Food and Agriculture Organization of the United Nations

Levelling the farm fields: A cross-country study of the determinants of gender-based yield gaps

Background paper for
The status of women in agrifood systems

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Abstract

The *State of Food and Agriculture 2010–11* brought to global attention the problem of female farmers lagging in terms of agricultural productivity compared with male farmers. This study returns to the question of gender-based differences in farm productivity, decomposing differences in farm yields between males and females. We identify one part of the gap explained by differences in attributes and access to productive assets, and another part explained by differences in returns to assets and attributes (i.e. "unexplained" differences). This paper applies the Kitagawa-Oaxaca–Blinder decomposition to gender-based productivity gaps using nationally representative household surveys from 11 developing countries in Asia, sub-Saharan Africa and Latin America. We estimate productivity models for each country utilizing a comparable set of explanatory assets and attributes. We also implement a comparable decomposition of observed productivity gaps. The cross-country analysis shows that observed total gaps in productivity by gender do not always favour male farmers; the decomposition of these gaps, however, reveals that female farmers face gender-specific constraints that manifest as lower returns to attributes and assets.

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1 Introduction

FAO's *State of Food and Agriculture of 2010–11* (FAO, 2011) placed the issue of gender inequalities in farming in the spotlight. Based on a wealth of information, the report showed that, in addition to a previously reported lower access to education (e.g. World Bank, 2008), women in agriculture globally hold less wealth in terms of farmland and livestock, have less access to inputs, such as seeds and fertilizers, and have less access to support services, such as financing and extension services. These disparities translated into significantly lower yields for women compared with men in the order of 20 percent to 30 percent, which is of a comparable magnitude to gender wage gaps documented in the labour literature. The FAO's findings generated renewed interest among international organizations (World Bank, 2014) and in the academic literature (e.g. Aguilar *et al.*, 2015; Oseni *et al.*, 2015; Peterman *et al.*, 2011; Slavchevska, 2015) regarding the issue of the degree and impacts of gender-based rural inequalities in developing countries.

A decade later, the issue of gender disparities in farming requires a more nuanced analysis. One question that requires more careful inspection is the definition of yields in the comparison of female and male farm productivity. Average yield gaps presented in the FAO's 2011 report mixed yields by both plot and farm. In some regions of sub-Saharan Africa some plots within a farm are controlled by women (usually food crops), while others are controlled by men (usually cash crops). More careful measurement, in this region, of gender and farm characteristics carried out in more recent rounds of World Bank's Living Standards Measurement Study (LSMS) surveys allows for the identification of both the gender of the farm manager and the gender of the manager of each individual plot. Recent studies using these surveys show that yield gaps between genders are higher at the plot level than when measured for the entire farm (see Kilic *et al.*, 2013; Peterman *et al.*, 2011; World Bank, 2014). Another question that requires more careful attention is the definition of the concept of the "female farmer." As Doss (2018) makes clear, not only can one measure female productivity either at the plot or the farm level, but the identification of the "female farmer" can be problematic, because the traditional identifier in the literature, the household head, is not always equivalent to the farm manager. Furthermore, many women in their farming activities could face diverse forms of gender discrimination while working under male household heads and managers. These latter forms of discrimination could be undermeasured when focusing on male-headed households that depend on female labour to varying degrees for their farm production. In the present study, we address these questions using different definitions of "female farmers."

From the literature one expects a priori lower yields for women farmers, not only because their household composition, ownership of assets and access to farm inputs places them in a position of disadvantage, but also because they face social norms and institutional barriers that hinder their ability to be more productive. Female farmers, particularly when they are also head of household, tend to have fewer economically active household members and higher dependency ratios, both of which introduce a demographic disadvantage to productivity. Demographic disadvantages are compounded by less access to crucial farming inputs, such as improved seeds, agricultural machinery, livestock and farmland, as reported in FAO (2011). Additionally, in many contexts social norms tend to distribute household chores unevenly among genders and to limit the ability of women to be more productive in farming. In some societies, formal institutions often discriminate against women, as for example when public extension services fail to adapt to female farmers' needs in terms of the evaluation and advice offered

and the way programmes reach users (e.g. Percy, 2005; Ponniah *et al.*, 2008). Similarly, in some countries financial institutions often place formal and informal barriers to women's access to credit and their services. Altogether, the array of biases and barriers that women farmers face likely translate to significant yield gaps relative to men.

In the present study we propose revisiting the question of gender-based yield gaps using a cross-country approach, examining the evidence from 11 developing countries in Africa, Asia and Latin America. We use different definitions of the "female farmers" to understand the influence of these definitions on observed yield gaps, and more importantly on the drivers of these gaps, making use of the Kitagawa–Oaxaca–Blinder decomposition approach. We show a surprising result: observed yield gaps do not always favour male farmers. Nevertheless, in terms of their profile, female farmers are consistently at a disadvantage across countries and definition. Regardless of the definition used, farms managed by women or that mostly employ women are headed by older and less-educated heads, have less farmland available, use less male family labour, have a smaller household size and have fewer economically active household members (with proportionally a greater number of females). Surprisingly, however, while these consistent farm differences by gender do not manifest in the aggregate as an observable farm yield gap, they do appear consistently in the decomposition of yield gaps. Female farmers appear to have an endowment-effect *advantage*. This effect taken alone, however, can be deceptive in its nature and one should take care in its interpretation. Importantly, female farms tend to be smaller, and, given that scale and yields are often negatively correlated, female farms would show a size or endowment-effect advantage, which would offset, and in some cases cancel, the "structural" or "unobserved effect" disadvantage, similar to that which has been found in the gender wage gap literature (e.g. Weichselbaumer and Winter-Ebmer, 2005).

Section 2 presents the data and methods employed in the analysis. Section 3 presents a brief country case description of the methods used in the full set of 11 countries. The case study is followed by a simple meta-analysis (section 4) that distils the main generalizable results in terms of gender-related yield gaps. Finally, the paper closes with some concluding remarks.

2 Data and methods

2.1 The Kitagawa–Oaxaca–Blinder decomposition

The Kitagawa–Oaxaca–Blinder decomposition approach (henceforth referred to as Oaxaca decomposition for brevity) is a straightforward method used to disentangle the underlying sources of the mean difference between two separate groups for any observable variable. Here we explain the method using yields, y, as an example, and with the visual aid of Figure 1. **Illustration of the Oaxaca decomposition** . The i^{th} farmer's yield (${y_i}^M$ for males and ${y_i}^F$ for females) can be explained by a vector of observable variables that describe the farmer and the household, the farm and location characteristics. Let the vector ${X_i}^j$ ($j = M$ and F) represent all observable characteristics of each farmer and farm and let the vector β^j represent the corresponding coefficients in a standard linear regression model explaining yields:

$$\ln\left(y_i^j\right) = {X_i}^j \beta^j + {\varepsilon_i}^j \quad j = M \text{ and } F \tag{1}$$

where ${\varepsilon_i}^j$ is a mean-zero and *iid* is the random error. The expected difference between male and female yields (in natural logarithms), at the averages of the explanatory variables, approximates the percentage difference of yields between male and female farms:

$$E(\ln[{y_i}^M/{y_i}^F]) = E(\ln[{y_i}^M]) - E(\ln[{y_i}^F]) = \bar{X}^M\hat{\beta}^M - \bar{X}^F\hat{\beta}^F \tag{2}$$

The estimator for this log difference is the difference between the predicted log yields in the regression line: $\bar{X}^M\hat{\beta}^M - \bar{X}^F\hat{\beta}^F$. The Oaxaca decomposition is obtained by adding and subtracting a convenient amount, such as $\pm\bar{X}^M\hat{\beta}^F$. A simple operation shows that we can now express this yield gap as:

$$E(\ln[{y_i}^M]) - E(\ln[{y_i}^F]) = (\bar{X}^M - \bar{X}^F)\hat{\beta}^F + \bar{X}^M(\hat{\beta}^M - \hat{\beta}^F) \tag{3}$$

In Figure 1. **Illustration of the Oaxaca decomposition** , the production relationships between yields and family labour employed in farming are given by the two lines for male and female farms. The difference between the two lines at any given level of labour represents the yield gap due to differences in productivity. However, male and female farmers will have both different levels of productivity and different levels of family labour employed. We might, for example, observe a point B, which is the observed yield of male farmers given their (higher) use of family labour and higher productivity per labour unit employed, and a point A, which is the yield of female farmers given both their lower use of family labour and their lower productivity. The percentage total difference in yields is the vertical distance between A and B.

In the case represented by Figure 1, the difference in yields between the two groups is not only due to higher labour use in male farmers, but also because the marginal productivity of labour is higher (as expressed by the steeper slope of the labour-yield relationship for male farmers) and overall productivity regardless of labour use is higher (as captured in the higher intercept). The Oaxaca decomposition identifies these effects separately: The first term, $(\bar{X}^M - \bar{X}^F)\hat{\beta}^F$, is what the literature calls the endowment effect or the explained gap (Endowment effect F in Figure 1), which is the portion of the observed gap that is due to the farms having different levels of input use.

The other component of the gap (Structural effect F in Figure 1) is "structural" in the sense that it is built into the parameters representing the inherent differences in the production function for males and female farmers regardless of the quantity of inputs employed. Such differences are interpreted as differences in the productivity of the characteristics of the farmer and farm: $\bar{X}^M(\hat{\beta}^M - \hat{\beta}^F)$ as expressed in equation (3). This component of the yield gap, also called the "unobservable effect" in the literature, describes how much of the gap is explained by differences in the return to inputs employed in contrast to the amount. In the absence of any structural differences in productivity, one would expect similar returns to inputs across groups and similar estimated coefficients associated with farm and farmer characteristics. An estimated structural effect and its magnitude would capture differences in the marginal productivity of the inputs used. In the labour literature, where wage–gender decompositions abound, the "unobservable effect" was initially identified as the magnitude of discrimination (e.g. Oaxaca, 1973). However, that interpretation is not employed any longer because there is a consensus in later literature that, in addition to discrimination, differences in unobservable traits would also explain these differential returns to inputs and assets, an argument that applies to the decompositions presented here as well.

The above decomposition approach is straightforward to implement. It presents a difficulty in interpretation, however, because one could obtain different magnitudes of both the endowment and structural effects by choosing a different reference point. One could instead use $\pm\bar{X}^F\hat{\beta}^M$ in equation (2):

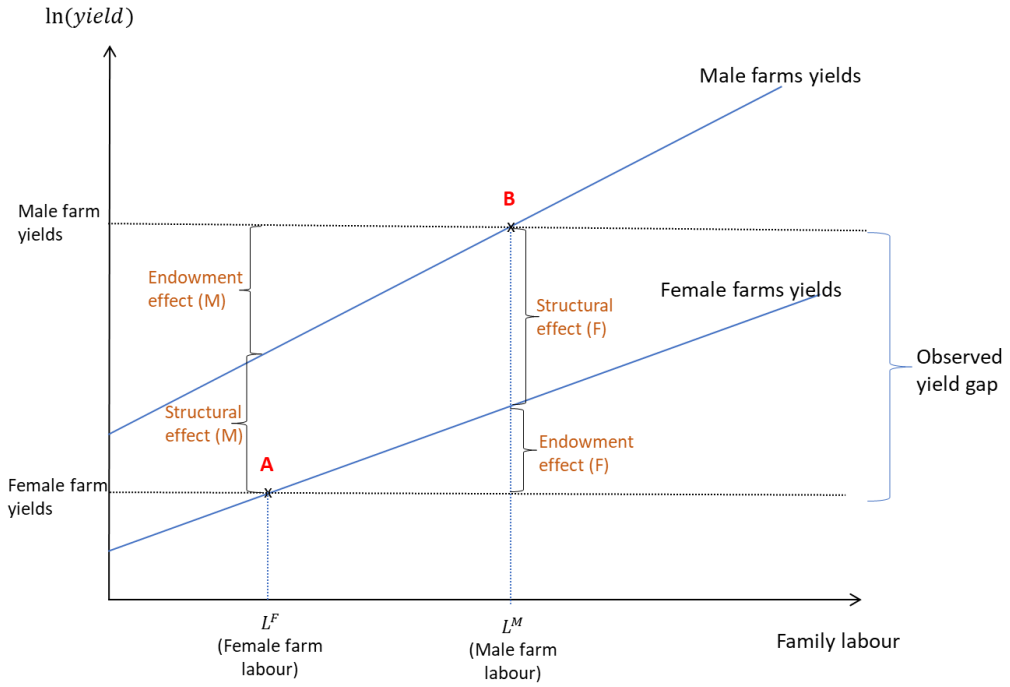
$$E(\ln[y_i{}^M]) - E(\ln[y_i{}^F]) = (\bar{X}^M - \bar{X}^F)\hat{\beta}^M + \bar{X}^F(\hat{\beta}^M - \hat{\beta}^F) \quad (4)$$

In this case, the endowment effect, $(\bar{X}^M - \bar{X}^F)\hat{\beta}^M$, is measured using the "structure" of the male farmers, shown in Figure 1. **Illustration of the Oaxaca decomposition** as Endowment effect (M). To resolve this potential ambiguity, various authors (e.g. Cotton, 1988; Neumark, 1988) have suggested measuring the endowment effect using a reference vector $\hat{\beta}^*$ to represent a reference production structure. There are two obvious candidates for this reference: a simple weighted mean of $\hat{\beta}^M$ and $\hat{\beta}^F$ or the coefficients estimated when both groups are pooled without differentiating between males and females. We use the latter approach here. The enhanced version of the Oaxaca decomposition adds and subtracts both $\pm\bar{X}^F\hat{\beta}^*$ and $\pm\bar{X}^M\hat{\beta}^*$:

$$E(\ln[y_i{}^M]) - E(\ln[y_i{}^F]) = (\bar{X}^M - \bar{X}^F)\hat{\beta}^* + \bar{X}^F(\hat{\beta}^* - \hat{\beta}^F) + \bar{X}^M(\hat{\beta}^M - \hat{\beta}^*) \quad (5)$$

The estimated structural effect, $\bar{X}^F(\hat{\beta}^* - \hat{\beta}^F) + \bar{X}^M(\hat{\beta}^M - \hat{\beta}^*)$, now has two components. The production relationship estimated by pooling all farmers would be a reference line that passes between both the individually estimated relationships for males and females in Figure 1. **Illustration of the Oaxaca decomposition** . The structural effect now would be the gap between the jointly estimated line and the female line $\bar{X}^F(\hat{\beta}^* - \hat{\beta}^F)$, and the gap between the joint line and the male $\bar{X}^M(\hat{\beta}^M - \hat{\beta}^*)$. Also, the endowment effect is now valued using the joint line as reference: $(\bar{X}^M - \bar{X}^F)\hat{\beta}^*$.

Figure 1. Illustration of the Oaxaca decomposition



2.2 Data sources

In this study the yield equation (1) is estimated for both men and women using data from a set of 11 countries deriving from nationally representative household surveys. The sources of this information are listed in Table1. The countries – four from Asia, four from sub-Saharan Africa and three from Latin America – were chosen from the set of 43 countries covered by FAO's Rural Livelihoods Information System (RuLIS) household income international repository.[1] The countries were chosen to achieve geographic coverage of the three developing regions considered. The choice of geographic diversity came at the cost of including some older surveys from Asia.[2] Building on the Rural Income Generating Activities (RIGA) database (Davis *et al.*, 2010), RuLIS estimates household income sources, including agricultural income, using a comparable methodology in terms of definitions of income aggregates and data manipulation.

This study uses the RuLIS database because it relies on the project's effort of consistently estimating crop income by household (a main component of agricultural income) across countries. Crop income is estimated crop by crop using local area prices (not sale values, because not all households sell crops). We use the gross value of crop production, estimated by the RuLIS project, and divide it by cultivated land area (calculated from the survey, as are all other variables used in this study) to get an estimate of yields.

[1] See more information at https://www.fao.org/in-action/rural-livelihoods-dataset-rulis/en/.
[2] To achieve geographic diversity, other surveys from sub-Saharan Africa that have excellent sex-disaggregated data (other LSMS-Integrated Surveys on Agriculture) are not included in this study.

Note that implicitly we are constructing an aggregate crop index where prices are used as weights. Also note that, although the use of local/community-level prices to estimate value of production is adequate to estimate income, it might cause an underestimation of gender biases, if there are biases or obstacles in product markets preventing female farmers from accessing the highest prices.

Table 1. Household surveys used in this study

Country Code1	Survey Year	Country / Survey Name
BGD	2010	Bangladesh Household Income and Expenditure Survey
ETH	2019	Ethiopian Socioeconomic Survey 2018/19
GHA	2013	Ghana Living Standards Survey 2012/13
GTM	2014	Guatemala Encuesta Nacional de Condiciones de Vida
KHM	2009	Cambodia Socioeconomic Survey
MWI	2017	Malawi Integrated Household Survey
NIC	2014	Nicaragua Encuesta de Medición de Nivel de Vida
PAK	2014	Pakistan Social and Living Standards Measurement Survey
PER	2019	Peru Encuesta Nacional de Hogares
UGA	2016	Uganda National Panel Survey
VNM	2010	Viet Nam Household Living Standard Survey

2.3 Controls used in the yield models

Oaxaca decompositions of farm yield differences by gender of farmer have been analysed in other case studies in the literature. In particular, similar analyses have been carried out using surveys from Ethiopia, Malawi, Nigeria and the United Republic of Tanzania by Aguilar *et al.* (2015), Kilic *et al.* (2013), Oseni *et al.* (2015) and Slavchevska (2015), respectively. In this present cross-country study we follow these previous efforts in selecting a similar set of controls, described in Table 2. The table also groups variables according to the features of the farm or farmer they describe. These variable groupings facilitate the meta-analysis of yield gaps across countries. The first group of variables (*mgr*) describe the household head in terms of age, marital status dummies, education and land tenancy (i.e. rents land or sharecrops land). Age is also included with a quadratic term because age is a proxy for experience which should exhibit positive but decreasing returns. Family labour (*familab*) is divided between male labour and female labour because we expect female farmers to have different relative endowments of male and female family labour and their productivity might differ. Note that labour and the other productive inputs are divided by land area, because implicitly this exercise is identifying a production function, where yields are an output that is divided by an input (land); therefore, for consistency the rest of the inputs should also be divided by land area.

Table 2. Controls included in the yield models

Variable group	Variable name	Variable definition	BGD	ETH	GHA	GTM	KHM	MWI	NIC	PAK	PER	UGA	VNM
Household head/manager characteristics (*mgr*)	agehead	Age	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	ageh2	Age x Age	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	educhead	Education	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	married	Married dummy	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	widow	Widow dummy	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	plots	Number of parcels managed	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	rent	Household rents land	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	sharecrop	Household sharecrops land	✗	✓	✓	✗	✗	✗	✗	✓	✗	✗	✗
Family labour (*familab*)	malefamlab_ha	Male adult family Labour / land	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	femfamlab_ha	Female family labour / land	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	childlab_ha	Child family labour / land	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Hired labour (*hiredlab*)	hiredlab_ha	Hired labour / land	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Other inputs (*inputs*)	fertil_ha	Fertilizers / land	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	seeds_ha	Seeds / land	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	other_ha	Other costs / land	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓
	agcap_ha	Agric. machinery index / land	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓
Scale* (see text) (*scale*)	land	Land with crops	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	land2	Land x Land	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	lland	Log (land with crops)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	lland2	Log (land) x Log (land)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Table 2 *(Cont.)*

Variable group	Variable name	Variable definition	BGD	ETH	GHA	GTM	KHM	MWI	NIC	PAK	PER	UGA	VNM
Gender variables (*genderch*)	child_dep	Child dependency ratio	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	femlabsh	Share of employed household members that are female	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Household characteristics (*hhchars*)	nfi	Household has self- employed non-farm income	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	nfwi	Household has wage income	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	hhsize	HH Size	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	wealth	Wealth index	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	distance	Distance to market or primary school	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Plot characteristics (*plotchars*)	irrigation	Household operates irrigated plots	✓	✓	✗	✓	✓	✓	✗	✓	✓	✓	✓
	altitude	Altitude of plot	✗	✓	✗	✗	✗	✗	✗	✗	✓	✗	✗
	slope	Household operates plots with slope	✗	✓	✗	✗	✗	✓	✗	✗	✗	✓	✗
Geographic effects (*geoeff*)	geodum	Small area fixed effects (municipality, district or similar)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Notes: ✓ Variable included in yield model; ✗ variable could not be recovered from survey. To deal with space constraints in charts, we use the mnemonic variable group names in column 1 and variable names in column 2 throughout most of the paper.
BGD – Bangladesh; ETH – Ethiopia; GHA – Ghana; GTM – Guatemala; KHM – Cambodia; MWI – Malawi; NIC – Nicaragua; PAK – Pakistan; PER – Peru; UGA – Uganda; VNM – Viet Nam.

The household surveys record labour effort in agriculture with varying degrees of detail. Most surveys have only a traditional employment module (where own-family farm labour can be extracted from the declared sector of employment) and the description of activity. In these cases, employment is calculated only as number of workers, without more detail in the actual labour effort. In the latest rounds of surveys in sub-Saharan Africa there is a notable attempt to record employment by plot, counting individuals and time devoted to farming on each plot, providing much more detail in the calculation of effective labour effort. Hired labour (*hiredlab*) is separated from family labour because the literature shows that costly supervision of farm work might lead to labour inefficiency

in the absence of incentive-compatible contracts (see Feder [1985], for example). If female farmers are more time constrained than male farmers, there might be important differences in effective supervision and in the productivity of hired labour.

The way land (*scale*) enters on the right hand of the yield equations requires some explanation. The fact that there appears to be an inverse relationship between yields and farm size has occupied at least 50 years of the agricultural economics literature. It is beyond this study to settle the question here (see Helfand and Taylor [2021] for a recent discussion), but the bulk of the evidence suggests that yields per unit area fall with farm size, especially when looking at the range of farm sizes such as those under study here. There may be a U-shaped curve where larger and mechanized farm exhibit rising yields with size. It is therefore an empirical issue how yields relate to farm size. To allow model flexibility, we estimated four different specifications for all countries – land alone, land and land squared, log of land and log of land and log of land squared – and chose the best model using the Akaike information criterion. In all countries, except Pakistan, the preferred model was to use log of land and log of land squared. For Pakistan land entered linearly and in squared terms.

The model also includes household characteristics (*genderch*) that might affect female farmers' productivity to a greater degree than that of males. These characteristics include child dependency and the share of all economically active household members that are women (as family workers or wage employed). If women face wage discrimination outside the farm, there might be an indirect impact on farm productivity. Similarly, the (*hhcars*) variables capture the involvement of household members in other activities, which implicitly would reduce effort and attention to farming. Finally, the model includes characteristics of the plot, such as land slope and irrigation (*plotchars*) when available from the surveys and location dummies (*geoeff*). Location dummies capture unobserved local characteristics (e.g. social capital and access to infrastructure) and, more importantly, the local agroecological conditions that determine returns to farming. We use the smallest area dummies that the data allow and find that the degree of disaggregation of these location effects has a significant impact in the overall goodness of fit of the yield models.

2.4 Identifying female farmers

Female farmers face various gender-specific constraints to their farming effort. Usually, the influence of social norms and traditions lead to a distribution of household tasks according to gender and this constrains women's time available to dedicate to activities outside the immediate household, including farming. Additionally, women face discriminatory norms in formal institutions, such as access to formal credit, the ability to sign contracts and access to formal extension services and many other productivity-enhancing factors (Quisumbing and Doss, 2021). When one looks at outcomes of policy relevance, such as total farm production, household per capita income or consumption, and household food security, the policy analyst generally focuses on the level of the farm or the household, which does not explicitly have a gender. This is one reason why the literature has used different approaches to identify the gender of the farmers when making welfare comparisons (Doss, 2018). Many studies identify the gender of the head of household as the gender of the manager of the household farming activities. Other studies look to differentiate the gender of the farmer of individual plots within a farm. The earlier literature achieved this division by assigning different crops by gender, assuming that norms determine the crops produced by each gender in specific contexts, while recent literature (usually using the later rounds of LSMS-Integrated

Surveys on Agriculture) makes use of the gender of the manager of each plot, which these surveys identify. Each approach has its advantages and shortcomings.

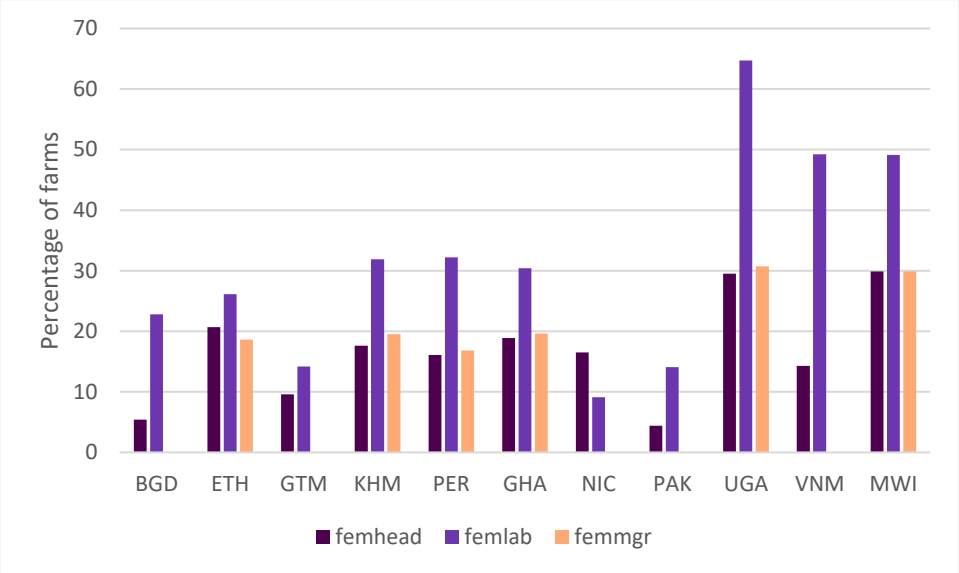
The most frequently used approach – identifying the gender of the farmer by the gender of the head of household – has been criticized because it masks the constraints facing many women farmers who operate within male-headed households. On the other hand, the gender of the farm manager probably measures in a more direct way the productivity of women farmers and the obstacles they face; the approach should be preferred when analysing differences in productivity by gender. However, the gender of the farm manager is not captured in many surveys outside of Africa, and when it is these surveys do not necessarily identify farms with joint management. Using the gender of the manager of each individual plot might seem the ideal approach. However, it is more suitable in limited contexts, where gender-segregated crop and livestock farming is practised – in countries such as Ethiopia, Kenya, Malawi, the Niger and Uganda, to name a few. Plot-level sex-disaggregated data are not available in most of Latin America and Asia and are often not relevant. Moreover, the researcher should be careful about associating large gaps in yields by plots to differences in welfare. In the first place, welfare is determined at the household level, not at the plot level, and whether large differences to plot returns correlate with unequal distribution of welfare within the household is only a hypothesis. Furthermore, we do not know if more unequal returns to plots by gender is a household strategy that correlates with overall better yields or not. Therefore, given that we are interested in welfare levels that are determined at the household level it makes sense to keep the unit of analysis at the farm or household level.

Given the absence of an ideal indicator of "female farmers" in this study, we used and analysed three different definitions. The first definition is the traditional gender of the head of household where the farm operates, identified as *femhead* (this definition can be used in all 11 surveys considered in this study, and for succinctness is called female-headed farms). The second definition is the manager of the farm, identified as *femmgr*. In the sub-Saharan Africa surveys where this question is asked plot by plot, we have three types of farm-level management: exclusively male, exclusively female and joint (either because a plot is jointly managed or because within a farm both genders manage plots). To construct a binary definition (required for the Oaxaca decomposition) male-managed farms are merged with jointly managed farms and are compared with exclusively female-managed farms, where expected gender barriers and biases should be more pronounced. This definition of female farmers may be preferred but can only be identified in six of the 11 surveys considered. For brevity, these latter farms are called female-managed farms. Finally, we propose another definition of female farmers based on the female contribution to farm labour. In this latter case, female farmers are those farms where women supply the majority of the farm family labour, identified as *femlab* or female-labour farms for succinctness, while male farmers are the remainder.

Figure 2 presents the prevalence of female farmers under the three separate definitions considered in this study. In countries where both female-headed and female-managed farms can be identified, there is not a large difference in their relative prevalence. However, analysing them separately is still useful because, although their relative prevalence may be similar, these are not completely overlapping sets. As we show below, there are differences in yields and their determinants between both definitions of "female farmer." As noted in other studies, the prevalence of female farmers is much lower in Bangladesh and Pakistan than elsewhere. Also, the large differences in the prevalence of female farmers defined by gender of own-family farm labour reveals that there is notable heterogeneity in female participation in farming between countries and regions. Malawi, Uganda

and Viet Nam show very high prevalence of farms reliant on female labour (*femlab*), revealing high rates of female participation in farming activities. Female participation in farming in Malawi and Uganda is high even by sub-Saharan Africa standards (Palacios-Lopez, Christiaensen and Kilic, 2017).

Figure 2. Prevalence of "female farmers" as a share of all farms based on three definitions of female farmer



Notes: femhead = female-headed household; femlab = majority of labour provided by females; femmgr = female-managed farm. BGD – Bangladesh; ETH – Ethiopia; GHA – Ghana; GTM – Guatemala; KHM – Cambodia; MWI – Malawi; NIC – Nicaragua; PAK – Pakistan; PER – Peru; UGA – Uganda; VNM – Viet Nam.
Source: Authors estimations.

3 The Oaxaca decomposition of yield differences in Uganda, an example

Before examining the cross-country evidence, we briefly examine an Oaxaca decomposition of the gender yield gap using Uganda as an example and taking gender of the head of household as the identifier of female farmers. As a first approximation to understanding gender inequalities in farming in Uganda, we examine the means of the main observable characteristics that describe farms. Table 3 shows descriptive statistics of the mean differences by gender of farms in Uganda. The first row of the table shows that, on average, male farmers produce yields that are 4 percent larger than those of their female counterparts. Given the variance in the underlying data, however, this difference is not statistically significant.

Table 3. Observed mean differences of farmer and farm characteristics between male- and female-headed farms in Uganda *(femhead)*

Variable	Female farmers	Male farmers	Difference (M–F)
ln(yield)	13.1720	13.2115	0.0395
	(0.0523)	(0.0309)	(0.0608)
agehead	48.0288	44.1427	-3.8862***
	(0.5637)	(0.3792)	(0.6794)
ageh2	2 504.7212	2 163.0938	-341.6274***
	(57.1905)	(37.3581)	(68.3109)
educhead	4.0465	6.6805	2.6340***
	(0.1464)	(0.0905)	(0.1722)
married	0.3798	0.9437	0.5639***
	(0.0194)	(0.0060)	(0.0203)
widow	0.4054	0.0121	-0.3934***
	(0.0197)	(0.0028)	(0.0199)
plots	2.0785	2.2532	0.1747***
	(0.0451)	(0.0312)	(0.0548)
rent	0.0673	0.0469	-0.0204*
	(0.0100)	(0.0055)	(0.0114)
malefamlab_ha	57.9149	116.3117	58.3968***
	(4.3324)	(3.8710)	(5.8099)
femfamlab_ha	201.6182	132.4797	-69.1385***
	(8.5564)	(3.7835)	(9.3556)
childlab_ha	33.2931	18.7644	-14.5287***
	(2.9709)	(1.2381)	(3.2186)
hiredlab_ha	3.8834	4.2797	0.3964
	(0.3208)	(0.2201)	(0.3890)
fertil_ha	0.2290	0.3285	0.0995
	(0.0843)	(0.0667)	(0.1075)

Variable	Female farmers	Male farmers	Difference (M–F)
Table 3 *(Cont.)*			
seeds_ha	2.0187	2.6380	0.6193***
	(0.1645)	(0.1244)	(0.2062)
other_ha	1.9017	2.0955	0.1938
	(0.1789)	(0.1200)	(0.2154)
agcap_ha	-1.1906	-0.4060	0.7846***
	(0.1410)	(0.0760)	(0.1601)
lland	-0.2084	0.0446	0.2530***
	(0.0373)	(0.0240)	(0.0444)
lland2	0.9124	0.8621	-0.0503
	(0.0615)	(0.0382)	(0.0724)
child_dep	0.1942	0.2640	0.0697***
	(0.0147)	(0.0083)	(0.0169)
femlabsh	0.7420	0.4179	-0.3241***
	(0.0118)	(0.0067)	(0.0136)
hhsize	4.9439	5.6611	0.7172***
	(0.1028)	(0.0732)	(0.1262)
nfi	0.3942	0.4575	0.0632***
	(0.0196)	(0.0129)	(0.0234)
nfwi	0.2628	0.2739	0.0111
	(0.0176)	(0.0115)	(0.0211)
distance	1.3654	1.4713	0.1059*
	(0.0406)	(0.0464)	(0.0617)
wealth_idx	-0.4497	-0.0628	0.3869***
	(0.0432)	(0.0364)	(0.0565)
irrigation	0.0208	0.0188	-0.0021
	(0.0057)	(0.0035)	(0.0067)
slope	0.1138	0.1427	0.0289*
	(0.0127)	(0.0091)	(0.0156)
Observations	624	1 493	2 117

Note: Standard errors in parentheses. The fourth column presents a standard t-test of mean differences. Mean difference different from 0 at (*) 10%, (**) 5%, and (***) 1% significance level.

Table 3 also shows that female heads are on average older, less educated, less likely to be married and more likely to be widowed. The latter findings are not surprising given that many of these female heads of households are de jure female heads, single and widowed. Female farmers have less male family labour but more female labour per unit of land. Female farmers also use less purchased seed, have less agricultural equipment and machinery, and operate smaller farms. Clearly, male and female farmers are not equal. Female farmers are at a relative disadvantage in most of the inputs and assets required for agricultural production, but nonetheless are only marginally less productive than male farmers. The Oaxaca decomposition can help disentangle this apparent inconsistency.

In Table 4, the yield model is estimated separately for male and female farmers. To estimate the decomposition presented in equation (5), the yield model is also estimated for the full sample of farms, including a dummy identifying female farmers. The final rows of the table provide some specification tests that can help in interpreting the different models. Under the null hypothesis of the Chow test there is no "structural break" between the male and female samples, and therefore from an econometric perspective the joint model would be preferred over separating the samples. The Chow test is not rejected, which means that both male and female yield models are not structurally different. However, a Wald test of the null hypothesis that the complete vector of female parameters is equal to the joint parameters is rejected, while the null hypothesis that the vector of male parameters is the same as the joint estimates is barely rejected at the 10 percent level of significance. We also note that the last column, which tests differences between the male and female parameters, yields few significant differences, which already suggests that a test of "structural difference" would not be significant. Finally, we note that the models are estimated with R-squared around 52 percent, which is reasonable in these large cross-section estimations.

Table 4. Yield model estimation by male- and female-headed farms in Uganda (*femhead)*

Variable	Joint estimation	Female farmers	Male farmers	Difference (male–female)
femhead	-0.1037			
	(0.0709)			
agehead	0.0146*	-0.0008	0.0159*	0.0166
	(0.0082)	(0.0191)	(0.0096)	(0.0214)
ageh2	-0.0001	0.0001	-0.0001	-0.0002
	(0.0001)	(0.0002)	(0.0001)	(0.0002)
educhead	0.0092	0.0147	0.0042	-0.0105
	(0.0060)	(0.0125)	(0.0071)	(0.0144)
married	0.1689**	0.0370	0.0967	0.0597
	(0.0784)	(0.1418)	(0.1332)	(0.1945)
widow	0.1076	0.0178	0.0891	0.0713
	(0.0806)	(0.0994)	(0.2354)	(0.2556)
plots	0.1266***	0.1361***	0.1314***	-0.0047
	(0.0175)	(0.0433)	(0.0199)	(0.0476)
rent	-0.2524**	-0.3943	-0.1784*	0.2159
	(0.1258)	(0.3361)	(0.0997)	(0.3506)
malefamlab_ha	0.0010***	0.0010**	0.0009***	-0.0001
	(0.0002)	(0.0004)	(0.0003)	(0.0005)
femfamlab_ha	0.0010***	0.0008***	0.0012***	0.0004
	(0.0002)	(0.0002)	(0.0003)	(0.0003)
childlab_ha	0.0008**	0.0008*	0.0009*	0.0000
	(0.0003)	(0.0005)	(0.0005)	(0.0007)
hiredlab_ha	0.0135***	0.0148**	0.0131***	-0.0018
	(0.0026)	(0.0060)	(0.0030)	(0.0067)
fertil_ha	0.0228***	0.0589**	0.0139**	-0.0450*
	(0.0079)	(0.0265)	(0.0063)	(0.0272)
seeds_ha	0.0001	0.0015	-0.0002	-0.0017
	(0.0043)	(0.0076)	(0.0052)	(0.0092)
other_ha	-0.0061	-0.0069	-0.0039	0.0030
	(0.0044)	(0.0090)	(0.0052)	(0.0104)
	0.0059	0.0122	0.0039	-0.0083

Variable	Joint estimation	Female farmers	Male farmers	Difference (male–female)
Table 4 (Cont.)				
agcap_ha	(0.0095)	(0.0183)	(0.0118)	(0.0217)
	-0.3992***	-0.4025***	-0.3951***	0.0074
lland	(0.0391)	(0.0810)	(0.0465)	(0.0934)
	-0.0636***	-0.0488*	-0.0722***	-0.0234
lland2	(0.0176)	(0.0284)	(0.0216)	(0.0356)
	0.0901	0.2124*	0.0285	-0.1839
child_dep	(0.0621)	(0.1126)	(0.0777)	(0.1368)
	0.1009	-0.1582	0.1897*	0.3479*
femlabsh	(0.0808)	(0.1575)	(0.1000)	(0.1866)
	0.0052	-0.0126	0.0094	0.0220
hhsize	(0.0092)	(0.0209)	(0.0105)	(0.0234)
	-0.0384	0.0432	-0.0801	-0.1233
nfi	(0.0427)	(0.0865)	(0.0510)	(0.1004)
	-0.0696	-0.1744*	-0.0575	0.1169
nfwi	(0.0444)	(0.0985)	(0.0520)	(0.1114)
	-0.0267**	-0.0671*	-0.0219*	0.0452
distance	(0.0104)	(0.0373)	(0.0113)	(0.0390)
	0.0095	0.0217	0.0107	-0.0110
wealth_idx	(0.0155)	(0.0492)	(0.0168)	(0.0520)
	0.0387	0.0585	0.0993	0.0407
irrigation	(0.1322)	(0.2637)	(0.1577)	(0.3072)
	-0.0869	-0.3368	-0.0242	0.3126
slope	(0.0731)	(0.2535)	(0.0615)	(0.2609)
	2 117	624	1 493	
Observations	0.519	0.525	0.515	
Adj. R^2	-2602.0	-755.5	-1782.0	
Log-likelihood	5 442.0	1 727.0	3 792.1	
Akaike information criterion	0.852	0.901	0.832	
Std. error of the regression	95	90	92	
Geographic fixed effects				
Model tests	0.531			
Chow test M=F p-value		0.000	0.098	
Wald Test F=J, M=J p-value				

Notes: Standard errors in parentheses. The fifth column presents a t-test of parameter differences assuming independence between the male and the female parameters. * Significant at 10%, ** Significant at 5%, ** Significant at 1% level.

