

**Preliminary and Incomplete: Comments Welcome**

**Please do not cite or circulate**

**CASH OR COW: BARGAINING POWER IN THE HOUSEHOLD AND CHILD  
OUTCOMES IN FOUR DEVELOPING COUNTRIES**

**Priscila Hermida**

*Pontificia Universidad Católica del Ecuador*

**Jere Behrman**

*University of Pennsylvania*

**Whitney Schott**

*University of Pennsylvania*

December 2014

**Abstract**

This study explores whether differences in mothers' decision making power within the household have an effect on children's health and cognitive development in Peru, India Ethiopia and Vietnam. We use a unique dataset containing information on which member of the household controls household income, animals and household goods collected by the Young Lives project. After controlling for child, community and household characteristics, the results show mother's bargaining power has a positive effect on child outcomes. The effect is heterogeneous to child's gender and urban/rural residency. However there are important differences among countries between rural and urban areas, and among bargaining power measures. Parental education gaps have a negative and significant effect over human capital acquisition in all countries, and most settings. Control over household income, earnings from wages, and earnings from land, is consistently associated with higher scores in cognitive tests (PPVT and CDA) in all countries. Control over household assets and animals results in higher HAZ in Ethiopia; and in rural areas in Vietnam, and Peru. The effects of maternal control over income and earnings are stronger in urban areas. In India, Vietnam and Peru, maternal control of assets translates into better outcomes for girls.

JEL Classifications: D13; R2; P52; B54

Key Words: intra-household decision making; bargaining power; human capital.

## INTRODUCTION

Differences among mothers in their power to assert their own preferences may have effects on children's health and cognitive development. The economics, nutrition and demography literatures suggest that women's bargaining power inside the household is associated with the wellbeing of women and children (Thomas 1990; Haddad and Hoddinot 1994; Haddad et al 1995; Alderman et al 1995; Quisumbing and Maluccio 2003; Doss 2013). Inside the household, the individual with more bargaining power in a couple obtains his or her preferred outcome. In the absence of information on the preferred outcome of parents, the usual assumption is that mothers and fathers have different preferences in terms of children's human capital formation on average, with mothers favoring investing in children, relative to fathers. The goal of this study is to explore whether different dimensions of mothers' decision making power in four developing countries are associated with differences in children's human cognitive development and physical growth. We also examine whether these associations are heterogeneous depending on children's gender, and household's rural residency.

Mother's bargaining power in the household generally is not directly observable. Measuring it empirically is challenging. A good proxy should be correlated with women's capacity to exercise their preferences in household decisions, but be exogenous to the outcomes being studied (Li and Wu, 2011). Selecting the appropriate indicator of bargaining power should also reflect the cultural relevance of the indicator (Quisumbing et al 2012). In each country, the interplay of different social and cultural norms, -and particular economic and productive settings-, influence mothers' abilities to make choices and enhance or hinder their capacities to assert their preferences. This interaction may differ between urban and rural areas, with the latter probably tending to have more traditional norms and other constraints on women expressing their preferences. If the measure of bargaining power is control over a particular type of household resource, potential improvements in children's wellbeing may also depend on the fungibility of the asset. All of these factors may determine how well a particular bargaining power measure captures the underlying concept.

Most studies that look at more than one indicator of bargaining power -and/or at mother's decision making over different types of household resources-, create an aggregate measure or index. We think it is important to highlight the association between different dimensions of control over household resources and positive outcomes, in different national settings. For this reason, we look at a battery of indicators of bargaining power -differences in parental characteristics, mothers' decision making power over household income, animals and productive assets- to establish which dimensions of women's decision making power matter most for children's cognitive development and nutritional status.

This study contributes to the current literature in bargaining power inside the household by exploring several dimensions of bargaining power, in different social, cultural and economic

settings, and examining their relation to several aspects of children's human capital. We use data from the Young Lives Project, a longitudinal multi country study of childhood poverty in Ethiopia, India, Vietnam and Peru. This very rich data set allows for comparison among countries, and between urban and rural areas in each country. We expand the analysis to outcomes other than child's nutritional status in infancy or years of schooling, by including HAZ score and standardized cognitive development measures taken at age five: the Peabody Picture Vocabulary Test (PPVT) and the Cognitive Development Assessment (CDA). To our knowledge, no previous research has used cognitive test scores or post-infancy child growth as outcomes. Additionally, we explore sources of heterogeneity in the relationship between mothers' bargaining power and outcomes, related to child characteristics and urban/rural residency.

Results from OLS indicate that, after controlling for child, household and community characteristics, greater maternal control of household assets is positively associated with both cognitive development and nutritional status of children. However there are important differences among countries between rural and urban areas, and among the bargaining power measures we consider. Parental education gaps have a negative and significant effect over human capital acquisition in all countries, and most settings. Control over household income, earnings from wages, and earnings from land, is consistently associated with higher scores in the vocabulary and quantitative development tests. Maternal control over household assets and animals results in higher HAZ in Ethiopia; and in rural areas in Vietnam and Peru. In all countries, the effects of maternal control over income and earnings are stronger in urban areas. In all countries except Ethiopia, maternal control of assets translates into better outcomes for girls, but not necessarily for boys.

This paper is structured as follows: Section 1 presents previous work on the topic. Section 2 describe the data and summary statistics. Section 3 and Section 4 explain the model specification and results. Section 5 concludes.

## **1. LITERATURE REVIEW:**

The Economics and Nutrition literature suggest women's bargaining power inside the household is associated with the wellbeing of women and children.<sup>1</sup> In unitary household models, all members share the same preferences and pool income. In collective models, household members cooperate, but do not have the same preferences or pool their income.<sup>2</sup> This type of model predicts that the distribution of household resources will be a function of the member's bargaining power. Bargaining power in turn, is related to the strength of the member's outside options -threat points- when faced with household dissolution

---

<sup>1</sup> Malhotra et al (2002) and Samman and Santos (2009) provide useful reviews of the literature.

<sup>2</sup> Quisumbing (2003).

(divorce), or when a non-cooperative solution is enacted (separate spheres).<sup>3</sup> Better outside options increase bargaining power. Outside options related to household dissolution are linked to division of household property upon divorce, which in turn depends on the legal framework and on existing social and cultural norms.<sup>4</sup> Outside options related to non-cooperative solutions have to do with the potential level of welfare that each member would then get.<sup>5</sup> In either divorce or non-cooperation, assets brought to marriage may be claimed back. Members of the household who have independent sources of income, control household assets, or make decisions about them may retain control over resources in case of non-cooperation or household dissolution.

The idea that, given different preferences among spouses, household outcomes will be determined by bargaining power and control over resources has been confirmed in various empirical studies (Quisumbing, 2003). Moreover, there is evidence that more bargaining power in the hands of mothers has a positive effect on children's lives.<sup>6 7</sup> Several studies have specifically investigated the relationship between measures of mother's bargaining power and child outcomes, with an emphasis on health indicators.<sup>8</sup> Table 1 summarizes relevant research published since 2000. The majority of the studies examine the connection between mother's bargaining power and some proxy of nutritional status: children's anthropometrics (Smith et al 2003; Lepine and Strobl, 2013; Novella, 2013; Imai et al, 2014); stunting (Gaiha and Kulkarni, 2005; Bhagowalia et al, 2012; Imai et al, 2014); probability of being underweight (Allendorf, 2007). Some of these papers estimate correlations, while others use Instrumental Variables and quasi-experiments to avoid the potential endogeneity of bargaining power.<sup>9</sup> The bargaining power proxies used are a function of available data

---

<sup>3</sup> Agarwal (1997), Lundberg and Pollak (1998).

<sup>4</sup> Fafchamps and Quisumbing (2002) provide evidence for Ethiopia.

<sup>5</sup> Kumar and Quisumbing (2011).

<sup>6</sup> Strauss and Thomas (1995), Thomas (1997), Haddad, Hoddinott and Alderman (1997), Quisumbing and Maluccio (2003), Doss (2006).

<sup>7</sup> Different types of proxies have been used to capture bargaining power. Some measures relate to ownership and control over household resources: inheritance and assets brought to marriage (Quisumbing and de la Briere, 2000; Thomas et al, 2002; Quisumbing and Maluccio, 2003; Brown, 2009); current assets (Quisumbing and Maluccio, 2003); land (Doss, 2006; Panda and Agarwal, 2005; Allendorf, 2007); earned income (Hoddinott and Haddad, 1995) and Thomas (1994)); unearned income (Thomas, 1990; Schultz, 1990; Duflo, 2003). Other measures capture non economic factors such as: mother's intra-household decision making (Beegle et al, 2001; Doss, 1996; Reggio, 2011); legal & cultural framework - mother's mobility & autonomy (Maitra, 2004); property rights law and social customs (Fafchamps et al, 2009; Imai et al, 2014; Menon et al 2014). Additional characteristics of the mother, such as level of schooling, age at first marriage, and differences between spouses in age and education (Thomas, 1994; Smith et al, 2003; Behrman, 2014) have also been used as proxies Malhotra et al (2002), van den Bold et al (2013).

<sup>8</sup> There is a vast and growing literature on the relationship between intrahousehold bargaining and the allocation of household expenditure measured through expenditure shares (Haddad and Hoddinot 1994; Haddad et al 1995; Alderman et al 1995; Quisumbing and Maluccio 2003)

<sup>9</sup> Mothers who control income or assets may exhibit some unobserved characteristic that makes them demand more health and education for children. This concern is less relevant for our study, since we are not trying to identify the causal effect of bargaining power. Kishor (2000), Smith et al (2003), Allendorf (2007), Adhikari and Sawangdee (2011), Bhagowalia et al (2012), Fafchamps et al (2009), and Novella (2013) estimate Logit or OLS models. Gaiha and Kulkarni (2005), Lepine and Strobl (2013) and Imai et al (2014) instrument at least one of their bargaining power variables. Menon et al (2014) uses a change of law as a quasi-experiment.

and can be grouped as relating to: a) assets brought to marriage; b) mother's control/decision making over current household assets; c) cultural or gender norms about mobility and/or domestic violence; d) divorce and inheritance laws or beliefs; and e) human capital differences between parents. While some of the studies examine the effect of each measure of bargaining power over the outcome separately, other papers group different - and sometimes numerous- indicators of women's empowerment and autonomy by constructing indexes or aggregate measures.<sup>10</sup>

A small number of studies specifically look at the relationship between mother's power and education<sup>11</sup>. Mothers are usually primary caregivers and influence various aspects of children's education and cognitive skills formation: nutrition, use of time, and other inputs for the education production function. Mothers' position relative to fathers' -or head of household- can have an effect on intra-household resource allocation and therefore, affect children's human capital accumulation (Doss, 2013). If mothers have greater capacity to exercise their preferences inside the household, children's educational achievement should benefit. Fafchamps et al (2009) find a positive relationship between bargaining power and the percentage of household children attending school in Ethiopia. Looking at the same outcome, Menon et al (2014) estimate the effect of changes in Vietnamese law allowing for an increased probability of land to be held by mothers. They find the change brought an increase of four percentage points in enrolment in households where the mother was the sole legal owner of at least one plot. However, in both these studies the school variable is defined as a household-level indicator that does not distinguish the sex or age of the child attending school.<sup>12</sup> Kumar and Kusumbing (2012) find that mother's negative beliefs about custody of household assets upon divorce -which signals lower bargaining power- has a negative effect on Ethiopian children's schooling deviation from the cohort mean, particularly for girls. Kiani and Behrman (2013) show that higher values of a mother's empowerment index have a positive effect on age of school start and school progression for children in Pakistan, especially girls.

In studies where more than one bargaining power measure is examined, results suggest not all power indicators are equivalent. Specific proxies have an effect on certain outcomes, but not in others. For example, Kishor (2000) finds that only two out of 32 bargaining power variables -maternal history of employment, and co-residency with in laws- reduce infant mortality and increase immunization rates among Egyptian children. Fafchamps et al (2009) show that mother's involvement in household purchases increases the percentage of

---

<sup>10</sup> Smith et al (2003), Allendorf (2007), Bhagowalia et al (2012), Lepine and Strobl (2013) and Kiani and Behrman (2013) construct indexes.