The table also shows that all inputs have expected positive signs and are in most cases statistically significant, except for seeds and other expenditures. Yields also display a strong negative correlation with farm size, both in terms of magnitude and statistical significance. As expected, distance to markets is negatively correlated with the value of agricultural yields. The characteristics of the plots also affect yields with expected signs, positive for

irrigation and negative for slope, but these estimates are not significant, likely due to the use of the geographic dummy variables. Age of the head positively affects yields; however, education has a positive but not significant impact on yields, as has been also found in similar studies (e.g. Aguilar *et al.*, 2015); agriculture tends not to be the sector with the highest returns to education.

With the means presented in Table 3, and the parameters presented in Table 4, the Oaxaca decomposition can be calculated following equation (5). A summary of the decomposition results is presented in Table 5, with results aggregated by the variable groupings described in Table 2. To understand the table, note that the last cell is 4 percent, the exact observed yield gap presented in the first row of Table 3. The standard error associated with this estimate is different, however. In Table 3, the standard error is that associated with the t-test of mean differences and implicitly reporting the variability of observed yields in the survey sample. In Table 5, on the other hand, the standard error is computed assuming means as constants but taking into account that estimated yields have a variance given by the vector of econometrically estimated coefficients, as shown in equation (5), which depends on the covariance matrix of the three reported regressions (Table 4). Tables 5 and 3 show that the latter variance, estimated using the parameters variance-covariance is marginally smaller than the sample standard error of the difference of means (the first row of Table 3).

Table 5 shows that endowment effects and structural effects move in opposite directions. In spite of the fact that we showed with Table 3 that female farmers are less endowed with assets and inputs, the endowment effect favours female farmers, and this result is due to a large and significant endowment effect explained by scale. Yields are strongly negatively related to scale, and since female farmers farm smaller areas, female farmers display an endowment-effect advantage. The decomposition also shows that the structural effect favours male farmers, and this advantage is large enough to cancel the female endowment-effect advantage. The decomposition illustrates in detail the true nature of gender disparities in agricultural yields in Uganda. Although observed yields are not significantly different between male and female farmers, female farmers face a strong structural disadvantage of 10 percent. This disadvantage is offset by an "endowment advantage" of female farmers. Without context, however, the term endowment advantage is perhaps deceptive, and this result should be interpreted with caution. It is likely due in major part to the real disadvantages of females that lead to them managing smaller farms in the first place, plus the fact that yields negatively correlate with farm size among Ugandan farms.

In the next section we compare all 11 countries in this study to investigate whether Uganda is an exception or whether there are common trends to gender inequalities in agricultural productivity.

Table 5. Oaxaca decomposition of yield gaps (male–female) by male- and female-headed farms in Uganda

Variable group	Endowment effect	Structural effect	Total effect (row sum)
mgr	0.0818**	0.2385	0.3203
	(0.0403)	(0.6737)	(0.5950)
familab	-0.0215	0.0625	0.0410
	(0.0204)	(0.0765)	(0.0612)
hiredlab	0.0054***	-0.0070	-0.0016
	(0.0010)	(0.0304)	(0.0266)
inputs	0.0058	-0.0005	0.0053
	(0.0080)	(0.0416)	(0.0358)

Variable group	Endowment effect	Structural effect	Total effect (row sum)
Table 5 (Cont.)			
scale	-0.0978***	-0.0214	-0.1192***
	(0.0102)	(0.0474)	(0.0402)
genderch	-0.0264	0.1893	0.1629
	(0.0267)	(0.1427)	(0.1238)
hhchars	0.0014	0.1591	0.1605
	(0.0085)	(0.1593)	(0.1389)
plotchars	-0.0026	0.0381	0.0355
	(0.0022)	(0.0334)	(0.0306)
geoeff	-0.0102	-0.5550	-0.5652
	(0.0108)	(0.7104)	(0.6322)
Total (column sum)	-0.0642	0.1037	0.0395
	(0.0525)	(0.0723)	(0.0420)

Notes: Authors' calculations. Standard errors in parentheses. Here controls are taken as given and standard errors are estimated from regression parameters and their estimated variance-covariance matrix. Variable groups are defined in Table 2. Estimate different from 0 at 10% (*), (**) 5% and (***) 1% significance level.

4 Meta-analysis

Contrary to a priori expectations, observed yield gaps do not overwhelmingly favour male farmers. Table 6 presents a summary of gaps in yields by different definitions of gender of the farm. The middle columns of the table show that exactly half of the sample has male farmers with higher average yields than female farmers. Many countries have small yield gaps. The majority of the observed gaps are small (and not statistically significant), eight countries have mean differences of less than 8 percent. Bangladesh and Nicaragua, with large yield gaps favouring male farmers, are the exception rather than the norm. We also note that farms defined by the gender of the head of the household (*femhead*) and the farm manager (*femmgr*) display similar gaps; the exception is Uganda, where yield gaps change sign with the different definitions. Furthermore, farms defined by the gender of the majority of their farm labour (*femlab*) also display gaps similar to those shown by farms defined by the gender of the household head (*femhead*), but on average gaps are smaller for the *femlab* definition. Again, Uganda is an exception as the only country where gaps change sign between definitions of gender of farmers.

Table 6. Yield gaps (percentage difference male-female farmers) for different definitions of farmers' gender

Country	*femmgr*	*femhead*	*femlab*
Bangladesh		0.2032**	0.0025
Ethiopia	-0.0275	-0.0048	-0.0284
Ghana	-0.0298	-0.0272	-0.0193
Guatemala		-0.0212	-0.0686**
Cambodia	-0.0220	-0.0138	0.0143
Malawi	0.0408**	0.0667***	0.0510***
Nicaragua		0.3891**	0.1533
Pakistan		0.0756*	-0.0646**
Peru	-0.0720	-0.1249**	-0.0091
Uganda	-0.1512***	0.0395	-0.0633
Viet Nam		-0.0693	-0.0198
Average	-0.0436	0.0436	-0.0047
Average (*femmgr* sample)		-0.0108	-0.0091

Notes: Yield gaps different from 0 at 1% level (***), 5% level (**) and 10% level (*). Significance tests were performed using sample variance.

Table 7 provides a brief summary that characterizes the main differences between farms by gender of farmer. The Appendix provides complete tables of summary statistics of farm characteristics for all countries considered in this study. In Table 7 some of the main differences are distilled by presenting gaps by gender of farmer of different farm characteristics together with indications of whether these gaps are significant. The table presents percentage differences as they are more easily comparable across countries when variables sometimes are defined with varying units or are notably different between countries on average. The table also provides a visual summary of characteristics where there are consistent differences by gender of the farmer. The variables with a dark shade indicate characteristics where there is a difference favouring male farmers in at least 9 of the 11 countries (all six

countries in case of *femmgr*), and this difference is significant in at least eight (all six countries in case of *femmgr*). Similarly, the lightly shaded variables in the table indicate that there is a difference favouring female farmers in at least 9 of the 11 countries (all six countries in case of *femmgr*), and this difference is significant in at least eight (all six countries in the case of *femmgr*).

The table provides a quick summary comparison of female and male farmers. A female farmer on average operates her farm under a household with an older head, with less education. These are the consequences of the presence of de jure female headship and rather universal gender gaps in access to education that occurred in the past. Also, female farmers have less male family labour in the farming activity and, on average, more female labour in farming. Furthermore, female farmers farm smaller areas, with less arable land available. Female farmers have on average fewer family members and have an overall larger share of women among those economically active in the household. Also, not as common as the other characteristics highlighted, female farmers also tend to have higher child dependency ratios. An interesting result is that this quick characterization of female farms holds for whether the comparison is made for female-headed farms or female-managed farms.

Table 7. Mean differences of selected farmer and farm characteristics by farmer's gender (expressed as percentage difference between male and female farmers)

A. Mean differences by *femhead*

	BGD	ETH	GHA	GTM	KHM	MWI	NIC	PAK	PER	UGA	VNM
agehead	1.3	-7.4***	-11.5***	-8.8***	-13.4***	-11.1***	-7.7**	5.7***	-9.3***	-8.8***	-13.9***
educhead	55.4***	68.2***	31.2***	39.2***	10.5***	37.5***	-20.1	69.6***	43.2***	39.4***	21.9***
malefamlab_ha	62.5***	48.9***	28.9***	34.5***	41.6***	67.9***	12.2	12.5	75.2***	50.2***	-61.8
femfamlab_ha	-105***	-178***	-238***	-159***	-84.9***	-60.3***	-266***	-501***	-258***	-52.2***	-27.9
childlab_ha	50.8***	-167***	-138***	14.1	49.3	N/A	32.4	-179	38.3	-77.4***	23.1
fertil_ha	38.6***	-139.4	18.4**	N/A	6.5	43.2***	N/A	30.3***	-46.4*	30.3	-3.0**
seeds_ha	39.1***	-10.3	-31	37.7***	14.3**	33.2***	N/A	18.2***	-35	23.5***	2
lland	11.4**	87.1***	81.3***	34.4***	47.4***	30.4***	15.4	66.3***	63.1***	25.3***	37.5***
child_dep	7.4	42.1***	19.8***	36.2***	28.6***	-12.0***	18.5	-22.1*	33.3***	26.4***	23.8
femlabsh	-1488***	-87.1***	-84.0***	-294***	-44.4***	-74.8***	-111.7***	-135.8***	-109***	-77.5***	-32.8***
hhsize	11.5***	31.3***	26.9***	18.9***	18.3***	20.4***	1.4	20.9***	23.0***	12.7***	22.1***
distance	33.2***	1.9	14.1***	-6.5**	-4.6	-2.7	4	12.6***	0.5	7.2*	11.2***

B. Mean differences by *femmgr*

		ETH	GHA		KHM	MWI			PER	UGA	
agehead		-10.1***	-10.0***		-9.2***	-10.4***			-8.2***	-9.6***	
educhead		66.1***	20.0***		11.1***	31.8***			23.1***	30.3***	
malefamlab_ha		57.2***	31.1***		32.8***	72.2***			78.0***	52.9***	
femfamlab_ha		-180***	-288***		-91.1***	-58.3***			-465***	-66.6***	
childlab_ha		-253***	-189***		44.7	N/A			25.2	-86.4***	
fertil_ha		-168.4	19.7**		-4.6	38.5***			-55.8**	30.5	
seeds_ha		1.5	-16.5		12.3*	26.0***			-52.1**	14.6*	
lland		92.6***	88.0***		50.4***	35.8***			86.6***	40.2***	
child_dep		48.5***	16.1***		10.1	-15.5***			32.9***	23.6***	

Table 7 (Cont.)

femlabsh		-79.5***	-83.9***		-40.0***	-73.7***			-125.8***	-76.8***	
hhsize		32.0***	25.1***		17.2***	19.9***			22.6***	8.6***	
distance		1.4	15.0***		-0.9	-1.6			-1.3	5.2	

C. Mean differences by *femlab*

	BGD	ETH	GHA	GTM	KHM	MWI	NIC	PAK	PER	UGA	VNM
agehead	11.2***	-6.3***	-8.0***	-6.1***	-8.5***	-6.7***	3.6	3.4**	0.6	-5.7***	0.2
educhead	-27.5***	25.2***	17.6***	-1.4	1.8	13.7***	-7.8	21.1***	10.8***	7.7***	1.6
malefamlab_ha	98.0***	53.5***	69.6***	39.0***	73.6***	63.0***	97.6***	29.6***	70.8***	56.9***	82.4***
femfamlab_ha	-848***	-359***	-264***	-552***	-147***	-84.8***	-1584***	-1187***	-478***	-101***	-333***
childlab_ha	41.9***	-206***	-115***	-39.2	-308	N/A	-30.3	-208***	28.5	-62.3***	-35.9
fertil_ha	-14.0***	40.2	4.5	N/A	-1.1	15.9***	N/A	18.7***	-29.4*	42	-0.5
seeds_ha	-13.8**	-0.3	6.7	0	-2.9	8.7**	N/A	17.0***	-39.7**	17.4**	0.1
lland	46.6***	80.4***	28.2***	28.7***	16.9***	18.0***	19.7	N/A	62.8***	9.7**	7.3
child_dep	-9.5***	16.9***	-12.1***	37.5***	23.7***	-12.3***	-24.8	-11.4*	-6.3	-18.5***	-27.5*
femlabsh	-985***	-78***	-99***	-541***	-57.1***	-70.4***	-263***	-189***	-93.1***	-90.5***	-355***
hhsize	6.9***	15.1***	-11.5***	9.0***	1.3	2.2**	5.9	-4.7**	2	-6.6***	-0.9
distance	-20.6***	-8.7**	-0.5	-2.6	-11.3***	2.1	6.3	2.9	-5.6	3.8	-0.6

Notes: Differences statistically significant at 1% (***), 5% (**), and 10% (*). Dark shaded variables indicate there is a difference favouring male farmers in at least 9 of the 11 countries (all six countries in case of femmgr), and this difference is significant in at least 8 (all six countries in case of femmgr). Light shaded variables indicate there is a difference favouring female farmers in at least 9 of the 11 countries (all six countries in case of femmgr), and this difference is significant in at least eight (all six countries in the case of femmgr).
BGD – Bangladesh; ETH – Ethiopia; GHA – Ghana; GTM – Guatemala; KHM – Cambodia; MWI – Malawi; NIC – Nicaragua; PAK – Pakistan; PER – Peru; UGA – Uganda; VNM – Viet Nam

The case of the female-labour farms, those defined by gender of the largest contribution to family farming labour (*femlab*), differs from the results using the other definitions. Such farms are smaller, with a higher share of women among those economically active and have on average more female and less male farming labour. Under this definition, however, female farmers do not necessarily have fewer household members, nor are there clear differences in the attributes of the household head, such as age and education. We note that, in terms of key characteristics that explain yield gaps, female farmers by gender of head and manager are similar in terms of the key differences with respect to male farmers. Also, female farmers defined by gender of labour contribution (*femlab*) are slightly less structurally different to their male counterparts.

Another important result shown in Table 7 is that there are no consistent gender gaps in terms of other major inputs used in farming (such as child labour, fertilizer and seeds). This result should be contrasted with what the *State of Food and Agriculture 2011* reported (FAO, 2011). The table reports input use per unit land area, while FAO (2011) reported observed differences in access to inputs by gender of the farmer. Hence, while on average female farmers may have lower input usage, as reported by FAO (2011), when normalized by land use, and comparing the intensity in the inputs used, these differences by gender do not always favour male farmers, as Table 7 shows.

A summary of the regressions used in the ensuing Oaxaca decompositions is presented in Table 8. Regressions have reasonably good fit, in line with what is presented in the literature, with adjusted R-squared between 37 percent and 60 percent. The number of geographic or administrative region fixed effects included in the regressions range from 7 in Nicaragua to 918 in Peru. Extended experimentation with these datasets indicates that the level of disaggregation of fixed effects included plays an important role in the final fit of the model, and, as a rule, we included as many as could be identified in the underlying datasets.

Table 8. Summary of regressions and specification tests

Female-headed farms (*femhead*)

	BGD	ETH	GHA	GTM	KHM	MWI	NIC	PAK	PER	UGA	VNM
Observations	2 427	2 020	7 676	3 812	3 142	9 208	699	3 978	7 312	2 117	2 894
Adjusted R^2	0.558	0.3	0.389	0.459	0.516	0.37	0.551	0.603	0.547	0.519	0.681
Geographic fixed effects	63	39	162	21	333	760	7	101	918	95	584
Share female farmers (%)	5.4	20.7	18.9	9.6	17.6	29.9	16.5	4.4	16.1	29.5	14.3
Chow test (p-value)	0.690	0.000	0.003	0.999	1.000	0.000	0.000	0.122	0.531	1.000	0.962

Female-managed farms (*femmgr*)

		ETH	GHA		KHM	MWI			PER	UGA	
Observations		2 020	7 676		3 142	9 204			7 312	2048	
Adjusted R^2		0.3	0.39		0.516	0.37			0.549	0.506	
Geographic fixed effects		39	162		333	760			918	92	
Share female farmers (%)		18.6	19.6		19.5	29.9			16.8	30.7	
Chow test (p-value)		0.000	0.000		1.000	0.599			1.000	0.246	

Table 8 (Cont.)

Female-labour farms (*femlab*)

	BGD	ETH	GHA	GTM	KHM	MWI	NIC	PAK	PER	UGA	VNM
Observations	2 427	2 020	7 676	3 812	3 142	9 208	699	3 978	7 312	2 117	2 854
Adjusted R^2	0.561	0.3	0.386	0.458	0.516	0.371	0.554	0.591	0.549	0.519	0.77
Geographic fixed effects	63	39	162	21	333	760	7	101	918	95	581
Share female farmers (%)	22.8	26.1	30.4	14.2	32.0	49.0	9.0	14.1	32.2	64.7	49.5
Chow test (p-value)	0.000	0.000	0.000	0.081	0.963	0.757	0.000	0.997	1.000	0.191	1.000

Notes: BGD – Bangladesh; ETH – Ethiopia; GHA – Ghana; GTM – Guatemala; KHM – Cambodia; MWI – Malawi; NIC – Nicaragua; PAK – Pakistan; PER – Peru; UGA – Uganda; VNM – Viet Nam.

A relevant specification test summarized in the table is the Chow test. The Chow test is a simple residuals F-test that contrasts the results of estimating the model in two separate samples with the joint estimation. The null hypothesis is that the underlying model is undifferentiated and therefore there should not be a "structural change" between the two samples. The test is the equivalent of estimating the model with the full sample and adding a vector of the original regression controls multiplied by a dummy variable that identifies the second sample (e.g. the female farmers dummy). Under the null hypothesis, all of the controls multiplied by dummy variables are jointly not statistically different from zero and therefore there is no structural change. Table 8 shows that there is no structural change in the case of female-headed farms (*femhead*) in most countries, which means that the parameters that identify the underlying yield models are not different for male and female farmers. The hypothesis of no structural differences, however, is rejected in Ethiopia, Ghana, Guatemala and Nicaragua.

The complete results of the Oaxaca decomposition of yields by gender of the farmer as defined by the gender of the household head (*femhead*) is presented in Table 9. (Tables of results for other definitions of farm gender are included in the Appendix.) The lower-right cell (Total effect) under each country presents the estimated gap in yields that results from the Oaxaca decomposition. The reader will note that this number is exactly equal to the observed sample yield gaps presented in Table 6. The only difference is that significance test in Table 9 uses the estimated econometric error, instead of the sample error used in the former table. The columns for each country identify the estimated endowment effect, the structural effect and the total effect, which is the sum of the two effects. Finally, the rows identify the impact that each variable group (defined in Table 2) has in each of the endowment, structural and total effect.

Table 9. Summary of Oaxaca decompositions of farm yields by male- and female-headed farms *(femhead)*

Variable group	Bangladesh			Ethiopia			Ghana		
	Endowment effect	Structural effect	Total effect (row sum)	Endowment effect	Structural effect	Total effect (row sum)	Endowment effect	Structural effect	Total effect (row sum)
mgr	0.0137	1.3655	1.3792	0.1141*	0.7118	0.8259	0.0756***	-0.3046	-0.2290
	(0.0248)	(1.1190)	(1.0548)	(0.0596)	(0.8077)	(0.7115)	(0.0228)	(0.4178)	(0.3869)
familab	0.0248	0.3918**	0.4166***	-0.0103	0.0124	0.0020	0.0100	0.0990***	0.1090***
	(0.0156)	(0.1613)	(0.1562)	(0.0252)	(0.0608)	(0.0451)	(0.0066)	(0.0243)	(0.0208)
hiredlab	0.0102***	-0.2003**	-0.1901**	-0.0122**	0.0154	0.0032	-0.0049**	0.0002	-0.0047
	(0.0024)	(0.0927)	(0.0912)	(0.0052)	(0.0214)	(0.0152)	(0.0023)	(0.0160)	(0.0130)
inputs	0.0470***	-0.2761*	-0.2291	-0.0096	0.2697*	0.2602**	0.0081**	-0.0572**	-0.0491**
	(0.0095)	(0.1437)	(0.1411)	(0.0133)	(0.1416)	(0.1235)	(0.0033)	(0.0265)	(0.0235)
scale	-0.0704***	-0.0575	-0.1278	-0.1919***	0.1596	-0.0324	-0.4804***	-0.0246	-0.5050***
	(0.0034)	(0.1663)	(0.1598)	(0.0278)	(0.1201)	(0.1079)	(0.0150)	(0.0336)	(0.0301)
genderch	0.0435	0.0485	0.0920	0.0072	-0.1526	-0.1454*	-0.0502**	0.1409	0.0907
	(0.0430)	(0.0926)	(0.0808)	(0.0227)	(0.1035)	(0.0881)	(0.0199)	(0.1192)	(0.1085)
hhchars	0.0128	-0.0868	-0.0740	0.0400**	-0.1134	-0.0734	0.0306***	0.0358	0.0664
	(0.0090)	(0.2143)	(0.2072)	(0.0202)	(0.2354)	(0.2101)	(0.0063)	(0.0944)	(0.0856)
plotchars	0.0164***	-0.0430	-0.0266	0.0050	0.3943	0.3993*	0.0543***	-0.0323	0.0220
	(0.0037)	(0.1407)	(0.1315)	(0.0033)	(0.2413)	(0.2119)	(0.0048)	(0.0262)	(0.0224)
geoeff	-0.0104	-1.0265	-1.0369	0.0125*	-1.2568	-1.2443	0.0531***	0.4194	0.4725
	(0.0118)	(1.1843)	(1.1190)	(0.0070)	(0.8916)	(0.7951)	(0.0085)	(0.4504)	(0.4216)
Total (column sum)	0.0875*	0.1157	0.2032***	-0.0452	0.0404	-0.0048	-0.3038***	0.2766***	-0.0272
	(0.0529)	(0.0759)	(0.0497)	(0.0684)	(0.0925)	(0.0535)	(0.0361)	(0.0486)	(0.0279)

Variable Group	Guatemala			Cambodia			Malawi		
	Endowment effect	Structural effect	Total effect (row sum)	Endowment effect	Structural effect	Total effect (row sum)	Endowment effect	Structural effect	Total effect (row sum)
Table 9 (Cont.)									
mgr	0.0197	0.4760	0.4957	0.0542	-0.3767	-0.3225	0.0818***	-0.1701	-0.0883
	(0.0321)	(0.4836)	(0.4400)	(0.0454)	(0.8112)	(0.7625)	(0.0253)	(0.2814)	(0.2454)
familab	0.0061	0.0429	0.0490	-0.0279**	-0.1102*	-0.1381**	-0.0020	0.0013	-0.0007
	(0.0087)	(0.0348)	(0.0304)	(0.0114)	(0.0663)	(0.0576)	(0.0096)	(0.0367)	(0.0314)
hiredlab	0.0001	-0.0481***	-0.0479***	0.0016	-0.0188	-0.0172	0.0027*	-0.0072	-0.0045
	(0.0002)	(0.0113)	(0.0110)	(0.0014)	(0.0306)	(0.0279)	(0.0015)	(0.0079)	(0.0065)
inputs	0.0257***	0.0092	0.0349	0.0078	-0.0676	-0.0598	0.0438***	0.0226	0.0664***
	(0.0039)	(0.0466)	(0.0427)	(0.0060)	(0.0661)	(0.0570)	(0.0048)	(0.0249)	(0.0221)
scale	-0.1437***	-0.1324**	-0.2762***	-0.1306***	-0.0246	-0.1552***	-0.1515***	-0.0744*	-0.2260***
	(0.0059)	(0.0618)	(0.0573)	(0.0147)	(0.0560)	(0.0502)	(0.0052)	(0.0451)	(0.0403)
genderch	-0.0233	-0.0469	-0.0702	0.0276*	-0.2141	-0.1865	0.0157	-0.0368	-0.0211
	(0.0186)	(0.0606)	(0.0536)	(0.0166)	(0.1574)	(0.1425)	(0.0195)	(0.1160)	(0.1035)
hhchars	-0.0066	0.0592	0.0526	-0.0255**	-1.4569	-1.4824	0.0160**	0.0769	0.0929
	(0.0056)	(0.1371)	(0.1283)	(0.0124)	(1.0552)	(1.0117)	(0.0067)	(0.0945)	(0.0809)
plotchars	0.0283***	-0.0197	0.0086	0.0016	0.0391	0.0407	0.0033***	-0.0050	-0.0016
	(0.0042)	(0.0397)	(0.0368)	(0.0015)	(0.0741)	(0.0706)	(0.0006)	(0.0269)	(0.0229)
geoeff	0.0074*	-0.2750	-0.2676	0.0431**	2.2639*	2.3071**	0.0204***	0.2292	0.2496
	(0.0045)	(0.5104)	(0.4658)	(0.0167)	(1.1863)	(1.1113)	(0.0065)	(0.3266)	(0.2896)
Total (column sum)	-0.0864**	0.0652	-0.0212	-0.0480	0.0342	-0.0138	0.0302	0.0365	0.0667***
	(0.0369)	(0.0542)	(0.0366)	(0.0521)	(0.0617)	(0.0294)	(0.0335)	(0.0410)	(0.0187)
mgr	-0.0202	4.7032***	4.6830***	0.0001	-0.2187	-0.2187	0.1783***	0.1607	0.3390
	(0.0836)	(1.7887)	(1.5971)	(0.0136)	(0.5406)	(0.5227)	(0.0369)	(0.9286)	(0.8634)

Table 9 (Cont.)

familab	0.0106	0.0831	0.0938	-0.0515***	0.0183	-0.0331	-0.0071	-0.0036	-0.0107
	(0.0241)	(0.1712)	(0.1497)	(0.0124)	(0.0478)	(0.0436)	(0.0050)	(0.0302)	(0.0291)
hiredlab	-0.0001**	-0.0674	-0.0675	-0.0033	-0.0468	-0.0501*	-0.0098	0.0742***	0.0644***
	(0.0000)	(0.0728)	(0.0657)	(0.0061)	(0.0288)	(0.0256)	(0.0086)	(0.0214)	(0.0145)
inputs	0.0302	0.4067***	0.4369***	0.0597***	-0.1862**	-0.1266	-0.0099***	-0.0494	-0.0593
	(0.0223)	(0.1548)	(0.1328)	(0.0078)	(0.0889)	(0.0823)	(0.0037)	(0.0417)	(0.0389)
scale	-0.1086***	0.4980	0.3894	-0.2001***	0.1163*	-0.0838	-0.3886***	-0.0404	-0.4289***
	(0.0136)	(0.3050)	(0.2764)	(0.0114)	(0.0698)	(0.0670)	(0.0130)	(0.0492)	(0.0447)
genderch	-0.0433	-0.0640	-0.1073	-0.0191	0.0492	0.0302	0.0850***	0.2414	0.3264*
	(0.0481)	(0.2853)	(0.2657)	(0.0121)	(0.1244)	(0.1218)	(0.0260)	(0.1828)	(0.1736)
hhchars	0.0499**	-0.4187	-0.3688	-0.0292***	0.0000	-0.0292	0.0299***	0.0463	0.0762
	(0.0194)	(0.4577)	(0.4162)	(0.0080)	(0.2332)	(0.2244)	(0.0092)	(0.1915)	(0.1784)
plotchars	0.0001*	0.2587	0.2588	0.0757***	0.0874	0.1631**	-0.0149***	-0.0478	-0.0627
	(0.0001)	(0.2225)	(0.2078)	(0.0146)	(0.0937)	(0.0816)	(0.0035)	(0.0773)	(0.0709)
geoeff	-0.0138	-4.9154**	-4.9292***	0.0915***	0.3322	0.4237	0.0141	-0.3834	-0.3693
	(0.0239)	(1.9691)	(1.7903)	(0.0273)	(0.6171)	(0.5927)	(0.0164)	(0.9901)	(0.9265)
Total (column sum)	-0.0951	0.4842***	0.3891***	-0.0761***	0.1517***	0.0756***	-0.1229**	-0.0020	-0.1249***
	(0.0904)	(0.1755)	(0.1305)	(0.0253)	(0.0398)	(0.0287)	(0.0490)	(0.0658)	(0.0368)

Variable Group	**Uganda**			**Viet Nam**		
	Endowment effect	**Structural effect**	**Total effect (row sum)**	**Endowment effect**	**Structural effect**	**Total effect (row sum)**
mgr	0.0818**	0.2385	0.3203	0.0339	1.4794	1.5133
	(0.0403)	(0.6737)	(0.5950)	(0.0352)	(0.9911)	(0.9516)
familab	-0.0215	0.0625	0.0410	-0.0039	0.1122	0.1083

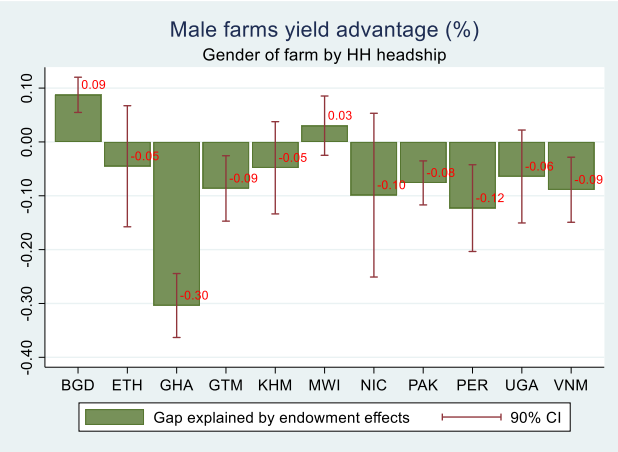
	(0.0204)	(0.0765)	(0.0612)	(0.0036)	(0.1193)	(0.1165)
hiredlab	0.0054***	-0.0070	-0.0016	-0.0058***	-0.0174	-0.0233
	(0.0010)	(0.0304)	(0.0266)	(0.0010)	(0.0421)	(0.0395)
inputs	0.0058	-0.0005	0.0053	0.0141***	-0.0501	-0.0361
	(0.0080)	(0.0416)	(0.0358)	(0.0035)	(0.0906)	(0.0861)
scale	-0.0978***	-0.0214	-0.1192***	-0.1884***	2.7701	2.5816
	(0.0102)	(0.0474)	(0.0402)	(0.0076)	(4.2120)	(4.0754)
genderch	-0.0264	0.1893	0.1629	0.0184***	-0.0025	0.0159
	(0.0267)	(0.1427)	(0.1238)	(0.0067)	(0.1391)	(0.1351)
hhchars	0.0014	0.1591	0.1605	2.3581***	22.9018***	25.2600***
	(0.0085)	(0.1593)	(0.1389)	(0.4274)	(8.2672)	(6.6377)
plotchars	-0.0026	0.0381	0.0355	-0.0006***	-0.0119	-0.0125
	(0.0022)	(0.0334)	(0.0306)	(0.0001)	(0.1221)	(0.1176)
geoeff	-0.0102	-0.5550	-0.5652	-2.3145***	-27.1620***	-29.4765***
	(0.0108)	(0.7104)	(0.6322)	(0.4293)	(9.6214)	(8.1187)
Total (column sum)	-0.0642	0.1037	0.0395	-0.0888**	0.0195	-0.0693**
	(0.0525)	(0.0723)	(0.0420)	(0.0430)	(0.0575)	(0.0324)

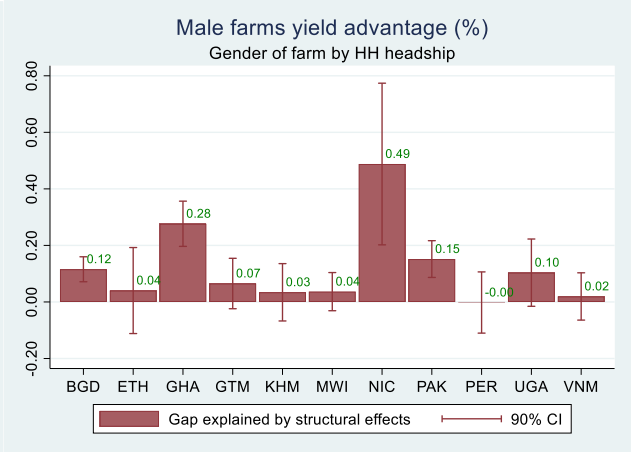
Note: Econometric standard errors in parenthesis. Parameter significant at 1% level (***), 5% level (**) and 10% level (*).

Table 9 contains a large amount of information. Figures 3 and 4 distil the main messages. Figure 3 shows endowment and structural effects for all countries considered in this study and for the three definitions of female farmer. It illustrates more transparently an important finding of this research effort: The Oaxaca decomposition of yields by gender shows that in general, in spite of the fact that yield gaps sometimes favour male farmers and sometimes female farmers, the endowment effect favours females, while the structural effect favours male farmers. The figure shows that the endowment effects favour female farmers in 9 out of 11 countries (five of six countries in the case of female-managed farms, *femmgr*). Similarly, structural effects tend to favour male farmers in 10 of 11 countries (five out of six in the case of *femmgr*). It should be noted that these gender differences do not follow the patterns generally found in the gender wage gaps literature (e.g. Boll and Lagemann, 2019; Stanley and Jarrell, 1998; Weichselbaumer and Winter-Ebmer, 2005). The literature generally shows that both endowment and structural effects favour male wage earners over females, and that structural effects dominate in the observed gaps.

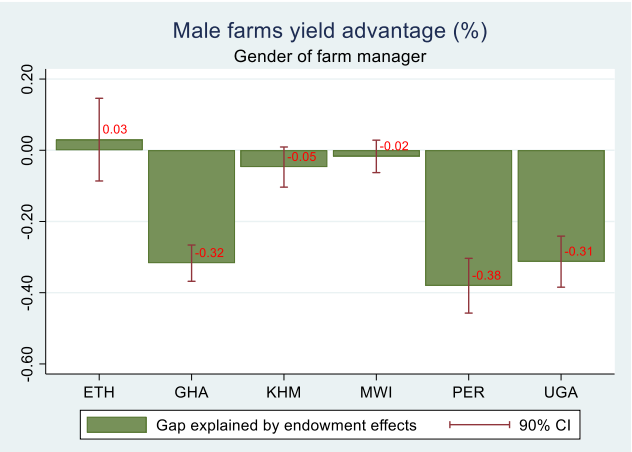
Figure 3. Endowment and structural effects in yield gaps

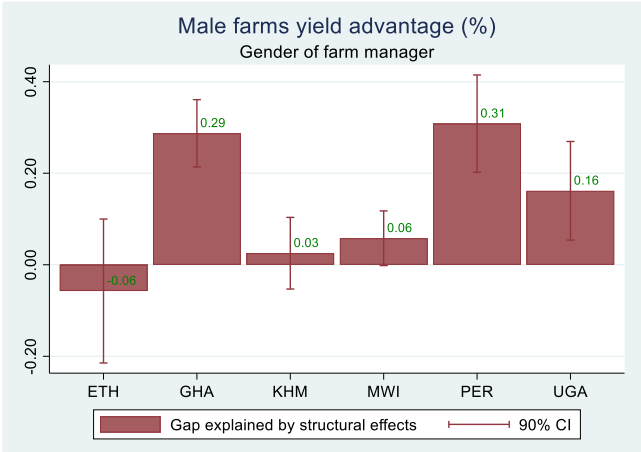
Panel A: Female-headed farms, *femhead*



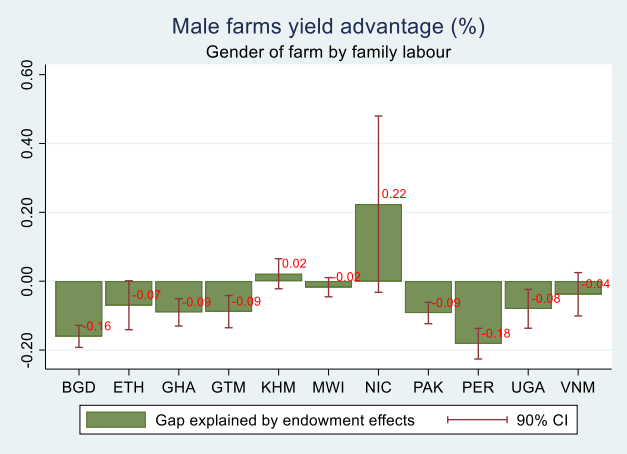


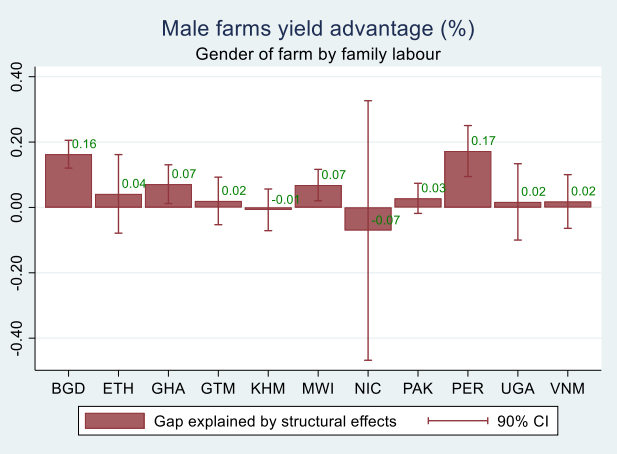
Panel B: Female-managed farms, *femmgr*





Panel C: Female-labour farms, *femlab*



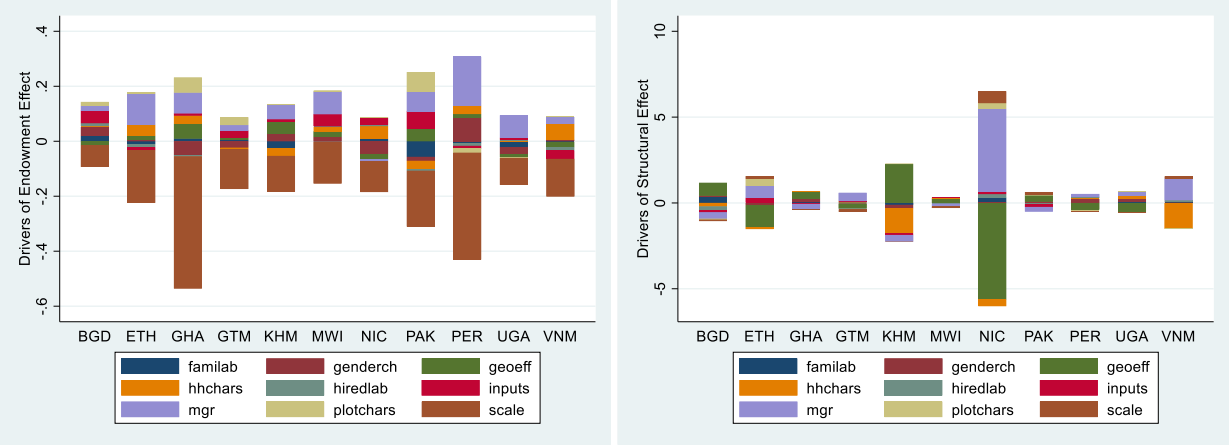


Note: BGD – Bangladesh; ETH – Ethiopia; GHA – Ghana; GTM – Guatemala; KHM – Cambodia; MWI – Malawi; NIC – Nicaragua; PAK – Pakistan; PER – Peru; UGA – Uganda; VNM – Viet Nam.

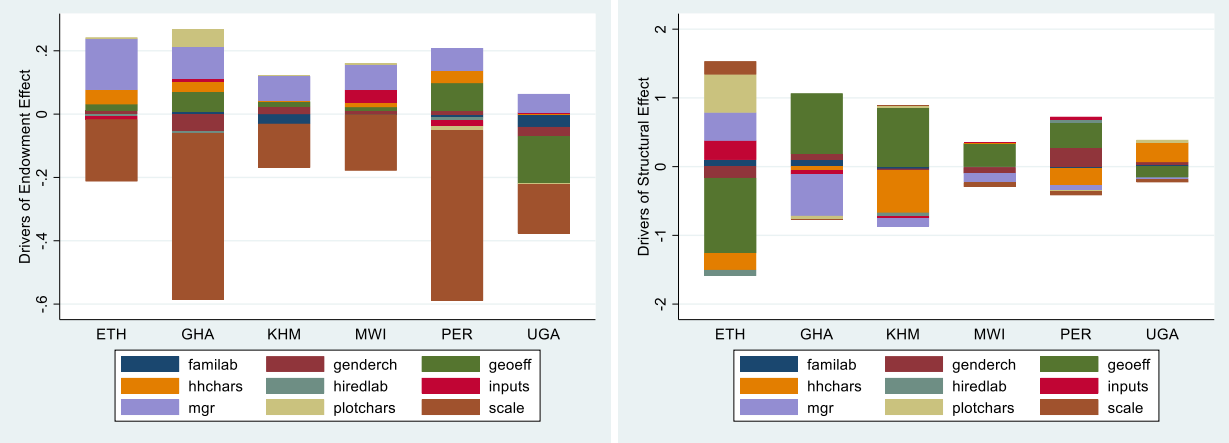
The endowment and structural effects are graphically decomposed in Figure 4. The panels on the left-hand side of the figures show that the most important component that explains the observed endowment advantage of female farmers is scale of operation (*scale* in the figures) in all countries and for all definitions of gender of the farm. Female farmers always operate smaller farms than male farmers. Moreover, yields were found to be negatively correlated with farm size in all these country yield models. Again, as noted previously, one straightforward interpretation of these results is that the endowment advantage that female farmers display is simply due to higher yields being correlated with smaller production units within the range of farm scale represented in the country surveys. And one can go further and say that it is likely that the tendency for female farmers to operate at a smaller scale is a consequence of underlying disadvantages that lead to women controlling less land. The negative relation of yields and farm size is likely due to the low level of mechanization and small farm sizes in the countries considered in this study. At this point, this is just a hypothesis, however. Nevertheless, one should avoid the spurious conclusion that women farmers are advantaged or privileged with respect to overall endowments of resources. The fact shown here is that the smaller size of farms operated by female farmers acts as an endowment advantage insofar as one accounts for differences in yields per unit area. Another generalizable finding is that the specific endowment effect of manager characteristics (*mgr* in the figures) favours male farmers. As shown in Table 7, female farmers also tend to be older and less educated than their male counterparts. These disadvantages in terms of endowments cause female farmers to have lower yields in all countries when considering female farmers defined by manager and household headship (*femlab* and *femmgr*) and in all but two countries (Uganda and Viet Nam) when considering female farmers by labour contribution (*femlab*).

Figure 4. Drivers of the endowment and structural effects

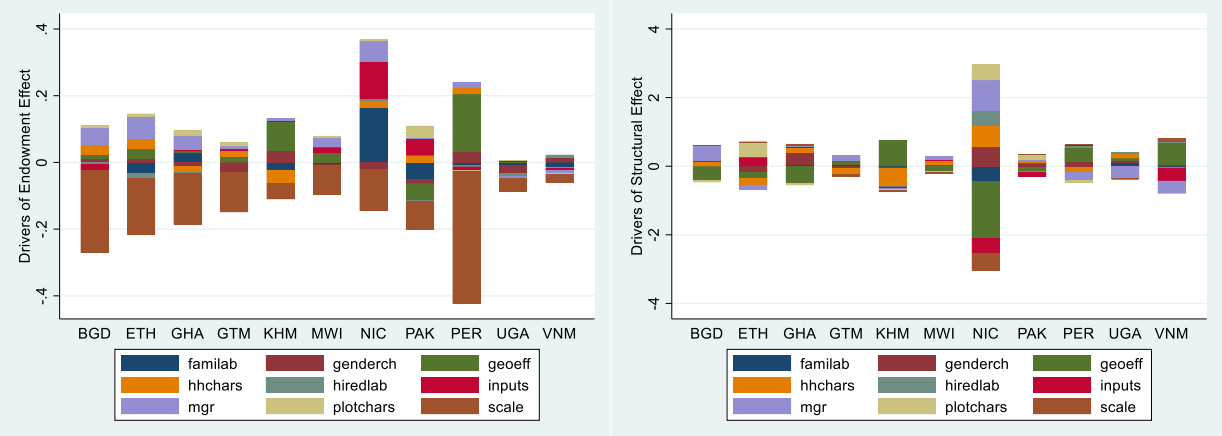
Panel A: Female-headed farms *(femhead)*



Panel B: Female-managed farms (*femmgr*)



Panel C: Female-labour farms (*femlab*)



Note: BGD – Bangladesh; ETH – Ethiopia; GHA – Ghana; GTM – Guatemala; KHM – Cambodia; MWI – Malawi; NIC – Nicaragua; PAK – Pakistan; PER – Peru; UGA – Uganda; VNM – Viet Nam.

The right-hand panels of Figure 4 show a visual decomposition of the structural effects. Although structural effects overall tend to favour male farmers, as shown in Figure 3, the main drivers of these advantages are country specific. There are three variable groups that dominate the structural effects, the geographic fixed effects (*geoeff*), the characteristics of the manager (*mgr*) and the household characteristics (*hhchars*). Perhaps it should not surprise the reader that the direction of these effects, however, varies by country. These structural effects partially capture the effects on farm productivity of gender inequalities, norms and discrimination that affect women farmers, all of which are expected to vary significantly by country. The geographic fixed effects in this econometric specification capture the impact on yields of unobserved characteristics, most probably including as an important component the agroecological conditions, but also possibly other factors, such as cultural differences and norms that may have differential impacts by gender while being geographically sorted.

Other farm aspects that display important structurally different returns to yields are manager characteristics (*mgr*) and household characteristics (*hhchar*). The manager characteristics include age and education of the head, civil status and the head's characteristics as a manager, such as the number of plots controlled and whether or not the land is rented. The household characteristics group of variables includes several features such as household size (members), distance to markets, and the economic structure of the household, in terms of receiving non-farm income, and wealth (assets owned). The above characteristics have an important impact on the structural biases observed, although the direction of these biases is country specific.

Table 10. Yield gaps (percentage difference between male and female farmers), assuming no farm-size differences

Country	*femmgr*	*femhead*	*femlab*
Bangladesh		0.2736	0.2492
Ethiopia	0.1677	0.1871	0.1399
Ghana	0.4958	0.4531	0.1347
Guatemala		0.1226	0.0511
Cambodia	0.1163	0.1168	0.0608
Malawi	0.2176	0.2182	0.1385
Nicaragua		0.5002	0.2759
Pakistan		0.2757	0.0196
Peru	0.4651	0.2637	0.3880
Uganda	0.0042	0.1373	-0.0238
Viet Nam		0.1191	0.0055
Average	0.2444	0.2404	0.1309
Average (*femmgr* sample)		0.2294	0.1397

One of the important results that this decomposition reveals is the key role that farm size plays in observed yield gaps by farm gender. The Oaxaca decomposition tool allows the analysis of the hypothesis of what the yield gaps would be if average farm sizes were comparable across gender of farmer (Table 10). It allows for a straightforward way of examining the effect of comparing yields for farms of equal average size, holding everything else constant. The results are in line with the a priori expectations about the direction of the yield gaps. Male farmers display

yields that are 24 percent higher on average than those of female farmers (in line with estimates in FAO [2011]) if they operated farms of equivalent size. Furthermore, this gap is similar if female farmers are identified by the gender of the household head (*femhead*) or farm manager (*femmgr*). The yield gap would be much smaller (about 13 percent) if female farmers were defined by the gender of the largest farm labour contribution (*femlab*). This is an expected result given that female-labour farms are more similar to those of their male counterparts in terms of observable traits and characteristics as compared with the other definitions of female farmer.

5 Concluding remarks

While the gender wage gap literature has demonstrated that wage differentials are explained by both endowment and structural effects that on average favour male employees, the results presented here regarding gender yield gaps are of a different nature. In brief, we find that endowment effects favour female farmers, while structural effects favour male farmers. The net effect, which is the observed yield gaps, do not generally favour male farmers. Nevertheless, the Oaxaca decompositions show that the main driver of the endowment advantage of female farmers might invite a spurious conclusion and should be interpreted in context. Given that female farmers farm smaller areas and given an inverse relation between farm size and yields that has been extensively reported in the literature (see, for example, Barrett, Bellemare and Hou, 2010; Helfand and Taylor, 2021), female farmers enjoy an endowment yield advantage. We also show that if this farm-size endowment effect is removed one finds a 24-percent yield gap favouring male farmers, in line with the average estimates provided by FAO (2011) where farm and plot yield gaps where mixed.

The yield decompositions also provide insight for policy interventions. Although smaller farm sizes favour female farms in terms of average yields, these disparities invite an inspection of policies that might be hindering women's access to farmland and of other formal or informal institutional obstacles and barriers that may be driving the unequal distribution of farmland. Also, the decompositions show that there is a negative endowment effect associated with household head and farm manager characteristics in the case of females. One driver of this is the age of household head, which is hard to address via policy, but narrowing gender gaps in education may be a reasonable objective for policy. Recent advances in gender parity in educational enrolment reported elsewhere (World Bank, 2007, 2012) have yet to manifest among household heads in our developing country sample.

An inspection of unobservable effects in yields reveals that there are no common trends across countries. However, two important policy lessons can be extracted from these heterogenous results. First, the nature of these unobserved effects, which include gender discrimination, barriers, obstacles and other gender-specific effects, depend on each country's context. This means that careful country case studies are required to understand the true nature of these effects. Nonetheless, there are two important sets of drivers to consider. One is related to the geographic fixed effects, which show that there are location-specific impacts, either agroecological or cultural or otherwise, that should be understood. The other set of drivers is associated with manager characteristics, which suggests that unobserved market conditions or social norms, which require further understanding, are appearing as gender-differentiated returns in farming to the household head or manager characteristics and attributes.

Another conclusion of this study is that there are in general no large differences in terms of observed yield gaps and their underlying drivers when the analysis is carried out by gender of the household head or gender of the manager of the farm. With the limited set of countries considered in this study, key indicators such as observed mean yield gaps and yield gaps for equivalent farm size are surprisingly similar when comparing female-headed farms and female-managed farms. This result would suggest that the frequent identifier of female farmers, household headship, is an adequate identifier, but further studies are required to confirm this result. Finally, this study invites further study in understanding the relation between gender-based yield gaps at farm level versus the plot level.

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Appendix

Table of appendix

Table 11. Differences in farm characterics by gender of household head *(femhead)*

		BGD	ETH	GHA	GTM	KHM	MWI	NIC	PAK	PER	UGA	VNM
agcap_ha	Male	0.99	4.07	-0.08	-1.21	0.08	-0.25	-0.2	6 448.66	-0.17	-0.41	0.67
		(0.1301)	(0.3426)	(0.0144)	(0.1909)	(0.1170)	(0.1237)	(0.0425)	(865.2654)	(0.1811)	(0.0760)	(0.1010)
	Female	0.24	-1.21	-0.49	-2.75	-1.13	-2.59	-0.41	2 102.37	2.27	-1.19	0.63
		(0.3007)	(1.2913)	(0.0359)	(0.4543)	(0.2374)	(0.1730)	(0.1053)	(618.6132)	(2.6346)	(0.1410)	(0.1363)
	Difference	0.76	5.28	0.41	1.55	1.21	2.34	0.21	4 346.29	-2.44	0.78	0.04
		**	***	***	***	***	***	**	***		***	
ageh2	Male	2 737.68	2 225.79	2 386.01	2 501.4	2 269.44	2087.22	2 685.11	2 458.89	3 026.21	2 163.09	2 448.92
		(13.0134)	(38.1670)	(19.4129)	(25.8667)	(26.0750)	(19.0581)	(67.1651)	(23.0156)	(20.4569)	(37.3581)	(26.5146)
	Female	2 682.46	2 512.03	2 900.31	2 910.64	2 855.7	2 596.28	3 052.85	2 147.61	3 584.63	2 504.72	3 129.22
		(60.0465)	(70.1708)	(41.8689)	(82.5618)	(57.7842)	(35.1151)	(153.6377)	(86.0256)	(51.1073)	(57.1905)	(73.0562)
	Difference	55.23	-286.24	-514.3	-409.25	-586.26	-509.07	-367.75	311.28	-558.42	-341.63	-680.3
			***	***	***	***	***	**	***	***	***	***
agehead	Male	50.68	44.7	46.53	47.76	45.65	43.01	49.38	47.55	53.05	44.14	47.83
		(0.1203)	(0.3775)	(0.1884)	(0.2527)	(0.2678)	(0.1917)	(0.6510)	(0.2283)	(0.1858)	(0.3792)	(0.2583)
	Female	50.03	48	51.87	51.97	51.77	47.78	53.2	44.82	57.97	48.03	54.39
		(0.5725)	(0.7062)	(0.3802)	(0.7576)	(0.5633)	(0.3379)	(1.3974)	(0.8968)	(0.4375)	(0.5637)	(0.6454)
	Difference	0.64	-3.3	-5.34	-4.21	-6.12	-4.76	-3.82	2.73	-4.92	-3.89	-6.56
			***	***	***	***	***	***	***	***	***	***
child_dep	Male	0.48	0.32	0.31	0.25	0.19	0.3	0.18	0.32	0.13	0.26	0.07
		(0.0063)	(0.0094)	(0.0047)	(0.0058)	(0.0056)	(0.0041)	(0.0104)	(0.0061)	(0.0032)	(0.0083)	(0.0048)
	Female	0.44	0.19	0.25	0.16	0.13	0.33	0.14	0.39	0.09	0.19	0.06
		(0.0308)	(0.0193)	(0.0121)	(0.0173)	(0.0122)	(0.0099)	(0.0231)	(0.0416)	(0.0067)	(0.0147)	(0.0112)
	Difference	0.04	0.13	0.06	0.09	0.05	-0.04	0.03	-0.07	0.04	0.07	0.01
			***	***	***	***	***	*	**	***	***	

Note: BGD – Bangladesh; ETH – Ethiopia; GHA – Ghana; GTM – Guatemala; KHM – Cambodia; MWI – Malawi; NIC – Nicaragua; PAK – Pakistan; PER – Peru; UGA – Uganda; VNM – Viet Nam.

Table A1. Differences in farm characteristics by gender of household head *(femhead)* (continued)

		BGD	ETH	GHA	GTM	KHM	MWI	NIC	PAK	PER	UGA	VNM
childlab	Male	0.46	0.14	0.33	0.17	0.31	0.17	15.55	0.07	3.64	18.76	0.04
		(0.0372)	(0.0187)	(0.0164)	(0.0282)	(0.1553)	(0.0055)	(3.3208)	(0.0077)	(1.7151)	(1.2381)	(0.0057)
	Female	0.22	0.36	0.79	0.14	0.16	0.32	10.51	0.21	2.25	33.29	0.01
		(0.0606)	(0.0861)	(0.0837)	(0.0390)	(0.0355)	(0.0215)	(5.4104)	(0.0839)	(0.4342)	(2.9709)	(0.0033)
	Difference	0.23	-0.23	-0.46	0.02	0.15	-0.16	5.04	-0.13	1.39	-14.53	0.03
		***	***	***			***		*		***	***
distance	Male	3.72	60.22	19.47	14.41	5.88	23.83	2.14	133.29	0.37	1.47	5.13
		(0.0782)	(1.1280)	(0.2118)	(0.1282)	(0.1058)	(0.2106)	(0.0663)	(1.3130)	(0.0088)	(0.0464)	(0.0828)
	Female	2.49	59.07	16.72	15.35	6.15	24.48	2.05	116.54	0.36	1.37	4.54
		(0.2854)	(2.1085)	(0.4185)	(0.4292)	(0.2024)	(0.3390)	(0.1412)	(5.3614)	(0.0190)	(0.0406)	(0.1813)
	Difference	1.24	1.15	2.75	-0.93	-0.27	-0.65	0.09	16.75	0	0.11	0.6
		***		***	**		*		***		**	***
educhead	Male	3.82	2.42	4.8	4.03	7.13	6.18	4.05	3.8	6.22	6.68	6.88
		(0.0418)	(0.0901)	(0.0611)	(0.0589)	(0.0612)	(0.0487)	(0.1667)	(0.0764)	(0.0493)	(0.0905)	(0.0714)
	Female	1.7	0.77	3.3	2.45	6.39	3.86	4.86	1.16	3.53	4.05	5.31
		(0.1352)	(0.1123)	(0.1088)	(0.1652)	(0.1494)	(0.0702)	(0.5266)	(0.2093)	(0.1155)	(0.1464)	(0.1888)
	Difference	2.12	1.65	1.5	1.58	0.75	2.32	-0.81	2.64	2.69	2.63	1.56
		***	***	***	***	***	***	*	***	***	***	***
femfaml	Male	5.01	1.19	0.66	0.68	1.66	1.08	21.95	0.54	46.18	132.48	0.11
		(0.1753)	(0.0624)	(0.0195)	(0.0477)	(0.0977)	(0.0200)	(4.6614)	(0.0278)	(5.0608)	(3.7835)	(0.0075)
	Female	10.29	3.31	2.24	1.76	3.08	1.73	80.42	3.24	165.61	201.62	0.12
		(0.6266)	(0.3185)	(0.2179)	(0.2408)	(0.2188)	(0.0424)	(21.7903)	(0.3609)	(30.0514)	(8.5564)	(0.0133)
	Difference	-5.28	-2.12	-1.58	-1.08	-1.41	-0.65	-58.48	-2.7	-119.44	-69.14	-0.03
		***	***	***	***	***	***	***	***	***	***	**

Note: BGD – Bangladesh; ETH – Ethiopia; GHA – Ghana; GTM – Guatemala; KHM – Cambodia; MWI – Malawi; NIC – Nicaragua; PAK – Pakistan; PER – Peru; UGA – Uganda; VNM – Viet Nam.

Table A1. Differences in farm characteristics by gender of household head *(femhead)* (continued)

		BGD	ETH	GHA	GTM	KHM	MWI	NIC	PAK	PER	UGA	VNM
femlabsh	Male	0.02	0.29	0.44	0.12	0.47	0.47	0.19	0.27	0.35	0.42	0.49
		(0.0011)	(0.0066)	(0.0027)	(0.0037)	(0.0035)	(0.0019)	(0.0100)	(0.0042)	(0.0030)	(0.0067)	(0.0080)
	Female	0.31	0.54	0.81	0.49	0.67	0.81	0.39	0.63	0.74	0.74	0.66
		(0.0197)	(0.0208)	(0.0069)	(0.0222)	(0.0110)	(0.0047)	(0.0338)	(0.0306)	(0.0090)	(0.0118)	(0.0206)
	Difference	-0.29	-0.25	-0.37	-0.36	-0.21	-0.35	-0.21	-0.36	-0.39	-0.32	-0.17
		***	***	***	***	***	***	***	***	***	***	***
fertil_ha	Male	156.62	0.25	61.22	11.15	0.31	2.56	0.17	22 085.78	0.05	0.33	5.85
		(2.8601)	(0.0901)	(2.3988)	(0.3116)	(0.0194)	(0.0708)	(0.0175)	(341.4015)	(0.0036)	(0.0667)	(0.0879)
	Female	96.12	0.6	49.95	10.35	0.29	1.45	0.21	15 401.4	0.07	0.23	6.03
		(6.2444)	(0.3029)	(4.9445)	(0.9398)	(0.0313)	(0.0935)	(0.0690)	(1 171.5980)	(0.0124)	(0.0843)	(0.0359)
	Difference	60.51	-0.35	11.26	0.8	0.02	1.11	-0.05	6 684.38	-0.02	0.1	-0.17
		***		**			***		***	**		**
hhsize	Male	5.93	5.21	5.63	5.66	5.19	4.77	4.88	7.73	4.16	5.66	4.38
		(0.0223)	(0.0526)	(0.0390)	(0.0441)	(0.0365)	(0.0243)	(0.0975)	(0.0590)	(0.0270)	(0.0732)	(0.0320)
	Female	5.25	3.58	4.11	4.59	4.24	3.8	4.81	6.11	3.2	4.94	3.43
		(0.1080)	(0.0921)	(0.0568)	(0.1242)	(0.0814)	(0.0346)	(0.1917)	(0.1818)	(0.0584)	(0.1028)	(0.0781)
	Difference	0.68	1.63	1.51	1.07	0.95	0.97	0.07	1.62	0.96	0.72	0.95
		***	***	***	***	***	***		***	***	***	***
hiredlab	Male	152.05	0.55	52.37	3.19	0.14	0.43	1.68	6 687.27	0.02	4.28	2.85
		(3.6697)	(0.0588)	(2.5005)	(0.4100)	(0.0114)	(0.0305)	(0.1081)	(193.7964)	(0.0009)	(0.2201)	(0.1502)
	Female	119.09	0.93	75.63	3.47	0.12	0.26	1.93	3 272.37	0.04	3.88	3.14
		(11.2671)	(0.1750)	(7.1444)	(0.5130)	(0.0121)	(0.0211)	(0.2481)	(509.3806)	(0.0090)	(0.3208)	(0.0569)
	Difference	32.97	-0.38	-23.26	-0.28	0.02	0.17	-0.26	3 414.9	-0.02	0.4	-0.29
		***	**	***			***		***	***		*

Note: BGD – Bangladesh; ETH – Ethiopia; GHA – Ghana; GTM – Guatemala; KHM – Cambodia; MWI – Malawi; NIC – Nicaragua; PAK – Pakistan; PER – Peru; UGA – Uganda; VNM – Viet Nam.

Table A1. Differences in farm characteristics by gender of household head (femhead) (continued)

		BGD	ETH	GHA	GTM	KHM	MWI	NIC	PAK	PER	UGA	VNM
irrigation	Male	0.76	0.12	0.53	0.55	0.5	0.01	0.48	0.85	0.39	0.02	0.37
		(0.0039)	(0.0080)	(0.0063)	(0.0085)	(0.0098)	(0.0012)	(0.0207)	(0.0059)	(0.0062)	(0.0035)	(0.0098)
	Female	0.69	0.08	0.31	0.36	0.55	0.01	0.48	0.53	0.46	0.02	0.37
		(0.0197)	(0.0132)	(0.0122)	(0.0251)	(0.0211)	(0.0015)	(0.0468)	(0.0380)	(0.0146)	(0.0057)	(0.0239)
	Difference	0.07	0.04	0.21	0.19	-0.05	0	0	0.32	-0.07	0	0
		***	***	***	***	**	*		***	***		
land	Male	-0.92	-0.62	0.78	-0.49	0.08	-0.7	1.46	2.63	0.36	0.04	-1.05
		(0.0103)	(0.0289)	(0.0127)	(0.0197)	(0.0209)	(0.0109)	(0.0642)	(0.0744)	(0.0176)	(0.0240)	(0.0248)
	Female	-1.04	-1.49	-0.03	-0.84	-0.39	-1	1.31	0.89	-0.27	-0.21	-1.43
		(0.0444)	(0.0631)	(0.0275)	(0.0604)	(0.0452)	(0.0156)	(0.1491)	(0.1058)	(0.0435)	(0.0373)	(0.0584)
	Difference	0.11	0.87	0.81	0.34	0.47	0.3	0.15	1.75	0.63	0.25	0.37
		***	***	***	***	***	***		***	***	***	***
land2	Male	2.1	1.72	1.61	1.58	1.14	1.25	4.55	27.95	2.03	0.86	2.61
		(0.0270)	(0.0784)	(0.0265)	(0.0424)	(0.0449)	(0.0270)	(0.2581)	(5.3998)	(0.0458)	(0.0382)	(0.0753)
	Female	2.16	3.88	1.1	2.03	1.28	1.67	4.25	2.72	2.28	0.91	3.47
		(0.1258)	(0.2582)	(0.0460)	(0.1387)	(0.0914)	(0.0428)	(0.6153)	(1.0631)	(0.1243)	(0.0615)	(0.2154)
	Difference	-0.06	-2.16	0.51	-0.45	-0.14	-0.42	0.3	25.22	-0.25	-0.05	-0.85
		***	***	***	***	***	***		***	***	***	***
malefaml	Male	11.55	2.39	0.9	2.23	1.9	1.17	187.94	1.25	70.02	116.31	0.10
		(0.2162)	(0.1166)	(0.0203)	(0.0878)	(0.0980)	(0.0261)	(11.7367)	(0.0268)	(9.2831)	(3.8710)	(0.0892)
	Female	4.34	1.22	0.64	1.46	1.11	0.37	165.08	1.09	17.36	57.91	0.16
		(0.7970)	(0.1386)	(0.0623)	(0.1667)	(0.0870)	(0.0165)	(24.1724)	(0.1388)	(1.9122)	(4.3324)	(0.0073)
	Difference	7.21	1.17	0.26	0.77	0.79	0.79	22.86	0.16	52.66	58.4	-0.06
		***	***	***	***	***	***			***	***	

Note: BGD – Bangladesh; ETH – Ethiopia; GHA – Ghana; GTM – Guatemala; KHM – Cambodia; MWI – Malawi; NIC – Nicaragua; PAK – Pakistan; PER – Peru; UGA – Uganda; VNM – Viet Nam.

Table A1. Differences in farm characteristics by gender of household head *(femhead)* (continued)

		BGD	ETH	GHA	GTM	KHM	MWI	NIC	PAK	PER	UGA	VNM
married	**Male**	0.8	0.94	0.81	0.95	0.97	0.94	0.9	0.94	0.88	0.94	0.57
		(0.0037)	(0.0060)	(0.0050)	(0.0037)	(0.0033)	(0.0029)	(0.0123)	(0.0039)	(0.0041)	(0.0060)	(0.0101)
	Female	0.22	0.25	0.25	0.21	0.22	0.2	0.4	0.67	0.2	0.38	0.27
		(0.0178)	(0.0211)	(0.0113)	(0.0214)	(0.0177)	(0.0076)	(0.0459)	(0.0357)	(0.0118)	(0.0194)	(0.0220)
	Difference	0.58	0.69	0.57	0.74	0.75	0.75	0.5	0.27	0.68	0.56	0.3
		***	***	***	***	***	***	***	***	***	***	***
nfi	**Male**	0.22	0.13	0.32	0.26	0.58	0.68	0.22	0.12	0.24	0.46	0.35
		(0.0038)	(0.0083)	(0.0059)	(0.0075)	(0.0097)	(0.0058)	(0.0171)	(0.0052)	(0.0055)	(0.0129)	(0.0097)
	Female	0.14	0.13	0.29	0.3	0.61	0.72	0.19	0.1	0.23	0.39	0.23
		(0.0147)	(0.0163)	(0.0119)	(0.0240)	(0.0208)	(0.0085)	(0.0368)	(0.0226)	(0.0123)	(0.0196)	(0.0208)
	Difference	0.08	0	0.03	-0.04	-0.03	-0.05	0.03	0.02	0.01	0.06	0.11
		***		***	*		***				***	***
nfwi	**Male**	0.24	0.23	0.36	0.31	0.25	0.14	0.21	0.36	0.21	0.27	0.35
		(0.0039)	(0.0105)	(0.0061)	(0.0079)	(0.0085)	(0.0043)	(0.0167)	(0.0078)	(0.0052)	(0.0115)	(0.0097)
	Female	0.22	0.21	0.32	0.33	0.27	0.06	0.29	0.16	0.18	0.26	0.34
		(0.0178)	(0.0201)	(0.0122)	(0.0247)	(0.0189)	(0.0047)	(0.0424)	(0.0275)	(0.0113)	(0.0176)	(0.0234)
	Difference	0.02	0.01	0.04	-0.02	-0.02	0.08	-0.08	0.21	0.03	0.01	0.01
				***			***	**	***	**		
other_ha	**Male**	548.14	12.63	85.45	9.9	0.29	0.4	0.13	23 979.79	0.08	2.1	0.45
		(21.1880)	(2.3933)	(3.2622)	(0.3178)	(0.0132)	(0.0217)	(0.0309)	(410.8040)	(0.0048)	(0.1200)	(0.0794)
	Female	300.74	13.37	75.2	7.52	0.27	0.21	0.1	21 880.11	0.1	1.9	0.29
		(30.8681)	(5.6679)	(5.5329)	(0.6050)	(0.0174)	(0.0270)	(0.0212)	(1 893.6370)	(0.0198)	(0.1789)	(0.0632)
	Difference	247.4	-0.74	10.25	2.39	0.02	0.19	0.03	2099.68	-0.02	0.19	0.16
		***		*	***		***					*

Note: BGD – Bangladesh; ETH – Ethiopia; GHA – Ghana; GTM – Guatemala; KHM – Cambodia; MWI – Malawi; NIC – Nicaragua; PAK – Pakistan; PER – Peru; UGA – Uganda; VNM – Viet Nam.

Table A1. Differences in farm characteristics by gender of household head *(femhead)* (continued)

		BGD	ETH	GHA	GTM	KHM	MWI	NIC	PAK	PER	UGA	VNM
plots	Male	6.01	3.42	2.55	2.07	2.13	1.52	1.23	1.11	2.36	2.25	10.32
		(0.0329)	(0.0644)	(0.0245)	(0.0234)	(0.0228)	(0.0092)	(0.0257)	(0.0054)	(0.0276)	(0.0312)	(0.1632)
	Female	5.31	2.3	1.84	1.86	1.84	1.38	1.13	1.05	2.11	2.08	8.5
		(0.1367)	(0.0825)	(0.0323)	(0.0591)	(0.0399)	(0.0120)	(0.0401)	(0.0168)	(0.0464)	(0.0451)	(0.3328)
	Difference	0.69	1.11	0.72	0.21	0.29	0.13	0.1	0.06	0.25	0.17	1.82
		***	***	***	***	***	***	**	***	***	***	***
rent	Male	0.14	0.09	0.08	0.53	0.01	0.11	0.37	0.12	0.05	0.05	0.12
		(0.0032)	(0.0073)	(0.0034)	(0.0085)	(0.0021)	(0.0038)	(0.0200)	(0.0054)	(0.0027)	(0.0055)	(0.0065)
	Female	0.1	0.04	0.05	0.64	0.02	0.06	0.36	0.11	0.04	0.07	0.09
		(0.0127)	(0.0099)	(0.0056)	(0.0251)	(0.0054)	(0.0045)	(0.0449)	(0.0237)	(0.0059)	(0.0100)	(0.0140)
	Difference	0.04	0.05	0.03	-0.11	0	0.05	0.01	0.02	0	-0.02	0.03
		***	***	***	***		***				**	**
seeds_ha	Male	68.9	0.45	6.52	1.75	0.17	0.96		8 602.98	0.03	2.64	4.63
		(1.5604)	(0.0287)	(0.5294)	(0.1387)	(0.0077)	(0.0244)		(153.2286)	(0.0019)	(0.1244)	(0.1008)
	Female	41.96	0.5	8.55	1.09	0.15	0.64		7 040.08	0.05	2.02	4.54
		(2.5216)	(0.0502)	(1.3344)	(0.1931)	(0.0092)	(0.0283)		(455.7811)	(0.0089)	(0.1645)	(0.0362)
	Difference	26.95	-0.05	-2.02	0.66	0.02	0.32		1 562.9	-0.01	0.62	0.09
		***		*	***	**	***		***	*	***	
sharecrop	Male		0.17	0.15					0.3			
			(0.0095)	(0.0045)					(0.0074)			
	Female		0.03	0.11					0.07			
			(0.0088)	(0.0081)					(0.0193)			
	Difference		0.14	0.04					0.23			
			***	***					***			

Note: BGD – Bangladesh; ETH – Ethiopia; GHA – Ghana; GTM – Guatemala; KHM – Cambodia; MWI – Malawi; NIC – Nicaragua; PAK – Pakistan; PER – Peru; UGA – Uganda; VNM – Viet Nam.

Table A1. Differences in farm characteristics by gender of household head *(femhead)* (continued)

		BGD	ETH	GHA	GTM	KHM	MWI	NIC	PAK	PER	UGA	VNM
slope	**Male**		16.59				0.46				0.14	
			(0.2548)				(0.0062)				(0.0091)	
	Female		15.85				0.44				0.11	
			(0.4751)				(0.0095)				(0.0127)	
	Difference		0.74				0.02				0.03	
			*				**				**	
wealth	**Male**	0.02	-1.3	-0.52	-1.19	-0.71	-0.35	-1.84	-0.67	-1.31	-0.06	-0.34
		(0.0031)	(0.0193)	(0.0094)	(0.0250)	(0.0224)	(0.0253)	(0.0711)	(0.0290)	(0.0170)	(0.0364)	(0.0391)
	Female	0.03	-1.42	-0.57	-1.08	-0.97	-0.81	-1.43	-0.53	-1.47	-0.45	-0.83
		(0.0167)	(0.0397)	(0.0181)	(0.0835)	(0.0454)	(0.0272)	(0.1731)	(0.1288)	(0.0420)	(0.0432)	(0.0909)
	Difference	-0.02	0.12	0.05	-0.11	0.26	0.46	-0.42	-0.13	0.16	0.39	0.48
			***	***		***	***	**		***	***	***
widow	**Male**	0.18	0.02	0.02	0.03	0.03	0.02	0.05	0.04	0.08	0.01	0.02
		(0.0036)	(0.0033)	(0.0017)	(0.0028)	(0.0031)	(0.0016)	(0.0094)	(0.0033)	(0.0035)	(0.0028)	(0.0029)
	Female	0.78	0.51	0.42	0.52	0.64	0.41	0.26	0.33	0.48	0.41	0.52
		(0.0179)	(0.0245)	(0.0130)	(0.0261)	(0.0204)	(0.0094)	(0.0411)	(0.0357)	(0.0146)	(0.0197)	(0.0247)
	Difference	-0.59	-0.49	-0.41	-0.49	-0.61	-0.39	-0.21	-0.28	-0.4	-0.39	-0.5
		***	***	***	***	***	***	***	***	***	***	***

Note: BGD – Bangladesh; ETH – Ethiopia; GHA – Ghana; GTM – Guatemala; KHM – Cambodia; MWI – Malawi; NIC – Nicaragua; PAK – Pakistan; PER – Peru; UGA – Uganda; VNM – Viet Nam.