<sup>11</sup> Thomas, Contreras and Frankenberg (2002), Quisumbing and de la Briere (2000), and Quisumbing and Maluccio (2003) show mother's bargaining power is associated with bigger household expenditure shares for schooling. Kishor (2000) looks at children's immunization rates in Egypt, while Kiani and Behrman (2013) explore immunizations in Pakistan; Reggio (2011) examines children's labour supply in Mexico. Kishor (2000), Maitra (2004), and Adhikari and Sawangdee (2011) also study infant mortality.

<sup>12</sup> Kumar & Quisumbing (2012).

children attending school, but share of assets brought to marriage, or expected share of assets upon divorce are related to the outcome. Bhagowalia et al (2012) find that their index measuring attitudes towards domestic violence is correlated with stunting in Bangladesh, but their mother's mobility and decision making indexes are not. Even when looking at the same country, no clear pattern emerges that would clarify whether the same type of bargaining power measure is effective for all outcomes. Gaiha and Kulkarni (2005) show that the male-female wage difference –but not mother's age at marriage- reduces child stunting in rural Indian households; while Imai et al (2014) find that Indian mothers' relative schooling improves child anthropometrics, but attitudes to domestic violence or mother's freedom of movement do not. Allendorf (2007) finds that only mother's land ownership –but not mother's decision making participation-, reduces the probability of Nepalese children being underweight; while Adhikari and Sawangdee (2011) show, also for Nepal, that the infant mortality rate is only correlated to mother's decision making regarding health care, but not to mother's decision power regarding household purchases, or freedom to visit friends and relatives.

These pattern of results may relate to the possibility that some measures of bargaining power are good proxies in specific socioeconomic and cultural settings but not in others, thus raising questions about generalizability. Multi-country studies could help illuminate the issue, but papers that look at the effect of bargaining power in more than one country are scarce, due to data limitations. In one such study, Quisumbing and Maluccio (2003) look at households in Bangladesh, Ethiopia, Indonesia, and South Africa, and find that mothers' human capital and assets at the time of marriage increase budget shares spent on education in all countries except Ethiopia. They also find big differences between countries in the relationship between mothers' bargaining power and expenditures in other areas. When looking at children's schooling, they find paternal and maternal assets and human capital have different effects in different countries. The heterogeneity is further compounded by the gender of the child. Also looking at more than one country, Novella (2013) examines whether education differences between mother and father have an effect on child's length-for-age z-score at age one. Using information for Peru, India, Vietnam and Ethiopia, taken from Round 1 of the Young Lives dataset, the author finds that maternal schooling has a positive effect on infant girls' nutritional status in Peru and Vietnam, and it as a negative effect in India. No effect is found for Ethiopia.

As seen, several empirical questions remain in the literature in relation to mothers' bargaining power and child outcomes. Are bargaining power measures context-specific? Are all dimensions or proxies of bargaining power equally important for different types of children's outcomes? Is there heterogeneity associated to household or child characteristics? As Fafchamps et al (2009) conclude, there is no clear answer to the question of whether all dimensions or proxies of bargaining power matter, or which are more effective over different types of children's outcomes.

This paper attempts to expand the literature in several ways. First, it explores the association between mothers' bargaining power and child outcomes in four developing countries included in the Young Lives dataset. The countries selected - Ethiopia, India, Vietnam and Peru- cover a range of social conditions and productive settings. Detailed information on parental characteristics, and mothers' control of household resources collected in Round 2 of the survey allows us to explore the relationship between maternal bargaining power and children's cognitive and physical development.<sup>13</sup> Second, it tries to answer the question of whether the bargaining power measure used makes a difference in terms of children's outcomes by comparing mothers' control of different household resources -assets, animals and income (from wages or land) - with parental differences in education, age and years living in the community. A third contribution is to expand the exploration to outcomes other than child's nutritional status in infancy or years of schooling, by including HAZ score and standardized cognitive development measures taken at age five: the Peabody Picture Vocabulary Test (PPVT) and the Cognitive Development Assessment (CDA). To our knowledge, no previous research has used cognitive test scores or post-infancy child growth as outcomes. Finally, we explore sources of heterogeneity in the relationship between mothers' bargaining power and outcomes, related to child characteristics and urban/rural residency.

## 2. DATA AND SUMMARY STATISTICS

### 2.1 THE DATA SET

The Young Lives project is a longitudinal study of childhood poverty in Ethiopia, India, Vietnam and Peru (Barnett and Petrou, 2012). Children's, household and community data collected in Round 2 are used for the estimations.<sup>14</sup> We explore the association of maternal bargaining power with two measures of cognitive development measured at age five, and with physical growth.<sup>15</sup> The Peabody Picture Vocabulary Test (PPVT) applied to the YL sample is a test of receptive vocabulary, consisting of picture identification of a stimulus word. It measures vocabulary acquisition. PPVT scores are correlated with cognitive and intellectual ability (Crookston et al, 2012). The Cognitive Development Assessment (CDA)

---

<sup>13</sup> Differences in bargaining power have been shown to be related to decision making in the household. Frankenberg and Thomas (2003) find that decision making in Indonesia is related to female education, social status and urban residency. Doss et al (2014) show property ownership is related to higher women's input in agricultural decisions, children's education, and household expenditures in the three African countries, but not in India.

<sup>14</sup> The study follows a cohort of children enrolled at age one (+- six months) in 2002 in each country. Subsequent waves of data collection took place in 2006 (Round 2), in 2009 (Round 3), and in 2013 (Round 4). Poorer households were oversampled, but the sample reflects countries ethnic, geographic and religious diversity. In India information was collected only in the state of Andhra Pradesh

<sup>15</sup> For a detailed description of the instruments see Cueto et al (2009).

measures quantitative reasoning.<sup>16</sup> Another outcome examined is height-for-age z-scores (HAZ), an indicator of long term nutritional status.<sup>17</sup> HAZ was computed using WHO 2006 standards.

The household survey provides information on parental, child, household, and community characteristics. Table 2 presents summary statistics on key characteristics of households and children in each country. There is also information on productive assets owned by the household, and the value of the assets. The questionnaire records the id of the person in the household who decides whether to sell or give away the asset. The questionnaire contains additional information on the number of animals owned by the household, their value, and on whether mothers can decide to sell or give away all household animals, but not each one. The survey records the amount and sources of family income during the last 12 months. It also registers the id of the household member who controls each type of income. Income categories include: earnings from sale of livestock products, earnings from sale of live small ruminants, earnings from agricultural waged work, earnings from salaried/regular work, earnings from casual work, earnings from food/cash-for-work, earnings from trading and selling commodities, earnings from processed food/alcohol, earnings from handicrafts, earnings from carpentry, ironmongery, etc., earnings from services (sewing, barber, etc.), earnings from other activities.<sup>18</sup>

To explore qualitative differences between parents that can be used as proxies for mother's bargaining power, we calculate parental age gap, years of schooling gap, and the difference between parents in years living in the community.<sup>19</sup> In order to study the effect of maternal control over resources, we first compute the total value of all assets owned by the household, and the proportion of household assets controlled by the mother, and construct indicators of whether the mother solely or jointly controls some, all, or no household assets. Table 3 lists productive assets included in the survey. We then calculate the total value of all animals owned by the household, and an indicator of mothers' control over animals. A variable containing the total value of household income from all sources was constructed<sup>20</sup>, as well as indicators of whether the mother controlled some, all, or none of it. Finally, we use information from two questions that specifically ask whether mothers solely or jointly

---

<sup>16</sup> Children choose an image from a selection of three or four that best described the concept (few, none, most, etc.) given by the examiner. Cueto et al (2009).

<sup>17</sup> World Health Organization (2006).

<sup>18</sup> Earnings from land holdings are not included.

<sup>19</sup> Father is absent in 2 percent of households in Ethiopia, India, and Vietnam; and in 5 percent of households in Peru. In those cases, we use information on the head of household to compute gaps and other control variables. The gap is defined as father's years minus mother's years of schooling, age, or residency in the community.

<sup>20</sup> Few households report income in more than a few categories



controlled earnings from wages or from land, in Ethiopia, India and Peru.<sup>21</sup> These two questions were not included in the questionnaire in Vietnam.

Mothers can have control of resources conditional on households having resources. If a family does not report ownership of a particular type of resource, the mother can not make decisions about it. For this reason, we exclude from the analysis all households that do not own the resource being examined. In Ethiopia, 21.5 percent of households do not report owning productive assets. The percentage is 24.6 for India, 29.6 percent for Vietnam, and 26.6 percent for Peru. There is information on asset control for all households that report assets. Around a third of households in Peru do not own animals; the figure is 38 percent in Ethiopia; 47 percent in Vietnam, and 54 percent in India. Less than five percent of households report no income in India, Vietnam and Peru, while 13 percent do in Ethiopia. Information on income control is missing in 18 percent of households in Ethiopia, 29 percent in India, and 10 percent in Vietnam, in households that report income. A third of households in all countries have missing information in the question of mothers' control over wages. Information on mothers' control over earnings from land is missing in 16.2 percent of households in Ethiopia, 4 percent of households in India, and 0.6 percent of households in Peru. Since we want to examine the effect of relative differences in bargaining power between parents, we also exclude from the analysis households in which the father is not present and the mother is the head of household.

## 2.2 DESCRIPTIVE STATISTICS

Table 2 also presents summary statistics on parental differences and measures of bargaining power in each country. On average, mothers are less educated than fathers. The education difference between parents varies among countries in the sample. The biggest average educational gap is observed in India (1.95 years), and the smallest in Vietnam (0.6 years). On average, mothers are younger than fathers, with the mean difference greater than five years in all countries except Vietnam (3.3 years). The average age gap in Ethiopia is 10.5 years. The average gap in years living in the community is also positive in all countries, with the biggest difference observed in India (12.6 years), and the smallest in Peru (0.3 years). Social and cultural norms regarding household formation and residency may determine observed heterogeneity between countries.

In cases where asset ownership is reported, 70 percent of mothers do not have decision power over any of them in Peru and India, compared to 62 and 64 percent of mothers in

---

<sup>21</sup> The income module in the Peru questionnaire does not ask the identity of the person controlling different sources of income. For this reason, we only use indicators of control over wages and control over land income as proxies in Peru. We don't have information on parental assets brought to the marriage, or on mother's wage income for any country. Although there are questions on the households' non labor income, there is a very small number of families that report any non earned income.

Ethiopia and Vietnam. Around 30 percent of mothers have control of all household assets in Ethiopia and Vietnam, compared to 26 percent in India and 22 percent in Peru. 8 percent of mothers in Ethiopia and Peru report controlling some of assets, while 4 percent do in India, and 6 percent do in Vietnam.

If animals are owned, mothers can decide to sell or give them away in only 11 percent of households in India, and in 26 percent of households in Vietnam and Ethiopia. In contrast, mothers have control over household animals in 56 percent of households in Peru.

In Ethiopia, mothers are responsible for controlling all income in 41 percent of families, while 21 percent do not have decision power over any household income. In India, 19 percent of mothers control all household income whilst 13 percent do not control any. In Vietnam, 67 percent of mothers control all household income, and 5 percent do not control any. Mothers that control some household income are 20 percent in Ethiopia, 39 percent in India, and 18 percent in Vietnam. In Peru, 75 percent of mothers report having control of household earnings from wages, and 57 percent report having control of household earnings from land. In Ethiopia, 75 percent of mothers control income from wages, and 47 control income from land. In India, 61 percent report having control over income from wages, and 23 do so for income from land. Table 4 presents correlation coefficients between different bargaining power measures for each country.

Mothers in the sample with more bargaining power have different characteristics, compared to mothers with less bargaining power. Tables 5 to 8 show differences between households where mothers control some or all assets, income or animals, and households where mothers do not have control over resources. Mothers of girls are no more likely to have control over household resources than mothers of boys, in any country in the sample. The only exception is Peru, where mothers of girls are more likely to control household income.