Table 12. Differences in farm characteristics by gender of farm defined by majority of labour contribution *(femlab)*

		BGD	ETH	GHA	GTM	KHM	MWI	NIC	PAK	PER	UGA	VNM
agcap_ha	Male	0.94	3.56	-0.09	-1.22	0.09	-0.29	-0.21	6 813.38	0.02	-0.4	0.61
		(0.0853)	(0.3136)	(0.0170)	(0.1995)	(0.1276)	(0.1472)	(0.0396)	(958.3084)	(0.0632)	(0.1185)	(0.0549)
	Female	1.07	1.34	-0.3	-2.14	-0.6	-1.63	-0.52	2 872.12	0.65	-0.77	1.17
		(0.4875)	(1.1705)	(0.0221)	(0.3476)	(0.1863)	(0.1390)	(0.1785)	(599.1207)	(1.3876)	(0.0831)	(0.5166)
	Difference	-0.13	2.21	0.21	0.91	0.69	1.34	0.31	3 941.27	-0.63	0.37	-0.56
			**	***	**	***	***	**	***		***	
ageh2	Male	2 863.04	2 213.74	2 370.37	2 502.8	2 255.19	2 102.67	2 764.65	2 468.16	3 129.3	2 126.98	2 552.38
		(14.5053)	(38.4488)	(20.4226)	(26.6450)	(28.4190)	(22.8623)	(65.3714)	(24.2756)	(23.2994)	(52.3369)	(35.1748)
	Female	2 273.66	2 486.99	2 742.07	2 769.26	2 622.91	2 381.39	2 553.4	2 305.62	3 086.58	2 338.54	2 541.55
		(24.3624)	(68.4414)	(34.4947)	(66.2477)	(43.9932)	(25.5283)	(182.4006)	(56.7086)	(33.7747)	(39.2119)	(36.1573)
	Difference	589.38	-273.26	-371.69	-266.45	-367.72	-278.72	211.25	162.54	42.72	-211.56	10.82
		***	***	***	***	***	***		***		***	
agehead	Male	51.91	44.64	46.42	47.75	45.5	43.03	50.17	47.65	53.95	43.67	48.85
		(0.1325)	(0.3849)	(0.2009)	(0.2609)	(0.2943)	(0.2312)	(0.6245)	(0.2404)	(0.2101)	(0.5427)	(0.3362)
	Female	46.1	47.47	50.11	50.67	49.35	45.89	48.35	46.05	53.6	46.17	48.69
		(0.2361)	(0.6656)	(0.3146)	(0.6105)	(0.4327)	(0.2470)	(1.8654)	(0.5748)	(0.3011)	(0.3886)	(0.3467)
	Difference	5.8	-2.83	-3.69	-2.92	-3.85	-2.86	1.82	1.6	0.34	-2.5	0.16
		***	***	***	***	***	***		***		***	
child_dep	Male	0.47	0.31	0.29	0.26	0.19	0.29	0.17	0.32	0.12	0.22	0.06
		(0.0070)	(0.0098)	(0.0050)	(0.0060)	(0.0063)	(0.0049)	(0.0098)	(0.0066)	(0.0034)	(0.0115)	(0.0058)
	Female	0.51	0.25	0.32	0.16	0.15	0.33	0.21	0.35	0.13	0.26	0.07
		(0.0134)	(0.0173)	(0.0091)	(0.0136)	(0.0087)	(0.0068)	(0.0357)	(0.0174)	(0.0053)	(0.0094)	(0.0065)
	Difference	-0.04	0.05	-0.03	0.1	0.05	-0.04	-0.04	-0.04	-0.01	-0.04	-0.01
		***	***	***	***	***	***		**		***	*

Note: BGD – Bangladesh; ETH – Ethiopia; GHA – Ghana; GTM – Guatemala; KHM – Cambodia; MWI – Malawi; NIC – Nicaragua; PAK – Pakistan; PER – Peru; UGA – Uganda; VNM – Viet Nam.

Table A2. Differences in farm characteristics by gender of farm defined by majority of labour contribution *(femlab)* (continued)

		BGD	ETH	GHA	GTM	KHM	MWI	NIC	PAK	PER	UGA	VNM
childlab	Male	0.49	0.12	0.31	0.15	0.14	0.15	14.33	0.06	3.76	16.42	0.02
		(0.0433)	(0.0183)	(0.0167)	(0.0295)	(0.0155)	(0.0056)	(3.0254)	(0.0071)	(2.1216)	(1.6065)	(0.0026)
	Female	0.29	0.37	0.67	0.21	0.58	0.28	18.67	0.19	2.69	26.67	0.05
		(0.0517)	(0.0721)	(0.0562)	(0.0334)	(0.3991)	(0.0141)	(10.6515)	(0.0394)	(0.2866)	(1.7053)	(0.0221)
	Difference	0.21	-0.25	-0.36	-0.06	-0.44	-0.13	-4.34	-0.13	1.07	-10.24	-0.03
		***	***	***	*		***		***		***	*
distance	Male	3.51	58.65	18.92	14.45	5.72	24.28	2.14	133.1	0.36	1.48	5.02
		(0.0844)	(1.1394)	(0.2229)	(0.1314)	(0.1119)	(0.2479)	(0.0632)	(1.4147)	(0.0098)	(0.0593)	(0.1036)
	Female	4.24	63.74	19.01	14.82	6.37	23.76	2	129.22	0.38	1.42	5.12
		(0.1708)	(2.0243)	(0.3580)	(0.3467)	(0.1726)	(0.2589)	(0.1919)	(2.8090)	(0.0139)	(0.0431)	(0.1077)
	Difference	-0.72	-5.09	-0.09	-0.37	-0.65	0.51	0.13	3.88	-0.02	0.06	-0.09
		***	**			***	*					
educhead	Male	3.52	2.22	4.77	3.87	7.04	5.88	4.15	3.79	6	6.22	6.74
		(0.0433)	(0.0908)	(0.0648)	(0.0603)	(0.0664)	(0.0573)	(0.1677)	(0.0807)	(0.0546)	(0.1297)	(0.0924)
	Female	4.48	1.66	3.93	3.93	6.92	5.08	4.48	2.99	5.35	5.73	6.51
		(0.1018)	(0.1399)	(0.0967)	(0.1522)	(0.1090)	(0.0597)	(0.6795)	(0.1825)	(0.0880)	(0.1037)	(0.0964)
	Difference	-0.97	0.56	0.84	-0.05	0.13	0.81	-0.33	0.8	0.65	0.48	0.23
		***	***	***			***		***	***	***	**
femfaml	Male	1.85	0.84	0.53	0.44	1.3	0.9	13	0.25	25.71	92.3	0.04
		(0.0736)	(0.0420)	(0.0144)	(0.0338)	(0.0533)	(0.0153)	(2.3369)	(0.0147)	(4.0458)	(3.6667)	(0.0044)
	Female	17.53	3.86	1.94	2.87	3.22	1.67	218.97	3.16	148.8	185.95	0.25
		(0.6874)	(0.2796)	(0.1414)	(0.2621)	(0.2518)	(0.0348)	(48.8325)	(0.1763)	(17.9911)	(5.2029)	(0.0562)
	Difference	-15.68	-3.02	-1.41	-2.43	-1.92	-0.76	-205.96	-2.92	-123.09	-93.65	-0.2
		***	***	***	***	***	***	***	***	***	***	***

Note: BGD – Bangladesh; ETH – Ethiopia; GHA – Ghana; GTM – Guatemala; KHM – Cambodia; MWI – Malawi; NIC – Nicaragua; PAK – Pakistan; PER – Peru; UGA – Uganda; VNM – Viet Nam.

Table A2. Differences in farm characteristics by gender of farm defined by majority of labour contribution *(femlab)* (continued)

		BGD	ETH	GHA	GTM	KHM	MWI	NIC	PAK	PER	UGA	VNM
femlabsh	Male	0.01	0.28	0.39	0.09	0.43	0.42	0.18	0.22	0.32	0.32	0.19
		(0.0007)	(0.0071)	(0.0026)	(0.0031)	(0.0036)	(0.0022)	(0.0093)	(0.0041)	(0.0033)	(0.0091)	(0.0060)
	Female	0.11	0.51	0.78	0.57	0.67	0.72	0.64	0.64	0.62	0.62	0.85
		(0.0061)	(0.0169)	(0.0041)	(0.0143)	(0.0060)	(0.0034)	(0.0388)	(0.0080)	(0.0059)	(0.0077)	(0.0057)
	Difference	-0.1	-0.22	-0.39	-0.48	-0.24	-0.3	-0.47	-0.42	-0.3	-0.29	-0.67
		***	***	***	***	***	***	***	***	***	***	***
fertil_ha	Male	149.4	0.36	59.91	11.12	0.31	2.42	0.18	22 383.32	0.05	0.41	0.09
		(2.8605)	(0.1207)	(2.2197)	(0.3222)	(0.0162)	(0.0791)	(0.0202)	(368.5202)	(0.0042)	(0.1157)	(0.0059)
	Female	170.29	0.21	57.19	10.82	0.31	2.03	0.1	18 192.75	0.06	0.24	0.16
		(7.3402)	(0.1270)	(4.9619)	(0.7424)	(0.0402)	(0.0826)	(0.0193)	(669.5300)	(0.0068)	(0.0527)	(0.0482)
	Difference	-20.89	0.14	2.73	0.29	0	0.38	0.08	4 190.57	-0.01	0.17	-0.07
		***					***	***	***	**	*	*
hhsize	Male	5.99	5.07	5.16	5.63	5.05	4.53	4.89	7.61	4.03	5.23	4.21
		(0.0250)	(0.0532)	(0.0375)	(0.0453)	(0.0396)	(0.0282)	(0.0884)	(0.0612)	(0.0299)	(0.1059)	(0.0395)
	Female	5.58	4.3	5.75	5.13	4.98	4.43	4.6	7.96	3.95	5.57	4.26
		(0.0446)	(0.1024)	(0.0714)	(0.1077)	(0.0643)	(0.0296)	(0.3790)	(0.1600)	(0.0444)	(0.0728)	(0.0450)
	Difference	0.41	0.77	-0.59	0.51	0.07	0.1	0.29	-0.36	0.08	-0.35	-0.05
		***	***	***	***		***		**	*	***	
hiredlab	Male	146	0.51	52.53	3.17	0.14	0.36	1.69	6 980.43	0.02	3.76	0.03
		(3.6964)	(0.0543)	(2.7615)	(0.4261)	(0.0136)	(0.0257)	(0.1007)	(209.7328)	(0.0010)	(0.2964)	(0.0029)
	Female	167.13	0.99	66.47	3.49	0.12	0.4	1.97	3 836.92	0.03	4.38	0.05
		(9.4098)	(0.1654)	(4.9332)	(0.5539)	(0.0081)	(0.0369)	(0.4216)	(332.3220)	(0.0045)	(0.2295)	(0.0261)
	Difference	-21.13	-0.48	-13.93	-0.32	0.03	-0.03	-0.28	3 143.51	-0.01	-0.62	-0.03
		**	***	***		**			***	***	**	

Note: BGD – Bangladesh; ETH – Ethiopia; GHA – Ghana; GTM – Guatemala; KHM – Cambodia; MWI – Malawi; NIC – Nicaragua; PAK – Pakistan; PER – Peru; UGA – Uganda; VNM – Viet Nam.

Table A2. Differences in farm characteristics by gender of farm defined by majority of labour contribution *(femlab)* (continued)

		BGD	ETH	GHA	GTM	KHM	MWI	NIC	PAK	PER	UGA	VNM
irrigation	Male	0.77	0.12	0.5	0.54	0.52	0.01	0.48	0.85	0.4	0.02	0.36
		(0.0043)	(0.0085)	(0.0068)	(0.0087)	(0.0108)	(0.0014)	(0.0198)	(0.0061)	(0.0069)	(0.0050)	(0.0125)
	Female	0.73	0.07	0.44	0.46	0.5	0.01	0.49	0.7	0.41	0.02	0.36
		(0.0086)	(0.0113)	(0.0103)	(0.0214)	(0.0158)	(0.0013)	(0.0635)	(0.0194)	(0.0101)	(0.0038)	(0.0128)
	Difference	0.03	0.05	0.06	0.08	0.03	0	-0.02	0.16	-0.01	0	0
		***	***	***	***	*			***			
land	Male	-0.83	-0.59	0.71	-0.49	0.05	-0.7	1.46	2.65	0.46	0.03	-1.07
		(0.0111)	(0.0292)	(0.0136)	(0.0202)	(0.0232)	(0.0126)	(0.0613)	(0.0776)	(0.0191)	(0.0344)	(0.0321)
	Female	-1.29	-1.39	0.43	-0.77	-0.11	-0.88	1.26	1.96	-0.16	-0.06	-1.15
		(0.0218)	(0.0585)	(0.0241)	(0.0500)	(0.0343)	(0.0130)	(0.2133)	(0.1817)	(0.0301)	(0.0252)	(0.0328)
	Difference	0.47	0.8	0.28	0.29	0.17	0.18	0.2	0.69	0.63	0.1	0.07
		***	***	***	***	***	***		***	***	**	
land2	Male	1.87	1.61	1.5	1.57	1.15	1.23	4.51	27.59	2.03	0.89	2.64
		(0.0273)	(0.0782)	(0.0269)	(0.0431)	(0.0490)	(0.0293)	(0.2477)	(5.6558)	(0.0478)	(0.0572)	(0.0975)
	Female	2.95	3.74	1.54	1.95	1.2	1.53	4.41	22.31	2.16	0.87	2.84
		(0.0689)	(0.2211)	(0.0456)	(0.1177)	(0.0710)	(0.0353)	(0.8600)	(12.4259)	(0.0892)	(0.0393)	(0.1055)
	Difference	-1.08	-2.12	-0.04	-0.38	-0.05	-0.3	0.1	5.28	-0.13	0.02	-0.19
		***	***		***		***					
malefaml	Male	14.26	2.5	1.08	2.28	2.3	1.34	201.94	1.3	79.74	156.78	0.17
		(0.2597)	(0.1236)	(0.0274)	(0.0888)	(0.1179)	(0.0335)	(11.3864)	(0.0294)	(11.4460)	(6.7223)	(0.0105)
	Female	0.29	1.16	0.33	1.39	0.61	0.5	4.86	0.91	23.29	67.58	0.04
		(0.0337)	(0.1194)	(0.0190)	(0.1918)	(0.0379)	(0.0160)	(2.4527)	(0.0513)	(2.3029)	(2.6426)	(0.0036)
	Difference	13.97	1.33	0.75	0.89	1.7	0.85	197.08	0.38	56.46	89.2	0.13
		***	***	***	***	***	***	***	***	***	***	***

Note: BGD – Bangladesh; ETH – Ethiopia; GHA – Ghana; GTM – Guatemala; KHM – Cambodia; MWI – Malawi; NIC – Nicaragua; PAK – Pakistan; PER – Peru; UGA – Uganda; VNM – Viet Nam.

Table A2. Differences in farm characteristics by gender of farm defined by majority of labour contribution *(femlab)* (continued)

		BGD	ETH	GHA	GTM	KHM	MWI	NIC	PAK	PER	UGA	VNM
married	**Male**	0.8	0.88	0.75	0.91	0.92	0.87	0.84	0.93	0.83	0.84	0.57
		(0.0041)	(0.0085)	(0.0059)	(0.0050)	(0.0060)	(0.0050)	(0.0144)	(0.0044)	(0.0053)	(0.0134)	(0.0129)
	Female	0.7	0.56	0.59	0.69	0.67	0.57	0.57	0.92	0.65	0.74	0.49
		(0.0089)	(0.0216)	(0.0102)	(0.0198)	(0.0148)	(0.0074)	(0.0628)	(0.0114)	(0.0099)	(0.0118)	(0.0132)
	Difference	0.1	0.32	0.16	0.22	0.24	0.3	0.27	0.01	0.19	0.1	0.08
		***	***	***	***	***	***	***		***	***	***
nfi	**Male**	0.17	0.11	0.32	0.22	0.6	0.67	0.22	0.11	0.27	0.42	0.34
		(0.0039)	(0.0082)	(0.0064)	(0.0072)	(0.0106)	(0.0069)	(0.0164)	(0.0054)	(0.0063)	(0.0181)	(0.0123)
	Female	0.37	0.16	0.31	0.54	0.55	0.72	0.19	0.13	0.18	0.45	0.31
		(0.0094)	(0.0162)	(0.0096)	(0.0214)	(0.0157)	(0.0067)	(0.0499)	(0.0144)	(0.0079)	(0.0134)	(0.0123)
	Difference	-0.2	-0.05	0	-0.32	0.05	-0.05	0.03	-0.02	0.09	-0.03	0.02
		***	***		***	***	***		*	***	*	*
nfwi	**Male**	0.2	0.24	0.35	0.3	0.25	0.12	0.22	0.34	0.17	0.25	0.36
		(0.0041)	(0.0110)	(0.0065)	(0.0080)	(0.0093)	(0.0047)	(0.0164)	(0.0081)	(0.0054)	(0.0158)	(0.0125)
	Female	0.37	0.19	0.35	0.39	0.26	0.12	0.22	0.42	0.28	0.28	0.33
		(0.0093)	(0.0169)	(0.0099)	(0.0210)	(0.0139)	(0.0048)	(0.0528)	(0.0209)	(0.0093)	(0.0122)	(0.0125)
	Difference	-0.16	0.05	0.01	-0.09	-0.02	0	0	-0.08	-0.11	-0.04	0.02
		***	***		***				***	***	**	*
other_ha	**Male**	509.22	14.42	86.1	9.67	0.3	0.39	0.12	24 338.85	0.08	2.19	0.44
		(17.7061)	(2.6700)	(3.4172)	(0.3214)	(0.0152)	(0.0263)	(0.0284)	(444.2545)	(0.0053)	(0.1859)	(0.1241)
	Female	637.85	8.16	77.58	9.67	0.25	0.29	0.13	21 135.85	0.1	1.95	0.57
		(68.3141)	(3.9876)	(5.1339)	(0.7051)	(0.0139)	(0.0220)	(0.0391)	(875.7291)	(0.0112)	(0.1159)	(0.1432)
	Difference	-128.63	6.26	8.53	0.01	0.05	0.1	-0.01	3 203	-0.02	0.24	-0.14
		**	*	*		***	***		***	*		

Note: BGD – Bangladesh; ETH – Ethiopia; GHA – Ghana; GTM – Guatemala; KHM – Cambodia; MWI – Malawi; NIC – Nicaragua; PAK – Pakistan; PER – Peru; UGA – Uganda; VNM – Viet Nam.

Table A2. Differences in farm characteristics by gender of farm defined by majority of labour contribution *(femlab)* (continued)

		BGD	ETH	GHA	GTM	KHM	MWI	NIC	PAK	PER	UGA	VNM
plots	Male	6.15	3.44	2.45	2.06	2.07	1.49	1.23	1.11	2.27	2.13	9.97
		(0.0372)	(0.0666)	(0.0249)	(0.0239)	(0.0242)	(0.0107)	(0.0243)	(0.0056)	(0.0297)	(0.0430)	(0.1997)
	Female	5.3	2.47	2.35	1.96	2.09	1.46	1.1	1.1	2.42	2.24	10.35
		(0.0601)	(0.0845)	(0.0393)	(0.0549)	(0.0362)	(0.0103)	(0.0436)	(0.0131)	(0.0423)	(0.0321)	(0.2110)
	Difference	0.85	0.97	0.1	0.1	-0.02	0.03	0.13	0	-0.16	-0.11	-0.38
		***	***	**	*		**	***		***	**	*
rent	Male	0.14	0.09	0.08	0.53	0.01	0.1	0.36	0.13	0.05	0.04	0.1
		(0.0035)	(0.0073)	(0.0037)	(0.0087)	(0.0024)	(0.0044)	(0.0191)	(0.0057)	(0.0030)	(0.0073)	(0.0080)
	Female	0.13	0.07	0.06	0.57	0.01	0.08	0.41	0.11	0.04	0.06	0.13
		(0.0064)	(0.0110)	(0.0051)	(0.0213)	(0.0036)	(0.0041)	(0.0625)	(0.0130)	(0.0041)	(0.0064)	(0.0088)
	Difference	0.01	0.02	0.01	-0.04	0	0.02	-0.05	0.02	0	-0.02	-0.02
		*	*	**	**		***		*		**	**
seeds_ha	Male	65.74	0.46	7.05	1.68	0.17	0.91		8 743.73	0.03	2.77	0.03
		(1.6404)	(0.0274)	(0.6281)	(0.1420)	(0.0072)	(0.0274)		(166.3028)	(0.0022)	(0.1948)	(0.0032)
	Female	74.79	0.46	6.58	1.68	0.17	0.83		7 258.31	0.05	2.29	0.05
		(3.5317)	(0.0564)	(0.7846)	(0.2468)	(0.0135)	(0.0266)		(266.5998)	(0.0047)	(0.1128)	(0.0106)
	Difference	-9.05	0	0.47	0	0	0.08		1 485.42	-0.01	0.48	-0.02
		**					**		***	***	**	*
sharecrop	Male		0.16	0.15					0.29			
			(0.0096)	(0.0049)					(0.0078)			
	Female		0.09	0.11					0.3			
			(0.0123)	(0.0066)					(0.0194)			
	Difference		0.08	0.04					-0.01			
			***	***								

Note: BGD – Bangladesh; ETH – Ethiopia; GHA – Ghana; GTM – Guatemala; KHM – Cambodia; MWI – Malawi; NIC – Nicaragua; PAK – Pakistan; PER – Peru; UGA – Uganda; VNM – Viet Nam.

Table A2. Differences in farm characteristics by gender of farm defined by majority of labour contribution *(femlab)* (continued)

		BGD	ETH	GHA	GTM	KHM	MWI	NIC	PAK	PER	UGA	VNM
slope	Male		17				0.47				0.13	
			(0.2655)				(0.0073)				(0.0123)	
	Female		14.83				0.44				0.14	
			(0.4122)				(0.0074)				(0.0093)	
	Difference		2.18				0.02				0	
			***				**					
wealth	Male	0.02	-1.31	-0.53	-1.22	-0.74	-0.45	-1.77	-0.58	-1.28	-0.11	-0.35
		(0.0033)	(0.0195)	(0.0102)	(0.0253)	(0.0246)	(0.0287)	(0.0689)	(0.0316)	(0.0193)	(0.0472)	(0.0508)
	Female	0.02	-1.36	-0.53	-0.9	-0.79	-0.52	-1.85	-1.18	-1.45	-0.21	-0.52
		(0.0071)	(0.0369)	(0.0147)	(0.0696)	(0.0351)	(0.0267)	(0.2338)	(0.0528)	(0.0272)	(0.0365)	(0.0491)
	Difference	0	0.05	0.01	-0.32	0.05	0.07	0.08	0.6	0.18	0.1	0.16
					***		**		***	***	**	**
widow	Male	0.18	0.07	0.06	0.06	0.07	0.06	0.08	0.05	0.1	0.07	0.06
		(0.0040)	(0.0065)	(0.0032)	(0.0042)	(0.0056)	(0.0034)	(0.0109)	(0.0039)	(0.0042)	(0.0091)	(0.0064)
	Female	0.29	0.27	0.18	0.17	0.27	0.21	0.16	0.06	0.24	0.16	0.11
		(0.0088)	(0.0192)	(0.0080)	(0.0161)	(0.0140)	(0.0061)	(0.0464)	(0.0102)	(0.0088)	(0.0099)	(0.0084)
	Difference	-0.11	-0.2	-0.12	-0.11	-0.2	-0.16	-0.08	-0.01	-0.15	-0.09	-0.05
		***	***	***	***	***	***	*		***	***	***

Note: BGD – Bangladesh; ETH – Ethiopia; GHA – Ghana; GTM – Guatemala; KHM – Cambodia; MWI – Malawi; NIC – Nicaragua; PAK – Pakistan; PER – Peru; UGA – Uganda; VNM – Viet Nam.

Table 13. Differences in farm characteristics by gender of farm manager *(femmgr)*

		ETH	GHA	KHM	MWI	PER	UGA
agcap_ha	Male	4.16	-0.08	0.13	-0.11	0.02	-0.44
		(0.3322)	(0.0129)	(0.1180)	(0.1182)	(0.0550)	(0.0696)
	Female	-2.21	-0.48	-1.2	-2.88	1.2	-1.08
		(1.4406)	(0.0443)	(0.2296)	(0.1909)	(2.6488)	(0.1646)
	Difference	6.37	0.4	1.33	2.78	-1.18	0.63
		***	***	***	***		***
ageh2	Male	2 211.71	2 394.41	2 291.77	2094.3	3 034.04	2 160.86
		(37.5550)	(19.4596)	(26.3283)	(19.0621)	(20.6939)	(37.8990)
	Female	2 607.39	2 847.75	2 706.47	2 578.1	3 518.29	2 542.82
		(73.5708)	(41.6920)	(56.9030)	(35.1860)	(48.6940)	(58.6646)
	Difference	-395.68	-453.34	-414.7	-483.81	-484.25	-381.96
		***	***	***	***	***	***
agehead	Male	44.54	46.62	45.9	43.09	53.1	44.14
		(0.3721)	(0.1891)	(0.2703)	(0.1920)	(0.1878)	(0.3870)
	Female	49.06	51.31	50.13	47.58	57.47	48.4
		(0.7324)	(0.3784)	(0.5620)	(0.3381)	(0.4182)	(0.5656)
	Difference	-4.52	-4.68	-4.23	-4.49	-4.37	-4.26
		***	***	***	***	***	***
child_dep	Male	0.32	0.31	0.18	0.3	0.13	0.26
		(0.0094)	(0.0047)	(0.0056)	(0.0041)	(0.0032)	(0.0086)
	Female	0.17	0.26	0.16	0.34	0.09	0.2
		(0.0192)	(0.0119)	(0.0124)	(0.0099)	(0.0065)	(0.0144)
	Difference	0.16	0.05	0.02	-0.05	0.04	0.06
		***	***	*	***	***	***

Note: ETH – Ethiopia; GHA – Ghana; KHM – Cambodia; MWI – Malawi; PER – Peru; UGA – Uganda.

Table A3. Differences in farm characteristics by gender of farm manager *(femmgr)* (continued)

		ETH	GHA	KHM	MWI	PER	UGA
childlab_ha	Male	0.12	0.31	0.31	0.17	3.57	18.54
		(0.0119)	(0.0126)	(0.1590)	(0.0055)	(1.7315)	(1.2623)
	Female	0.44	0.88	0.17	0.32	2.67	34.56
		(0.1132)	(0.0915)	(0.0350)	(0.0216)	(0.4894)	(2.9790)
	Difference	-0.32	-0.58	0.14	-0.15	0.9	-16.02
		***	***		***		***
distance	Male	60.13	19.52	5.92	23.92	0.37	1.47
		(1.1065)	(0.2142)	(0.1083)	(0.2110)	(0.0087)	(0.0430)
	Female	59.32	16.59	5.97	24.3	0.37	1.39
		(2.2767)	(0.3979)	(0.1825)	(0.3382)	(0.0208)	(0.0651)
	Difference	0.81	2.93	-0.05	-0.38	0	0.08
			***				
educhead	Male	2.37	4.7	7.16	6.06	6.02	6.54
		(0.0882)	(0.0610)	(0.0623)	(0.0486)	(0.0490)	(0.0935)
	Female	0.8	3.76	6.36	4.14	4.63	4.56
		(0.1230)	(0.1140)	(0.1370)	(0.0736)	(0.1312)	(0.1540)
	Difference	1.56	0.94	0.79	1.93	1.39	1.98
		***	***	***	***	***	***
femfaml	Male	1.22	0.61	1.62	1.08	36.61	129.66
		(0.0672)	(0.0149)	(0.0976)	(0.0198)	(4.0404)	(3.7236)
	Female	3.42	2.38	3.1	1.72	206.94	216.03
		(0.3330)	(0.2159)	(0.2159)	(0.0423)	(32.3232)	(8.7873)
	Difference	-2.2	-1.77	-1.48	-0.63	-170.33	-86.37
		***	***	***	***	***	***

Note: ETH – Ethiopia; GHA – Ghana; KHM – Cambodia; MWI – Malawi; PER – Peru; UGA – Uganda

Table A3. Differences in farm characteristics by gender of farm manager *(femmgr)* (continued)

		ETH	GHA	KHM	MWI	PER	UGA
femlabsh	Male	0.3	0.44	0.47	0.47	0.34	0.41
		(0.0068)	(0.0027)	(0.0035)	(0.0019)	(0.0030)	(0.0068)
	Female	0.53	0.8	0.65	0.81	0.77	0.73
		(0.0220)	(0.0066)	(0.0103)	(0.0047)	(0.0075)	(0.0117)
	Difference	-0.24	-0.37	-0.19	-0.34	-0.43	-0.32
		***	***	***	***	***	***
fertil_ha	Male	0.24	61.46	0.31	2.52	0.05	0.33
		(0.0877)	(2.4131)	(0.0196)	(0.0703)	(0.0036)	(0.0639)
	Female	0.66	49.37	0.32	1.55	0.07	0.23
		(0.3384)	(4.8225)	(0.0316)	(0.0958)	(0.0120)	(0.0955)
	Difference	-0.41	12.09	-0.01	0.97	-0.03	0.1
			**		***	**	
hhsize	Male	5.18	5.61	5.2	4.76	4.16	5.63
		(0.0521)	(0.0393)	(0.0370)	(0.0243)	(0.0272)	(0.0738)
	Female	3.52	4.21	4.31	3.81	3.22	5.14
		(0.0955)	(0.0565)	(0.0764)	(0.0346)	(0.0557)	(0.1065)
	Difference	1.65	1.41	0.89	0.95	0.94	0.48
		***	***	***	***	***	***
hiredlab_ha	Male	0.6	51.87	0.14	0.41	0.02	4.22
		(0.0693)	(2.4772)	(0.0116)	(0.0301)	(0.0009)	(0.2224)
	Female	0.77	76.85	0.12	0.31	0.04	4.2
		(0.0947)	(7.1567)	(0.0109)	(0.0246)	(0.0085)	(0.3413)
	Difference	-0.17	-24.98	0.02	0.1	-0.02	0.02
		*	***	*	***	***	

Note: ETH – Ethiopia; GHA – Ghana; KHM – Cambodia; MWI – Malawi; PER – Peru; UGA – Uganda.

Table A3. Differences in farm characteristics by gender of farm manager *(femmgr)* (continued)

		ETH	GHA	KHM	MWI	PER	UGA
irrigation	**Male**	0.12	0.53	0.5	0.01	0.39	0.02
		(0.0079)	(0.0064)	(0.0099)	(0.0012)	(0.0063)	(0.0035)
	Female	0.08	0.31	0.56	0.01	0.45	0.02
		(0.0140)	(0.0119)	(0.0200)	(0.0014)	(0.0142)	(0.0059)
	Difference	0.04	0.22	-0.06	0	-0.06	0
		**	***	***	**	***	
land	**Male**	-0.63	0.8	0.1	-0.68	0.41	0.09
		(0.0285)	(0.0126)	(0.0211)	(0.0108)	(0.0173)	(0.0243)
	Female	-1.55	-0.08	-0.41	-1.04	-0.46	-0.31
		(0.0672)	(0.0268)	(0.0429)	(0.0157)	(0.0428)	(0.0369)
	Difference	0.93	0.88	0.5	0.36	0.87	0.4
		***	***	***	***	***	***
land2	**Male**	1.73	1.62	1.13	1.22	1.99	0.85
		(0.0758)	(0.0267)	(0.0453)	(0.0260)	(0.0439)	(0.0380)
	Female	4.09	1.09	1.29	1.76	2.46	0.95
		(0.2892)	(0.0447)	(0.0885)	(0.0455)	(0.1379)	(0.0657)
	Difference	-2.37	0.53	-0.16	-0.54	-0.46	-0.1
		***	***	*	***	***	*
malefaml	**Male**	2.4	0.91	1.88	1.19	70.9	120.7
		(0.1153)	(0.0211)	(0.0973)	(0.0261)	(9.3689)	(4.0282)
	Female	1.03	0.63	1.26	0.33	15.6	56.86
		(0.1233)	(0.0562)	(0.1279)	(0.0152)	(2.5267)	(4.3133)
	Difference	1.37	0.28	0.62	0.86	55.3	63.84
		***	***	***	***	***	***

Note: ETH – Ethiopia; GHA – Ghana; KHM – Cambodia; MWI – Malawi; PER – Peru; UGA – Uganda.

Table A3. Differences in farm characteristics by gender of farm manager *(femmgr)* (continued)

		ETH	GHA	KHM	MWI	PER	UGA
married	Male	0.93	0.8	0.96	0.92	0.86	0.92
		(0.0064)	(0.0051)	(0.0039)	(0.0034)	(0.0044)	(0.0072)
	Female	0.22	0.31	0.34	0.25	0.34	0.46
		(0.0213)	(0.0119)	(0.0191)	(0.0083)	(0.0135)	(0.0199)
	Difference	0.71	0.49	0.62	0.67	0.52	0.47
		***	***	***	***	***	***
nfi	Male	0.13	0.32	0.59	0.68	0.24	0.45
		(0.0082)	(0.0059)	(0.0098)	(0.0058)	(0.0055)	(0.0132)
	Female	0.12	0.29	0.58	0.72	0.23	0.41
		(0.0170)	(0.0117)	(0.0199)	(0.0086)	(0.0120)	(0.0196)
	Difference	0	0.03	0.01	-0.04	0.01	0.04
			**		***		**
nfwi	Male	0.22	0.35	0.25	0.14	0.2	0.27
		(0.0103)	(0.0061)	(0.0086)	(0.0043)	(0.0051)	(0.0118)
	Female	0.22	0.34	0.25	0.08	0.25	0.27
		(0.0214)	(0.0122)	(0.0175)	(0.0051)	(0.0123)	(0.0177)
	Difference	0.01	0.01	0	0.06	-0.05	0
					***	***	
other_ha	Male	12.78	86.07	0.29	0.39	0.08	2.02
		(2.3557)	(3.2975)	(0.0134)	(0.0216)	(0.0046)	(0.1132)
	Female	12.8	73.05	0.27	0.22	0.11	2.07
		(6.1419)	(5.2585)	(0.0159)	(0.0273)	(0.0203)	(0.1895)
	Difference	-0.02	13.01	0.02	0.17	-0.03	-0.05
			**		***	*	

Note: ETH – Ethiopia; GHA – Ghana; KHM – Cambodia; MWI – Malawi; PER – Peru; UGA – Uganda.

Table A3. Differences in farm characteristics by gender of farm manager *(femmgr)* (continued)

		ETH	GHA	KHM	MWI	PER	UGA
plots	**Male**	3.41	2.58	2.16	1.53	2.33	2.29
		(0.0632)	(0.0247)	(0.0231)	(0.0093)	(0.0268)	(0.0323)
	Female	2.22	1.74	1.77	1.35	2.25	2.07
		(0.0837)	(0.0303)	(0.0372)	(0.0114)	(0.0578)	(0.0443)
	Difference	1.19	0.84	0.39	0.18	0.08	0.22
		***	***	***	***		***
rent	**Male**	0.09	0.08	0.01	0.11	0.05	0.05
		(0.0071)	(0.0034)	(0.0020)	(0.0038)	(0.0027)	(0.0059)
	Female	0.04	0.05	0.02	0.06	0.04	0.06
		(0.0101)	(0.0057)	(0.0056)	(0.0046)	(0.0053)	(0.0094)
	Difference	0.05	0.03	-0.01	0.04	0.01	-0.01
		***	***	*	***	**	
seeds_ha	**Male**	0.46	6.69	0.17	0.94	0.03	2.59
		(0.0286)	(0.5334)	(0.0078)	(0.0239)	(0.0019)	(0.1220)
	Female	0.45	7.79	0.15	0.7	0.05	2.21
		(0.0499)	(1.2917)	(0.0094)	(0.0308)	(0.0084)	(0.1898)
	Difference	0.01	-1.1	0.02	0.25	-0.02	0.38
				**	***	**	**
sharecrop	**Male**	0.17	0.15				
		(0.0093)	(0.0045)				
	Female	0.03	0.1				
		(0.0083)	(0.0078)				
	Difference	0.14	0.05				
		***	***				

Note: ETH – Ethiopia; GHA – Ghana; KHM – Cambodia; MWI – Malawi; PER – Peru; UGA – Uganda.

Table A3. Differences in farm characteristics by gender of farm manager *(femmgr)* (continued)

		ETH	GHA	KHM	MWI	PER	UGA
slope	**Male**	16.65			0.47		0.14
		(0.2509)			(0.0062)		(0.0092)
	Female	15.49			0.43		0.13
		(0.5022)			(0.0094)		(0.0136)
	Difference	1.16			0.03		0
		**			***		
wealth_idx	**Male**	-1.29	-0.52	-0.71	-0.38	-1.32	-0.1
		(0.0190)	(0.0094)	(0.0226)	(0.0247)	(0.0170)	(0.0339)
	Female	-1.44	-0.55	-0.96	-0.74	-1.4	-0.29
		(0.0420)	(0.0187)	(0.0433)	(0.0308)	(0.0414)	(0.0580)
	Difference	0.14	0.03	0.25	0.36	0.08	0.19
		***		***	***	**	***
widow	**Male**	0.03	0.03	0.04	0.03	0.09	0.03
		(0.0041)	(0.0021)	(0.0037)	(0.0022)	(0.0037)	(0.0045)
	Female	0.51	0.37	0.54	0.37	0.4	0.35
		(0.0258)	(0.0124)	(0.0201)	(0.0092)	(0.0140)	(0.0191)
	Difference	-0.49	-0.34	-0.5	-0.34	-0.31	-0.32
		***	***	***	***	***	***

Note: ETH – Ethiopia; GHA – Ghana; KHM – Cambodia; MWI – Malawi; PER – Peru; UGA – Uganda.

Table 14. Summary of Oaxaca decompositions of farm yields by gender of household head *(femhead)*

Variable group	Bangladesh			Ethiopia			Ghana		
	Endowment effect	Structural effect	Total effect	Endowment effect	Structural effect	Total effect	Endowment effect	Structural effect	Total effect
mgr	0.0137	1.3655	1.3792	0.1141*	0.7118	0.8259	0.0756***	-0.3046	-0.2290
	(0.0248)	(1.1190)	(1.0548)	(0.0596)	(0.8077)	(0.7115)	(0.0228)	(0.4178)	(0.3869)
familab	0.0248	0.3918**	0.4166***	-0.0103	0.0124	0.0020	0.0100	0.0990***	0.1090***
	(0.0156)	(0.1613)	(0.1562)	(0.0252)	(0.0608)	(0.0451)	(0.0066)	(0.0243)	(0.0208)
hiredlab	0.0102***	-0.2003**	-0.1901**	-0.0122**	0.0154	0.0032	-0.0049**	0.0002	-0.0047
	(0.0024)	(0.0927)	(0.0912)	(0.0052)	(0.0214)	(0.0152)	(0.0023)	(0.0160)	(0.0130)
inputs	0.0470***	-0.2761*	-0.2291	-0.0096	0.2697*	0.2602**	0.0081**	-0.0572**	-0.0491**
	(0.0095)	(0.1437)	(0.1411)	(0.0133)	(0.1416)	(0.1235)	(0.0033)	(0.0265)	(0.0235)
scale	-0.0704***	-0.0575	-0.1278	-0.1919***	0.1596	-0.0324	-0.4804***	-0.0246	-0.5050***
	(0.0034)	(0.1663)	(0.1598)	(0.0278)	(0.1201)	(0.1079)	(0.0150)	(0.0336)	(0.0301)
genderch	0.0435	0.0485	0.0920	0.0072	-0.1526	-0.1454*	-0.0502**	0.1409	0.0907
	(0.0430)	(0.0926)	(0.0808)	(0.0227)	(0.1035)	(0.0881)	(0.0199)	(0.1192)	(0.1085)
hhchars	0.0128	-0.0868	-0.0740	0.0400**	-0.1134	-0.0734	0.0306***	0.0358	0.0664
	(0.0090)	(0.2143)	(0.2072)	(0.0202)	(0.2354)	(0.2101)	(0.0063)	(0.0944)	(0.0856)
plotchars	0.0164***	-0.0430	-0.0266	0.0050	0.3943	0.3993*	0.0543***	-0.0323	0.0220
	(0.0037)	(0.1407)	(0.1315)	(0.0033)	(0.2413)	(0.2119)	(0.0048)	(0.0262)	(0.0224)
geoeff	-0.0104	-1.0265	-1.0369	0.0125*	-1.2568	-1.2443	0.0531***	0.4194	0.4725
	(0.0118)	(1.1843)	(1.1190)	(0.0070)	(0.8916)	(0.7951)	(0.0085)	(0.4504)	(0.4216)
Total (column sum)	0.0875*	0.1157	0.2032***	-0.0452	0.0404	-0.0048	-0.3038***	0.2766***	-0.0272
	(0.0529)	(0.0759)	(0.0497)	(0.0684)	(0.0925)	(0.0535)	(0.0361)	(0.0486)	(0.0279)
	Guatemala			Cambodia			Malawi		
mgr	0.0197	0.4760	0.4957	0.0542	-0.3767	-0.3225	0.0818***	-0.1701	-0.0883
	(0.0321)	(0.4836)	(0.4400)	(0.0454)	(0.8112)	(0.7625)	(0.0253)	(0.2814)	(0.2454)
familab	0.0061	0.0429	0.0490	-0.0279**	-0.1102*	-0.1381**	-0.0020	0.0013	-0.0007
	(0.0087)	(0.0348)	(0.0304)	(0.0114)	(0.0663)	(0.0576)	(0.0096)	(0.0367)	(0.0314)
hiredlab	0.0001	-0.0481***	-0.0479***	0.0016	-0.0188	-0.0172	0.0027*	-0.0072	-0.0045
	(0.0002)	(0.0113)	(0.0110)	(0.0014)	(0.0306)	(0.0279)	(0.0015)	(0.0079)	(0.0065)
inputs	0.0257***	0.0092	0.0349	0.0078	-0.0676	-0.0598	0.0438***	0.0226	0.0664***
	(0.0039)	(0.0466)	(0.0427)	(0.0060)	(0.0661)	(0.0570)	(0.0048)	(0.0249)	(0.0221)
scale	-0.1437***	-0.1324**	-0.2762***	-0.1306***	-0.0246	-0.1552***	-0.1515***	-0.0744*	-0.2260***
	(0.0059)	(0.0618)	(0.0573)	(0.0147)	(0.0560)	(0.0502)	(0.0052)	(0.0451)	(0.0403)
genderch	-0.0233	-0.0469	-0.0702	0.0276*	-0.2141	-0.1865	0.0157	-0.0368	-0.0211
	(0.0186)	(0.0606)	(0.0536)	(0.0166)	(0.1574)	(0.1425)	(0.0195)	(0.1160)	(0.1035)

hhchars	-0.0066	0.0592	0.0526	-0.0255**	-1.4569	-1.4824	0.0160**	0.0769	0.0929
	(0.0056)	(0.1371)	(0.1283)	(0.0124)	(1.0552)	(1.0117)	(0.0067)	(0.0945)	(0.0809)
plotchars	0.0283***	-0.0197	0.0086	0.0016	0.0391	0.0407	0.0033***	-0.0050	-0.0016
	(0.0042)	(0.0397)	(0.0368)	(0.0015)	(0.0741)	(0.0706)	(0.0006)	(0.0269)	(0.0229)
geoeff	0.0074*	-0.2750	-0.2676	0.0431**	2.2639*	2.3071**	0.0204***	0.2292	0.2496
	(0.0045)	(0.5104)	(0.4658)	(0.0167)	(1.1863)	(1.1113)	(0.0065)	(0.3266)	(0.2896)
Total (column sum)	-0.0864**	0.0652	-0.0212	-0.0480	0.0342	-0.0138	0.0302	0.0365	0.0667***
	(0.0369)	(0.0542)	(0.0366)	(0.0521)	(0.0617)	(0.0294)	(0.0335)	(0.0410)	(0.0187)

Note: Econometric standard errors in parenthesis. Parameter significant at 1% level (***), 5% level (**) and 10% level (*).

Table 14. Summary of Oaxaca decompositions of farm yields by gender of household head *(femhead)*. Summary of Oaxaca decompositions of farm yields by gender of household head (*femhead*) (continued)

Variable group	Nicaragua			Pakistan			Peru		
	Endowment effect	Structural effect	Total effect	Endowment effect	Structural effect	Total effect	Endowment effect	Structural effect	Total effect
mgr	-0.0202	4.7032***	4.6830***	0.0001	-0.2187	-0.2187	0.1783***	0.1607	0.3390
	(0.0836)	(1.7887)	(1.5971)	(0.0136)	(0.5406)	(0.5227)	(0.0369)	(0.9286)	(0.8634)
familab	0.0106	0.0831	0.0938	-0.0515***	0.0183	-0.0331	-0.0071	-0.0036	-0.0107
	(0.0241)	(0.1712)	(0.1497)	(0.0124)	(0.0478)	(0.0436)	(0.0050)	(0.0302)	(0.0291)
hiredlab	-0.0001**	-0.0674	-0.0675	-0.0033	-0.0468	-0.0501*	-0.0098	0.0742***	0.0644***
	(0.0000)	(0.0728)	(0.0657)	(0.0061)	(0.0288)	(0.0256)	(0.0086)	(0.0214)	(0.0145)
inputs	0.0302	0.4067***	0.4369***	0.0597***	-0.1862**	-0.1266	-0.0099***	-0.0494	-0.0593
	(0.0223)	(0.1548)	(0.1328)	(0.0078)	(0.0889)	(0.0823)	(0.0037)	(0.0417)	(0.0389)
scale	-0.1086***	0.4980	0.3894	-0.2001***	0.1163*	-0.0838	-0.3886***	-0.0404	-0.4289***
	(0.0136)	(0.3050)	(0.2764)	(0.0114)	(0.0698)	(0.0670)	(0.0130)	(0.0492)	(0.0447)
genderch	-0.0433	-0.0640	-0.1073	-0.0191	0.0492	0.0302	0.0850***	0.2414	0.3264*
	(0.0481)	(0.2853)	(0.2657)	(0.0121)	(0.1244)	(0.1218)	(0.0260)	(0.1828)	(0.1736)
hhchars	0.0499**	-0.4187	-0.3688	-0.0292***	0.0000	-0.0292	0.0299***	0.0463	0.0762
	(0.0194)	(0.4577)	(0.4162)	(0.0080)	(0.2332)	(0.2244)	(0.0092)	(0.1915)	(0.1784)
plotchars	0.0001*	0.2587	0.2588	0.0757***	0.0874	0.1631**	-0.0149***	-0.0478	-0.0627
	(0.0001)	(0.2225)	(0.2078)	(0.0146)	(0.0937)	(0.0816)	(0.0035)	(0.0773)	(0.0709)
geoeff	-0.0138	-4.9154**	-4.9292***	0.0915***	0.3322	0.4237	0.0141	-0.3834	-0.3693
	(0.0239)	(1.9691)	(1.7903)	(0.0273)	(0.6171)	(0.5927)	(0.0164)	(0.9901)	(0.9265)
	-0.0951	0.4842***	0.3891***	-0.0761***	0.1517***	0.0756***	-0.1229**	-0.0020	-0.1249***

Total (column sum)	(0.0904)	(0.1755)	(0.1305)	(0.0253)	(0.0398)	(0.0287)	(0.0490)	(0.0658)	(0.0368)
Variable group	**Uganda**			**Viet Nam**					
mgr	0.0818**	0.2385	0.3203	0.0339	1.4794	1.5133			
	(0.0403)	(0.6737)	(0.5950)	(0.0352)	(0.9911)	(0.9516)			
familab	-0.0215	0.0625	0.0410	-0.0039	0.1122	0.1083			
	(0.0204)	(0.0765)	(0.0612)	(0.0036)	(0.1193)	(0.1165)			
hiredlab	0.0054***	-0.0070	-0.0016	-0.0058***	-0.0174	-0.0233			
	(0.0010)	(0.0304)	(0.0266)	(0.0010)	(0.0421)	(0.0395)			
inputs	0.0058	-0.0005	0.0053	0.0141***	-0.0501	-0.0361			
	(0.0080)	(0.0416)	(0.0358)	(0.0035)	(0.0906)	(0.0861)			
scale	-0.0978***	-0.0214	-0.1192***	-0.1884***	2.7701	2.5816			
	(0.0102)	(0.0474)	(0.0402)	(0.0076)	(4.2120)	(4.0754)			
genderch	-0.0264	0.1893	0.1629	0.0184***	-0.0025	0.0159			
	(0.0267)	(0.1427)	(0.1238)	(0.0067)	(0.1391)	(0.1351)			
hhchars	0.0014	0.1591	0.1605	2.3581***	22.9018***	25.2600***			
	(0.0085)	(0.1593)	(0.1389)	(0.4274)	(8.2672)	(6.6377)			
plotchars	-0.0026	0.0381	0.0355	-0.0006***	-0.0119	-0.0125			
	(0.0022)	(0.0334)	(0.0306)	(0.0001)	(0.1221)	(0.1176)			
geoeff	-0.0102	-0.5550	-0.5652	-2.3145***	-	-			
	(0.0108)	(0.7104)	(0.6322)	(0.4293)	(9.6214)	(8.1187)			
Total (column sum)	-0.0642	0.1037	0.0395	-0.0888**	0.0195	-0.0693**			
	(0.0525)	(0.0723)	(0.0420)	(0.0430)	(0.0575)	(0.0324)			

Note: Econometric standard errors in parenthesis. Parameter significant at 1% level (***), 5% level (**) and 10% level (*).

Table 15. Summary of Oaxaca decompositions of farm yields by gender of majority of labour contibution *(femlab)*

Variable group	Bangladesh			Ethiopia			Ghana		
	Endowment effect	Structural effect	Total effect	Endowment effect	Structural effect	Total effect	Endowment effect	Structural effect	Total effect
mgr	0.0486***	0.4565*	0.5051**	0.0649***	-0.1234	-0.0585	0.0408***	0.0207	0.0615
	(0.0042)	(0.2732)	(0.2424)	(0.0236)	(0.7534)	(0.6504)	(0.0058)	(0.3068)	(0.2641)
familab	0.0020	-0.0110	-0.0090	-0.0317	0.0153	-0.0164	0.0302***	0.0380*	0.0682***
	(0.0152)	(0.0315)	(0.0250)	(0.0349)	(0.0652)	(0.0469)	(0.0078)	(0.0207)	(0.0170)
hiredlab	-0.0065***	-0.0131	-0.0195**	-0.0158**	0.0035	-0.0123	-0.0029**	-0.0142	-0.0171*
	(0.0007)	(0.0114)	(0.0087)	(0.0067)	(0.0240)	(0.0183)	(0.0014)	(0.0129)	(0.0098)
inputs	-0.0167***	0.0158	-0.0010	0.0012	0.2439*	0.2451**	0.0042**	0.0359	0.0401*
	(0.0014)	(0.0277)	(0.0229)	(0.0093)	(0.1317)	(0.1121)	(0.0018)	(0.0273)	(0.0244)
scale	-0.2467***	0.0216	-0.2251***	-0.1683***	0.0286	-0.1396	-0.1540***	0.0309	-0.1231***
	(0.0069)	(0.0437)	(0.0375)	(0.0266)	(0.1024)	(0.0892)	(0.0061)	(0.0259)	(0.0217)
genderch	0.0099**	-0.0112	-0.0013	0.0110	-0.1863*	-0.1753**	-0.0128	0.3505***	0.3377***
	(0.0049)	(0.0150)	(0.0124)	(0.0176)	(0.0964)	(0.0816)	(0.0229)	(0.1220)	(0.1105)
hhchars	0.0319***	0.1339**	0.1658***	0.0309***	-0.1799	-0.1489	-0.0159***	0.1460*	0.1301*
	(0.0048)	(0.0577)	(0.0508)	(0.0117)	(0.2151)	(0.1860)	(0.0024)	(0.0801)	(0.0678)
plotchars	0.0063***	-0.0496	-0.0434	0.0088	0.4199**	0.4288**	0.0161***	-0.0431	-0.0270
	(0.0007)	(0.0457)	(0.0407)	(0.0076)	(0.2133)	(0.1803)	(0.0014)	(0.0274)	(0.0230)
geoeff	0.0110***	-0.3801	-0.3691	0.0290***	-0.1802	-0.1512	0.0039	-0.4935	-0.4897
	(0.0038)	(0.2875)	(0.2550)	(0.0097)	(0.8167)	(0.7134)	(0.0054)	(0.3435)	(0.3046)
Total (column sum)	-0.1603*** (0.0194)	0.1628*** (0.0259)	0.0025 (0.0146)	-0.0698 (0.0432)	0.0415 (0.0731)	-0.0284 (0.0485)	-0.0904*** (0.0242)	0.0712** (0.0360)	-0.0193 (0.0219)
	Guatemala			Cambodia			Malawi		
mgr	0.0076	0.1545	0.1621	0.0071	-0.0464	-0.0394	0.0296***	0.0997	0.1293
	(0.0085)	(0.4326)	(0.3828)	(0.0089)	(0.5324)	(0.4546)	(0.0072)	(0.2495)	(0.2081)
familab	0.0003	0.0400	0.0404	-0.0228	-0.0305	-0.0533	-0.0066	-0.0101	-0.0167
	(0.0193)	(0.0382)	(0.0298)	(0.0146)	(0.0560)	(0.0461)	(0.0105)	(0.0303)	(0.0243)
hiredlab	0.0002	-0.0006	-0.0005	0.0022	-0.0253	-0.0231	-0.0005*	0.0092	0.0087*
	(0.0002)	(0.0074)	(0.0069)	(0.0018)	(0.0246)	(0.0210)	(0.0003)	(0.0067)	(0.0048)
inputs	0.0052***	-0.0020	0.0032	0.0016	-0.0352	-0.0337	0.0160***	0.0238	0.0398**
	(0.0016)	(0.0440)	(0.0393)	(0.0042)	(0.0671)	(0.0576)	(0.0023)	(0.0205)	(0.0168)
scale	-0.1197***	-0.0605	-0.1803***	-0.0466***	-0.0291	-0.0757**	-0.0875***	-0.0495	-0.1370***
	(0.0049)	(0.0524)	(0.0474)	(0.0052)	(0.0393)	(0.0340)	(0.0030)	(0.0338)	(0.0282)
Genderch	-0.0293	-0.0593	-0.0885	0.0349*	-0.0481	-0.0132	-0.0008	0.0332	0.0324
	(0.0268)	(0.0667)	(0.0571)	(0.0212)	(0.1435)	(0.1248)	(0.0161)	(0.0907)	(0.0790)

Hhchars	0.0184*	-0.1716	-0.1532	-0.0399*	-0.5004	-0.5404	-0.0012	0.1220	0.1208
	(0.0096)	(0.1190)	(0.1078)	(0.0205)	(0.5042)	(0.4078)	(0.0013)	(0.0890)	(0.0739)
Plotchars	0.0118***	-0.0076	0.0042	-0.0008	-0.0328	-0.0337	0.0042***	-0.0277	-0.0236
	(0.0018)	(0.0355)	(0.0316)	(0.0008)	(0.0431)	(0.0374)	(0.0005)	(0.0253)	(0.0210)
geoeff	0.0170***	0.1269	0.1440	0.0860***	0.7406	0.8266	0.0294***	-0.1323	-0.1028
	(0.0040)	(0.4452)	(0.3952)	(0.0233)	(0.7308)	(0.6073)	(0.0056)	(0.2751)	(0.2304)
Total (column sum)	-0.0885***	0.0199	-0.0686**	0.0217	-0.0074	0.0143	-0.0174	0.0684**	0.0510***
	(0.0285)	(0.0442)	(0.0294)	(0.0265)	(0.0388)	(0.0235)	(0.0170)	(0.0292)	(0.0171)

Note: Econometric standard errors in parenthesis. Parameter significant at 1% level (***), 5% level (**) and 10% level (*).

Table 15. Summary of Oaxaca decompositions of farm yields by gender of majority of labour contibution *(femlab)* Summary of Oaxaca decompositions of farm yields by gender of majority of labour contibution (*femlab*) (continued)

Variable group	Nicaragua			Pakistan			Peru		
	Endowment effect	Structural effect	Total effect	Endowment effect	Structural effect	Total effect	Endowment effect	Structural effect	Total effect
mgr	0.0635	0.8924	0.9558	0.0022	0.0244	0.0266	0.0214**	-0.2524	-0.2311
	(0.0435)	(3.2362)	(3.1319)	(0.0024)	(0.2701)	(0.2345)	(0.0087)	(0.6736)	(0.5847)
familab	0.1634	-0.4452	-0.2819	-0.0510***	-0.0347	-0.0857***	-0.0079	-0.0301*	-0.0380***
	(0.1070)	(0.2898)	(0.2592)	(0.0148)	(0.0313)	(0.0245)	(0.0051)	(0.0158)	(0.0142)
hiredlab	0.0068	0.4280	0.4348*	-0.0038	-0.0112	-0.0149	-0.0051	0.0414**	0.0363***
	(0.0119)	(0.2688)	(0.2443)	(0.0059)	(0.0237)	(0.0185)	(0.0043)	(0.0175)	(0.0130)
inputs	0.1096***	-0.4133*	-0.3037	0.0505***	-0.1385*	-0.0881	-0.0110***	0.0264	0.0154
	(0.0362)	(0.2138)	(0.1960)	(0.0052)	(0.0733)	(0.0625)	(0.0033)	(0.0239)	(0.0192)
scale	-0.1225***	-0.5008	-0.6233	-0.0842***	0.0017	-0.0826*	-0.3970***	0.0184	-0.3786***
	(0.0271)	(0.4500)	(0.4278)	(0.0052)	(0.0484)	(0.0422)	(0.0126)	(0.0363)	(0.0307)
genderch	-0.0201	0.5581	0.5380	-0.0126	0.0888	0.0762	0.0284	0.1239	0.1523
	(0.1171)	(0.7099)	(0.6884)	(0.0146)	(0.0954)	(0.0920)	(0.0205)	(0.1233)	(0.1125)
hhchars	0.0219**	0.6324	0.6543	0.0210***	0.0768	0.0978	0.0210***	-0.1548	-0.1338
	(0.0088)	(0.6855)	(0.6539)	(0.0067)	(0.1412)	(0.1234)	(0.0072)	(0.1470)	(0.1279)
plotchars	0.0032*	0.4485	0.4517*	0.0359***	0.1494*	0.1852***	-0.0018***	-0.0592	-0.0609
	(0.0019)	(0.2842)	(0.2718)	(0.0072)	(0.0811)	(0.0632)	(0.0004)	(0.0544)	(0.0460)
geoeff	-0.0018	-1.6707	-1.6726	-0.0503***	-0.1289	-0.1792	0.1736***	0.4556	0.6292
	(0.0214)	(3.7873)	(3.6929)	(0.0151)	(0.3301)	(0.2821)	(0.0160)	(0.7078)	(0.6200)
Total (column sum)	0.2238	-0.0705	0.1533	-0.0924***	0.0278	-0.0646***	-0.1783***	0.1692***	-0.0091

	(0.1557)	(0.2414)	(0.1708)	(0.0189)	(0.0280)	(0.0185)	(0.0270)	(0.0474)	(0.0300)
Variable group	**Uganda**			**Viet Nam**					
mgr	-0.0070	-0.3438	-0.3508	-0.0190***	0.0187	-0.0002			
	(0.0073)	(0.5900)	(0.5004)	(0.0038)	(0.5269)	(0.4499)			
familab	-0.0096	0.0961	0.0865	-0.0436***	0.0085	-0.0350			
	(0.0305)	(0.0891)	(0.0739)	(0.0153)	(0.0487)	(0.0410)			
hiredlab	-0.0084***	0.0361	0.0277	0.0074***	-0.0417*	-0.0343			
	(0.0016)	(0.0285)	(0.0244)	(0.0013)	(0.0252)	(0.0210)			
inputs	0.0045	-0.0109	-0.0064	0.0396***	-0.0317	0.0079			
	(0.0043)	(0.0368)	(0.0306)	(0.0087)	(0.0511)	(0.0425)			
scale	-0.0395***	-0.0263	-0.0658*	-0.0203***	-4.1106**	-4.1309***			
	(0.0037)	(0.0417)	(0.0351)	(0.0007)	(1.9164)	(1.5921)			
genderch	-0.0229	0.0560	0.0331	0.0400	-0.0643	-0.0244			
	(0.0238)	(0.1049)	(0.0862)	(0.0440)	(0.1368)	(0.1238)			
hhchars	0.0012	0.1326	0.1337	-0.8583***	21.3181***	20.4597***			
	(0.0043)	(0.1487)	(0.1261)	(0.1598)	(6.7739)	(4.4176)			
plotchars	0.0004	-0.0017	-0.0013	-0.0017***	0.0044	0.0027			
	(0.0004)	(0.0277)	(0.0240)	(0.0003)	(0.0613)	(0.0520)			
geoeff	0.0010	0.0790	0.0800	0.8245***	-17.0500**	-			
	(0.0120)	(0.5871)	(0.4936)	(0.1561)	(7.2799)	(4.9202)			
Total (column sum)	-0.0802**	0.0170	-0.0633	-0.0315	0.0514	0.0199			
	(0.0343)	(0.0710)	(0.0410)	(0.0448)	(0.0567)	(0.0249)			

Note: Econometric standard errors in parenthesis. Parameter significant at 1% level (***), 5% level (**) and 10% level (*).

Table 16. Summary of Oaxaca decompositions of farm yields by gender of farm manager *(femmgr)*

Variable group	Ethiopia			Ghana			Cambodia		
	Endowment effect	Structural effect	Total effect	Endowment effect	Structural effect	Total effect	Endowment effect	Structural effect	Total effect
mgr	0.1605***	0.4086	0.5691	0.1010***	-0.6042	-0.5032	0.0766**	-0.1169	-0.0404
	(0.0610)	(0.8690)	(0.7814)	(0.0180)	(0.4008)	(0.3690)	(0.0298)	(0.7642)	(0.7126)
familab	-0.0011	0.1003	0.0992**	0.0081	0.0985***	0.1065***	-0.0305***	-0.0298	-0.0604
	(0.0279)	(0.0654)	(0.0500)	(0.0077)	(0.0230)	(0.0188)	(0.0118)	(0.0644)	(0.0551)
hiredlab	-0.0054**	-0.0860*	-0.0914**	-0.0052**	-0.0031	-0.0083	0.0020	-0.0575*	-0.0556**
	(0.0023)	(0.0440)	(0.0419)	(0.0025)	(0.0155)	(0.0125)	(0.0017)	(0.0305)	(0.0278)

inputs	-0.0104	0.2795*	0.2691**	0.0093***	-	-	0.0005	-0.0209	-0.0204
	(0.0154)	(0.1466)	(0.1295)	(0.0033)	(0.0226)	(0.0191)	(0.0057)	(0.0682)	(0.0589)
scale	-0.1951***	0.1891	-0.0061	-0.5256***	-0.0085	-	-0.1383***	0.0003	-
	(0.0300)	(0.1255)	(0.1127)	(0.0164)	(0.0332)	(0.0294)	(0.0156)	(0.0574)	(0.0516)
genderch	0.0103	-0.1654	-0.1551*	-0.0545***	0.0863	0.0318	0.0234	-0.0242	-0.0009
	(0.0222)	(0.1017)	(0.0866)	(0.0192)	(0.1166)	(0.1062)	(0.0148)	(0.1472)	(0.1319)
hhchars	0.0453**	-0.2454	-0.2001	0.0314***	-0.0494	-0.0180	0.0007	-0.6160	-0.6153
	(0.0204)	(0.2467)	(0.2233)	(0.0059)	(0.0987)	(0.0901)	(0.0084)	(1.0522)	(1.0100)
plotchars	0.0047	0.5545**	0.5592**	0.0562***	-0.0520**	0.0041	0.0019	0.0301	0.0320
	(0.0039)	(0.2462)	(0.2177)	(0.0049)	(0.0261)	(0.0223)	(0.0017)	(0.0711)	(0.0674)
geoeff	0.0211***	-1.0926	-1.0715	0.0624***	0.8794**	0.9419**	0.0166	0.8604	0.8770
	(0.0073)	(0.9921)	(0.9080)	(0.0085)	(0.4402)	(0.4108)	(0.0127)	(1.1491)	(1.0739)
Total (column sum)	0.0299	-0.0574	-0.0275	-0.3171***	0.2872***	-0.0298	-0.0472	0.0252	-0.0220
	(0.0706)	(0.0956)	(0.0551)	(0.0309)	(0.0447)	(0.0279)	(0.0343)	(0.0476)	(0.0286)
Variable group	**Malawi**			**Peru**			**Uganda**		
mgr	0.0796***	-0.1228	-0.0432	0.0747***	-0.1808	-0.1061	0.0578**	-0.0256	0.0321
	(0.0200)	(0.2765)	(0.2402)	(0.0250)	(0.9938)	(0.9360)	(0.0284)	(0.6048)	(0.5189)
familab	-0.0013	-0.0098	-0.0111	-0.0111	-0.0198	-0.0310	-0.0407*	0.0290	-0.0117
	(0.0096)	(0.0359)	(0.0305)	(0.0071)	(0.0291)	(0.0276)	(0.0232)	(0.0779)	(0.0620)
hiredlab	0.0016*	-0.0054	-0.0038	-0.0100	0.0564**	0.0464***	0.0002***	-0.0070	-0.0068
	(0.0009)	(0.0077)	(0.0062)	(0.0083)	(0.0221)	(0.0160)	(0.0000)	(0.0289)	(0.0247)
inputs	0.0392***	0.0102	0.0494**	-0.0169***	0.0328	0.0159	0.0053	0.0015	0.0068
	(0.0049)	(0.0253)	(0.0225)	(0.0045)	(0.0274)	(0.0226)	(0.0062)	(0.0376)	(0.0304)
scale	-0.1768***	-0.0591	-	-0.5370***	-0.0546	-	-0.1555***	-0.0406	-
	(0.0060)	(0.0471)	(0.0423)	(0.0183)	(0.0540)	(0.0484)	(0.0164)	(0.0479)	(0.0390)
genderch	0.0112	-0.0857	-0.0746	0.0059	0.2917	0.2976	-0.0309	0.0369	0.0060
	(0.0186)	(0.1132)	(0.1013)	(0.0308)	(0.2316)	(0.2231)	(0.0260)	(0.1346)	(0.1157)
hhchars	0.0134**	0.0020	0.0154	0.0429***	-0.2406	-0.1977	0.0003	0.2863**	0.2866**
	(0.0061)	(0.0941)	(0.0804)	(0.0094)	(0.2027)	(0.1904)	(0.0052)	(0.1406)	(0.1168)
plotchars	0.0050***	-0.0110	-0.0060	-0.0140***	-0.0063	-0.0203	-0.0006	0.0358	0.0352
	(0.0009)	(0.0269)	(0.0230)	(0.0033)	(0.0770)	(0.0707)	(0.0008)	(0.0313)	(0.0279)
geoeff	0.0110	0.3396	0.3506	0.0875***	0.4273	0.5148	-0.1488***	-0.1546	-0.3035
	(0.0068)	(0.3238)	(0.2866)	(0.0207)	(1.0755)	(1.0197)	(0.0147)	(0.6141)	(0.5273)
Total (column sum)	-0.0172	0.0579	0.0408**	-0.3781***	0.3060***	-0.0720*	-0.3128***	0.1616**	-
	(0.0277)	(0.0364)	(0.0186)	(0.0467)	(0.0647)	(0.0385)	(0.0436)	(0.0655)	(0.0400)

Note: Econometric standard errors in parenthesis. Parameter significant at 1% level (***), 5% level (**) and 10% level (*).

Table 17. Yield models by gender using *femhead* – Bangladesh

Variable	Joint	Female	Male	Difference
femhead	-0.1157	.	.	.
	(0.0862)	.	.	.
agehead	0.0119*	-0.0057	0.0138*	0.0195
	(0.0072)	(0.0354)	(0.0078)	(0.0363)
ageh2	-0.0001**	-0.0000	-0.0002**	-0.0001
	(0.0001)	(0.0003)	(0.0001)	(0.0003)
educhead	-0.0077**	0.0220	-0.0073*	-0.0293
	(0.0037)	(0.0284)	(0.0037)	(0.0286)
married	0.0126	-0.4674*	0.0265	0.4940**
	(0.0391)	(0.2385)	(0.0397)	(0.2418)
widow	-0.4592***	0.0000	-0.4561***	-0.4561***
	(0.1033)	(0.0000)	(0.1087)	(0.1087)
plots	0.2999	-0.2676	0.3776	0.6452*
	(0.2068)	(0.2803)	(0.2548)	(0.3788)
rent	0.2320***	-0.0368	0.2197***	0.2566
	(0.0458)	(0.4235)	(0.0469)	(0.4260)
malefamlab_ha	0.3698**	-4.1597***	0.3828**	4.5425***
	(0.1862)	(1.1736)	(0.1924)	(1.1893)
femfamlab_ha	0.1213	-1.7295	0.1137	1.8432*
	(0.2035)	(1.0530)	(0.2090)	(1.0736)
childlab_ha	1.2175***	3.6778	1.2622***	-2.4156
	(0.3341)	(3.7530)	(0.3519)	(3.7694)
hiredlab_ha	0.0346***	0.1887***	0.0335***	-0.1552**
	(0.0083)	(0.0700)	(0.0085)	(0.0705)
seeds_ha	0.0403**	0.6888***	0.0393**	-0.6495***
	(0.0166)	(0.2377)	(0.0162)	(0.2383)
fertilizers_ha	0.0454***	0.0201	0.0466***	0.0265
	(0.0150)	(0.1190)	(0.0146)	(0.1199)
other_ha	0.0017**	0.0122	0.0020**	-0.0102
	(0.0009)	(0.0142)	(0.0009)	(0.0143)
agcap_ha	13.8912	43.2268	14.7712	-28.4556
	(12.5952)	(89.5199)	(12.7968)	(90.4299)
lland	-0.6490***	-0.5156**	-0.6443***	-0.1287
	(0.0275)	(0.1978)	(0.0285)	(0.1999)
lland2	-0.0829***	0.0016	-0.0826***	-0.0843
	(0.0131)	(0.0742)	(0.0136)	(0.0754)
child_dep	-0.0801	0.0000	-0.0738	-0.0738
	(0.1318)	(0.0000)	(0.1327)	(0.1327)
femlabsh	-0.1115	-0.2331	-0.2177	0.0154
	(0.1087)	(0.1940)	(0.1828)	(0.2666)

Table A7. Yield models by gender using *femhead* – Bangladesh (continued)

Variable	Joint	Female	Male	Difference
hhsize	0.0331***	0.0267	0.0311***	0.0043
	(0.0083)	(0.0495)	(0.0086)	(0.0502)
nfi	-0.0675	0.3591	-0.0745*	-0.4336
	(0.0416)	(0.3563)	(0.0427)	(0.3589)
nfwi	-0.1003***	0.3896	-0.1018***	-0.4915*
	(0.0371)	(0.2658)	(0.0384)	(0.2686)
distance	-0.0051**	-0.0096	-0.0042**	0.0054
	(0.0020)	(0.0102)	(0.0021)	(0.0104)
wealth_idx	0.1300**	-0.3081	0.1281**	0.4362
	(0.0523)	(0.3870)	(0.0536)	(0.3907)
irrigation	0.2163***	0.2832	0.2202***	-0.0630
	(0.0487)	(0.1828)	(0.0513)	(0.1899)
Observations	2 427	131	2 296	
Adj. R2	0.558	0.688	0.559	
Log-likelihood	-2 604.3	-52.2	-2 470.6	
AIC	5 386.6	210.3	5 117.3	
S.Error Regr.	0.721	0.541	0.724	
Geogr. FE	63	49	63	
Model Tests				
Chow F Test M=F pval	0.690			
Wald Test F=J, M=J pval		0.000	1.000	

Table 18. Yield models by gender using *femhead* – Ethiopia

Variable	Joint	Female	Male	Difference
femhead	-0.0404	.	.	.
	(0.0855)	.	.	.
agehead	0.0046	-0.0259	0.0087	0.0346
	(0.0108)	(0.0248)	(0.0117)	(0.0274)
ageh2	-0.0000	0.0003	-0.0001	-0.0004
	(0.0001)	(0.0002)	(0.0001)	(0.0003)
educhead	0.0013	-0.0303	0.0005	0.0308
	(0.0069)	(0.0266)	(0.0070)	(0.0275)
married	0.1377*	-0.0152	0.1506	0.1658
	(0.0823)	(0.1475)	(0.1017)	(0.1791)
widow	0.0407	-0.1215	-0.1152	0.0063
	(0.1062)	(0.1364)	(0.2312)	(0.2684)
plots	0.0116	0.0641	0.0060	-0.0581
	(0.0145)	(0.0634)	(0.0138)	(0.0649)
rent	0.0426	-0.6480***	0.1063	0.7543***
	(0.0661)	(0.2267)	(0.0658)	(0.2361)
sharecrop	0.1756***	0.2058	0.1522***	-0.0536
	(0.0519)	(0.2667)	(0.0521)	(0.2717)
malefamlab_ha	0.0474***	0.0757***	0.0416***	-0.0340
	(0.0090)	(0.0196)	(0.0088)	(0.0215)
femfamlab_ha	0.0286***	0.0255**	0.0367**	0.0112
	(0.0099)	(0.0106)	(0.0155)	(0.0188)
childlab_ha	0.0213	-0.0521*	0.1244***	0.1765***
	(0.0438)	(0.0308)	(0.0316)	(0.0441)
hiredlab_ha	0.0324**	0.0204	0.0400**	0.0196
	(0.0139)	(0.0135)	(0.0157)	(0.0207)
fertil_ha	-0.0015	-0.0086	0.0054	0.0140
	(0.0055)	(0.0072)	(0.0060)	(0.0094)
seeds_ha	0.0153	0.0345	0.0082	-0.0263
	(0.0423)	(0.0549)	(0.0476)	(0.0726)
other_ha	0.0000	0.0004	-0.0002	-0.0006
	(0.0001)	(0.0004)	(0.0001)	(0.0004)
plough	0.0366	-0.1870	0.0891	0.2762*
	(0.0588)	(0.1370)	(0.0639)	(0.1511)
orgfert	0.0376	-0.1024	0.0795	0.1819
	(0.0486)	(0.1301)	(0.0513)	(0.1398)
agcap_ha	-0.0029	-0.0088***	0.0012	0.0099**
	(0.0020)	(0.0034)	(0.0032)	(0.0046)
lland	-0.4101***	-0.2364**	-0.4297***	-0.1933
	(0.0364)	(0.1173)	(0.0367)	(0.1229)
lland2	-0.0766***	-0.0540*	-0.0900***	-0.0361
	(0.0132)	(0.0324)	(0.0153)	(0.0358)

Table A8. Yield models by gender using *femhead* – Ethiopia (continued)