In Ethiopia, mothers who control all types of resources are younger and more likely to work for a wage. Compared to mothers that have no decision power over assets and animals, mothers who can decide about them are more educated, and live in wealthier households where the heads is more educated. In contrast, Ethiopian mothers that have control over income live in less wealthy, smaller households, where fathers are more often absent, compared to mother who can not decide about income. In India, mothers who decide about resources are more educated and less likely to work for a wage than mothers who don't. They are more likely to live in urban areas, with access to healthcare. They belong to smaller, wealthier families, with more educated heads of household.

In Vietnam, mothers who decide over animals and assets are more educated and more likely to work for a wage, compared to mothers who do not decide. They are less likely to live in rural areas, and come from wealthier, smaller households, with more educated heads. The opposite is true for mothers who control household income. They are less educated than mothers who do not make decisions about income and more likely to live in rural areas and

come from less wealthy families, where the head is less educated compared to households where mothers do not control income.

In Peru, mothers who control all types of resources are younger than mothers who have no control. Mothers with decision making power over assets and animals are more likely to work for a wage, whether those who control income are less likely to do so. Mothers who control assets are less educated and come from poorer households. Mothers who make decisions about income and animals have a higher probability of living in urban areas and come from bigger households where fathers are more likely to be absent. Distinctly, mothers who make decisions about animals are more educated, and live in wealthier households, where the head is also more educated.

### 3. MODEL ESPECIFICATION:

The goal of this study is to explore several dimensions of bargaining power, in different social, cultural and economic settings, and examine their relation to several aspects of children's human capital. To do so, we run separate OLS models for different bargaining measures. First, we focus on differences in mother and father characteristics. Maternal education or age, relative to household head, may be the source of greater decision making power. Differences between parents in the number of years they have lived in the community could impact mothers' outside options. Next, we examine mother's reported control over household income; and over productive assets and animals. In these models, we keep the parental education gap as a control in order to net out the effect of resource control from other parental characteristics. Equation (1) is estimated for each country, using as outcomes: a) PPVT scores; b) CDA scores; c) HAZ scores. Robust standard errors are clustered at the community level. Test scores have been normalized to have a mean of 0 and a standard deviation of 1.

$$Outcome_i = \beta_0 + \beta_1 HOUSEHOLD + \beta_2 CHILD + \beta_3 COMMUNITY + \beta_4 MOTHER + \beta_5 BARG\_POWER + \mu \quad (1)$$

Household, child, and community characteristics that are expected to influence human capital formation are included as controls. In order to explore heterogeneity based on children's gender and household's rural residency, we also run regressions for different subgroups in the sample. HOUSEHOLD is a vector of household characteristics that includes rural residency, household wealth index,<sup>22</sup> number of adults, and number of

---

<sup>22</sup> The wealth index a measure of long-run wealth and consists of the simple average of: (1) housing quality (average of scaled rooms per person, floor, roof and wall); (2) value of consumer durables (radio, refrigerator,

children in the house, head's years of schooling, and an indicator of the child's father not being present in the household. An indicator of the mother not being the respondent of the questionnaire is also included, since the identity of the respondent may influence the degree of reported maternal bargaining power. In models where the variable of interest is control over income or animals and assets, we include the log of the total value of the resource being examined.

CHILD is a vector of child characteristics that includes ethnicity, gender and age in months at Round 2. COMMUNITY is a vector of community characteristics that includes an index of average food prices, an indicator of the existence of a health center to capture differences in access to public services,<sup>23</sup> and a fixed effect for sentinel site.<sup>24</sup> This variable will capture unobserved differences between groups of communities, such as regional cultural differences or social norms. MOTHER is a vector of caregiver's characteristics that includes mothers' age, an indicator of the mother not being the primary caregiver, and an indicator of whether the mother works for a wage. In models where the outcome is HAZ score, maternal height and children's HAZ score in Round 1 are included as additional controls. BARG\_POWER captures mother's bargaining power through either qualitative differences between parents, mothers' control over income, or mothers' control over assets and animals.

## **4. RESULTS**

### **4.1. BARGAINING POWER AND CHILDREN'S OUTCOMES**

#### **4.1.1 ETHIOPIA:**

Tables 9 to 11 show results from models examining the association between children's cognitive development and growth, and bargaining power measures in Ethiopia. Children of mothers who have control over all household income and household earnings from wages score 0.23 and 0.3 SD higher in the PPVT test, compared with children whose mothers do not have control over those resources. No effect is found for maternal control over earnings from land. Children of mothers who can decide about family owned animals also score 0.27 SD higher in the vocabulary test. We find no effect of maternal asset control over PPVT scores. In terms of qualitative differences between parents, each additional year of the education gap decreases test scores by 0.05 SD.

---

bicycle, motorcycle, car, mobile phone, land line phone, fan, and television); and (3) the value of services (drinking water, electricity, sanitation facilities, and fuel). See Schott et al (2013).

<sup>23</sup> In Vietnam, all communities report having a health center. The percentage of the community without access to sanitation is included as a control in Vietnam.

<sup>24</sup> In the Young Lives dataset, communities are grouped in sentinel sites for sampling purposes. These represent a certain type of population or area. See Escobal and Flores (2008).

When the outcome is quantitative reasoning, we find that maternal control over earnings from wages is associated with children's CDA scores that are 0.19 SD higher compared to scores of children whose mothers have no control. Offspring of mothers who can make decisions about household assets score 0.28 SD higher in this test. Finally, each additional year of schooling in the parental education gap reduces CDA scores by 0.06 SD. The coefficient for parental differences in years living in the community is negative and significant, but its magnitude is very small. Bargaining power measures do not any significant effect over HAZ in Ethiopia, with the exception of maternal control over earnings from land. This coefficient is negative and significant, implying a reduction of 0.15 SD in HAZ for children whose mothers control this type of resource.

#### **4.1.2 INDIA:**

Tables 12 to 14 show results of models examining the association between maternal bargaining power measures and children outcomes in India. In this country, we find that mothers that have control over some household income, or control earnings from wages, have children who score 0.16 SD and 0.19 SD higher in the PPVT, compared to children of mothers who have no control over income or earnings from wages. No effect is found for maternal control over all household income, or over earnings from land. There are no significant effects of maternal control over household assets or animals on vocabulary test scores. The coefficient on the parental schooling gap implies that each additional year of education of the head relative to the mother will reduce PPVT scores by 0.03 SD.

After controlling for household, community and maternal characteristics, children's quantitative cognitive development does not seem to be associated with mothers' bargaining power, with the exception of parental relative schooling. Each additional year of the education gap reduces CDA scores by 0.03 SD. We do not find significant effects of any bargaining power measure over HAZ scores in India.

#### **4.1.3 VIETNAM:**

Tables 15 to 17 present results for Vietnam, for PPVT, CDA and HAZ scores. In this country, maternal control over all household income is associated with higher vocabulary test scores. The magnitude of the effect is 0.3 SD. The coefficient on maternal control over some household income is positive and of similar magnitude, but not significant. There are no significant effects of maternal control over assets or animals on PPVT scores. The education gap also has a negative effect on PPVT scores in Vietnam, where each additional year of difference reduces scores by 0.02 SD.

After controlling for household, child and community characteristics, maternal control over some or all household income is associated with higher scores in the quantitative reasoning. The magnitude of the effect is an increase of 0.32 SD for maternal control over some income, and 0.35 SD increase in scores for maternal control over all income. Parental education or age gaps have no effect over CDA scores in Vietnam. In contrast, each additional year of difference in years living in the community reduces scores by 0.2 SD. In terms of nutritional status, we find that children of mothers who can decide over household animals score 0.13 SD in HAZ above children whose mother can not decide.

#### **4.1.4 PERU:**

Tables 18 to 20 present findings for Peru. Regressions results in Table 18 show maternal control over both household earnings from wages and earnings from land, is associated with an increase of 0.1 SD in the vocabulary test. No significant results for were found for maternal control over other types of resources. In terms of qualitative differences between parents, the coefficient on the schooling gap suggest each year of difference reduces PPVT scores by 0.04 SD.

Table 19 shows results for the CDA test. We find children of mothers who control earnings from land have, on average, scores 0.15 SD higher than the control group. The coefficient on the parental schooling gap is negative and significant, and of similar magnitude as above. No significant results were found for maternal control over wage income, asset, animals, or any other qualitative measure. Table 20 presents results for nutritional status. The results show that children of mothers who have decision making power over household assets have higher HAZ scores. The magnitude of the effect is 0.2 SD.

## **4.2. HETEROGENOUS EFFECTS OF BARGAINING POWER MEASURES**

### **4.2.1 Urban/Rural Differences**

When looking at potential heterogeneity by region of residency in Ethiopia, results show maternal control over all household income, earnings from wages, and household animals is associated with higher PPVT scores in urban areas. The magnitude of the effect is bigger than a third of a standard deviation of the distribution of scores. A similar advantage of maternal control over resources in urban areas is found when looking at the scores in the CDA test. Children of urban mothers who control earnings from wages have scores 0.39 SD higher, on average. Maternal control over household assets is associated with CDA scores 0.69 SD higher in the urban sample. In contrast, maternal control over land earnings in rural

areas is associated with lower vocabulary test scores (0.24 SD), and lower average HAZ scores (0.2 SD). The only positive and significant coefficient in rural areas is the one for maternal control over household animals. Its magnitude suggests children from mothers who have control score, on average, 0.23 SD higher in the vocabulary compared to children from less empowered mothers. In both urban and rural households, the parental schooling gap has a negative and significant effect over vocabulary and quantitative reasoning test scores.

Results for India show maternal control over all household income and earnings from wages is associated with better PPVT scores for children in urban and rural areas.<sup>25</sup> In the rural sample, the magnitude of the effect is of an average advantage of 0.24 SD and of 0.15 SD in PPVT scores, respectively. In urban sites, mothers' control over earnings from wages results in an average increase in PPVT scores equivalent to 0.33 SD, a bigger increase than in the rural sample. In both urban and rural households, the parental schooling gap has a negative and significant effect over PPVT scores. For quantitative reasoning test scores, the coefficient is only significant for the rural sample. When looking at nutritional status, maternal control over all household income is also associated an increase of 0.27 SD in HAZ scores in urban areas only. After controlling for household, community and maternal characteristics, parental education differences are not associated with HAZ scores in India.

In Vietnam, bargaining power measures are associated with better children outcomes in rural and urban areas, but the effect is markedly bigger in magnitude for the urban sample. Children from urban households whose mothers have control over some, or all family income, score an average of 0.77 SD, and 1.06 SD higher in the PPVT test, compared to children with mothers with no control over income. Results from CDA scores show the effect of maternal control over some or all family income is on average, equivalent to an increase in scores of 0.92 SD and 0.8 SD, respectively. For the rural sample, the coefficient on maternal control over all household income is positive and significant, resulting in an average increase in PPVT scores of 0.3 SD. A very similar effect is found for the CDA test in rural areas. Maternal control over some or all income is associated with an increase of 0.3 SD. An additional year of the parental gap in years living in the community reduces CDA scores by 0.18 SD for children from rural households, and by 0.25 SD for children from urban ones. As in Ethiopia, we find a positive and significant effect of maternal control over household animals over children outcomes in rural areas. In this case, maternal control over animals results in an average increase in HAZ equivalent to 0.12 SD.

In Peru, we also find a stronger association between of bargaining power measures and outcomes in urban areas. Results from PPVT regressions show offspring of mothers with control over earning from land perform an average of 0.09 SD better in the test compared to

---

<sup>25</sup> Too few Indian or Vietnamese urban households report animal ownership, and for this reason we do not estimate the model where maternal control over animals and assets is the variable of interest for the urban sample in these two countries.

the comparison group in the urban sample. The same is true for children from urban households where mothers have decision making power over animals.<sup>26</sup> These children have on average 0.2 higher scores in the vocabulary test. Heterogeneity in the results by region of residency carries over to models where CDA score is the dependent variable. In urban households, maternal control over earnings from wages, or earnings from land, is associated with an average increase in scores equivalent to a quarter of a SD in the CDA test. The parental education gap has negative and significant effects in both urban and rural areas for PPVT scores, but is significant only for the urban sample in CDA and HAZ regressions. Mothers in Peru's rural households that control some assets have children with 0.28 SD higher HAZ scores, on average.