Variable	Joint	Female	Male	Difference
child_dep	-0.0731	-0.2746*	-0.0281	0.2466
	(0.0707)	(0.1532)	(0.0770)	(0.1715)
femlabsh	-0.0676	0.2128	-0.2490***	-0.4618***
	(0.0796)	(0.1405)	(0.0890)	(0.1664)
hhsize	0.0218*	0.0332	0.0135	-0.0197
	(0.0124)	(0.0391)	(0.0125)	(0.0410)
nfi	0.0846	-0.0467	0.1018	0.1485
	(0.0580)	(0.1390)	(0.0637)	(0.1529)
nfwi	-0.0005	-0.1878	0.0231	0.2109
	(0.0514)	(0.1463)	(0.0543)	(0.1560)
distance	-0.0030***	-0.0021	-0.0030***	-0.0010
	(0.0006)	(0.0015)	(0.0006)	(0.0016)
wealth_idx	0.0662***	0.0424	0.0684**	0.0260
	(0.0256)	(0.0625)	(0.0281)	(0.0686)
irrigation	0.1844***	0.0251	0.2059***	0.1808
	(0.0638)	(0.1787)	(0.0686)	(0.1914)
slopepct	-0.0025	0.0070	-0.0046	-0.0117
	(0.0028)	(0.0071)	(0.0031)	(0.0078)
altitude	0.0000	-0.0002	0.0001***	0.0003**
	(0.0000)	(0.0001)	(0.0001)	(0.0001)
Observations	2020	419	1 601	
Adj. R2	0.300	0.223	0.379	
Log-likelihood	-2 589.2	-561.7	-1 914.5	
AIC	5 320.5	1 257.3	3 969.0	
S.Error Regr.	0.888	1.012	0.818	
Geogr. FE	39	38	39	
Model Tests				
Chow F Test M=F pval	0.000			
Wald Test F=J, M=J pval		0.000	1.000	

Table 19. Yield models by gender using *femhead* – Ghana

Variable	Joint	Female	Male	Difference
femhead	-0.2766***	.	.	.
	(0.0470)	.	.	.
agehead	-0.0028	0.0012	-0.0023	-0.0035
	(0.0042)	(0.0133)	(0.0045)	(0.0140)
ageh2	0.0000	0.0000	0.0000	-0.0000
	(0.0000)	(0.0001)	(0.0000)	(0.0001)
educhead	0.0007	0.0114	-0.0005	-0.0120
	(0.0027)	(0.0081)	(0.0029)	(0.0086)
married	0.0437	-0.0065	0.0548	0.0612
	(0.0320)	(0.0824)	(0.0361)	(0.0900)
widow	0.0921*	0.0433	0.1128	0.0695
	(0.0519)	(0.0743)	(0.1042)	(0.1280)
plots	0.1039***	0.1509***	0.1004***	-0.0505*
	(0.0065)	(0.0261)	(0.0067)	(0.0270)
rent	0.0008	0.1690	-0.0241	-0.1932
	(0.0444)	(0.1379)	(0.0484)	(0.1461)
sharecrop	0.1550***	0.0912	0.1569***	0.0657
	(0.0369)	(0.1028)	(0.0396)	(0.1102)
malefamlab_ha	0.0427***	0.0183	0.0632***	0.0449**
	(0.0071)	(0.0145)	(0.0114)	(0.0184)
femfamlab_ha	0.0000	-0.0198***	0.0083	0.0281**
	(0.0039)	(0.0053)	(0.0119)	(0.0130)
childlab_ha	0.0025	-0.0110	0.0159	0.0269*
	(0.0076)	(0.0124)	(0.0101)	(0.0160)
hiredlab_ha	0.0002**	0.0002	0.0002	-0.0000
	(0.0001)	(0.0002)	(0.0001)	(0.0002)
fertil_ha	0.0003**	0.0006***	0.0002*	-0.0004*
	(0.0001)	(0.0002)	(0.0001)	(0.0002)
seeds_ha	-0.0002	-0.0010	0.0001	0.0011
	(0.0003)	(0.0006)	(0.0003)	(0.0007)
other_ha	0.0003**	0.0010***	0.0002**	-0.0007***
	(0.0001)	(0.0002)	(0.0001)	(0.0002)
agcap_ha	0.0052	0.0195	0.0014	-0.0181
	(0.0076)	(0.0278)	(0.0076)	(0.0288)
lland	-0.5637***	-0.6414***	-0.5006***	0.1408***
	(0.0210)	(0.0402)	(0.0286)	(0.0493)
lland2	-0.0429***	-0.0044	-0.0611***	-0.0566**
	(0.0071)	(0.0237)	(0.0085)	(0.0252)
child_dep	-0.0073	-0.0828	0.0072	0.0900
	(0.0307)	(0.0658)	(0.0342)	(0.0742)
femlabsh	0.1348**	0.0257	0.2015***	0.1759
	(0.0532)	(0.1307)	(0.0651)	(0.1461)

Table A9. Yield models by gender using *femhead* – Ghana (continued)

Variable	Joint	Female	Male	Difference
hhsize	0.0204***	0.0409***	0.0154***	-0.0255*
	(0.0040)	(0.0141)	(0.0042)	(0.0147)
nfi	-0.0528*	-0.1181	-0.0471	0.0710
	(0.0281)	(0.0778)	(0.0302)	(0.0834)
nfwi	-0.0339	-0.0417	-0.0395	0.0022
	(0.0273)	(0.0763)	(0.0294)	(0.0818)
distance	0.0019**	-0.0036	0.0032***	0.0068***
	(0.0008)	(0.0024)	(0.0009)	(0.0025)
wealth_idx	-0.0523***	-0.0306	-0.0476***	-0.0170
	(0.0175)	(0.0506)	(0.0181)	(0.0537)
d_livestock	0.2538***	0.2958***	0.2172***	-0.0786
	(0.0223)	(0.0594)	(0.0241)	(0.0641)
Observations	7 676	1 452	6 224	
Adj. R2	0.389	0.378	0.404	
Log-likelihood	-9 751.3	-1 938.6	-7 628.8	
AIC	19 880.6	4 217.2	15 631.6	
S.Error Regr.	0.873	0.983	0.837	
Geogr. FE	162	153	161	
Model Tests				
Chow F Test M=F pval	0.000			
Wald Test F=J, M=J pval		0.000	1.000	

Table 20. Yield models by gender using *femhead* – Guatemala

Variable	Joint	Female	Male	Difference
femhead	-0.0652	.	.	.
	(0.0530)	.	.	.
agehead	0.0152***	-0.0049	0.0170***	0.0220
	(0.0050)	(0.0145)	(0.0054)	(0.0155)
ageh2	-0.0001***	0.0000	-0.0002***	-0.0002
	(0.0000)	(0.0001)	(0.0001)	(0.0001)
educhead	0.0051	-0.0057	0.0055	0.0111
	(0.0035)	(0.0141)	(0.0036)	(0.0146)
married	0.0033	0.0089	-0.0527	-0.0617
	(0.0587)	(0.1198)	(0.0749)	(0.1413)
widow	-0.0003	0.0551	-0.0833	-0.1384
	(0.0660)	(0.1078)	(0.0952)	(0.1438)
plots	0.0973***	0.1435***	0.0936***	-0.0499
	(0.0092)	(0.0398)	(0.0094)	(0.0409)
rent	0.0284	0.0002	0.0292	0.0291
	(0.0228)	(0.0849)	(0.0238)	(0.0882)
malefamlab_ha	1.5093***	1.2649	1.7307***	0.4657
	(0.4057)	(1.5408)	(0.4577)	(1.6074)
femfamlab_ha	0.5004	-1.5606	0.5971	2.1576
	(0.7430)	(1.3291)	(0.9431)	(1.6297)
childlab_ha	-0.3657	1.4098	-0.4087	-1.8185
	(0.7685)	(4.8251)	(0.7929)	(4.8898)
hiredlab_ha	-0.0488	1.3168***	-0.0719*	-1.3887***
	(0.0561)	(0.3141)	(0.0423)	(0.3169)
seeds_ha	-0.7231***	1.1753	-0.7546***	-1.9299*
	(0.2306)	(1.0880)	(0.2341)	(1.1129)
fertilizers_ha	0.8342***	0.4706*	0.8458***	0.3753
	(0.0813)	(0.2573)	(0.0879)	(0.2719)
other_ha	0.8015***	1.0466***	0.7996***	-0.2470
	(0.1072)	(0.3639)	(0.1109)	(0.3804)
agcap_ha	29.9294*	65.9779	28.9776	-37.0003
	(17.4974)	(44.8510)	(18.6296)	(48.5662)
lland	-0.5086***	-0.5319***	-0.5018***	0.0301
	(0.0173)	(0.0653)	(0.0179)	(0.0677)
lland2	-0.0693***	-0.0200	-0.0751***	-0.0552*
	(0.0088)	(0.0301)	(0.0093)	(0.0316)
child_dep	0.0352	0.0728	0.0282	-0.0446
	(0.0368)	(0.1088)	(0.0399)	(0.1159)
femlabsh	0.0731	0.1487	0.0536	-0.0951
	(0.0510)	(0.1030)	(0.0612)	(0.1198)
hhsize	-0.0101**	0.0010	-0.0114**	-0.0124
	(0.0048)	(0.0209)	(0.0049)	(0.0214)

Table A10. Yield models by gender using *femhead* – Guatemala (continued)

Variable	Joint	Female	Male	Difference
nfi	-0.0492*	-0.1446*	-0.0289	0.1157
	(0.0268)	(0.0871)	(0.0285)	(0.0916)
nfwi	-0.0659***	-0.0727	-0.0649**	0.0077
	(0.0249)	(0.0894)	(0.0259)	(0.0931)
distance	0.0001	-0.0042	0.0004	0.0046
	(0.0014)	(0.0048)	(0.0015)	(0.0050)
wealth_idx	-0.0082	-0.0007	-0.0106	-0.0098
	(0.0085)	(0.0243)	(0.0093)	(0.0261)
irrigated	0.1515***	0.2002**	0.1476***	-0.0526
	(0.0227)	(0.0957)	(0.0235)	(0.0985)
Observations	3 812	366	3 446	
Adj. R2	0.459	0.435	0.465	
Log-likelihood	-3 630.0	-348.0	-3 243.2	
AIC	7 356.1	789.9	6 580.4	
S.Error Regr.	0.631	0.671	0.624	
Geogr. FE	21	21	21	
Model Tests				
Chow F Test M=F pval	0.003			
Wald Test F=J, M=J pval		0.004	1.000	

Table 21 Yield models by gender using *femhead* – Cambodia

Variable	Joint	Female	Male	Difference
femhead	-0.0342	.	.	.
	(0.0613)	.	.	.
agehead	0.0180***	0.0210	0.0154**	-0.0057
	(0.0066)	(0.0248)	(0.0073)	(0.0259)
ageh2	-0.0002***	-0.0002	-0.0002**	0.0000
	(0.0001)	(0.0002)	(0.0001)	(0.0002)
educhead	0.0137***	0.0103	0.0155***	0.0053
	(0.0047)	(0.0148)	(0.0053)	(0.0157)
married	-0.0206	0.2200	-0.1080	-0.3280
	(0.1003)	(0.2240)	(0.2361)	(0.3255)
widow	-0.0234	0.0302	-0.1720	-0.2022
	(0.0839)	(0.1290)	(0.2469)	(0.2786)
plots	0.1432***	0.1591***	0.1370***	-0.0222
	(0.0143)	(0.0496)	(0.0155)	(0.0519)
rent	-0.1561	0.0394	-0.1426	-0.1820
	(0.1344)	(0.2023)	(0.1477)	(0.2505)
malefamlab_ha	0.0074	0.0313	0.0080	-0.0234
	(0.0057)	(0.0207)	(0.0065)	(0.0217)
femfamlab_ha	0.0222***	0.0486***	0.0160	-0.0325*
	(0.0081)	(0.0153)	(0.0100)	(0.0183)
childlab_ha	-0.0155**	-0.0529	-0.0124	0.0404
	(0.0067)	(0.0587)	(0.0077)	(0.0592)
hiredlab_ha	0.0824	0.2549	0.0949	-0.1600
	(0.0685)	(0.2189)	(0.0713)	(0.2303)
fertil_ha	0.1364**	0.0862	0.1376*	0.0514
	(0.0644)	(0.1226)	(0.0753)	(0.1439)
seeds_ha	0.3319***	1.1633***	0.3127***	-0.8505***
	(0.0660)	(0.2361)	(0.0626)	(0.2443)
other_ha	0.1393***	0.0859	0.1428***	0.0569
	(0.0426)	(0.1301)	(0.0447)	(0.1376)
agcap_ha	-0.0051	0.0210**	-0.0056	-0.0266***
	(0.0043)	(0.0084)	(0.0055)	(0.0100)
lland	-0.2932***	-0.2912***	-0.2943***	-0.0031
	(0.0295)	(0.0689)	(0.0330)	(0.0764)
lland2	-0.0593***	-0.0422	-0.0622***	-0.0200
	(0.0113)	(0.0350)	(0.0121)	(0.0370)
child_dep	0.0579	0.2922*	0.0127	-0.2795
	(0.0520)	(0.1631)	(0.0604)	(0.1739)
femlabsh	-0.1183	0.1008	-0.1763*	-0.2771
	(0.0797)	(0.2035)	(0.1011)	(0.2272)
hhsize	-0.0192**	-0.0285	-0.0148*	0.0137
	(0.0082)	(0.0282)	(0.0088)	(0.0295)

Table A11. Yield models by gender using *femhead* – Cambodia (continued)

Variable	Joint	Female	Male	Difference
nfi	0.2010	0.9849**	0.0923	-0.8926**
	(0.2020)	(0.3971)	(0.1119)	(0.4126)
nfwi	0.0272	0.1038	0.0122	-0.0916
	(0.0287)	(0.0990)	(0.0338)	(0.1046)
distance	0.0804***	0.2368	0.0773***	-0.1594
	(0.0273)	(0.1584)	(0.0299)	(0.1612)
wealth_idx	0.0807***	0.1090**	0.0833***	-0.0257
	(0.0137)	(0.0496)	(0.0149)	(0.0518)
irrigation	-0.0326	-0.1212	-0.0525*	0.0688
	(0.0298)	(0.1242)	(0.0316)	(0.1281)
Observations	3 142	554	2 588	
Adj. R2	0.516	0.501	0.528	
Log-likelihood	-2 786.6	-366.0	-2 235.6	
AIC	6 229.3	1 074.1	5 109.2	
S.Error Regr.	0.624	0.629	0.617	
Geogr. FE	333	221	324	
Model Tests				
Chow F Test M=F pval	0.999			
Wald Test F=J, M=J pval		0.000	0.000	

Table 22. Yield models by gender using *femhead* – Malawi

Variable	Joint	Female	Male	Difference
femhead	-0.0365	.	.	.
	(0.0383)	.	.	.
agehead	0.0092**	0.0149*	0.0073	-0.0076
	(0.0037)	(0.0079)	(0.0048)	(0.0092)
ageh2	-0.0001***	-0.0001*	-0.0001*	0.0001
	(0.0000)	(0.0001)	(0.0000)	(0.0001)
educhead	0.0141***	0.0221***	0.0143***	-0.0078
	(0.0029)	(0.0067)	(0.0034)	(0.0075)
married	0.0531	0.0340	0.1367*	0.1027
	(0.0358)	(0.0547)	(0.0725)	(0.0908)
widow	0.0621*	-0.0089	0.0131	0.0220
	(0.0363)	(0.0498)	(0.1028)	(0.1142)
plots	0.1953***	0.1997***	0.1838***	-0.0159
	(0.0148)	(0.0370)	(0.0169)	(0.0407)
rent	0.0262	0.0568	0.0238	-0.0330
	(0.0401)	(0.1015)	(0.0454)	(0.1112)
malefamlab_ha	0.0243***	-0.0390	0.0373***	0.0763**
	(0.0073)	(0.0339)	(0.0109)	(0.0356)
femfamlab_ha	0.0299***	0.0391**	0.0123	-0.0268
	(0.0091)	(0.0170)	(0.0095)	(0.0195)
childfamlab_ha	0.0106	0.0143	0.0023	-0.0119
	(0.0196)	(0.0211)	(0.0317)	(0.0380)
hiredlab_ha	0.0158*	0.0425**	0.0150*	-0.0275
	(0.0088)	(0.0203)	(0.0089)	(0.0222)
fertil_ha	0.0223***	0.0277***	0.0223***	-0.0053
	(0.0030)	(0.0069)	(0.0031)	(0.0076)
seeds_ha	0.0319***	0.0120	0.0349***	0.0229
	(0.0064)	(0.0152)	(0.0073)	(0.0169)
other_ha	0.0054	0.0130	0.0032	-0.0097
	(0.0080)	(0.0152)	(0.0092)	(0.0178)
agcap_ha	0.0034**	0.0101*	0.0042***	-0.0058
	(0.0014)	(0.0054)	(0.0013)	(0.0056)
lland	-0.5512***	-0.5706***	-0.5424***	0.0281
	(0.0240)	(0.0578)	(0.0272)	(0.0638)
lland2	-0.0389***	-0.0155	-0.0467***	-0.0312
	(0.0099)	(0.0236)	(0.0110)	(0.0261)
child_dep	-0.0819***	-0.1013**	-0.0488	0.0525
	(0.0300)	(0.0487)	(0.0434)	(0.0652)
femlabsh	-0.0367	-0.0387	-0.1544	-0.1158
	(0.0565)	(0.1159)	(0.0968)	(0.1511)
hhsize	0.0064	0.0064	0.0095	0.0030
	(0.0058)	(0.0126)	(0.0073)	(0.0145)

Table A12. Yield models by gender using *femhead* – Malawi (continued)

Variable	Joint	Female	Male	Difference
nfi	0.0672***	0.0732	0.0646**	-0.0086
	(0.0220)	(0.0467)	(0.0264)	(0.0536)
nfwi	-0.0190	0.0313	0.0000	-0.0313
	(0.0301)	(0.0804)	(0.0342)	(0.0874)
distance	-0.0014**	-0.0025**	-0.0011	0.0013
	(0.0006)	(0.0011)	(0.0008)	(0.0014)
wealth_idx	0.0294***	0.0722***	0.0239***	-0.0483**
	(0.0072)	(0.0224)	(0.0078)	(0.0237)
irrigation	0.1374	-0.1898	0.2431**	0.4328
	(0.1167)	(0.3466)	(0.1129)	(0.3646)
slope	-0.0498*	-0.0150	-0.0618*	-0.0467
	(0.0302)	(0.0585)	(0.0371)	(0.0692)
soil_quality	0.1564***	0.1608***	0.1565***	-0.0043
	(0.0190)	(0.0384)	(0.0230)	(0.0447)
Observations	9 208	2 750	6 458	
Adj. R2	0.370	0.355	0.377	
Log-likelihood	-10 845.7	-2 941.2	-7 477.4	
AIC	23 241.3	7 162.4	16 464.9	
S.Error Regr.	0.822	0.820	0.821	
Geogr. FE	760	688	753	
Model Tests				
Chow F Test M=F pval	0.962			
Wald Test F=J, M=J pval		0.000	1.000	

Table 23. Yield models by gender using *femhead* – Nicaragua

Variable	Joint	Female	Male	Difference
femhead	-0.4842***	.	.	.
	(0.1629)	.	.	.
agehead	0.0055	-0.1210**	0.0195	0.1405***
	(0.0210)	(0.0487)	(0.0217)	(0.0533)
ageh2	-0.0001	0.0009*	-0.0002	-0.0011**
	(0.0002)	(0.0004)	(0.0002)	(0.0005)
educhead	0.0221	-0.0479	0.0342**	0.0821*
	(0.0150)	(0.0393)	(0.0161)	(0.0425)
married	-0.0550	-0.4056	0.1150	0.5206
	(0.1654)	(0.3261)	(0.2121)	(0.3890)
widow	0.3855	0.2407	0.4160	0.1753
	(0.3763)	(0.8576)	(0.4685)	(0.9772)
plots	0.2303***	0.5191**	0.1751**	-0.3440
	(0.0764)	(0.2294)	(0.0864)	(0.2452)
rent	0.1628	-0.3194	0.1598	0.4791
	(0.1148)	(0.3325)	(0.1251)	(0.3552)
malefamlab_ha	0.0007***	0.0007	0.0008***	0.0001
	(0.0003)	(0.0007)	(0.0003)	(0.0007)
femfamlab_ha	0.0001	-0.0010	0.0007*	0.0017**
	(0.0004)	(0.0007)	(0.0004)	(0.0008)
childlab_ha	-0.0005	0.0024	-0.0006	-0.0029
	(0.0007)	(0.0029)	(0.0007)	(0.0030)
hiredlab_ha	0.5934**	1.3047	0.4151	-0.8896
	(0.2922)	(0.8105)	(0.3067)	(0.8666)
seedfert_ha	0.6951***	0.7718	1.0689***	0.2972
	(0.2407)	(1.0076)	(0.1655)	(1.0211)
other_ha	-0.4229***	-1.2227	-0.3882***	0.8345
	(0.0940)	(0.9880)	(0.0815)	(0.9914)
agcap_ha	0.2532***	0.5731**	0.1923***	-0.3809
	(0.0938)	(0.2669)	(0.0727)	(0.2766)
lland	-0.5936***	-1.4710***	-0.4035***	1.0675***
	(0.1347)	(0.3479)	(0.1342)	(0.3729)
lland2	-0.0569**	0.1227**	-0.0936***	-0.2163***
	(0.0280)	(0.0583)	(0.0288)	(0.0650)
child_dep	0.0245	-0.3607	0.0845	0.4452
	(0.1893)	(0.4209)	(0.2006)	(0.4662)
femlabsh	0.2129	0.5493	0.2237	-0.3257
	(0.2274)	(0.6532)	(0.2456)	(0.6979)
hhsize	0.0745***	0.1391*	0.0577**	-0.0815
	(0.0221)	(0.0815)	(0.0227)	(0.0846)
nfi	0.0108	-0.0191	0.0715	0.0906
	(0.1280)	(0.3975)	(0.1342)	(0.4195)

Table A13. Yield models by gender using *femhead* – Nicaragua (continued)

Variable	Joint	Female	Male	Difference
nfwi	-0.2187	-0.0187	-0.0920	-0.0733
	(0.1450)	(0.4406)	(0.1420)	(0.4629)
distance	0.0274	0.0014	0.0169	0.0155
	(0.0224)	(0.0879)	(0.0238)	(0.0910)
wealth_idx	-0.0587	-0.0962	-0.0638	0.0324
	(0.0412)	(0.0973)	(0.0433)	(0.1065)
d_livestock	-0.1940*	-0.6478	-0.1069	0.5409
	(0.1173)	(0.4164)	(0.1244)	(0.4346)
Observations	699	115	584	
Adj. R^2	0.561	0.615	0.574	
Log-likelihood	-1 123.3	-174.3	-910.5	
AIC	2 312.5	410.7	1 883.0	
S.Error Regr.	1.236	1.297	1.183	
Geogr. FE	7	7	7	
Model Tests				
Chow F Test M=F pval	0.000			
Wald Test F=J, M=J pval		0.004	1.000	

Table 24. Yield models by gender using *femhead* – Pakistan

Variable	Joint	Female	Male	Difference
femhead	-0.1517***	.	.	.
	(0.0482)	.	.	.
agehead	0.0062*	0.0088	0.0057	-0.0031
	(0.0035)	(0.0187)	(0.0036)	(0.0191)
ageh2	-0.0001*	-0.0001	-0.0001	0.0000
	(0.0000)	(0.0002)	(0.0000)	(0.0002)
educhead	-0.0008	-0.0089	-0.0007	0.0082
	(0.0022)	(0.0144)	(0.0023)	(0.0146)
married	0.0224	-0.1244	0.0201	0.1445
	(0.0553)	(0.1202)	(0.0554)	(0.1323)
widow	0.0235	0.0000	0.0058	0.0058
	(0.0685)	(0.0000)	(0.0705)	(0.0705)
plots	0.0932***	0.3654*	0.0940***	-0.2714
	(0.0279)	(0.1871)	(0.0281)	(0.1892)
rent	-0.0217	-0.1323	-0.0184	0.1138
	(0.0329)	(0.1695)	(0.0338)	(0.1729)
malefamlab_ha	0.0398***	0.0254	0.0405***	0.0151
	(0.0079)	(0.0310)	(0.0084)	(0.0322)
femfamlab_ha	0.0189***	0.0209	0.0163***	-0.0046
	(0.0047)	(0.0132)	(0.0053)	(0.0142)
childlab_ha	0.0502***	0.0075	0.0611***	0.0536
	(0.0132)	(0.0368)	(0.0150)	(0.0398)
hiredlab_ha	-0.0000	0.0000**	-0.0000	-0.0000**
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
fertil_ha	0.0000***	0.0000**	0.0000***	-0.0000
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
seeds_ha	0.0000**	0.0000	0.0000**	-0.0000
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
other_ha	0.0000***	0.0000***	0.0000***	-0.0000
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
agcap_ha	0.0000	-0.0000	0.0000	0.0000
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
land	-0.1281***	-0.3900***	-0.1291***	0.2608**
	(0.0085)	(0.1123)	(0.0087)	(0.1127)
land2	0.0009***	0.0425***	0.0009***	-0.0416***
	(0.0002)	(0.0137)	(0.0002)	(0.0137)
child_dep	0.0123	-0.0046	0.0152	0.0198
	(0.0218)	(0.0743)	(0.0230)	(0.0778)
femlabsh	0.0505	-0.0219	0.0371	0.0589
	(0.0334)	(0.1871)	(0.0346)	(0.1903)
hhsize	0.0093***	-0.0058	0.0101***	0.0160
	(0.0030)	(0.0200)	(0.0030)	(0.0203)

Table A14. Yield models by gender using *femhead* – Pakistan (continued)

Variable	Joint	Female	Male	Difference
nfi	-0.1161***	0.0625	-0.1235***	-0.1860
	(0.0261)	(0.1275)	(0.0270)	(0.1304)
nfwi	-0.0868***	-0.2186*	-0.0864***	0.1322
	(0.0183)	(0.1248)	(0.0186)	(0.1262)
distance	-0.0013***	-0.0002	-0.0013***	-0.0011
	(0.0003)	(0.0014)	(0.0003)	(0.0014)
wealth_idx	0.0242***	0.0793*	0.0238**	-0.0556
	(0.0091)	(0.0437)	(0.0093)	(0.0446)
irrigation	0.2392***	0.0758	0.2404***	0.1646
	(0.0462)	(0.1332)	(0.0488)	(0.1419)
Observations	3 978	174	3 804	
Adj. R^2	0.592	0.725	0.598	
Log-likelihood	-2 817.8	-22.7	-2 684.0	
AIC	5 889.6	145.4	5 620.0	
S.Error Regr.	0.499	0.364	0.498	
Geogr. FE	101	49	101	
Model Tests				
Chow F Test M=F pval	0.114			
Wald Test F=J, M=J pval		0.000	1.000	

Table 25. Yield models by gender using *femhead* – Peru

Variable	Joint	Female	Male	Difference
femhead	0.0073	.	.	.
	(0.0631)	.	.	.
agehead	0.0380***	0.0175	0.0415***	0.0240
	(0.0084)	(0.0264)	(0.0095)	(0.0280)
ageh2	-0.0004***	-0.0002	-0.0004***	-0.0003
	(0.0001)	(0.0002)	(0.0001)	(0.0002)
educhead	0.0114**	0.0271	0.0090	-0.0181
	(0.0052)	(0.0185)	(0.0058)	(0.0194)
married	0.1594***	0.1143	0.1289**	0.0145
	(0.0516)	(0.1571)	(0.0648)	(0.1700)
widow	-0.0130	0.6232	-0.3534	-0.9766
	(0.4259)	(0.3843)	(0.6934)	(0.7927)
plots	0.0369***	0.1309***	0.0307***	-0.1001**
	(0.0105)	(0.0389)	(0.0113)	(0.0405)
rent	-0.0029	0.0737	-0.0160	-0.0898
	(0.0983)	(0.3391)	(0.1092)	(0.3563)
malefamlab_ha	0.0000	0.0006	-0.0001**	-0.0007
	(0.0000)	(0.0006)	(0.0000)	(0.0006)
femfamlab_ha	0.0001	-0.0002	-0.0000	0.0001
	(0.0000)	(0.0001)	(0.0001)	(0.0002)
childlab_ha	-0.0004***	0.0078***	-0.0006***	-0.0084***
	(0.0001)	(0.0029)	(0.0002)	(0.0029)
hiredlab_ha	0.4123	-0.6026*	2.6862***	3.2889***
	(0.3633)	(0.3356)	(0.4196)	(0.5372)
fertil_ha	-0.0001	0.1566	0.0307	-0.1259
	(0.0753)	(0.2391)	(0.0992)	(0.2588)
seeds_ha	0.4585*	-0.3844	1.0893**	1.4737**
	(0.2560)	(0.3998)	(0.4366)	(0.5920)
other_ha	0.2907***	1.3418***	0.2694***	-1.0723**
	(0.0659)	(0.4436)	(0.0715)	(0.4493)
agcap_ha	-0.0001	0.0010	-0.0022**	-0.0032**
	(0.0005)	(0.0009)	(0.0010)	(0.0014)
lland	-0.6339***	-0.6966***	-0.6213***	0.0753
	(0.0195)	(0.0600)	(0.0236)	(0.0644)
lland2	-0.0464***	-0.0348**	-0.0455***	-0.0107
	(0.0062)	(0.0175)	(0.0079)	(0.0192)
child_dep	-0.0701	0.0599	-0.0736	-0.1335
	(0.0778)	(0.2754)	(0.0835)	(0.2878)
femlabsh	-0.2207***	-0.5118**	-0.1353	0.3765
	(0.0676)	(0.2315)	(0.0864)	(0.2470)
hhsize	0.0332***	0.0168	0.0357***	0.0189
	(0.0093)	(0.0415)	(0.0101)	(0.0427)

Table A15. Yield models by gender using *femhead* – Peru (continued)

Variable	Joint	Female	Male	Difference
nfi	-0.0880**	0.0067	-0.1114**	-0.1181
	(0.0416)	(0.1420)	(0.0454)	(0.1490)
nfwi	-0.2098***	-0.2710*	-0.2033***	0.0677
	(0.0442)	(0.1546)	(0.0490)	(0.1622)
distance	-0.0031	0.0072	0.0027	-0.0045
	(0.0307)	(0.0793)	(0.0367)	(0.0873)
wealth_idx	0.0468**	0.0303	0.0430*	0.0127
	(0.0195)	(0.0564)	(0.0222)	(0.0606)
irrigation	0.2200***	0.2752*	0.2020***	-0.0732
	(0.0513)	(0.1487)	(0.0576)	(0.1595)
Observations	7 312	1 170	6 142	
Adj. R^2	0.547	0.626	0.550	
Log-likelihood	-11 414.6	-1 432.4	-9 473.7	
AIC	24 483.1	3 486.9	20 515.4	
S.Error Regr.	1.235	1.142	1.227	
Geogr. FE	918	536	892	
Model Tests				
Chow F Test M=F pval	1.000			
Wald Test F=J, M=J pval		0.000	0.000	

Table 26. Yield models by gender using *femhead* – Uganda

Variable	Joint	Female	Male	Difference
femhead	-0.1037	.	.	.
	(0.0709)	.	.	.
agehead	0.0146*	-0.0008	0.0159*	0.0166
	(0.0082)	(0.0191)	(0.0096)	(0.0214)
ageh2	-0.0001	0.0001	-0.0001	-0.0002
	(0.0001)	(0.0002)	(0.0001)	(0.0002)
educhead	0.0092	0.0147	0.0042	-0.0105
	(0.0060)	(0.0125)	(0.0071)	(0.0144)
married	0.1689**	0.0370	0.0967	0.0597
	(0.0784)	(0.1418)	(0.1332)	(0.1945)
widow	0.1076	0.0178	0.0891	0.0713
	(0.0806)	(0.0994)	(0.2354)	(0.2556)
plots	0.1266***	0.1361***	0.1314***	-0.0047
	(0.0175)	(0.0433)	(0.0199)	(0.0476)
rent	-0.2524**	-0.3943	-0.1784*	0.2159
	(0.1258)	(0.3361)	(0.0997)	(0.3506)
malefamlab_ha	0.0010***	0.0010**	0.0009***	-0.0001
	(0.0002)	(0.0004)	(0.0003)	(0.0005)
femfamlab_ha	0.0010***	0.0008***	0.0012***	0.0004
	(0.0002)	(0.0002)	(0.0003)	(0.0003)
childlab_ha	0.0008**	0.0008*	0.0009*	0.0000
	(0.0003)	(0.0005)	(0.0005)	(0.0007)
hiredlab_ha	0.0135***	0.0148**	0.0131***	-0.0018
	(0.0026)	(0.0060)	(0.0030)	(0.0067)
fertil_ha	0.0228***	0.0589**	0.0139**	-0.0450*
	(0.0079)	(0.0265)	(0.0063)	(0.0272)
seeds_ha	0.0001	0.0015	-0.0002	-0.0017
	(0.0043)	(0.0076)	(0.0052)	(0.0092)
other_ha	-0.0061	-0.0069	-0.0039	0.0030
	(0.0044)	(0.0090)	(0.0052)	(0.0104)
agcap_ha	0.0059	0.0122	0.0039	-0.0083
	(0.0095)	(0.0183)	(0.0118)	(0.0217)
lland	-0.3992***	-0.4025***	-0.3951***	0.0074
	(0.0391)	(0.0810)	(0.0465)	(0.0934)
lland2	-0.0636***	-0.0488*	-0.0722***	-0.0234
	(0.0176)	(0.0284)	(0.0216)	(0.0356)
child_dep	0.0901	0.2124*	0.0285	-0.1839
	(0.0621)	(0.1126)	(0.0777)	(0.1368)
femlabsh	0.1009	-0.1582	0.1897*	0.3479*
	(0.0808)	(0.1575)	(0.1000)	(0.1866)
hhsize	0.0052	-0.0126	0.0094	0.0220
	(0.0092)	(0.0209)	(0.0105)	(0.0234)

Table A16. Yield models by gender using *femhead* – Uganda (continued)

Variable	Joint	Female	Male	Difference
nfi	-0.0384	0.0432	-0.0801	-0.1233
	(0.0427)	(0.0865)	(0.0510)	(0.1004)
nfwi	-0.0696	-0.1744*	-0.0575	0.1169
	(0.0444)	(0.0985)	(0.0520)	(0.1114)
distance	-0.0267**	-0.0671*	-0.0219*	0.0452
	(0.0104)	(0.0373)	(0.0113)	(0.0390)
wealth_idx	0.0095	0.0217	0.0107	-0.0110
	(0.0155)	(0.0492)	(0.0168)	(0.0520)
irrigation	0.0387	0.0585	0.0993	0.0407
	(0.1322)	(0.2637)	(0.1577)	(0.3072)
slope	-0.0869	-0.3368	-0.0242	0.3126
	(0.0731)	(0.2535)	(0.0615)	(0.2609)
Observations	2 117	624	1 493	
Adj. R2	0.519	0.525	0.515	
Log-likelihood	-2 602.0	-755.5	-1 782.0	
AIC	5 442.0	1 727.0	3 792.1	
S.Error Regr.	0.852	0.901	0.832	
Geogr. FE	95	90	92	
Model Tests				
Chow F Test M=F pval	0.531			
Wald Test F=J, M=J pval		0.000	0.098	

Table 27. Yield models by gender using *femhead* – Viet Nam

Variable	Joint	Female	Male	Difference
femhead	-0.0417	.	.	.
	(0.0508)	.	.	.
agehead	0.0158**	-0.0254	0.0173**	0.0427
	(0.0065)	(0.0292)	(0.0074)	(0.0301)
ageh2	-0.0002**	0.0002	-0.0002**	-0.0004
	(0.0001)	(0.0003)	(0.0001)	(0.0003)
educhead	-0.0111**	-0.0317	-0.0044	0.0272
	(0.0045)	(0.0271)	(0.0050)	(0.0276)
married	-0.0128	-0.1688	-0.0347	0.1341
	(0.0264)	(0.1753)	(0.0291)	(0.1777)
widow	-0.0126	-0.0746	-0.1068	-0.0322
	(0.0628)	(0.1784)	(0.1268)	(0.2189)
plots	0.0158***	0.0150	0.0152***	0.0002
	(0.0022)	(0.0144)	(0.0023)	(0.0146)
rent	0.1128***	0.3571	0.0749*	-0.2822
	(0.0389)	(0.2523)	(0.0440)	(0.2561)
malefamlab_ha	0.0191	-0.6977*	0.2469***	0.9446**
	(0.0333)	(0.3921)	(0.0792)	(0.4000)
femfamlab_ha	0.0967***	0.4763	0.1125***	-0.3638
	(0.0360)	(0.5026)	(0.0363)	(0.5039)
childlab_ha	0.1921***	2.1661*	0.0864	-2.0797*
	(0.0733)	(1.2008)	(0.0888)	(1.2041)
hiredlab_ha	0.0454***	0.0196	0.0448***	0.0252
	(0.0055)	(0.0289)	(0.0062)	(0.0296)
seeds_ha	0.1744***	0.1470*	0.1720***	0.0250
	(0.0202)	(0.0770)	(0.0229)	(0.0803)
fertil_ha	0.2507***	0.2355***	0.2525***	0.0170
	(0.0268)	(0.0849)	(0.0310)	(0.0904)
other_ha	-0.0046	0.0698	0.0008	-0.0689
	(0.0092)	(0.2838)	(0.0100)	(0.2840)
agcap_ha	0.0258*	0.3201**	0.0341**	-0.2860*
	(0.0133)	(0.1558)	(0.0150)	(0.1565)
lland	-0.4290***	-0.2803	-0.4383***	-0.1580
	(0.0361)	(0.1789)	(0.0400)	(0.1833)
lland2	-0.0287***	-0.0136	-0.0458***	-0.0322
	(0.0102)	(0.0553)	(0.0112)	(0.0564)
child_dep	-0.0045	-0.3384	0.0187	0.3571
	(0.0587)	(0.4120)	(0.0643)	(0.4170)
femlabsh	-0.0372	-0.0759	-0.0265	0.0493
	(0.0319)	(0.1799)	(0.0357)	(0.1834)
hhsize	0.0377***	0.0011	0.0298***	0.0287
	(0.0092)	(0.0658)	(0.0099)	(0.0666)