#### 4.2.2 Gender Differences

We next explore heterogeneity by child's gender. In Ethiopia, there are gender related differences in outcomes depending on the type and amount of resources under maternal control. Mothers who can decide over all household resources, and mothers that control all household assets seem to invest more in girls than in boys. Girls whose mothers control all household income score 0.31 SD higher on the PPVT. In contrast, mothers who can make decisions on household income from wages, or household animals, have sons –but not daughters– who score 0.43 SD higher on average on the vocabulary test. Results from the quantitative reasoning models show the coefficient on maternal control over wages is positive and significant for girls only, and is equivalent to an average increase in CDA scores of 0.24 SD. There are no gender differences in the effect of the parental schooling gap over either cognitive development test. In terms of nutritional status, maternal control over earnings from land, or over household animals reduces HAZ for males by 0.24 SD and 0.22 SD, respectively. No similar negative effect is found in the female sample.

In India, maternal control over resources is associated with better outcomes for girls. Daughters –but not sons– of mothers who can have control over household wages, or over some household assets score on average 0.21SD and 0.38 SD higher in the vocabulary test. Maternal control over animals is associated with a reduction of 0.28 SD in PPVT scores for males. No negative effect is found for females. When looking at quantitative reasoning scores, we find an average advantage of 0.42 SD in the test scores of daughters of mothers who report control over household assets. The only instance of a positive and significant coefficient for males is in the regression where the variable of interest is maternal control over household income.

In Vietnam, female PPVT scores are associated with maternal control over all household income. Daughters of mothers who report control over income score 0.39 SD higher on

---

<sup>26</sup> 47 percent of urban households in Peru report animal ownership.



average in this test. Likewise, we find that maternal control over some or all income results in average increases in the CDA test for females, equivalent to 0.33 SD and 0.47 SD, respectively. The coefficient on control over some household income is also significant for the male sample. In terms of children's growth, maternal control over some household income, or animals, is also associated with increased male HAZ. The magnitude of the effects is equivalent to 0.23 SD and 0.25 SD.

A strong effect of the bargaining power measures in the female sample emerges from the analysis in Peru. Here, we find that maternal control over household earnings from wages translates into an average increase of 0.28 SD in PPVT scores for girls. No similar effect is found for boys. Likewise, maternal control over earnings from wages, or earnings from land, results in average increases of 0.26 SD and 0.20 SD in quantitative reasoning test scores for girls only. As for Vietnam, we find that maternal control over household assets increases HAZ by 0.32 SD on average for males. The parental education gap is negative and significant for males and females in PPVT regressions, but is only significant for the male sample in models where HAZ is the outcome.

## 5. SUMMARY AND CONCLUSIONS

This paper aimed to explore the association between several dimensions of bargaining power, in different social, cultural and economic settings, and examine their relation to several children's outcomes previously not studied in the bargaining power literature: standardized cognitive development measures taken at age five, the Peabody Picture Vocabulary Test (PPVT) and the Cognitive Development Assessment (CDA), in addition to nutritional status. Furthermore, we explored sources of heterogeneity in the relationship between mothers' bargaining power and outcomes, related to child characteristics and urban/rural residency.

Although several differences emerge, we can learn from the comparison of patterns across countries. Mothers in all countries are on average younger and less educated than fathers, and they have lived in the community a fewer number of years than fathers. There are some differences in maternal control of household between countries, but overall, the majority of mothers are excluded from resource control and decision making across the board. In households that report asset ownership, 62 percent of mothers can not make decisions about them in Ethiopia, 64 percent in Vietnam, and 70 percent in India and Peru. If animals are owned, mothers can not decide to sell or give them away in 89 percent of households in India, and in 74 percent of households in Vietnam and Ethiopia. In contrast, mothers have control over household animals in 56 percent of households in Peru.

Compared with assets and animals, income seems to be a resource under greater maternal control. Still, 21 percent of Ethiopian mothers report having no control over household income, while the numbers are 13 percent for India and 5 percent for Vietnam. In Peru, 75 percent of mothers report having control of household earnings from wages, and 57 percent report having control of household earnings from land. In Ethiopia, 75 percent of mothers control income from wages, and 47 control income from land. In India, 61 percent report having control over income from wages, and 23 do so for income from land.

Mothers with more bargaining power have different characteristics, compared to mothers with less bargaining power. Differences may be related with social norms, and the mother's participation in home and market production. In Ethiopia and Peru, mothers with control over all types of resources are younger than mothers without control, hinting perhaps at changing social roles. In India, mothers with more bargaining power are more likely to belong to smaller and wealthier urban families, and are less likely to work for a wage. Maternal income control is found in Ethiopia, Vietnam and Peru in less wealthy households, where the father has a higher probability of being absent. In the two latter countries, mothers who have control over income are less likely to work for a wage, compared to households where mothers have no income control, suggesting other forms of market participation such as informal work. Interestingly, we do not find any evidence that mothers with more bargaining power are more likely to be mothers of boys. This may be related to the fact that, as noted in Novella (2013), children's gender is not related to observable household characteristics in any country in the Young Lives sample.

The estimated association between our measures of bargaining power and children's outcomes vary across countries and bargaining measures. However, it is possible to say that after controlling for child, household and community characteristics, greater maternal control of household assets is positively associated with both cognitive development and nutritional status of children. Tables 20 to 23 summarize the results. The evidence shows parental education gaps have a negative and significant effect over human capital acquisition in all countries, and most settings. This suggests human capital differences between parents are important for children development and constitute a reliable bargaining power measure in several contexts. Control over immediately available resources -income, earnings from wages, and earnings from land-, is also consistently associated with higher scores in the vocabulary and quantitative development tests. This finding may relate to the fungibility of cash versus assets or animals. Mothers first need to sell non liquid resources before being able to invest in children. Maternal control over household assets and animals results in higher HAZ in Ethiopia; and in rural areas in Vietnam and Peru.

There are additional differences between rural and urban areas. In all samples, the effects of maternal control over income and earnings are stronger in urban areas. The results may relate to the significant disparities between urban and rural areas in terms of access to public

education and health services in the countries studied. Better functioning markets in urban areas may also play a role. Markets are important factors empowering mothers to exert their preferences. Lack of functioning labor, asset and even animal markets may hinder threats of withdraw of resources from the household. Mothers with better access to markets, can more easily convert income and wages into inputs to children's human capital production function. More conservative social and cultural norms more prevalent in rural areas may also influence mothers' abilities to make choices.

In all countries except Ethiopia, maternal control of assets translates into better outcomes for girls, but not necessarily for boys. Gender bias in household allocation that make mothers use resources to improve the human capital of their daughters has been widely documented in developing countries (Thomas 1990 and 1994; Strauss and Thomas, 1995; Duflo, 2003). The gender heterogeneity in the results could arise if mothers get more utility from investing in girls than from investing in boys. This is the case if, for example, children participate in work at an early age, and girls help mothers in housework while boys help fathers in agricultural work; or if daughters are expected to contribute to parents in old age. Results could also be related to gender differentials in expectations about future returns to human capital investments.

Our findings pose interesting avenues for further research, in particular in estimating causal effects of maternal resource control over children's cognitive and physical development; and in the interplay of cultural, social and economic national differences with the capacity of women to exercise their preferences. Understanding these interrelations will help design better policy instruments to empower mothers and improve children's lives.

**TABLE 1: SUMMARY OF BARGAINING POWER AND CHILD OUTCOMES STUDIES SINCE 2000**

STUDY	COUNTRY & YEAR	OUTCOME	BARGAINING INDICATOR	METHOD	FINDINGS
Kishor (2000)	Egypt, 1995-1996	Infant mortality Children's immunization	32 indicators (financial autonomy, exposure to employment, decision making, family structure, attitudes to traditional roles in the family, traditional marriage, etc.)	Logit	History of employment and history of residency with in-laws are negatively correlated with infant mortality and positively correlated with complete immunization. The other measures are not significant.
Smith et al (2003)	DHS data from 36 countries, 1990-1998	Children's Height-for-age, Weight-for-age, Weight-for-height	Index of the difference between mothers' & fathers' age at marriage, relative difference in parental education, and whether or not the mother has a paid job. Societal measures of women's status are captured by an index of gender differences in mean WAZ scores, vaccination rates in children, and educational attainment.	OLS	Both the community-level and the household-level indexes are found to be predictors of child nutritional status in South Asia, Sub-Saharan Africa, and Latin America.
Maitra (2004)	Rural households in India, 1999	Use of prenatal healthcare and child mortality	Mother's need for permission to visit family and friends, go to the market; whether the husband hits the mother if she goes out without informing him of if she is unfaithful; whether mother's family provides money; whether the mother is able to have money set aside; whether the mother has say in decisions regarding cooking, obtaining healthcare, staying with family.	Joint estimation of decision to obtain prenatal healthcare and child's mortality using Full Information Maximum Likelihood.	Bargaining power reduces child mortality, but the effect operates through the increased demand of prenatal healthcare.
Gaiha and Kulkarni (2005)	Rural households in India, 1994	Number of stunted children under five in the household	Mother's age at marriage, male-female wage difference.	IV estimation of Poisson regression model.	The male-female wage difference has a positive and significant effect on the number of stunted children in the household.
Allendorf (2007)	Nepal, 2001	Children's probability to be underweight	Mother's decision making in regards to her own health, large hh purchases, daily hh purchases, visits for friends & relatives. The proxy takes the values from 1 to 4.	Logit	Only land ownership is positively correlated with child's nutrition.

**TABLE 1: SUMMARY OF BARGAINING POWER AND CHILD OUTCOMES STUDIES SINCE 2000, Continued**

STUDY	COUNTRY & YEAR	OUTCOME	BARGAINING INDICATOR	METHOD	FINDINGS
Fafchamps et al (2009)	Ethiopia, 1997	Children's Height-for-age, Weight-for-age, Weight-for-height % of hh children attending school	Predisposition towards violence, cognitive capacity, involvement in hh finances and decisions, share of assets brought to marriage, expected share of assets upon divorce.	OLS for anthropometrics, Tobit for school attendance.	Mother's assets brought to marriage has a positive effect on HAZ and WAZ. Mother's involvement in hh purchases increases the percentage of hh children attending school. Other measures of bargaining power are not significant.
Adhikari & Sawangdee (2011)	Nepal, 2006	Infant mortality rate	Mother's decision making in regards to obtaining healthcare, large hh purchases, daily hh purchases, visits to family and relatives.	Logit	Children of mothers involved in decision making regarding healthcare had a 25 percent lower chance of dying, compared to children of mother not involved in healthcare decision making.
Reggio (2011)	Mexico, 2002	Children's labor supply, inside and outside the home.	Decision making over the family house and household electric appliances-, estimated as a function of state-level sex ratios and mother's age relative to father's age.	Two-stage OLS.	Daughters, but not sons, of mothers with more bargaining power work less inside the home. There is no effect on work outside the home.
Kumar & Quisumbing (2012)	Ethiopia, 1997 & 2009	child's schooling deviation from cohort mean	Mother's beliefs about division of hh assets upon divorce. Assets considered: house, land, livestock owned by husband, livestock owned by wife, livestock acquired after marriage.	OLS and fixed effects.	Beliefs about custody of house and land given to husband in case of divorce related negatively with outcome. In FE estimation, house, land and asset coefficient significant for girls.
Bhagowalia et al (2012)	Bangladesh, 2007	Stunting Dietary diversity	Three additive indexes: a) decision making over financial resources, household purchases, healthcare, and visits to relatives; b) freedom of movement; and c) attitudes towards domestic violence.	Logit	Attitudes toward domestic violence are correlated with stunting, but mobility and decision making have no effect. None of the indexes affects dietary diversity.
Lepine & Strobl (2013)	Senegal	children's mid-upper arm circumference z-score	Index constructed from information on which member of the couple decides on the mother's labor market participation, health, visits to relatives and the ability to leave the house.	OLS & IV. The authors construct the IV using the ethnicity of the mother relative to the ethnicity of the community where she resides.	One SD increase in the index improves children's mid-upper arm circumference z-score by 0.81 SD. OLS results underestimate the magnitude of the effect of bargaining power over child nutrition.