Table A17. Yield models by gender using *femhead* – Viet Nam (continued)

Variable	Joint	Female	Male	Difference
nfi	0.0059	0.1935	0.0048	-0.1887
	(0.0309)	(0.2006)	(0.0332)	(0.2033)
nfwi	0.0163	0.0795	0.0060	-0.0735
	(0.0291)	(0.1475)	(0.0314)	(0.1509)
distance	0.0365**	0.4199***	0.0702***	-0.3497**
	(0.0181)	(0.1518)	(0.0237)	(0.1536)
wealth_idx	-0.0016	0.0692	-0.0069	-0.0762
	(0.0091)	(0.0617)	(0.0096)	(0.0624)
irrigation	0.2320***	0.2286	0.2198***	-0.0088
	(0.0513)	(0.2312)	(0.0616)	(0.2393)
Observations	2 854	417	2 437	
Adj. R^2	0.770	0.775	0.782	
Log-likelihood	-2 185.0	-83.7	-1 762.0	
AIC	5 456.0	413.4	4 541.9	
S.Error Regr.	0.587	0.568	0.574	
Geogr. FE	581	278	569	
Model Tests				
Chow F Test M=F pval	1.000			
Wald Test F=J, M=J pval		0.000	0.000	

Table 28. Yield models by gender using *femmgr* – Ethiopia

Variable	Joint	Female	Male	Difference
femmgr	0.0574	.	.	.
	(0.0878)	.	.	.
agehead	0.0035	-0.0152	0.0115	0.0267
	(0.0108)	(0.0286)	(0.0116)	(0.0309)
ageh2	-0.0000	0.0002	-0.0001	-0.0003
	(0.0001)	(0.0003)	(0.0001)	(0.0003)
educhead	0.0022	-0.0139	0.0012	0.0152
	(0.0069)	(0.0260)	(0.0070)	(0.0269)
married	0.1783**	0.0281	0.1774*	0.1494
	(0.0838)	(0.1661)	(0.0984)	(0.1931)
widow	0.0175	-0.0478	-0.1038	-0.0560
	(0.1061)	(0.1480)	(0.2020)	(0.2504)
plots	0.0123	0.1060*	0.0018	-0.1042*
	(0.0144)	(0.0546)	(0.0137)	(0.0563)
rent	0.0461	-0.7959***	0.1031	0.8990***
	(0.0660)	(0.2262)	(0.0666)	(0.2358)
sharecrop	0.1797***	0.0687	0.1621***	0.0934
	(0.0520)	(0.3075)	(0.0513)	(0.3118)
malefamlab_ha	0.0484***	0.0390*	0.0470***	0.0080
	(0.0092)	(0.0223)	(0.0088)	(0.0240)
femfamlab_ha	0.0278***	0.0127	0.0437***	0.0310*
	(0.0098)	(0.0105)	(0.0132)	(0.0169)
childlab_ha	0.0209	-0.0178	0.0684*	0.0862*
	(0.0434)	(0.0343)	(0.0380)	(0.0512)
hiredlab_ha	0.0321**	0.1372**	0.0234**	-0.1137**
	(0.0137)	(0.0538)	(0.0119)	(0.0551)
fertil_ha	-0.0015	-0.0109	0.0053	0.0162*
	(0.0056)	(0.0070)	(0.0059)	(0.0092)
seeds_ha	0.0153	0.0853*	0.0012	-0.0841
	(0.0422)	(0.0503)	(0.0462)	(0.0683)
other_ha	0.0000	0.0003	-0.0001	-0.0004
	(0.0001)	(0.0003)	(0.0001)	(0.0004)
plough	0.0356	-0.2090	0.0934	0.3023*
	(0.0588)	(0.1409)	(0.0637)	(0.1546)
orgfert	0.0373	-0.1414	0.0777	0.2191
	(0.0487)	(0.1471)	(0.0513)	(0.1558)
agcap_ha	-0.0028	-0.0074**	0.0012	0.0086*
	(0.0020)	(0.0035)	(0.0034)	(0.0048)
lland	-0.4071***	-0.1385	-0.4203***	-0.2818**
	(0.0368)	(0.1145)	(0.0363)	(0.1201)
lland2	-0.0768***	-0.0239	-0.0880***	-0.0640*
	(0.0132)	(0.0329)	(0.0157)	(0.0364)

Table A18. Yield models by gender using *femmgr* – Ethiopia (continued)

Variable	Joint	Female	Male	Difference
child_dep	-0.0727	-0.2817*	-0.0513	0.2304
	(0.0707)	(0.1626)	(0.0762)	(0.1796)
femlabsh	-0.0912	0.1878	-0.2849***	-0.4726***
	(0.0787)	(0.1451)	(0.0856)	(0.1685)
hhsize	0.0230*	0.0674*	0.0115	-0.0559
	(0.0123)	(0.0389)	(0.0128)	(0.0409)
nfi	0.0852	-0.0089	0.1029	0.1118
	(0.0582)	(0.1456)	(0.0636)	(0.1589)
nfwi	0.0007	-0.1186	0.0172	0.1358
	(0.0514)	(0.1462)	(0.0546)	(0.1561)
distance	-0.0030***	-0.0029*	-0.0031***	-0.0001
	(0.0006)	(0.0016)	(0.0006)	(0.0017)
wealth_idx	0.0655**	0.0278	0.0735***	0.0457
	(0.0256)	(0.0710)	(0.0282)	(0.0764)
irrigation	0.1855***	-0.0097	0.2183***	0.2280
	(0.0638)	(0.1663)	(0.0689)	(0.1800)
slopepct	-0.0023	0.0120	-0.0037	-0.0158*
	(0.0028)	(0.0079)	(0.0030)	(0.0085)
altitude	0.0000	-0.0003**	0.0001***	0.0004***
	(0.0000)	(0.0001)	(0.0001)	(0.0001)
Observations	2020	375	1 645	
Adj. R^2	0.300	0.242	0.367	
Log-likelihood	-2 589.1	-490.5	-1 991.8	
AIC	5 320.2	1 113.0	4 123.6	
S.Error Regr.	0.888	0.991	0.830	
Geogr. FE	39	38	39	
Model Tests				
Chow F Test M=F pval	0.000			
Wald Test F=J, M=J pval		0.000	1.000	

Table 29. Yield models by gender using *femmgr* – Ghana

Variable	Joint	Female	Male	Difference
femmgr	-0.2872***	.	.	.
	(0.0422)	.	.	.
agehead	-0.0033	0.0087	-0.0048	-0.0134
	(0.0042)	(0.0124)	(0.0045)	(0.0132)
ageh2	0.0000	-0.0000	0.0000	0.0001
	(0.0000)	(0.0001)	(0.0000)	(0.0001)
educhead	0.0016	0.0136*	-0.0012	-0.0148*
	(0.0027)	(0.0079)	(0.0029)	(0.0084)
married	0.0492	-0.0713	0.0712**	0.1425*
	(0.0318)	(0.0769)	(0.0362)	(0.0850)
widow	0.0695	0.0217	0.0417	0.0200
	(0.0493)	(0.0750)	(0.0807)	(0.1102)
plots	0.1023***	0.1612***	0.0974***	-0.0638**
	(0.0064)	(0.0275)	(0.0067)	(0.0283)
rent	0.0016	0.2262*	-0.0248	-0.2510*
	(0.0444)	(0.1249)	(0.0486)	(0.1341)
sharecrop	0.1514***	0.0704	0.1502***	0.0797
	(0.0369)	(0.1026)	(0.0396)	(0.1100)
malefamlab_ha	0.0400***	0.0336**	0.0531***	0.0195
	(0.0071)	(0.0136)	(0.0094)	(0.0165)
femfamlab_ha	0.0006	-0.0187***	0.0244*	0.0431***
	(0.0041)	(0.0052)	(0.0131)	(0.0141)
childlab_ha	0.0039	-0.0102	0.0359***	0.0460***
	(0.0076)	(0.0107)	(0.0116)	(0.0158)
hiredlab_ha	0.0002**	0.0002	0.0002	-0.0001
	(0.0001)	(0.0001)	(0.0001)	(0.0002)
fertil_ha	0.0003**	0.0004**	0.0002*	-0.0002
	(0.0001)	(0.0002)	(0.0001)	(0.0002)
seeds_ha	-0.0003	-0.0008	0.0001	0.0009
	(0.0003)	(0.0007)	(0.0003)	(0.0008)
other_ha	0.0002**	0.0010***	0.0002**	-0.0007***
	(0.0001)	(0.0002)	(0.0001)	(0.0002)
agcap_ha	0.0068	0.0019	0.0032	0.0013
	(0.0077)	(0.0119)	(0.0094)	(0.0152)
lland	-0.5725***	-0.6387***	-0.5072***	0.1315***
	(0.0211)	(0.0393)	(0.0287)	(0.0487)
lland2	-0.0415***	-0.0142	-0.0575***	-0.0433*
	(0.0071)	(0.0231)	(0.0085)	(0.0246)
child_dep	-0.0096	-0.0868	0.0115	0.0983
	(0.0306)	(0.0665)	(0.0339)	(0.0746)
femlabsh	0.1473***	0.0934	0.1850***	0.0916
	(0.0519)	(0.1274)	(0.0634)	(0.1423)

Table A19. Yield models by gender using *femmgr* – Ghana (continued)

Variable	Joint	Female	Male	Difference
hhsize	0.0208***	0.0440***	0.0143***	-0.0297*
	(0.0040)	(0.0147)	(0.0041)	(0.0153)
nfi	-0.0576**	-0.1411*	-0.0354	0.1057
	(0.0282)	(0.0739)	(0.0303)	(0.0799)
nfwi	-0.0285	0.0439	-0.0438	-0.0877
	(0.0274)	(0.0733)	(0.0297)	(0.0791)
distance	0.0018**	-0.0019	0.0026***	0.0045
	(0.0008)	(0.0028)	(0.0008)	(0.0029)
wealth_idx	-0.0529***	-0.0405	-0.0535***	-0.0131
	(0.0175)	(0.0436)	(0.0188)	(0.0475)
d_livestock	0.2530***	0.3433***	0.2068***	-0.1364**
	(0.0223)	(0.0598)	(0.0239)	(0.0644)
Observations	7 676	1 505	6 171	
Adj. R2	0.390	0.363	0.410	
Log-likelihood	-9 745.3	-2 041.1	-7 504.9	
AIC	19 868.6	4 428.3	15 383.8	
S.Error Regr.	0.872	1.002	0.829	
Geogr. FE	162	156	161	
Model Tests				
Chow F Test M=F pval	0.000			
Wald Test F=J, M=J pval		0.000	0.000	

Table 30. Yield models by gender using *femmgr* – Cambodia

Variable	Joint	Female	Male	Difference
femmgr	-0.0252	.	.	.
	(0.0443)	.	.	.
agehead	0.0179***	0.0158	0.0155**	-0.0003
	(0.0066)	(0.0230)	(0.0074)	(0.0242)
ageh2	-0.0002***	-0.0002	-0.0002**	-0.0000
	(0.0001)	(0.0002)	(0.0001)	(0.0002)
educhead	0.0137***	0.0152	0.0140**	-0.0013
	(0.0047)	(0.0139)	(0.0055)	(0.0150)
married	-0.0116	0.1442	-0.0177	-0.1620
	(0.0906)	(0.1557)	(0.2466)	(0.2916)
widow	-0.0239	0.0377	-0.0657	-0.1034
	(0.0839)	(0.1167)	(0.2546)	(0.2801)
plots	0.1428***	0.1304***	0.1363***	0.0059
	(0.0143)	(0.0466)	(0.0159)	(0.0492)
rent	-0.1549	-0.1269	-0.1425	-0.0156
	(0.1344)	(0.2507)	(0.1428)	(0.2885)
malefamlab_ha	0.0074	-0.0179	0.0162***	0.0341
	(0.0058)	(0.0206)	(0.0059)	(0.0215)
femfamlab_ha	0.0223***	0.0420***	0.0131	-0.0289*
	(0.0080)	(0.0136)	(0.0093)	(0.0165)
childlab_ha	-0.0155**	0.0054	-0.0114	-0.0167
	(0.0067)	(0.0244)	(0.0078)	(0.0256)
hiredlab_ha	0.0820	0.5831***	0.0869	-0.4962**
	(0.0684)	(0.2221)	(0.0746)	(0.2343)
fertil_ha	0.1367**	-0.1657	0.1582*	0.3239**
	(0.0643)	(0.1353)	(0.0820)	(0.1582)
seeds_ha	0.3318***	1.0281***	0.3185***	-0.7095***
	(0.0661)	(0.2388)	(0.0622)	(0.2468)
other_ha	0.1392***	0.2718**	0.1282***	-0.1436
	(0.0426)	(0.1342)	(0.0459)	(0.1419)
agcap_ha	-0.0052	0.0134*	-0.0003	-0.0136
	(0.0043)	(0.0078)	(0.0057)	(0.0097)
lland	-0.2930***	-0.2924***	-0.2804***	0.0120
	(0.0295)	(0.0661)	(0.0331)	(0.0739)
lland2	-0.0593***	-0.0625*	-0.0640***	-0.0015
	(0.0113)	(0.0356)	(0.0121)	(0.0376)
child_dep	0.0583	0.2156	0.0346	-0.1810
	(0.0519)	(0.1347)	(0.0608)	(0.1478)
femlabsh	-0.1196	-0.1427	-0.1401	0.0026
	(0.0792)	(0.1927)	(0.1020)	(0.2180)
hhsize	-0.0192**	-0.0392	-0.0144	0.0248
	(0.0082)	(0.0254)	(0.0090)	(0.0269)

Table A20. Yield models by gender using *femmgr* – Cambodia (continued)

Variable	Joint	Female	Male	Difference
nfi	0.2018	0.3157	0.1161	-0.1996
	(0.2018)	(0.7785)	(0.1104)	(0.7862)
nfwi	0.0269	0.0992	0.0077	-0.0915
	(0.0287)	(0.0916)	(0.0337)	(0.0976)
distance	0.0810***	0.1751	0.0773**	-0.0979
	(0.0272)	(0.1473)	(0.0300)	(0.1503)
wealth_idx	0.0807***	0.0828**	0.0883***	0.0055
	(0.0137)	(0.0410)	(0.0149)	(0.0436)
irrigation	-0.0327	-0.1055	-0.0540*	0.0514
	(0.0298)	(0.1169)	(0.0321)	(0.1212)
Observations	3 142	614	2 528	
Adj. R2	0.516	0.493	0.524	
Log-likelihood	-2 786.7	-422.4	-2 190.1	
AIC	6 229.3	1 220.8	5 014.2	
S.Error Regr.	0.624	0.639	0.620	
Geogr. FE	333	239	321	
Model Tests				
Chow F Test M=F pval	1.000			
Wald Test F=J, M=J pval		0.000	0.000	

Table 31. Yield models by gender using *femmgr* – Malawi

Variable	Joint	Female	Male	Difference
femmgr	-0.0579*	.	.	.
	(0.0337)	.	.	.
agehead	0.0093**	0.0141*	0.0081*	-0.0061
	(0.0037)	(0.0075)	(0.0049)	(0.0090)
ageh2	-0.0001***	-0.0001**	-0.0001*	0.0001
	(0.0000)	(0.0001)	(0.0000)	(0.0001)
educhead	0.0143***	0.0142**	0.0155***	0.0014
	(0.0029)	(0.0065)	(0.0034)	(0.0074)
married	0.0465	0.0219	0.1037*	0.0818
	(0.0335)	(0.0535)	(0.0614)	(0.0815)
widow	0.0617*	0.0146	0.0449	0.0302
	(0.0362)	(0.0505)	(0.0833)	(0.0974)
plots	0.1953***	0.2297***	0.1773***	-0.0524
	(0.0148)	(0.0346)	(0.0170)	(0.0386)
rent	0.0263	-0.0449	0.0355	0.0804
	(0.0401)	(0.1016)	(0.0454)	(0.1113)
malefamlab_ha	0.0232***	-0.0080	0.0349***	0.0429
	(0.0072)	(0.0346)	(0.0107)	(0.0362)
femfamlab_ha	0.0312***	0.0426***	0.0163*	-0.0263
	(0.0091)	(0.0165)	(0.0097)	(0.0192)
childfamlab_ha	0.0100	0.0007	0.0036	0.0029
	(0.0195)	(0.0219)	(0.0316)	(0.0384)
hiredlab_ha	0.0159*	0.0300*	0.0133	-0.0166
	(0.0089)	(0.0161)	(0.0089)	(0.0184)
fertil_ha	0.0222***	0.0216***	0.0236***	0.0019
	(0.0031)	(0.0071)	(0.0031)	(0.0078)
seeds_ha	0.0317***	0.0184	0.0316***	0.0132
	(0.0064)	(0.0128)	(0.0076)	(0.0149)
other_ha	0.0054	0.0238**	0.0013	-0.0225
	(0.0080)	(0.0116)	(0.0096)	(0.0151)
agcap_ha	0.0033**	0.0041	0.0043***	0.0001
	(0.0014)	(0.0046)	(0.0014)	(0.0048)
lland	-0.5519***	-0.5529***	-0.5415***	0.0114
	(0.0241)	(0.0550)	(0.0269)	(0.0612)
lland2	-0.0383***	-0.0173	-0.0499***	-0.0326
	(0.0099)	(0.0227)	(0.0114)	(0.0254)
child_dep	-0.0821***	-0.1292***	-0.0423	0.0870
	(0.0300)	(0.0483)	(0.0435)	(0.0650)
femlabsh	-0.0215	0.0711	-0.1041	-0.1753
	(0.0547)	(0.1149)	(0.0909)	(0.1465)
hhsize	0.0064	0.0079	0.0046	-0.0033
	(0.0058)	(0.0126)	(0.0072)	(0.0146)

Table A21. Yield models by gender using *femmgr* – Malawi (continued)

Variable	Joint	Female	Male	Difference
nfi	0.0665***	0.0858*	0.0601**	-0.0257
	(0.0220)	(0.0469)	(0.0263)	(0.0538)
nfwi	-0.0191	-0.0499	0.0182	0.0681
	(0.0301)	(0.0776)	(0.0342)	(0.0848)
distance	-0.0013**	-0.0013	-0.0013*	0.0000
	(0.0006)	(0.0011)	(0.0008)	(0.0014)
wealth_idx	0.0292***	0.0631***	0.0257***	-0.0374*
	(0.0072)	(0.0187)	(0.0086)	(0.0205)
irrigation	0.1359	-0.1248	0.2030	0.3278
	(0.1169)	(0.3232)	(0.1263)	(0.3470)
slope	-0.0502*	-0.0083	-0.0531	-0.0448
	(0.0302)	(0.0582)	(0.0372)	(0.0691)
soil_quality	0.1562***	0.1626***	0.1463***	-0.0162
	(0.0190)	(0.0400)	(0.0228)	(0.0460)
Observations	9 204	2 751	6 453	
Adj. R2	0.370	0.364	0.379	
Log-likelihood	-10 838.6	-2 927.1	-7 451.3	
AIC	23 223.2	7 132.2	16 400.7	
S.Error Regr.	0.822	0.818	0.819	
Geogr. FE	760	702	751	
Model Tests				
Chow F Test M=F pval	0.599			
Wald Test F=J, M=J pval		0.000	0.000	

Table 32.Yield models by gender using *femmgr* – Peru

Variable	Joint	Female	Male	Difference
femmgr	-0.3060***	.	.	.
	(0.0625)	.	.	.
agehead	0.0387***	0.0406	0.0410***	0.0004
	(0.0084)	(0.0298)	(0.0092)	(0.0312)
ageh2	-0.0004***	-0.0004	-0.0004***	-0.0001
	(0.0001)	(0.0002)	(0.0001)	(0.0003)
educhead	0.0107**	0.0173	0.0107*	-0.0066
	(0.0051)	(0.0180)	(0.0058)	(0.0189)
married	0.0559	-0.2552	0.0945	0.3496**
	(0.0482)	(0.1636)	(0.0598)	(0.1742)
widow	-0.0104	0.4621	-0.3885	-0.8507
	(0.4310)	(0.4422)	(0.6940)	(0.8229)
plots	0.0348***	0.0641**	0.0310***	-0.0331
	(0.0104)	(0.0262)	(0.0120)	(0.0288)
rent	-0.0113	0.3864	-0.0827	-0.4691
	(0.0979)	(0.3446)	(0.1063)	(0.3606)
malefamlab_ha	0.0000	0.0001	-0.0001	-0.0002
	(0.0000)	(0.0004)	(0.0000)	(0.0004)
femfamlab_ha	0.0001	0.0000	0.0000	-0.0000
	(0.0000)	(0.0001)	(0.0001)	(0.0001)
childlab_ha	-0.0004***	0.0053**	-0.0008***	-0.0061**
	(0.0001)	(0.0025)	(0.0002)	(0.0025)
hiredlab_ha	0.4268	-0.2443	2.2511***	2.4954***
	(0.3537)	(0.3377)	(0.5386)	(0.6357)
fertil_ha	0.0037	-0.0508	0.1116	0.1624
	(0.0739)	(0.2196)	(0.0932)	(0.2386)
seeds_ha	0.4392*	0.6512***	0.8037*	0.1525
	(0.2497)	(0.2392)	(0.4210)	(0.4842)
other_ha	0.2834***	0.1251	0.3315***	0.2064
	(0.0653)	(0.1002)	(0.0837)	(0.1305)
agcap_ha	-0.0002	-0.0004	0.0080	0.0084
	(0.0004)	(0.0009)	(0.0065)	(0.0066)
lland	-0.6443***	-0.6378***	-0.6321***	0.0057
	(0.0195)	(0.0565)	(0.0247)	(0.0617)
lland2	-0.0451***	-0.0222	-0.0482***	-0.0261
	(0.0062)	(0.0171)	(0.0082)	(0.0190)
child_dep	-0.0664	-0.0493	-0.0806	-0.0313
	(0.0776)	(0.2940)	(0.0816)	(0.3051)
femlabsh	-0.0203	-0.3936	0.0001	0.3937
	(0.0717)	(0.2877)	(0.0873)	(0.3006)
hhsize	0.0324***	0.0488	0.0315***	-0.0173
	(0.0093)	(0.0404)	(0.0100)	(0.0416)

Table A22. Yield models by gender using *femmgr* – Peru (continued)

Variable	Joint	Female	Male	Difference
nfi	-0.0986**	0.1154	-0.1546***	-0.2700*
	(0.0414)	(0.1464)	(0.0450)	(0.1531)
nfwi	-0.1958***	-0.2176	-0.1721***	0.0455
	(0.0440)	(0.1503)	(0.0488)	(0.1580)
distance	-0.0013	0.0947*	-0.0021	-0.0968
	(0.0312)	(0.0496)	(0.0426)	(0.0654)
wealth_idx	0.0508***	-0.0161	0.0512**	0.0672
	(0.0192)	(0.0715)	(0.0202)	(0.0743)
irrigation	0.2195***	0.2140	0.1968***	-0.0172
	(0.0513)	(0.1476)	(0.0585)	(0.1587)
Observations	7 312	1 231	6 081	
Adj. R^2	0.549	0.595	0.553	
Log-likelihood	-11 399.5	-1 622.7	-9 311.3	
AIC	24 453.0	3 901.4	20 162.6	
S.Error Regr.	1.233	1.236	1.214	
Geogr. FE	918	546	886	
Model Tests				
Chow F Test M=F pval	1.000			
Wald Test F=J, M=J pval		0.000	0.000	

Table 33. Yield models by gender using *femmgr* – Uganda

Variable	Joint	Female	Male	Difference
femmgr	-0.1616***	.	.	.
	(0.0609)	.	.	.
agehead	0.0122	0.0060	0.0136	0.0077
	(0.0080)	(0.0158)	(0.0097)	(0.0185)
ageh2	-0.0001	0.0000	-0.0001	-0.0002
	(0.0001)	(0.0001)	(0.0001)	(0.0002)
educhead	0.0076	0.0204*	-0.0021	-0.0224
	(0.0061)	(0.0115)	(0.0074)	(0.0136)
married	0.1470**	0.0169	0.1417	0.1248
	(0.0748)	(0.1399)	(0.1233)	(0.1865)
widow	0.1035	0.0591	0.1042	0.0451
	(0.0797)	(0.0978)	(0.1828)	(0.2073)
plots	0.1198***	0.1161***	0.1247***	0.0085
	(0.0171)	(0.0373)	(0.0203)	(0.0425)
rent	-0.2611**	-0.3951	-0.2230**	0.1721
	(0.1289)	(0.3703)	(0.0974)	(0.3829)
malefamlab_ha	0.0009***	0.0014***	0.0009***	-0.0005
	(0.0002)	(0.0004)	(0.0003)	(0.0005)
femfamlab_ha	0.0010***	0.0008***	0.0011***	0.0003
	(0.0002)	(0.0002)	(0.0003)	(0.0003)
childlab_ha	0.0008**	0.0008	0.0011*	0.0002
	(0.0003)	(0.0005)	(0.0006)	(0.0008)
hiredlab_ha	0.0124***	0.0143***	0.0126***	-0.0017
	(0.0025)	(0.0049)	(0.0032)	(0.0059)
fertil_ha	0.0210**	0.0556**	0.0163***	-0.0393
	(0.0082)	(0.0241)	(0.0051)	(0.0246)
seeds_ha	0.0010	0.0007	0.0010	0.0003
	(0.0043)	(0.0063)	(0.0058)	(0.0085)
other_ha	-0.0071	-0.0048	-0.0057	-0.0010
	(0.0048)	(0.0071)	(0.0062)	(0.0094)
agcap_ha	0.0039	0.0140	0.0010	-0.0130
	(0.0094)	(0.0121)	(0.0134)	(0.0180)
lland	-0.4032***	-0.3880***	-0.4009***	-0.0129
	(0.0392)	(0.0725)	(0.0494)	(0.0877)
lland2	-0.0683***	-0.0274	-0.0762***	-0.0488
	(0.0179)	(0.0227)	(0.0234)	(0.0326)
child_dep	0.0659	0.1524	0.0251	-0.1273
	(0.0616)	(0.1140)	(0.0776)	(0.1378)
femlabsh	0.1100	0.0305	0.1265	0.0960
	(0.0800)	(0.1446)	(0.1066)	(0.1797)
hhsize	0.0028	-0.0295	0.0127	0.0423**
	(0.0093)	(0.0184)	(0.0106)	(0.0213)

Table A23. Yield models by gender using *femmgr* – Uganda (continued)

Variable	Joint	Female	Male	Difference
nfi	-0.0336	-0.0197	-0.0535	-0.0338
	(0.0431)	(0.0827)	(0.0538)	(0.0987)
nfwi	-0.0794*	-0.1995**	-0.0350	0.1644
	(0.0445)	(0.0891)	(0.0536)	(0.1039)
distance	-0.0268***	-0.0332***	-0.0211	0.0122
	(0.0099)	(0.0122)	(0.0142)	(0.0187)
wealth_idx	0.0133	0.0630***	-0.0100	-0.0731**
	(0.0155)	(0.0229)	(0.0196)	(0.0301)
irrigation	0.0343	0.2575	-0.0395	-0.2971
	(0.1345)	(0.2611)	(0.1532)	(0.3027)
slope	-0.0930	-0.3332*	-0.0213	0.3118
	(0.0726)	(0.1942)	(0.0648)	(0.2047)
Observations	2048	628	1 420	
Adj. R2	0.506	0.548	0.489	
Log-likelihood	-2 484.6	-715.6	-1 701.0	
AIC	5 201.2	1 639.3	3 630.0	
S.Error Regr.	0.839	0.833	0.837	
Geogr. FE	92	83	91	
Model Tests				
Chow F Test M=F pval	0.246			
Wald Test F=J, M=J pval		0.000	1.000	

Table 34. Yield models by gender using *femlab* – Bangladesh

Variable	Joint	Female	Male	Difference
femlab	-0.1979***	.	.	.
	(0.0562)	.	.	.
agehead	0.0108	-0.0235	0.0146*	0.0382*
	(0.0071)	(0.0181)	(0.0086)	(0.0201)
ageh2	-0.0001**	0.0002	-0.0002**	-0.0004**
	(0.0001)	(0.0002)	(0.0001)	(0.0002)
educhead	-0.0063*	-0.0110	-0.0044	0.0066
	(0.0036)	(0.0085)	(0.0041)	(0.0094)
married	0.0182	-0.0265	0.0344	0.0609
	(0.0358)	(0.0760)	(0.0412)	(0.0864)
widow	-0.4762***	0.0000	-0.4705***	-0.4705***
	(0.0984)	(0.0000)	(0.0996)	(0.0996)
plots	0.3002	0.0360	0.4627	0.4267
	(0.2057)	(0.2487)	(0.3201)	(0.4054)
rent	0.2301***	0.2922**	0.2051***	-0.0871
	(0.0456)	(0.1202)	(0.0511)	(0.1306)
malefamlab_ha	0.2537	1.4616	0.2016	-1.2599
	(0.1888)	(2.9739)	(0.2441)	(2.9839)
femfamlab_ha	0.1874	0.1526	0.1203	-0.0323
	(0.1939)	(0.2825)	(0.3094)	(0.4190)
childlab_ha	1.2028***	0.9040	1.1893***	0.2853
	(0.3312)	(1.8123)	(0.4009)	(1.8561)
hiredlab_ha	0.0328***	0.0344***	0.0305***	-0.0038
	(0.0080)	(0.0104)	(0.0098)	(0.0143)
seeds_ha	0.0411**	0.0503*	0.0417**	-0.0087
	(0.0166)	(0.0271)	(0.0177)	(0.0323)
fertilizers_ha	0.0453***	0.0320	0.0583***	0.0263
	(0.0155)	(0.0229)	(0.0166)	(0.0283)
other_ha	0.0017*	0.0025***	0.0005	-0.0020
	(0.0009)	(0.0008)	(0.0018)	(0.0019)
agcap_ha	14.7407	-5.2355	37.9817	43.2171
	(12.3062)	(5.2626)	(47.0105)	(47.3042)
lland	-0.6590***	-0.6328***	-0.6746***	-0.0418
	(0.0277)	(0.0812)	(0.0290)	(0.0862)
lland2	-0.0773***	-0.0724**	-0.0743***	-0.0019
	(0.0132)	(0.0286)	(0.0186)	(0.0341)
child_dep	-0.1093	-1.0778	-0.0416	1.0362
	(0.1284)	(0.7809)	(0.1204)	(0.7902)
femlabsh	-0.0690	-0.2111*	0.5285	0.7395**
	(0.0994)	(0.1077)	(0.3305)	(0.3476)
hhsize	0.0333***	0.0134	0.0383***	0.0249
	(0.0083)	(0.0213)	(0.0093)	(0.0232)

Table A24. Yield models by gender using *femlab* – Bangladesh (continued)

Variable	Joint	Female	Male	Difference
nfi	-0.0292	0.0578	-0.0608	-0.1185
	(0.0409)	(0.0922)	(0.0454)	(0.1028)
nfwi	-0.0707*	0.0424	-0.0821*	-0.1245
	(0.0374)	(0.0878)	(0.0428)	(0.0977)
distance	-0.0046**	-0.0059*	-0.0039	0.0021
	(0.0020)	(0.0036)	(0.0024)	(0.0043)
wealth_idx	0.1347**	0.1544	0.1041*	-0.0503
	(0.0528)	(0.1329)	(0.0587)	(0.1453)
irrigation	0.2097***	0.2187*	0.1785***	-0.0402
	(0.0485)	(0.1183)	(0.0538)	(0.1300)
Observations	2 427	553	1 874	
Adj. R^2	0.561	0.525	0.580	
Log-likelihood	-2 595.3	-590.5	-1 936.7	
AIC	5 368.7	1 349.0	4 049.3	
S.Error Regr.	0.718	0.767	0.697	
Geogr. FE	63	62	63	
Model Tests				
Chow F Test M=F pval	0.000			
Wald Test F=J, M=J pval		0.000	1.000	

Table 35. Yield models by gender using *femlab* – Ethiopia

Variable	Joint	Female	Male	Difference
femlab	-0.0415	.	.	.
	(0.0635)	.	.	.
agehead	0.0045	0.0047	0.0054	0.0007
	(0.0109)	(0.0231)	(0.0118)	(0.0259)
ageh2	-0.0000	-0.0000	-0.0000	-0.0000
	(0.0001)	(0.0002)	(0.0001)	(0.0003)
educhead	0.0017	0.0113	0.0015	-0.0099
	(0.0069)	(0.0187)	(0.0073)	(0.0200)
married	0.1463*	0.0324	0.1230	0.0906
	(0.0762)	(0.1372)	(0.0941)	(0.1663)
widow	0.0306	0.0586	-0.1338	-0.1925
	(0.1047)	(0.1561)	(0.1465)	(0.2141)
plots	0.0117	0.0502	0.0031	-0.0470
	(0.0144)	(0.0407)	(0.0149)	(0.0433)
rent	0.0448	-0.0772	0.0616	0.1388
	(0.0661)	(0.1518)	(0.0748)	(0.1692)
sharecrop	0.1786***	0.1788	0.1758***	-0.0030
	(0.0517)	(0.1623)	(0.0545)	(0.1712)
malefamlab_ha	0.0467***	0.0922***	0.0379***	-0.0543**
	(0.0092)	(0.0247)	(0.0080)	(0.0259)
femfamlab_ha	0.0294***	0.0214**	0.0600***	0.0386*
	(0.0101)	(0.0106)	(0.0200)	(0.0226)
childlab_ha	0.0210	-0.0381	0.1190***	0.1571***
	(0.0439)	(0.0280)	(0.0415)	(0.0501)
hiredlab_ha	0.0329**	0.0303*	0.0346*	0.0044
	(0.0140)	(0.0156)	(0.0193)	(0.0249)
fertil_ha	-0.0016	-0.0296***	0.0011	0.0308***
	(0.0055)	(0.0112)	(0.0039)	(0.0119)
seeds_ha	0.0151	-0.0509	0.0412*	0.0920
	(0.0420)	(0.0845)	(0.0234)	(0.0876)
other_ha	0.0000	0.0006	0.0000	-0.0006
	(0.0001)	(0.0004)	(0.0001)	(0.0004)
plough	0.0362	-0.1367	0.1092*	0.2459*
	(0.0588)	(0.1251)	(0.0641)	(0.1406)
orgfert	0.0378	0.0015	0.0534	0.0519
	(0.0486)	(0.1132)	(0.0539)	(0.1253)
agcap_ha	-0.0028	-0.0050*	0.0009	0.0058
	(0.0020)	(0.0028)	(0.0040)	(0.0048)
lland	-0.4122***	-0.3437***	-0.4202***	-0.0765
	(0.0368)	(0.1118)	(0.0357)	(0.1174)
lland2	-0.0768***	-0.0618**	-0.0863***	-0.0245
	(0.0132)	(0.0312)	(0.0168)	(0.0354)

Table A25. Yield models by gender using *femlab* – Ethiopia (continued)

Variable	Joint	Female	Male	Difference
child_dep	-0.0727	-0.1271	-0.0622	0.0649
	(0.0707)	(0.1429)	(0.0831)	(0.1653)
femlabsh	-0.0665	0.2017	-0.3052***	-0.5069***
	(0.0765)	(0.1373)	(0.0899)	(0.1641)
hhsize	0.0223*	0.0304	0.0170	-0.0134
	(0.0123)	(0.0259)	(0.0134)	(0.0291)
nfi	0.0872	-0.0748	0.1248*	0.1995
	(0.0583)	(0.1129)	(0.0691)	(0.1324)
nfwi	-0.0020	0.1678	-0.0527	-0.2205
	(0.0513)	(0.1286)	(0.0576)	(0.1409)
distance	-0.0029***	-0.0019	-0.0031***	-0.0012
	(0.0006)	(0.0014)	(0.0006)	(0.0016)
wealth_idx	0.0658**	0.0415	0.0644**	0.0228
	(0.0255)	(0.0539)	(0.0301)	(0.0617)
irrigation	0.1832***	0.0020	0.2646***	0.2626
	(0.0638)	(0.1474)	(0.0711)	(0.1636)
slopepct	-0.0026	-0.0098	-0.0017	0.0081
	(0.0028)	(0.0089)	(0.0029)	(0.0094)
altitude	0.0000	-0.0000	0.0001***	0.0001
	(0.0000)	(0.0001)	(0.0001)	(0.0001)
Observations	2020	528	1 492	
Adj. R2	0.300	0.315	0.330	
Log-likelihood	-2 589.1	-714.1	-1 787.6	
AIC	5 320.2	1 554.2	3 713.3	
S.Error Regr.	0.888	1.002	0.821	
Geogr. FE	39	37	38	
Model Tests				
Chow F Test M=F pval	0.000			
Wald Test F=J, M=J pval		0.000	1.000	