**TABLE 1: SUMMARY OF BARGAINING POWER AND CHILD OUTCOMES STUDIES SINCE 2000, Continued**

STUDY	COUNTRY & YEAR	OUTCOME	BARGAINING INDICATOR	METHOD	FINDINGS
Novella (2013)	YL Sample, 2005 India, Peru, Ehtiopia and Vietnam	Length-for-age z-score at age one	Education difference between mother and father.	OLS	Maternal power has a positive effect on infant girls' nutritional status in Peru and Vietnam, and it as a negative effect in India.
Kiani & Behrman (2013)	Pakistan, 1998-1999 and 2007-2008	Children's immunization Age of school entry Schooling progression gap	Index of mother's decision making over seven categories including her education, employment, birth control, number of children, purchases of food, clothing, medical treatment, travel and recreation.	OLS for schooling and logit for vaccination.	Higher values of the index have a positive effect on immunizations, age of school start and school progression.
Imai et al (2014)	India 1992-2006	Stunting of children < 3 Weight-for-age Weight-for-height	Mothers' schooling relative to fathers', attitues to domestic violence and freedom of movement to the village market.	OLS and IV. Proportional difference between mothers' and fathers' age, and the village average wage rate are used as instruments.	OLS results show mother's relative schooling is correlated with weight-for-age and weight for-height. No significant results are found for the IV estimations.
Menon et al (2014)	Vietnam, 2004 & 2008	Percentage of children sick during the last month and last year, percentage of chil- dren enrolled in school, hh expenditure on food and beverages, on alcohol and ta- baco, on education.	Vietnam 2001 Land Law Reform that allowed plot land titles to be held by males only, females only, or held jointly.	OLS (quasi-experiment).	Land titles held by women only lead to a decreas of 18 percentage points in the share of hh childre sick in the past month, a decrease of 9 points in the share of children sick during the last year, an increase of 4 percentage points in the share of hh children enrolled in school, a 1 percentage point increase in expenditure in food and beverages.

**TABLE 2: SUMMARY OF DESCRIPTIVE STATISTICS**

**DESCRIPTIVE STATISTICS ETHIOPIA**

<b>Variable</b>	<b>Obs</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>
<u>HOUSEHOLD &amp; CHILD CHARACTERISTICS</u>					
Rasch score in the PPVT test	745	298,53	47,99	179	504
Rasch score in the CDA test	743	299	49	115	425
HAZ score	745	-1	1	-4,96	2
Asset index	745	0,99	2,50	-2	12
Number of adults in household	745	2,83	1,41	1	9
Age of child in months	745	62,47	3,81	55	75
Age of caregiver	690	32,12	8,23	14	75
Max educ grade attained by head of household	691	5,29	4,96	0	16
Mother answers the survey	745	0,72	0,45	0	1
Is the mother the primary caregiver?	695	0,85	0,36	0	1
Site is rural	745	0,39	0,49	0	1
Child is female	745	0,47	0,50	0	1
Healthcenter in the community	630	0,85	0,35	0	1
Father not in household	745	0,21	0,41	0	1
<u>BARGAINING POWER MEASURES</u>					
Parents education difference	684	1,09	4,14	-15	14
Parents age difference	690	10,53	9,97	-37	52
Difference in years living in community	647	1,66	12,46	-56	57
Mother controls all income	667	0,41	0,49	0	1
Mother controls some income	667	0,20	0,40	0	1
Mother does not control income	667	0,21	0,41	0	1
Mother controls income from wages	484	0,75	0,44	0	1
Mother controls income from land	624	0,47	0,50	0	1
Mother controls all assets	477	0,30	0,46	0	1
Mother controls some assets	477	0,08	0,27	0	1
Mother does not control assets	477	0,62	0,49	0	1
Mother controls animals	477	0,26	0,44	0	1
Mother does not control animals	477	0,36	0,48	0	1

**TABLE 2: SUMMARY OF DESCRIPTIVE STATISTICS, Continued**

**DESCRIPTIVE STATISTICS INDIA**

Variable	Obs	Mean	Std. Dev.	Min	Max
<u>HOUSEHOLD &amp; CHILD CHARACTERISTICS</u>					
Rasch score in the PPVT test	1557	299,40	49,65	181	471
Rasch score in the CDA test	1544	300,71	48,54	81	441
HAZ score	1557	-1,65	0,97	-7	3
Asset index	1557	0,01	2,07	-3	8
Number of adults in household	1557	2,99	1,62	1	19
Age of child in months	1557	64,79	3,78	55	76
Age of caregiver	1535	27,63	4,58	9	60
Max educ grade attained by head of household	1508	5,64	5,27	0	16
Mother answers the survey	1557	0,86	0,34	0	1
Is the mother the primary caregiver?	1528	0,98	0,13	0	1
Site is rural	1557	0,75	0,43	0	1
Child is female	1557	0,46	0,50	0	1
Percentage of community with sanitation	1440	0,72	0,45	0	1
Father not in household	1557	0,20	0,40	0	1
<u>BARGAINING POWER MEASURES</u>					
Parents education difference	1500	1,95	4,32	-11	16
Parents age difference	1535	5,91	4,39	-30	50
Difference in years living in community	1508	12,56	13,20	-53	65
Mother controls all income	1534	0,19	0,39	0	1
Mother controls some income	1534	0,39	0,49	0	1
Mother does not control income	1534	0,13	0,33	0	1
Mother controls income from wages	1092	0,61	0,49	0	1
Mother controls income from land	1493	0,23	0,42	0	1
Mother controls all assets	1193	0,26	0,44	0	1
Mother controls some assets	1193	0,05	0,22	0	1
Mother does not control assets	1193	0,69	0,46	0	1
Mother controls animals	1193	0,11	0,31	0	1
Mother does not control animals	1193	0,35	0,48	0	1



**TABLE 2: SUMMARY OF DESCRIPTIVE STATISTICS, Continued**

**DESCRIPTIVE STATISTICS VIETNAM**

Variable	Obs	Mean	Std. Dev.	Min	Max
<u>HOUSEHOLD &amp; CHILD CHARACTERISTICS</u>					
Rasch score in the PPVT test	1521	299,89	49,95	179	469
Rasch score in the CDA test	1478	303	47,66	122	423
HAZ score	1521	-1,27	0,99	-6.14	2.87
Asset index	1521	0,22	1,98	-5	5
Number of adults in household	1521	2,60	1,15	1	10
Age of child in months	1521	63,80	3,39	49	72
Age of caregiver	1489	31,45	6,24	21	69
Max educ grade attained by head of household	1460	8,02	3,79	0	16
Mother answers the survey	1521	0,90	0,30	0	1
Is the mother the primary caregiver?	1492	0,93	0,26	0	1
Site is rural	1520	0,79	0,41	0	1
Child is female	1521	0,48	0,50	0	1
Percentage of community without sanitation	1521	0,57	0,50	0	1
Father not in household	1521	0,20	0,40	0	1
<u>BARGAINING POWER MEASURES</u>					
Parents education difference	1443	0,58	3,16	-12	11
Parents age difference	1485	3,31	4,96	-40	50
Difference in years living in community	1464	4,12	15,85	-56	52
Mother controls all income	1468	0,67	0,47	0	1
Mother controls some income	1468	0,18	0,39	0	1
Mother does not control income	1468	0,05	0,21	0	1
Mother controls all assets	1046	0,30	0,46	0	1
Mother controls some assets	1046	0,06	0,24	0	1
Mother does not control assets	1046	0,64	0,48	0	1
Mother controls animals	1046	0,26	0,44	0	1
Mother does not control animals	1046	0,27	0,44	0	1

**TABLE 2: SUMMARY OF DESCRIPTIVE STATISTICS, Continued**

**DESCRIPTIVE STATISTICS PERU**

Variable	Obs	Mean	Std. Dev.	Min	Max
<u>HOUSEHOLD &amp; CHILD CHARACTERISTICS</u>					
Rasch score in the PPVT test	1493	300,28	49,75	161	502
Rasch score in the CDA test	1493	302,54	47,42	81	414
HAZ score	1493	-1,39	1,06	-4.5	2.05
Asset index	1493	0,35	2,07	-3	5
Number of adults in household	1493	2,90	1,38	1	11
Age of child in months	1493	64,45	4,57	53	76
Age of caregiver	1479	31,87	7,77	15	75
Max educ grade attained by head of household	1493	9,13	3,79	0	15
Mother answers the survey	1493	0,92	0,28	0	1
Is mother the primary caregiver?	1493	0,95	0,22	0	1
Site is rural	1493	0,37	0,48	0	1
Child is female	1493	0,49	0,50	0	1
Percentage of community with sanitation	1197	0,87	0,34	0	1
Father not in household	1493	0,21	0,41	0	1
<u>BARGAINING POWER MEASURES</u>					
Parents education difference	1478	0,76	3,69	-14	14
Parents age difference	1478	5,84	9,47	-45	49
Difference in years living in community	1448	0,32	14,14	-51	50
Mother controls income from wages	1078	0,75	0,43	0	1
Mother controls income from land	1484	0,57	0,50	0	1
Mother controls all assets	1046	0,22	0,42	0	1
Mother controls some assets	1046	0,08	0,27	0	1
Mother does not control assets	1046	0,70	0,46	0	1
Mother controls animals	1046	0,58	0,49	0	1
Mother does not control animals	1046	0,15	0,36	0	1

**TABLE 3: LIST OF PRODUCTIVE ASSETS**

<b>PRODUCTIVE ASSETS</b>		
<b>Agricultural assets:</b>	<b>Non-agricultural assets:</b>	<b>Non-agricultural assets continued:</b>
Agricultural tools (e.g. sickle, crowbar, shovels, axe, hoe, spade, etc.)	Barber tools (scissors, mirror, etc.)	Protective clothing (overalls, steel-toed boots, hardhat, etc.)
Working Cart/ wheelbarrow (hand pushed or horse pulled)	Beauty salon equipment (hair dryer, etc.)	Sewing machine
Pesticide sprayer	Blacksmith tools	Teaching supplies (books, blackboard, etc.)
Working Plough	Cleaning/Ironing/Domestic work equipment (mop, iron, etc.)	Trading stall equipment (display table, weighing machine, money box, etc.)
Working Pump (motor or engine)	Construction tools (electrical tools, carpentry tool box, etc.)	Trading license (e.g. for market stall)
Working Thresher	Entertainment equipment (musical instruments, speakers, lighting, karaoke machine, etc.)	Transport (minibus, car, motorbike, bicycle, etc.)
Working Tractor	Food preparation/ Local alcohol processing equipment (portable stove, serving bowls, etc.)	Weaving equipment (loom, etc.)
Other farm equipment	Gun	House for rent
Milk churner	Mechanic equipment (jack, tires, jumper cables, etc)	Refrigerator
	Plumbing equipment	Other
	Pottery equipment (kiln, potters wheel, etc.)	

**TABLE 4: CORRELATION BETWEEN DIFFERENT BARGAINING POWER MEASURES**

	1	2	3	4	5	6	7	8	9	10							
<b>ETHIOPIA</b>																	
1. Parents education Differences	1,00																
2. Differences in years living in community	0,08	***	1,00														
3. Mom controls some Income	0,01	0,01	1,00														
4. Mom controls all Income	0,01	0,00	-0,52	***	1,00												
5. Does caregiver control earnings from work for wages activities	0,05	0,00	-0,18	***	0,42	***	1,00										
6. Does caregiver control earnings from any of the land?	-0,03	0,03	0,03	0,07	***	0,29	***	1,00									
7. Mum controls animals	-0,01	0,01	-0,11	0,35	***	0,16	***	0,37	***	1,00							
8. Mom controls some assets	0,05	-0,02	0,05	*	0,00	**	-0,02	0,11	***	0,07	***	1,00					
9. Mom controls all assets	-0,03	-0,01	-0,04	0,23	***	0,08	*	0,16	***	0,34	***	-0,18	***	1,00			
10. Waged Mom	-0,12	-0,07	***	0,00	0,03	*	0,11	***	-0,17	***	-0,21	***	-0,05	**	-0,12	***	1,00
<b>INDIA</b>																	
1. Parents education Differences	1,00																
2. Differences in years living in community	0,04	1,00															
3. Mom controls some Income	-0,07	**	0,03	1,00													
4. Mom controls all Income	0,00	-0,07	-0,37	***	1,00												
5. Does caregiver control earnings from work for wages activities	-0,07	**	-0,01	0,09	***	0,26	***	1,00									
6. Does caregiver control earnings from any of the land?	-0,01	0,05	0,01	0,24	***	0,31	***	0,31	***	1,00							
7. Mum controls animals	-0,01	0,05	*	0,00	0,21	0,11	***	0,20	***	0,20	***	1,00					
8. Mom controls some assets	-0,02	-0,01	0,05	***	0,01	-0,03	0,03	***	0,09	***	0,09	***	1,00				
9. Mom controls all assets	0,05	0,02	-0,03	***	0,42	***	0,17	***	0,27	***	0,26	***	-0,08	***	1,00		
10. Waged Mom	-0,08	***	-0,06	0,03	0,12	***	0,26	***	0,07	**	0,05	0,08	**	0,06	**	1,00	

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01

**TABLE 4: CORRELATION BETWEEN DIFFERENT BARGAINING POWER MEASURES, Continued**

	1	2	3	4	5	6	7	8	9	10						
<b>VIETNAM</b>																
1. Parents education Differences	1,00															
2. Differences in years living in community	-0,01	1,00														
3. Mom controls some Income	0,26	0,26	1,00													
4. Mom controls all Income	-0,21	-0,18	-0,59	***	1,00											
5. Does caregiver control earnings from work for wages activities	-0,16	0,22	***	-0,22	**	0,15	**	1,00								
6. Does caregiver control earnings from any of the land?	0,04	0,12	-0,01	0,08	**	0,39	***	1,00								
7. Mum controls animals	0,04	-0,06	**	-0,23	0,24	***	0,11	0,26	***	1,00						
8. Mom controls some assets	.	.	.	.	.	***	.	.	***	.						
9. Mom controls all assets	0,12	-0,11	-0,04	***	0,13	***	-0,12	***	0,08	***	0,35	***	.	***	1,00	
10. Waged Mom	-0,18	***	-0,03	0,00	0,03	0,27	***	-0,10	**	-0,18	***	.	***	-0,28	***	1,00
<b>PERU</b>																
1. Parents education Differences	1,00															
2. Differences in years living in community	0,12	***	1,00													
3. Mom controls some Income																
4. Mom controls all Income																
5. Does caregiver control earnings from work for wages activities	0,00	0,05	*		1,00											
6. Does caregiver control earnings from any of the land?	0,07	***	0,03		0,23	***	1,00									
7. Mum controls animals	0,16	***	0,13	***	0,04	0,27	***	1,00								
8. Mom controls some assets	-0,01	*	-0,05		0,02	-0,02	-0,04	1,00								
9. Mom controls all assets	0,00	-0,01	*		0,02	0,11	***	0,04	-0,07	***	1,00					
10. Waged Mom	-0,12	***	-0,11	***	0,12	***	-0,05	-0,26	***	-0,04	**	-0,10	***	1,00		

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01

**TABLE 5: BARGAINING POWER AND DIFFERENCES BETWEEN HOUSEHOLDS,  
Ethiopia**

ETHIOPIA

	Controls Assets	No Control	Diff	Controls Income	No Control	Diff	Controls Animals	No Control	Diff	
<u>MOTHERS' CHARACTERISTICS</u>										
Works for a wage	0,11 (0,01)	0,03 (0,01)	0,07 ***	0,03 (0,01)	0,09 (0,01)	-0,06 ***	0,11 (0,01)	0,03 (0,01)	0,09 ***	
Age	31,47 (0,23)	33,26 (0,34)	-1,78 ***	31,12 (0,36)	32,38 (0,25)	-1,26 ***	31,66 (0,24)	32,77 (0,33)	-1,12 ***	
Max educ grade attained	3,06 (0,12)	1,79 (0,14)	1,27 ***	2,25 (0,17)	2,57 (0,12)	-0,32	3,41 (0,13)	1,38 (0,11)	2,03 ***	
<u>CHILDREN'S CHARACTERISTICS</u>										
Child is female	0,47 (0,01)	0,45 (0,02)	0,02	0,46 (0,02)	0,47 (0,02)	-0,02	0,47 (0,01)	0,45 (0,02)	0,02	
<u>HOUSEHOLD CHARACTERISTICS</u>										
Site is rural	0,57 (0,01)	0,70 (0,02)	-0,13 ***	0,68 (0,02)	0,63 (0,02)	0,05 *	0,49 (0,02)	0,82 (0,02)	-0,32 ***	
Healthcenter in community	0,82 (0,01)	0,85 (0,02)	-0,03	0,78 (0,02)	0,84 (0,01)	-0,06 ***	0,83 (0,01)	0,83 (0,02)	0,00	
Wealth index	0,15 (0,07)	-0,43 (0,08)	0,58 ***	-0,45 (0,08)	-0,03 (0,07)	-0,42 ***	0,37 (0,07)	0,78 (0,06)	1,15 ***	
Number of adults in household	2,71 (0,04)	2,73 (0,05)	-0,02	2,47 (0,05)	2,76 (0,04)	-0,29 ***	2,72 (0,04)	2,72 (0,05)	0,00	
Father not in household	0,15 (0,01)	0,16 (0,02)	-0,02	0,06 (0,01)	0,17 (0,01)	-0,10 ***	0,16 (0,01)	0,13 (0,01)	0,03 *	
Max educ grade attained by head of hh	4,52 (0,14)	3,44 (0,17)	1,09 ***	4,03 (0,21)	4,08 (0,14)	-0,05	4,99 (0,15)	2,79 (0,15)	2,20 ***	

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01

**TABLE 6: BARGAINING POWER AND DIFFERENCES BETWEEN HOUSEHOLDS,  
India**

INDIA

	Controls Assets	No Control	Diff	Controls Income	No Control	Diff	Controls Animals	No Control	Diff
<u>MOTHERS' CHARACTERISTICS</u>									
Works for a wage	0,26 (0,01)	0,33 (0,02)	-0,08 ***	0,14 (0,02)	0,31 (0,01)	-0,18 ***	0,27 (0,01)	0,30 (0,04)	-0,03
Age	27,60 (0,12)	27,99 (0,24)	-0,40	27,21 (0,26)	27,83 (0,14)	-0,62 **	27,69 (0,11)	27,57 (0,32)	0,12
Max educ grade attained	4,02 (0,13)	2,57 (0,19)	1,45 ***	5,68 (0,33)	3,26 (0,14)	2,43 ***	3,82 (0,12)	2,46 (0,31)	1,36 ***
<u>CHILDREN'S CHARACTERISTICS</u>									
Child is female	0,47 (0,01)	0,44 (0,02)	0,03	0,44 (0,03)	0,46 (0,02)	-0,02	0,47 (0,01)	0,42 (0,04)	0,05
<u>HOUSEHOLD CHARACTERISTICS</u>									
Site is rural	0,69 (0,01)	0,90 (0,01)	-0,21 ***	0,50 (0,03)	0,80 (0,01)	-0,29 ***	0,72 (0,01)	0,96 (0,02)	-0,24 ***
Healthcenter in community	0,77 (0,01)	0,61 (0,02)	0,15 ***	0,89 (0,02)	0,64 (0,02)	0,25 ***	0,74 (0,01)	0,59 (0,04)	0,15 ***
Wealth index	0,20 (0,06)	-0,60 (0,08)	0,80 ***	1,12 (0,14)	-0,25 (0,06)	1,37 ***	0,09 (0,05)	-0,75 (0,11)	0,84 ***
Number of adults in household	2,97 (0,04)	3,12 (0,09)	-0,15	2,60 (0,08)	2,88 (0,05)	-0,28 ***	2,98 (0,04)	3,23 (0,15)	-0,24
Father not in household	0,20 (0,01)	0,21 (0,02)	-0,01	0,14 (0,02)	0,18 (0,01)	-0,04	0,20 (0,01)	0,22 (0,03)	-0,01
Max educ grade attained by head of hh	5,87 (0,14)	4,55 (0,24)	1,32 ***	7,62 (0,36)	4,99 (0,16)	2,63 ***	5,69 (0,13)	4,48 (0,37)	1,21 ***

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01

**TABLE 7: BARGAINING POWER AND DIFFERENCES BETWEEN HOUSEHOLDS,  
Vietnam**

VIETNAM

	Controls Assets	No Control	Diff	Controls Income	No Control	Diff	Controls Animals	No Control	Diff
<u>MOTHERS' CHARACTERISTICS</u>									
Works for a wage	0,28 (0,01)	0,09 (0,01)	0,19 ***	0,07 (0,02)	0,24 (0,01)	-0,17 ***	0,27 (0,01)	0,10 (0,01)	0,17 ***
Age	31,36 (0,17)	31,44 (0,32)	-0,07	30,75 (0,55)	31,49 (0,17)	-0,74	31,60 (0,17)	30,73 (0,31)	0,86 **
Max educ grade attained	7,27 (0,11)	6,22 (0,17)	1,05 ***	4,86 (0,36)	7,18 (0,10)	-2,31 ***	7,21 (0,11)	6,36 (0,18)	0,86 ***
<u>CHILDREN'S CHARACTERISTICS</u>									
Child is female	0,48 (0,01)	0,50 (0,02)	-0,02	0,52 (0,04)	0,48 (0,01)	0,03	0,49 (0,01)	0,47 (0,02)	0,02
<u>HOUSEHOLD CHARACTERISTICS</u>									
Site is rural	0,77 (0,01)	0,87 (0,02)	-0,10 ***	0,93 (0,02)	0,78 (0,01)	0,15 ***	0,74 (0,01)	0,97 (0,01)	-0,23 ***
% of community without sanitation	0,54 (0,01)	0,64 (0,02)	-0,11 ***	0,58 (0,04)	0,57 (0,01)	0,01	0,57 (0,01)	0,54 (0,02)	0,03
Wealth index	0,16 (0,06)	-0,34 (0,09)	0,51 ***	-0,97 (0,16)	0,14 (0,05)	-1,12 ***	0,29 (0,06)	-0,77 (0,08)	1,06 ***
Number of adults in household	2,65 (0,03)	2,51 (0,05)	0,14 **	2,44 (0,09)	2,51 (0,03)	-0,07	2,67 (0,03)	2,44 (0,05)	0,23 ***
Father not in household	0,20 (0,01)	0,19 (0,02)	0,01	0,20 (0,03)	0,16 (0,01)	0,04	0,22 (0,01)	0,14 (0,02)	0,08 ***
Max educ grade attained by head of hh	8,01 (0,11)	6,68 (0,17)	1,34 ***	5,60 (0,37)	7,83 (0,10)	-2,23 ***	7,92 (0,11)	6,89 (0,18)	1,02 ***