Table 36. Yield models by gender using *femlab* – Ghana

Variable	Joint	Female	Male	Difference
femlab	-0.0712**	.	.	.
	(0.0306)	.	.	.
agehead	-0.0063	-0.0063	-0.0043	0.0020
	(0.0042)	(0.0083)	(0.0051)	(0.0097)
ageh2	0.0001	0.0001	0.0000	-0.0000
	(0.0000)	(0.0001)	(0.0000)	(0.0001)
educhead	0.0031	0.0033	0.0010	-0.0023
	(0.0028)	(0.0051)	(0.0033)	(0.0061)
married	0.0916***	0.0363	0.0805**	0.0442
	(0.0311)	(0.0597)	(0.0388)	(0.0712)
widow	-0.0109	-0.0238	0.0145	0.0383
	(0.0471)	(0.0683)	(0.0667)	(0.0955)
plots	0.1046***	0.0926***	0.1074***	0.0148
	(0.0065)	(0.0115)	(0.0077)	(0.0138)
rent	0.0082	0.2297***	-0.0889	-0.3186***
	(0.0444)	(0.0812)	(0.0544)	(0.0977)
sharecrop	0.1630***	0.1099	0.1632***	0.0532
	(0.0370)	(0.0772)	(0.0423)	(0.0880)
malefamlab_ha	0.0421***	-0.0114	0.0564***	0.0678***
	(0.0071)	(0.0240)	(0.0093)	(0.0258)
femfamlab_ha	0.0005	0.0052	0.0213	0.0161
	(0.0041)	(0.0061)	(0.0165)	(0.0176)
childlab_ha	0.0022	-0.0009	0.0054	0.0063
	(0.0078)	(0.0107)	(0.0109)	(0.0153)
hiredlab_ha	0.0002**	0.0004***	0.0001	-0.0002
	(0.0001)	(0.0001)	(0.0001)	(0.0002)
fertil_ha	0.0003**	0.0003	0.0003**	0.0000
	(0.0001)	(0.0002)	(0.0001)	(0.0002)
seeds_ha	-0.0002	-0.0007	-0.0001	0.0006
	(0.0003)	(0.0007)	(0.0003)	(0.0008)
other_ha	0.0003**	0.0001	0.0003***	0.0002
	(0.0001)	(0.0002)	(0.0001)	(0.0003)
agcap_ha	0.0069	0.0531*	0.0012	-0.0518*
	(0.0076)	(0.0271)	(0.0082)	(0.0283)
lland	-0.5518***	-0.6064***	-0.4933***	0.1132**
	(0.0208)	(0.0344)	(0.0293)	(0.0452)
lland2	-0.0447***	-0.0372***	-0.0599***	-0.0228
	(0.0071)	(0.0117)	(0.0094)	(0.0150)
child_dep	-0.0028	-0.0600	0.0301	0.0901
	(0.0308)	(0.0527)	(0.0376)	(0.0647)
femlabsh	0.0331	-0.3263**	0.1408*	0.4671***
	(0.0590)	(0.1349)	(0.0764)	(0.1550)

Table A26. Yield models by gender using *femlab* – Ghana (continued)

Variable	Joint	Female	Male	Difference
hhsize	0.0254***	0.0218***	0.0196***	-0.0022
	(0.0040)	(0.0069)	(0.0052)	(0.0086)
nfi	-0.0509*	-0.0503	-0.0463	0.0040
	(0.0282)	(0.0516)	(0.0335)	(0.0615)
nfwi	-0.0317	-0.0742	-0.0183	0.0559
	(0.0274)	(0.0536)	(0.0327)	(0.0627)
distance	0.0020**	-0.0020	0.0037***	0.0057***
	(0.0008)	(0.0015)	(0.0010)	(0.0018)
wealth_idx	-0.0560***	-0.0189	-0.0670***	-0.0481
	(0.0177)	(0.0324)	(0.0203)	(0.0382)
d_livestock	0.2569***	0.3131***	0.2206***	-0.0925*
	(0.0224)	(0.0422)	(0.0268)	(0.0500)
Observations	7 676	2 332	5 344	
Adj. R2	0.386	0.392	0.394	
Log-likelihood	-9 771.2	-2 936.4	-6 688.4	
AIC	19 920.4	6 242.9	13 750.8	
S.Error Regr.	0.875	0.889	0.861	
Geogr. FE	162	161	160	
Model Tests				
Chow F Test M=F pval	0.000			
Wald Test F=J, M=J pval		0.844	1.000	

Table 37. Yield models by gender using *femlab* – Guatemala

Variable	Joint	Female	Male	Difference
femlab	-0.0199	.	.	.
	(0.0413)	.	.	.
agehead	0.0150***	0.0065	0.0145***	0.0080
	(0.0050)	(0.0132)	(0.0054)	(0.0143)
ageh2	-0.0001***	-0.0001	-0.0001**	-0.0001
	(0.0000)	(0.0001)	(0.0001)	(0.0001)
educhead	0.0056	0.0078	0.0055	-0.0023
	(0.0035)	(0.0097)	(0.0037)	(0.0103)
married	0.0316	0.1204	0.0105	-0.1098
	(0.0551)	(0.1113)	(0.0672)	(0.1300)
widow	-0.0097	0.0937	-0.0379	-0.1316
	(0.0656)	(0.1253)	(0.0805)	(0.1489)
plots	0.0972***	0.0882***	0.0997***	0.0115
	(0.0092)	(0.0287)	(0.0098)	(0.0303)
rent	0.0267	0.0220	0.0262	0.0042
	(0.0228)	(0.0637)	(0.0244)	(0.0682)
malefamlab_ha	1.5017***	-1.7191	1.9903***	3.7094**
	(0.4112)	(1.5931)	(0.5549)	(1.6870)
femfamlab_ha	0.5448	1.0488	1.8190	0.7703
	(0.7639)	(1.3555)	(1.5061)	(2.0262)
childlab_ha	-0.3457	2.6151	-0.8206	-3.4358
	(0.7678)	(3.7423)	(0.9565)	(3.8626)
hiredlab_ha	-0.0500	-0.0392	-0.0580	-0.0188
	(0.0556)	(0.1926)	(0.0551)	(0.2004)
seeds_ha	-0.7234***	-0.3147	-0.7595***	-0.4447
	(0.2310)	(0.6102)	(0.2446)	(0.6574)
fertilizers_ha	0.8362***	0.7340***	0.8552***	0.1212
	(0.0815)	(0.2036)	(0.0902)	(0.2227)
other_ha	0.8030***	0.8596***	0.7852***	-0.0745
	(0.1074)	(0.3006)	(0.1164)	(0.3223)
agcap_ha	29.9545*	30.8394	35.7269*	4.8875
	(17.5368)	(43.0360)	(20.1634)	(47.5253)
lland	-0.5085***	-0.4859***	-0.5031***	-0.0173
	(0.0173)	(0.0447)	(0.0186)	(0.0484)
lland2	-0.0695***	-0.0383*	-0.0788***	-0.0405*
	(0.0088)	(0.0210)	(0.0095)	(0.0230)
child_dep	0.0353	0.1787**	0.0114	-0.1673*
	(0.0368)	(0.0890)	(0.0406)	(0.0978)
femlabsh	0.0676	0.1132	0.0238	-0.0894
	(0.0555)	(0.0932)	(0.0801)	(0.1229)
hhsize	-0.0102**	0.0038	-0.0124**	-0.0162
	(0.0048)	(0.0154)	(0.0051)	(0.0162)

Table A27. Yield models by gender using *femlab* – Guatemala (continued)

Variable	Joint	Female	Male	Difference
nfi	-0.0457*	0.0260	-0.0541*	-0.0801
	(0.0267)	(0.0685)	(0.0312)	(0.0753)
nfwi	-0.0649***	-0.1663**	-0.0494*	0.1170*
	(0.0249)	(0.0654)	(0.0272)	(0.0708)
distance	0.0001	0.0042	-0.0003	-0.0046
	(0.0014)	(0.0036)	(0.0015)	(0.0039)
wealth_idx	-0.0088	-0.0334*	-0.0074	0.0260
	(0.0085)	(0.0187)	(0.0095)	(0.0210)
irrigated	0.1526***	0.1657***	0.1498***	-0.0159
	(0.0227)	(0.0621)	(0.0241)	(0.0666)
Observations	3 812	542	3 270	
Adj. R2	0.458	0.430	0.465	
Log-likelihood	-3 630.7	-499.0	-3 100.4	
AIC	7 357.5	1 091.9	6 294.8	
S.Error Regr.	0.631	0.636	0.629	
Geogr. FE	21	21	21	
Model Tests				
Chow F Test M=F pval	0.081			
Wald Test F=J, M=J pval		0.845	1.000	

Table 38. Yield models by gender using *femlab* – Cambodia

Variable	Joint	Female	Male	Difference
femlab	0.0074	.	.	.
	(0.0325)	.	.	.
agehead	0.0176***	0.0148	0.0130	-0.0018
	(0.0066)	(0.0133)	(0.0082)	(0.0156)
ageh2	-0.0002***	-0.0002	-0.0001*	0.0000
	(0.0001)	(0.0001)	(0.0001)	(0.0002)
educhead	0.0137***	0.0096	0.0122**	0.0026
	(0.0047)	(0.0085)	(0.0062)	(0.0105)
married	0.0068	0.0880	-0.0018	-0.0898
	(0.0837)	(0.1356)	(0.1168)	(0.1790)
widow	-0.0231	0.0551	-0.0290	-0.0842
	(0.0838)	(0.1265)	(0.1292)	(0.1808)
plots	0.1430***	0.1441***	0.1465***	0.0024
	(0.0143)	(0.0299)	(0.0180)	(0.0349)
rent	-0.1572	-0.2864	-0.1002	0.1862
	(0.1345)	(0.4017)	(0.1267)	(0.4212)
malefamlab_ha	0.0077	0.0417	0.0125	-0.0292
	(0.0058)	(0.0254)	(0.0078)	(0.0266)
femfamlab_ha	0.0222***	0.0286**	0.0132	-0.0154
	(0.0081)	(0.0137)	(0.0130)	(0.0189)
childlab_ha	-0.0154**	-0.0267**	0.0194	0.0461*
	(0.0067)	(0.0115)	(0.0256)	(0.0280)
hiredlab_ha	0.0826	0.3002*	0.0838	-0.2164
	(0.0685)	(0.1591)	(0.0673)	(0.1728)
fertil_ha	0.1362**	0.2384**	0.0879	-0.1505
	(0.0644)	(0.1194)	(0.0818)	(0.1447)
seeds_ha	0.3323***	0.1838*	0.4191***	0.2353*
	(0.0660)	(0.1002)	(0.1001)	(0.1416)
other_ha	0.1393***	0.2578**	0.1287***	-0.1291
	(0.0426)	(0.1078)	(0.0478)	(0.1179)
agcap_ha	-0.0051	0.0012	-0.0033	-0.0044
	(0.0044)	(0.0073)	(0.0064)	(0.0097)
lland	-0.2921***	-0.2530***	-0.2909***	-0.0379
	(0.0294)	(0.0477)	(0.0374)	(0.0606)
lland2	-0.0594***	-0.0389	-0.0674***	-0.0285
	(0.0113)	(0.0252)	(0.0126)	(0.0281)
child_dep	0.0569	0.2454**	-0.0134	-0.2588**
	(0.0520)	(0.1078)	(0.0632)	(0.1249)
femlabsh	-0.1332	-0.0797	-0.0661	0.0137
	(0.0872)	(0.1683)	(0.1252)	(0.2098)
hhsize	-0.0193**	-0.0131	-0.0254**	-0.0123
	(0.0083)	(0.0160)	(0.0102)	(0.0190)

Table A28. Yield models by gender using *femlab* – Cambodia (continued)

Variable	Joint	Female	Male	Difference
nfi	0.2051	0.5058	0.0942	-0.4116
	(0.2000)	(0.3256)	(0.1547)	(0.3605)
nfwi	0.0269	0.1267**	-0.0134	-0.1401**
	(0.0287)	(0.0546)	(0.0368)	(0.0659)
distance	0.0812***	0.0865**	0.0633**	-0.0232
	(0.0271)	(0.0435)	(0.0307)	(0.0533)
wealth_idx	0.0807***	0.0516*	0.0949***	0.0434
	(0.0137)	(0.0273)	(0.0168)	(0.0321)
irrigation	-0.0329	-0.0011	-0.0656*	-0.0646
	(0.0297)	(0.0652)	(0.0362)	(0.0746)
Observations	3 142	1 005	2 137	
Adj. R2	0.516	0.546	0.513	
Log-likelihood	-2 786.8	-758.4	-1 832.4	
AIC	6 227.7	1988.8	4 272.7	
S.Error Regr.	0.624	0.612	0.623	
Geogr. FE	333	268	318	
Model Tests				
Chow F Test M=F pval	0.963			
Wald Test F=J, M=J pval		0.000	0.000	

Table 39. Yield models by gender using *femlab* – Malawi

Variable	Joint	Female	Male	Difference
femlab	-0.0684***	.	.	.
	(0.0239)	.	.	.
agehead	0.0095**	0.0112**	0.0075	-0.0038
	(0.0037)	(0.0057)	(0.0054)	(0.0078)
ageh2	-0.0001***	-0.0001**	-0.0001	0.0000
	(0.0000)	(0.0001)	(0.0001)	(0.0001)
educhead	0.0144***	0.0081*	0.0154***	0.0073
	(0.0029)	(0.0046)	(0.0041)	(0.0062)
married	0.0648**	0.0219	0.2006***	0.1787**
	(0.0294)	(0.0435)	(0.0638)	(0.0773)
widow	0.0564	0.0185	0.1283	0.1098
	(0.0362)	(0.0461)	(0.0789)	(0.0914)
plots	0.1959***	0.1978***	0.1840***	-0.0138
	(0.0148)	(0.0227)	(0.0211)	(0.0310)
rent	0.0267	0.0420	0.0220	-0.0200
	(0.0401)	(0.0688)	(0.0521)	(0.0863)
malefamlab_ha	0.0224***	0.0135	0.0355***	0.0220
	(0.0072)	(0.0198)	(0.0123)	(0.0232)
femfamlab_ha	0.0316***	0.0335**	-0.0003	-0.0338
	(0.0091)	(0.0131)	(0.0217)	(0.0253)
childfamlab_ha	0.0105	0.0062	0.0009	-0.0054
	(0.0194)	(0.0222)	(0.0336)	(0.0403)
hiredlab_ha	0.0160*	0.0090	0.0338***	0.0248*
	(0.0088)	(0.0079)	(0.0100)	(0.0127)
fertil_ha	0.0223***	0.0191***	0.0260***	0.0070
	(0.0031)	(0.0043)	(0.0041)	(0.0060)
seeds_ha	0.0320***	0.0277***	0.0350***	0.0073
	(0.0064)	(0.0094)	(0.0094)	(0.0133)
other_ha	0.0052	0.0032	0.0030	-0.0002
	(0.0080)	(0.0135)	(0.0098)	(0.0167)
agcap_ha	0.0033**	0.0047*	0.0041***	-0.0006
	(0.0014)	(0.0028)	(0.0015)	(0.0032)
lland	-0.5522***	-0.5669***	-0.5452***	0.0216
	(0.0241)	(0.0344)	(0.0333)	(0.0479)
lland2	-0.0390***	-0.0289**	-0.0523***	-0.0233
	(0.0100)	(0.0135)	(0.0140)	(0.0194)
child_dep	-0.0870***	-0.1054***	-0.0549	0.0506
	(0.0301)	(0.0403)	(0.0499)	(0.0642)
femlabsh	0.0131	-0.0815	-0.1060	-0.0245
	(0.0547)	(0.0870)	(0.1174)	(0.1462)
hhsize	0.0078	0.0015	0.0129	0.0113
	(0.0058)	(0.0086)	(0.0088)	(0.0123)

Table A29. Yield models by gender using *femlab* – Malawi (continued)

Variable	Joint	Female	Male	Difference
nfi	0.0670***	0.0663*	0.0780***	0.0117
	(0.0220)	(0.0347)	(0.0300)	(0.0459)
nfwi	-0.0157	-0.0389	0.0513	0.0901
	(0.0301)	(0.0481)	(0.0430)	(0.0645)
distance	-0.0014**	-0.0023***	-0.0004	0.0020
	(0.0006)	(0.0009)	(0.0009)	(0.0013)
wealth_idx	0.0288***	0.0381***	0.0269***	-0.0112
	(0.0072)	(0.0116)	(0.0102)	(0.0155)
irrigation	0.1351	0.1426	0.1824	0.0398
	(0.1170)	(0.2310)	(0.1202)	(0.2604)
slope	-0.0485	0.0356	-0.1337***	-0.1693***
	(0.0303)	(0.0428)	(0.0453)	(0.0624)
soil_quality	0.1560***	0.1541***	0.1429***	-0.0112
	(0.0190)	(0.0294)	(0.0275)	(0.0402)
Observations	9 208	4 512	4 696	
Adj. R2	0.371	0.352	0.389	
Log-likelihood	-10 841.6	-5 178.4	-5 228.7	
AIC	23 231.2	11 836.7	11 875.5	
S.Error Regr.	0.821	0.838	0.805	
Geogr. FE	760	749	731	
Model Tests				
Chow F Test M=F pval	0.757			
Wald Test F=J, M=J pval		0.000	0.000	

Table 40. Yield models by gender using *femlab* – Nicaragua

Variable	Joint	Female	Male	Difference
femlab	0.0499	.	.	.
	(0.2650)	.	.	.
agehead	0.0052	-0.0950	0.0147	0.1097
	(0.0208)	(0.1132)	(0.0213)	(0.1151)
ageh2	-0.0001	0.0012	-0.0002	-0.0013
	(0.0002)	(0.0011)	(0.0002)	(0.0011)
educhead	0.0194	0.0161	0.0108	-0.0052
	(0.0152)	(0.0487)	(0.0142)	(0.0507)
married	0.1675	0.7250	0.0153	-0.7098
	(0.1467)	(0.5610)	(0.1471)	(0.5799)
widow	0.4295	0.0000	0.3837	0.3837
	(0.3298)	(0.0000)	(0.3562)	(0.3562)
plots	0.2488***	0.3872	0.2232***	-0.1641
	(0.0762)	(0.3732)	(0.0808)	(0.3819)
rent	0.1447	0.7688	0.1396	-0.6292
	(0.1155)	(0.5895)	(0.1191)	(0.6014)
malefamlab_ha	0.0007***	0.0171	0.0005**	-0.0165
	(0.0003)	(0.0142)	(0.0003)	(0.0142)
femfamlab_ha	-0.0000	0.0016	0.0007	-0.0009
	(0.0005)	(0.0011)	(0.0008)	(0.0014)
childlab_ha	-0.0004	-0.0013	-0.0007	0.0006
	(0.0007)	(0.0027)	(0.0008)	(0.0028)
hiredlab_ha	0.5909*	2.8451	0.6079**	-2.2371
	(0.3011)	(1.8264)	(0.3059)	(1.8518)
seedfert_ha	0.6822***	4.7910**	0.6375***	-4.1536*
	(0.2581)	(2.1818)	(0.2419)	(2.1951)
other_ha	-0.4164***	0.0598	-0.3602***	-0.4200
	(0.0936)	(0.5620)	(0.0878)	(0.5688)
agcap_ha	0.2546***	0.6211**	0.1713**	-0.4498*
	(0.0961)	(0.2351)	(0.0769)	(0.2474)
lland	-0.5822***	0.0444	-0.6035***	-0.6479
	(0.1370)	(0.6402)	(0.1347)	(0.6542)
lland2	-0.0579**	-0.0793	-0.0647**	0.0146
	(0.0279)	(0.0946)	(0.0280)	(0.0986)
child_dep	0.0663	1.0580	0.0613	-0.9967
	(0.1913)	(1.2465)	(0.1960)	(1.2619)
femlabsh	0.0411	-0.7623	-0.0312	0.7311
	(0.2488)	(0.9800)	(0.2543)	(1.0125)
hhsize	0.0644***	-0.0391	0.0730***	0.1122*
	(0.0227)	(0.0631)	(0.0246)	(0.0677)
nfi	0.0689	-0.2638	0.1841	0.4479
	(0.1290)	(0.5403)	(0.1293)	(0.5555)

Table A30. Yield models by gender using *femlab* – Nicaragua (continued)

Variable	Joint	Female	Male	Difference
nfwi	-0.2135	-0.0623	-0.1860	-0.1237
	(0.1508)	(0.5619)	(0.1489)	(0.5813)
distance	0.0268	-0.0082	0.0285	0.0367
	(0.0227)	(0.1689)	(0.0234)	(0.1705)
wealth_idx	-0.0578	0.0134	-0.0601	-0.0735
	(0.0416)	(0.1541)	(0.0440)	(0.1602)
d_livestock	-0.2114*	-0.9972**	-0.0665	0.9307**
	(0.1205)	(0.4575)	(0.1186)	(0.4726)
Observations	699	63	636	
Adj. R2	0.554	0.548	0.584	
Log-likelihood	-1 128.4	-84.9	-1 002.7	
AIC	2 322.9	229.9	2069.3	
S.Error Regr.	1.246	1.287	1.201	
Geogr. FE	7	6	7	
Model Tests				
Chow F Test M=F pval	0.000			
Wald Test F=J, M=J pval		0.000	1.000	

Table 41. Yield models by gender using *femlab* – Pakistan

Variable	Joint	Female	Male	Difference
femlab	-0.0351	.	.	.
	(0.0263)	.	.	.
agehead	0.0056	0.0089	0.0057	-0.0032
	(0.0036)	(0.0080)	(0.0039)	(0.0089)
ageh2	-0.0001	-0.0001	-0.0001	0.0000
	(0.0000)	(0.0001)	(0.0000)	(0.0001)
educhead	0.0003	-0.0012	-0.0002	0.0011
	(0.0022)	(0.0043)	(0.0024)	(0.0049)
married	0.0184	-0.1460	0.0356	0.1816
	(0.0553)	(0.1164)	(0.0622)	(0.1320)
widow	-0.0147	-0.0966	-0.0080	0.0886
	(0.0692)	(0.1382)	(0.0780)	(0.1587)
plots	0.0944***	0.0750	0.0924***	0.0174
	(0.0279)	(0.0772)	(0.0300)	(0.0828)
rent	-0.0193	0.1075	-0.0269	-0.1343
	(0.0330)	(0.0904)	(0.0354)	(0.0971)
malefamlab_ha	0.0409***	0.0290	0.0408***	0.0118
	(0.0080)	(0.0203)	(0.0091)	(0.0222)
femfamlab_ha	0.0190***	0.0317***	0.0015	-0.0302*
	(0.0051)	(0.0060)	(0.0171)	(0.0181)
childlab_ha	0.0488***	0.0486**	0.0641***	0.0154
	(0.0135)	(0.0214)	(0.0194)	(0.0288)
hiredlab_ha	-0.0000	0.0000	-0.0000	-0.0000
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
fertil_ha	0.0000***	0.0000***	0.0000***	-0.0000
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
seeds_ha	0.0000**	0.0000	0.0000**	-0.0000
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
other_ha	0.0000***	0.0000***	0.0000***	-0.0000
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
agcap_ha	0.0000	-0.0000	0.0000	0.0000
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
land	-0.1274***	-0.1267***	-0.1294***	-0.0027
	(0.0085)	(0.0246)	(0.0080)	(0.0259)
land2	0.0009***	0.0016***	0.0009***	-0.0007
	(0.0002)	(0.0004)	(0.0002)	(0.0005)
child_dep	0.0096	-0.0164	0.0179	0.0343
	(0.0218)	(0.0455)	(0.0249)	(0.0519)
femlabsh	0.0425	-0.0697	0.0570	0.1267
	(0.0350)	(0.1433)	(0.0391)	(0.1485)
hhsize	0.0100***	-0.0010	0.0092***	0.0102
	(0.0030)	(0.0067)	(0.0033)	(0.0075)

Table A31. Yield models by gender using *femlab* – Pakistan (continued)

Variable	Joint	Female	Male	Difference
nfi	-0.1114***	-0.1663**	-0.1016***	0.0647
	(0.0261)	(0.0735)	(0.0278)	(0.0786)
nfwi	-0.0803***	-0.0932*	-0.0843***	0.0089
	(0.0181)	(0.0497)	(0.0201)	(0.0536)
distance	-0.0012***	-0.0005	-0.0014***	-0.0008
	(0.0003)	(0.0007)	(0.0004)	(0.0008)
wealth_idx	0.0216**	0.0653***	0.0227**	-0.0426*
	(0.0090)	(0.0206)	(0.0097)	(0.0228)
irrigation	0.2397***	0.0541	0.2789***	0.2249***
	(0.0465)	(0.0629)	(0.0563)	(0.0844)
Observations	3 978	560	3 418	
Adj. R2	0.591	0.620	0.591	
Log-likelihood	-2 822.6	-230.9	-2 503.8	
AIC	5 899.3	629.7	5 259.7	
S.Error Regr.	0.500	0.399	0.513	
Geogr. FE	101	64	101	
Model Tests				
Chow F Test M=F pval	0.997			
Wald Test F=J, M=J pval		0.000	1.000	

Table 42. Yield models by gender using *femlab* – Peru

Variable	Joint	Female	Male	Difference
femlab	-0.1692***	.	.	.
	(0.0414)	.	.	.
agehead	0.0386***	0.0458***	0.0381***	-0.0077
	(0.0084)	(0.0177)	(0.0105)	(0.0206)
ageh2	-0.0004***	-0.0005***	-0.0004***	0.0000
	(0.0001)	(0.0002)	(0.0001)	(0.0002)
educhead	0.0114**	0.0177*	0.0048	-0.0130
	(0.0051)	(0.0103)	(0.0066)	(0.0122)
married	0.1279***	0.0456	0.1486**	0.1030
	(0.0436)	(0.0954)	(0.0654)	(0.1156)
widow	0.0026	0.4218	-0.2750	-0.6969
	(0.4278)	(0.2601)	(0.7157)	(0.7615)
plots	0.0361***	0.0282	0.0350**	0.0069
	(0.0104)	(0.0192)	(0.0140)	(0.0238)
rent	-0.0036	-0.0496	-0.0290	0.0206
	(0.0976)	(0.2162)	(0.1154)	(0.2451)
malefamlab_ha	0.0000	0.0004*	-0.0001	-0.0004*
	(0.0000)	(0.0002)	(0.0000)	(0.0002)
femfamlab_ha	0.0001	0.0001*	0.0000	-0.0001
	(0.0000)	(0.0001)	(0.0001)	(0.0001)
childlab_ha	-0.0004***	0.0020	-0.0009***	-0.0028
	(0.0001)	(0.0022)	(0.0003)	(0.0022)
hiredlab_ha	0.4206	0.0437	2.2932***	2.2495***
	(0.3570)	(0.2724)	(0.6380)	(0.6937)
fertil_ha	0.0011	-0.0860	0.1033	0.1892
	(0.0745)	(0.1613)	(0.0896)	(0.1845)
seeds_ha	0.4483*	0.5181**	0.7827*	0.2647
	(0.2526)	(0.2123)	(0.4566)	(0.5035)
other_ha	0.2856***	0.2386***	0.3306***	0.0920
	(0.0657)	(0.0836)	(0.0910)	(0.1236)
agcap_ha	-0.0002	-0.0002	0.0130	0.0132
	(0.0004)	(0.0006)	(0.0113)	(0.0113)
lland	-0.6413***	-0.6267***	-0.6309***	-0.0041
	(0.0195)	(0.0362)	(0.0292)	(0.0465)
lland2	-0.0451***	-0.0495***	-0.0443***	0.0052
	(0.0062)	(0.0114)	(0.0097)	(0.0150)
child_dep	-0.0655	-0.0811	-0.0216	0.0595
	(0.0775)	(0.1596)	(0.0948)	(0.1856)
femlabsh	-0.0942	-0.2819*	-0.0905	0.1915
	(0.0690)	(0.1713)	(0.1043)	(0.2006)
hhsize	0.0347***	0.0411**	0.0304***	-0.0106
	(0.0093)	(0.0187)	(0.0116)	(0.0220)

Table A32. Yield models by gender using *femlab* – Peru (continued)

Variable	Joint	Female	Male	Difference
nfi	-0.1158***	-0.0584	-0.1246**	-0.0662
	(0.0420)	(0.0906)	(0.0514)	(0.1042)
nfwi	-0.1894***	-0.2366***	-0.1689***	0.0677
	(0.0446)	(0.0809)	(0.0601)	(0.1007)
distance	0.0015	0.0344	-0.0246	-0.0590
	(0.0312)	(0.0378)	(0.0483)	(0.0613)
wealth_idx	0.0479**	-0.0031	0.0636***	0.0667
	(0.0192)	(0.0469)	(0.0219)	(0.0517)
irrigation	0.2179***	0.2821***	0.1346*	-0.1475
	(0.0512)	(0.0911)	(0.0688)	(0.1141)
Observations	7 312	2 351	4 961	
Adj. R2	0.549	0.619	0.526	
Log-likelihood	-11 404.6	-3 267.0	-7 628.5	
AIC	24 463.1	7 570.1	16 711.1	
S.Error Regr.	1.234	1.174	1.243	
Geogr. FE	918	716	860	
Model Tests				
Chow F Test M=F pval	1.000			
Wald Test F=J, M=J pval		0.000	0.000	

Table 43. Yield models by gender using *femlab* – Uganda

Variable	Joint	Female	Male	Difference
femlab	-0.0170	.	.	.
	(0.0522)	.	.	.
agehead	0.0143*	0.0160	0.0070	-0.0090
	(0.0082)	(0.0100)	(0.0156)	(0.0186)
ageh2	-0.0001	-0.0001	-0.0000	0.0001
	(0.0001)	(0.0001)	(0.0002)	(0.0002)
educhead	0.0115*	0.0169**	-0.0092	-0.0262*
	(0.0061)	(0.0073)	(0.0123)	(0.0143)
married	0.2122***	0.1894**	0.0911	-0.0983
	(0.0683)	(0.0831)	(0.1573)	(0.1779)
widow	0.0855	0.1091	-0.0597	-0.1688
	(0.0786)	(0.0870)	(0.2026)	(0.2205)
plots	0.1268***	0.1033***	0.1805***	0.0773*
	(0.0176)	(0.0216)	(0.0386)	(0.0442)
rent	-0.2541**	-0.1291	-0.4644	-0.3354
	(0.1274)	(0.0989)	(0.3604)	(0.3737)
malefamlab_ha	0.0010***	0.0009***	0.0010**	0.0001
	(0.0003)	(0.0003)	(0.0005)	(0.0006)
femfamlab_ha	0.0010***	0.0009***	0.0017***	0.0008
	(0.0002)	(0.0002)	(0.0006)	(0.0006)
childlab_ha	0.0008**	0.0007**	0.0017	0.0009
	(0.0003)	(0.0003)	(0.0013)	(0.0013)
hiredlab_ha	0.0135***	0.0105***	0.0197***	0.0091
	(0.0026)	(0.0028)	(0.0056)	(0.0063)
fertil_ha	0.0231***	0.0313*	0.0153***	-0.0159
	(0.0079)	(0.0190)	(0.0055)	(0.0198)
seeds_ha	0.0001	0.0089	-0.0093	-0.0182*
	(0.0043)	(0.0058)	(0.0079)	(0.0098)
other_ha	-0.0061	-0.0095*	-0.0030	0.0065
	(0.0045)	(0.0058)	(0.0069)	(0.0090)
agcap_ha	0.0052	0.0268**	-0.0211	-0.0479**
	(0.0094)	(0.0108)	(0.0165)	(0.0197)
lland	-0.3965***	-0.4337***	-0.3594***	0.0743
	(0.0392)	(0.0396)	(0.0774)	(0.0869)
lland2	-0.0646***	-0.0481**	-0.0767**	-0.0286
	(0.0177)	(0.0233)	(0.0329)	(0.0403)
child_dep	0.1003	0.1347*	-0.1447	-0.2794*
	(0.0618)	(0.0732)	(0.1255)	(0.1453)
femlabsh	0.0643	-0.0040	0.2988*	0.3029
	(0.0808)	(0.0948)	(0.1722)	(0.1966)
hhsize	0.0055	0.0083	0.0035	-0.0048
	(0.0092)	(0.0109)	(0.0180)	(0.0210)

Table A33. Yield models by gender using *femlab* – Uganda (continued)

Variable	Joint	Female	Male	Difference
nfi	-0.0352	-0.0943*	0.0917	0.1860*
	(0.0426)	(0.0496)	(0.0848)	(0.0982)
nfwi	-0.0724	-0.0896	-0.0319	0.0577
	(0.0441)	(0.0545)	(0.0843)	(0.1004)
distance	-0.0264**	-0.0388***	0.0018	0.0406**
	(0.0103)	(0.0093)	(0.0141)	(0.0169)
wealth_idx	0.0087	0.0093	-0.0311	-0.0403
	(0.0155)	(0.0180)	(0.0335)	(0.0381)
irrigation	0.0333	-0.0242	0.1664	0.1906
	(0.1320)	(0.1708)	(0.2347)	(0.2903)
slope	-0.0831	-0.0781	-0.1187	-0.0406
	(0.0727)	(0.0666)	(0.1742)	(0.1864)
Observations	2 117	1 369	748	
Adj. R^2	0.519	0.571	0.440	
Log-likelihood	-2 603.4	-1 548.0	-968.0	
AIC	5 444.8	3 324.1	2 145.9	
S.Error Regr.	0.853	0.785	0.959	
Geogr. FE	95	94	88	
Model Tests				
Chow F Test M=F pval	0.191			
Wald Test F=J, M=J pval		1.000	0.000	

Table 44. Yield models by gender using femlab – Viet Nam

Variable	Joint	Female	Male	Difference
femlab	-0.0182	.	.	.
	(0.0450)	.	.	.
agehead	0.0153**	0.0153*	0.0063	-0.0090
	(0.0065)	(0.0091)	(0.0113)	(0.0145)
ageh2	-0.0002**	-0.0001*	-0.0001	0.0001
	(0.0001)	(0.0001)	(0.0001)	(0.0001)
educhead	-0.0108**	-0.0054	-0.0196**	-0.0142
	(0.0045)	(0.0068)	(0.0085)	(0.0109)
married	-0.0100	-0.0252	-0.0288	-0.0036
	(0.0263)	(0.0443)	(0.0449)	(0.0631)
widow	-0.0411	-0.0318	-0.0226	0.0092
	(0.0503)	(0.0757)	(0.1002)	(0.1255)
plots	0.0159***	0.0157***	0.0168***	0.0011
	(0.0022)	(0.0035)	(0.0039)	(0.0052)
rent	0.1126***	0.0835	0.0720	-0.0115
	(0.0389)	(0.0687)	(0.0563)	(0.0888)
malefamlab_ha	0.0183	0.4714**	-0.1378**	-0.6092***
	(0.0334)	(0.1980)	(0.0566)	(0.2059)
femfamlab_ha	0.0977***	0.1209**	0.0456	-0.0753
	(0.0361)	(0.0591)	(0.1450)	(0.1566)
childlab_ha	0.1930***	0.0324	0.3451***	0.3127
	(0.0736)	(0.1821)	(0.0993)	(0.2074)
hiredlab_ha	0.0451***	0.0372***	0.0485***	0.0113
	(0.0055)	(0.0085)	(0.0097)	(0.0129)
seeds_ha	0.1748***	0.1844***	0.1535***	-0.0309
	(0.0202)	(0.0308)	(0.0318)	(0.0443)
fertil_ha	0.2509***	0.2717***	0.2253***	-0.0464
	(0.0268)	(0.0392)	(0.0397)	(0.0558)
other_ha	-0.0045	0.0037	0.0891**	0.0854**
	(0.0093)	(0.0130)	(0.0401)	(0.0422)
agcap_ha	0.0260*	0.0239	0.0541*	0.0302
	(0.0133)	(0.0164)	(0.0279)	(0.0323)
lland	-0.4285***	-0.3914***	-0.4417***	-0.0503
	(0.0361)	(0.0565)	(0.0611)	(0.0832)
lland2	-0.0289***	-0.0401**	-0.0216	0.0185
	(0.0101)	(0.0163)	(0.0163)	(0.0230)
child_dep	-0.0064	0.0390	-0.0530	-0.0920
	(0.0587)	(0.0850)	(0.1205)	(0.1474)
femlabsh	-0.0218	-0.0611	0.0932	0.1543
	(0.0561)	(0.1102)	(0.0999)	(0.1488)
hhsize	0.0390***	0.0540***	0.0266*	-0.0274
	(0.0092)	(0.0158)	(0.0157)	(0.0223)

Table A34. Yield models by gender using *femlab* – Viet Nam (continued)

Variable	Joint	Female	Male	Difference
nfi	0.0066	0.0255	-0.0353	-0.0608
	(0.0309)	(0.0468)	(0.0516)	(0.0697)
nfwi	0.0165	0.0331	-0.0038	-0.0369
	(0.0291)	(0.0453)	(0.0506)	(0.0679)
distance	0.0355**	0.0969***	0.1233***	0.0264
	(0.0181)	(0.0374)	(0.0287)	(0.0472)
wealth_idx	-0.0015	-0.0176	-0.0011	0.0165
	(0.0091)	(0.0149)	(0.0145)	(0.0208)
irrigation	0.2318***	0.2665***	0.2492***	-0.0173
	(0.0512)	(0.0761)	(0.0930)	(0.1202)
Observations	2 854	1 412	1 442	
Adj. R^2	0.770	0.781	0.763	
Log-likelihood	-2 185.4	-858.0	-982.1	
AIC	5 454.8	2 498.0	2 754.2	
S.Error Regr.	0.587	0.563	0.605	
Geogr. FE	581	506	515	
Model Tests				
Chow F Test M=F pval	1.000			
Wald Test F=J, M=J pval		0.000	0.000	

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