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01



**TABLE 8: BARGAINING POWER AND DIFFERENCES BETWEEN HOUSEHOLDS,  
Peru**

PERU

	Controls Assets	No Control	Diff	Controls Income	No Control	Diff	Controls Animals	No Control	Diff
<u>MOTHERS' CHARACTERISTICS</u>									
Works for a wage	0,16 (0,01)	0,07 (0,01)	0,09 ***	0,06 (0,01)	0,17 (0,01)	-0,10 ***	0,23 (0,02)	0,07 (0,01)	0,16 ***
Age	31,69 (0,21)	33,42 (0,45)	-1,72 ***	30,13 (0,37)	32,58 (0,22)	-2,46 ***	31,13 (0,27)	32,77 (0,27)	-1,65 ***
Max educ grade attained	7,45 (0,12)	8,20 (0,23)	-0,75 ***	7,90 (0,21)	7,53 (0,13)	0,37	9,38 (0,14)	6,11 (0,14)	3,27 ***
<u>CHILDREN'S CHARACTERISTICS</u>									
Child is female	0,50 (0,01)	0,49 (0,03)	0,01	0,56 (0,03)	0,48 (0,01)	0,09 ***	0,51 (0,02)	0,49 (0,02)	0,02
<u>HOUSEHOLD CHARACTERISTICS</u>									
Site is rural	0,46 (0,01)	0,42 (0,03)	0,04	0,41 (0,03)	0,46 (0,01)	-0,05 *	0,23 (0,02)	0,64 (0,02)	-0,40 ***
Healthcenter in community	0,85 (0,01)	0,83 (0,02)	0,01	0,81 (0,02)	0,86 (0,01)	-0,05 *	0,90 (0,01)	0,80 (0,01)	0,09 ***
Wealth index	-0,07 (0,06)	0,41 (0,12)	-0,48 ***	0,15 (0,11)	0,01 (0,06)	0,14	0,99 (0,07)	-0,78 (0,06)	1,78 ***
Number of adults in household	2,85 (0,04)	2,92 (0,07)	-0,07	3,17 (0,08)	2,78 (0,03)	0,39 ***	2,95 (0,05)	2,79 (0,04)	0,15 **
Father not in household	0,19 (0,01)	0,22 (0,02)	-0,03	0,31 (0,02)	0,17 (0,01)	0,14 ***	0,27 (0,02)	0,14 (0,01)	0,13 ***
Max educ grade attained by head of hh	8,49 (0,11)	8,88 (0,22)	-0,39	8,39 (0,20)	8,63 (0,11)	-0,24	9,73 (0,13)	7,58 (0,13)	2,15 ***

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01

**TABLE 9: MATERNAL BARGAINING POWER AND PPVT SCORES IN ETHIOPIA**

	(1)		(2)		(3)		(4)		(5)
	All		Rural		Urban		Female		Male
	b/se		b/se		b/se		b/se		b/se
Mom controls some Income	-0.02 (0.11)		0.09 (0.09)		0.00 (0.17)		-0.05 (0.12)		0.00 (0.16)
Mom controls all Income	0.23 (0.11)	**	0.16 (0.09)		0.40 (0.18)	*	0.31 (0.10)	**	0.14 (0.14)
R-Square	0.45		0.26		0.30		0.50		0.45
N	451		203		248		224		227
Does caregiver control earnings from work for wages activities?	0.30 (0.10)	**	0.15 (0.14)		0.34 (0.15)	*	0.18 (0.19)		0.43 (0.14)
Does caregiver control earnings from any of the land?	-0.14 (0.13)		-0.24 (0.05)	**	-0.05 (0.20)		-0.07 (0.12)		-0.23 (0.19)
R-Square	0.38		0.29		0.27		0.44		0.39
N	390		145		245		189		201
Mum controls animals	0.27 (0.04)	***	0.23 (0.06)	**	0.54 (0.21)	*	0.12 (0.12)		0.42 (0.09)
Mom controls some assets	0.10 (0.12)		0.06 (0.11)		0.38 (0.47)		0.00 (0.20)		0.06 (0.18)
Mom controls all assets	-0.12 (0.07)	*	-0.05 (0.06)		-0.34 (0.21)		-0.01 (0.14)		-0.25 (0.03)
R-Square	0.29		0.23		0.83		0.23		0.44
N	265		232		33		127		138
Parents education Differences	-0.05 (0.02)	**	-0.02 (0.01)	**	-0.06 (0.02)	**	-0.05 (0.01)	**	-0.05 (0.03)
Parents Age Differences	0.00 (0.00)		0.00 (0.00)	**	0.01 (0.01)		0.01 (0.01)		-0.00 (0.01)
Differences in years living in community	0.00 (0.00)		0.01 (0.00)	*	-0.00 (0.00)		0.01 (0.00)		-0.01 (0.01)
R-Square	0.42		0.27		0.29		0.46		0.45
N	456		225		231		221		235

\* p<0.10, \*\* p<0.05, \*\*\* p<0.001

**TABLE 10: MATERNAL BARGAINING POWER AND CDA SCORES IN ETHIOPIA**

	(1)		(2)		(3)		(4)		(5)
	All		Rural		Urban		Female		Male
	b/se		b/se		b/se		b/se		b/se
Mom controls some Income	0.04 (0.07)		0.13 (0.08)		-0.00 (0.13)		0.04 (0.12)		0.08 (0.11)
Mom controls all Income	0.03 (0.09)		0.02 (0.10)		0.17 (0.19)		0.07 (0.11)		0.00 (0.11)
R-Square	0.22		0.15		0.26		0.22		0.25
N	881		553		328		408		473
Does caregiver control earnings from work for wages activities?	0.19 (0.10)	*	0.01 (0.12)		0.39 (0.11)	**	0.24 (0.12)	**	0.17 (0.13)
Does caregiver control earnings from any of the land?	0.12 (0.09)		-0.03 (0.15)		-0.14 (0.17)		-0.12 (0.10)		-0.16 (0.13)
R-Square	0.21		0.12		0.29		0.24		0.21
N	791		498		293		368		423
Mum controls animals	-0.15 (0.10)		-0.12 (0.11)		-0.04 (0.28)		-0.13 (0.13)		-0.18 (0.14)
Mom controls some assets	0.28 (0.16)	*	0.26 (0.16)		0.77 (0.56)		0.08 (0.21)		0.40 (0.16)
Mom controls all assets	0.19 (0.13)		0.16 (0.13)		0.69 (0.36)	*	0.26 (0.18)		0.11 (0.14)
R-Square	0.13		0.13		0.47		0.15		0.17
N	655		583		72		298		357
Parents education Differences	-0.06 (0.01)	***	-0.06 (0.01)	**	-0.07 (0.02)	**	-0.04 (0.02)	**	-0.06 (0.01)
Parents Age Differences	-0.00 (0.00)		-0.00 (0.01)		-0.00 (0.01)		-0.00 (0.00)		-0.00 (0.01)
Differences in years living in community	-0.00 (0.00)	**	-0.01 (0.00)	**	-0.00 (0.00)		-0.01 (0.00)	*	-0.00 (0.00)
R-Square	0.22		0.15		0.25		0.23		0.25
N	893		584		309		407		486

\* p<0.10, \*\* p<0.05, \*\*\* p<0.001

**TABLE 11: MATERNAL BARGAINING POWER AND HAZ IN ETHIOPIA**

	(1)	(2)	(3)	(4)	(5)
	All	Rural	Urban	Female	Male
	b/se	b/se	b/se	b/se	b/se
Mom controls some Income	-0.14 (0.11)	-0.19 (0.12)	0.03 (0.16)	-0.19 (0.12)	-0.10 (0.12)
Mom controls all Income	-0.04 (0.07)	-0.10 (0.08)	0.01 (0.13)	0.01 (0.11)	-0.10 (0.06)
R-Square	0.39	0.44	0.36	0.42	0.36
N	1084	734	350	507	577
Does caregiver control earnings from work for wages activities?	0.07 (0.09)	0.11 (0.06)	-0.06 (0.18)	-0.02 (0.13)	0.13 (0.10)
Does caregiver control earnings from any of the land?	-0.15 ** (0.05)	-0.20 *** (0.04)	-0.07 (0.14)	-0.06 (0.07)	-0.24 ** (0.09)
R-Square	0.38	0.46	0.32	0.39	0.40
N	844	581	263	394	450
Mum controls animals	-0.11 (0.08)	-0.12 (0.08)	-0.17 (0.18)	0.01 (0.09)	-0.22 ** (0.09)
Mom controls some assets	-0.16 (0.10)	-0.15 (0.12)	-0.10 (0.27)	-0.17 (0.13)	-0.16 (0.11)
Mom controls all assets	0.01 (0.08)	-0.05 (0.07)	0.31 (0.37)	0.01 (0.12)	0.01 (0.08)
R-Square	0.43	0.45	0.48	0.48	0.42
N	870	774	96	405	465
Parents education Differences	-0.01 (0.01)	0.00 (0.02)	-0.01 (0.02)	-0.00 (0.02)	-0.02 (0.01)
Parents Age Differences	-0.00 (0.00)	-0.00 (0.00)	0.01 (0.00)	0.00 (0.00)	-0.00 (0.00)
Differences in years living in community	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	-0.00 (0.00)	0.00 (0.00)
R-Square	0.38	0.44	0.34	0.39	0.39
N	1210	831	379	565	645

\* p<0.10, \*\* p<0.05, \*\*\* p<0.001

**TABLE 12: MATERNAL BARGAINING POWER AND PPVT SCORES IN INDIA**

	(1)		(2)		(3)		(4)		(5)
	All		Rural		Urban		Female		Male
	b/se		b/se		b/se		b/se		b/se
Mom controls some Income	0.16 *		0.24 **		-0.19		-0.01		0.31 **
	(0.08)		(0.10)		(0.16)		(0.12)		(0.11)
Mom controls all Income	0.01		0.05		0.04		-0.15		0.14
	(0.08)		(0.10)		(0.19)		(0.16)		(0.10)
R-Square	0.25		0.20		0.35		0.30		0.23
N	892		702		190		403		489
Does caregiver control earnings from work for wages activities?	0.19 **		0.15 *		0.33 *		0.21 **		0.16
	(0.08)		(0.09)		(0.19)		(0.10)		(0.10)
Does caregiver control earnings from any of the land?	0.10		0.09		0.26		0.11		0.09
	(0.10)		(0.10)		(0.29)		(0.12)		(0.12)
R-Square	0.26		0.19		0.40		0.31		0.23
N	893		721		172		406		487
Mum controls animals	-0.03		-0.01				0.18		-0.28 **
	(0.09)		(0.10)				(0.13)		(0.11)
Mom controls some assets	0.21		0.20				0.38 **		0.02
	(0.16)		(0.17)				(0.18)		(0.27)
Mom controls all assets	0.06		0.06				0.01		0.15
	(0.10)		(0.10)				(0.15)		(0.14)
R-Square	0.13		0.13				0.18		0.17
N	556		547				255		301
Parents education Differences	-0.03 ***		-0.03 **		-0.05 ***		-0.04 **		-0.03 **
	(0.01)		(0.01)		(0.01)		(0.01)		(0.01)
Parents Age Differences	-0.00		-0.00		-0.01		-0.01		0.00
	(0.01)		(0.01)		(0.03)		(0.01)		(0.02)
Differences in years living in community	0.00		0.00		-0.00		0.00		-0.00
	(0.00)		(0.00)		(0.00)		(0.00)		(0.00)
R-Square	0.25		0.19		0.36		0.31		0.22
N	887		694		193		399		488

\* p<0.10, \*\* p<0.05, \*\*\* p<0.001

**TABLE 13: MATERNAL BARGAINING POWER AND CDA SCORES IN INDIA**

	(1)	(2)	(3)	(4)	(5)	
	All	Rural	Urban	Female	Male	
	b/se	b/se	b/se	b/se	b/se	
Mom controls some Income	0.05 (0.09)	0.04 (0.10)	-0.17 (0.16)	-0.01 (0.13)	0.12 (0.13)	
Mom controls all Income	0.02 (0.09)	-0.03 (0.11)	0.15 (0.13)	-0.02 (0.17)	0.12 (0.12)	
R-Square	0.14	0.11	0.25	0.16	0.15	
N	991	781	210	455	536	
Does caregiver control earnings from work for wages activities?	0.10 (0.08)	0.09 (0.10)	0.08 (0.16)	0.02 (0.11)	0.15 (0.10)	
Does caregiver control earnings from any of the land?	0.04 (0.09)	0.07 (0.10)	-0.05 (0.28)	-0.04 (0.14)	0.10 (0.11)	
R-Square	0.14	0.11	0.19	0.12	0.17	
N	1010	817	193	467	543	
Mum controls animals	0.10 (0.09)	0.11 (0.09)		0.04 (0.15)	0.12 (0.12)	
Mom controls some assets	0.02 (0.18)	-0.01 (0.18)		0.42 (0.19)	** (0.32)	
Mom controls all assets	-0.06 (0.09)	-0.06 (0.10)		0.01 (0.16)	-0.10 (0.11)	
R-Square	0.12	0.12		0.13	0.17	
N	638	627		300	338	
Parents education Differences	-0.03 (0.01)	** (0.01)	-0.03 (0.01)	** (0.02)	-0.03 (0.01)	-0.04 (0.01)
Parents Age Differences	-0.00 (0.01)	-0.01 (0.01)	0.00 (0.04)	0.02 (0.01)	-0.03 (0.01)	* (0.01)
Differences in years living in community	0.00 (0.00)	0.00 (0.00)	* (0.00)	-0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
R-Square	0.15	0.12	0.25	0.18	0.16	
N	987	774	213	452	535	

\* p<0.10, \*\* p<0.05, \*\*\* p<0.001

**TABLE 14: MATERNAL BARGAINING POWER AND HAZ IN INDIA**

	(1)	(2)	(3)	(4)	(5)
	All	Rural	Urban	Female	Male
	b/se	b/se	b/se	b/se	b/se
Mom controls some Income	-0.13 (0.08)	-0.20 (0.12)	-0.08 (0.09)	-0.10 (0.09)	-0.17 (0.12)
Mom controls all Income	0.02 (0.08)	-0.09 (0.12)	0.27 (0.13)	** -0.02 (0.11)	0.02 (0.11)
R-Square	0.42	0.40	0.40	0.44	0.41
N	1059	805	254	477	582
Does caregiver control earnings from work for wages activities?	0.07 (0.05)	0.09 (0.06)	0.00 (0.11)	0.04 (0.08)	0.06 (0.08)
Does caregiver control earnings from any of the land?	0.09 (0.06)	0.08 (0.07)	0.07 (0.14)	0.05 (0.09)	0.10 (0.08)
R-Square	0.43	0.41	0.47	0.43	0.45
N	1053	832	221	477	576
Mum controls animals	0.02 (0.08)	0.00 (0.08)		0.06 (0.10)	-0.08 (0.13)
Mom controls some assets	-0.08 (0.14)	-0.08 (0.15)		-0.23 (0.19)	0.00 (0.26)
Mom controls all assets	0.03 (0.09)	0.05 (0.08)		0.00 (0.11)	0.07 (0.13)
R-Square	0.45	0.44		0.50	0.46
N	656	645		310	346
Parents education Differences	0.00 (0.01)	0.00 (0.01)	-0.00 (0.01)	0.00 (0.01)	-0.00 (0.01)
Parents Age Differences	-0.00 (0.01)	-0.01 (0.01)	0.03 (0.02)	* 0.00 (0.01)	-0.00 (0.01)
Differences in years living in community	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)
R-Square	0.42	0.41	0.39	0.41	0.43
N	1592	1198	394	740	852

\* p<0.10, \*\* p<0.05, \*\*\* p<0.001

**TABLE 15: MATERNAL BARGAINING POWER AND PPVT SCORES IN VIETNAM**

	(1)		(2)		(3)		(4)		(5)	
	All		Rural		Urban		Female		Male	
	b/se		b/se		b/se		b/se		b/se	
Mom controls some Income	0.27 (0.19)		0.24 (0.21)		0.77 (0.37)	*	0.24 (0.28)		0.28 (0.20)	
Mom controls all Income	0.34 (0.17)	**	0.31 (0.18)	*	1.06 (0.49)	*	0.39 (0.22)	*	0.28 (0.20)	
R-Square	0.34		0.25		0.26		0.37		0.32	
N	1128		989		139		536		592	
Mum controls animals	-0.00 (0.08)		0.01 (0.08)				0.02 (0.11)		-0.03 (0.09)	
Mom controls some assets	-0.11 (0.11)		-0.11 (0.11)				-0.20 (0.19)		-0.08 (0.17)	
Mom controls all assets	-0.04 (0.09)		-0.04 (0.09)				-0.06 (0.12)		-0.05 (0.11)	
R-Square	0.32		0.32				0.31		0.38	
N	520		515				255		265	
Parents education Differences	-0.02 (0.01)	*	-0.02 (0.01)		-0.03 (0.02)		-0.01 (0.02)		-0.04 (0.01)	**
Parents Age Differences	0.00 (0.01)		0.01 (0.01)		-0.02 (0.02)		0.00 (0.01)		0.00 (0.01)	
Differences in years living in community	-0.00 (0.00)	*	-0.00 (0.00)		-0.00 (0.00)		-0.00 (0.00)		-0.00 (0.00)	**
R-Square	0.34		0.26		0.23		0.36		0.33	
N	1139		1005		134		543		596	

\* p<0.10, \*\* p<0.05, \*\*\* p<0.001



**TABLE 16: MATERNAL BARGAINING POWER AND CDA SCORES IN VIETNAM**

	(1)		(2)		(3)		(4)		(5)	
	All		Rural		Urban		Female		Male	
	b/se		b/se		b/se		b/se		b/se	
Mom controls some Income	0.32	**	0.27	**	0.92	**	0.33	*	0.28	**
	(0.13)		(0.13)		(0.18)		(0.18)		(0.13)	
Mom controls all Income	0.35	**	0.32	**	0.80	***	0.47	**	0.21	
	(0.14)		(0.15)		(0.03)		(0.15)		(0.17)	
R-Square	0.13		0.13		0.24		0.14		0.15	
N	1239		1090		149		598		641	
Mum controls animals	-0.14		-0.15				-0.27	*	-0.05	
	(0.11)		(0.11)				(0.14)		(0.13)	
Mom controls some assets	0.08		0.09				-0.23		0.31	*
	(0.17)		(0.17)				(0.21)		(0.18)	
Mom controls all assets	0.14		0.14				0.12		0.17	
	(0.12)		(0.12)				(0.16)		(0.12)	
R-Square	0.11		0.10				0.16		0.10	
N	587		582				292		295	
Parents education Differences	0.28		0.52		-1.53		-0.27		0.65	
	(0.73)		(0.84)		(1.69)		(1.12)		(0.79)	
Parents Age Differences	-0.20		-0.26		0.93		-0.35		0.21	
	(0.23)		(0.25)		(0.72)		(0.34)		(0.38)	
Differences in years living in community	-0.20	**	-0.18	*	-0.25	*	-0.16		-0.23	*
	(0.09)		(0.10)		(0.12)		(0.13)		(0.11)	
R-Square	0.14		0.14		0.26		0.15		0.15	
N	1265		1122		143		614		651	

\* p<0.10, \*\* p<0.05, \*\*\* p<0.001

**TABLE 17: MATERNAL BARGAINING POWER AND HAZ IN VIETNAM**

	(1)	(2)	(3)	(4)	(5)
	All	Rural	Urban	Female	Male
	b/se	b/se	b/se	b/se	b/se
Mom controls some Income	0.01 (0.07)	0.04 (0.08)	-0.23 (0.13)	-0.22 (0.10)	0.25 (0.11)
Mom controls all Income	0.01 (0.07)	0.03 (0.07)	-0.21 (0.25)	-0.11 (0.09)	0.15 (0.12)
R-Square	0.66	0.62	0.67	0.69	0.66
N	1312	1151	161	629	683
Mum controls animals	0.13 (0.05)	0.12 (0.05)		0.03 (0.06)	0.23 (0.09)
Mom controls some assets	-0.08 (0.09)	-0.07 (0.09)		-0.12 (0.11)	-0.04 (0.11)
Mom controls all assets	-0.03 (0.07)	-0.03 (0.07)		0.02 (0.08)	-0.05 (0.09)
R-Square	0.67		0.67	0.70	0.64
N	671		665	327	345
Parents education Differences	-0.02 (0.01)	-0.02 (0.01)	0.00 (0.01)	-0.01 (0.01)	-0.02 (0.01)
Parents Age Differences	0.00 (0.00)	0.00 (0.00)	0.01 (0.00)	0.00 (0.00)	-0.00 (0.00)
Differences in years living in community	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
R-Square	0.67	0.63	0.70	0.69	0.67
N	1503	1324	179	721	782

\* p<0.10, \*\* p<0.05, \*\*\* p<0.001

**TABLE 18: MATERNAL BARGAINING POWER AND PPVT SCORES IN PERU**

	(1)		(2)		(3)		(4)		(5)
	All		Rural		Urban		Female		Male
	b/se		b/se		b/se		b/se		b/se
Does caregiver control earnings from work for wages activities?	0.11	*	0.16		0.09		0.28	***	-0.03
	(0.06)		(0.10)		(0.08)		(0.07)		(0.10)
Does caregiver control earnings from any of the land?	0.10	**	0.11		0.09	*	0.08		0.11
	(0.04)		(0.08)		(0.05)		(0.08)		(0.08)
R-Square	0.55		0.33		0.41		0.60		0.53
N	676		244		432		317		359
Mum controls animals	0.02		-0.07		0.20	**	-0.06		0.04
	(0.07)		(0.08)		(0.08)		(0.11)		(0.09)
Mom controls some assets	0.05		0.20	*	-0.03		0.01		0.07
	(0.08)		(0.11)		(0.14)		(0.12)		(0.13)
Mom controls all assets	0.07		0.06		0.07		0.09		0.08
	(0.07)		(0.10)		(0.10)		(0.09)		(0.09)
R-Square	0.49		0.29		0.41		0.51		0.48
N	619		383		236		305		314
Parents education Differences	-0.04	***	-0.03	**	-0.06	***	-0.05	***	-0.04
	(0.01)		(0.01)		(0.01)		(0.01)		(0.01)
Parents Age Differences	-0.00		-0.00		0.00		0.00		-0.00
	(0.00)		(0.01)		(0.00)		(0.00)		(0.01)
Differences in years living in community	-0.00		-0.00	*	0.00		0.00		-0.00
	(0.00)		(0.00)		(0.00)		(0.00)		(0.00)
R-Square	0.57		0.32		0.39		0.60		0.54
N	948		386		562		462		486

\* p<0.10, \*\* p<0.05, \*\*\* p<0.001

**TABLE 19: MATERNAL BARGAINING POWER AND CDA SCORES IN PERU**

	(1)		(2)		(3)		(4)		(5)	
	All		Rural		Urban		Female		Male	
	b/se		b/se		b/se		b/se		b/se	
Does caregiver control earnings from work for wages activities?	0.13 (0.08)		0.26 (0.12)	**	0.03 (0.10)		0.26 (0.10)	**	0.02 (0.13)	
Does caregiver control earnings from any of the land?	0.15 (0.07)	**	-0.04 (0.13)		0.24 (0.07)	**	0.20 (0.11)	*	0.11 (0.10)	
R-Square	0.19		0.14		0.19		0.23		0.20	
N	816		376		440		384		432	
Mum controls animals	-0.09 (0.10)		-0.17 (0.11)		0.14 (0.15)		-0.17 (0.11)		-0.08 (0.16)	
Mom controls some assets	0.11 (0.14)		0.13 (0.18)		0.25 (0.23)		0.01 (0.22)		0.14 (0.21)	
Mom controls all assets	-0.06 (0.10)		-0.15 (0.12)		0.11 (0.16)		-0.11 (0.12)		0.03 (0.14)	
R-Square	0.18		0.15		0.24		0.26		0.16	
N	782		548		234		388		394	
Parents education Differences	-0.02 (0.01)	**	-0.00 (0.01)		-0.05 (0.01)	***	-0.01 (0.01)		-0.03 (0.01)	**
Parents Age Differences	-0.00 (0.00)		-0.01 (0.01)		0.00 (0.00)		-0.00 (0.00)		-0.00 (0.01)	
Differences in years living in community	-0.00 (0.00)		-0.00 (0.00)		0.00 (0.00)		0.00 (0.00)	*	-0.01 (0.00)	*
R-Square	0.19		0.11		0.18		0.24		0.18	
N	1131		559		572		553		578	

\* p<0.10, \*\* p<0.05, \*\*\* p<0.001

**TABLE 20: MATERNAL BARGAINING POWER AND HAZ IN PERU**

	(1)	(2)	(3)	(4)	(5)	
	All	Rural	Urban	Female	Male	
	b/se	b/se	b/se	b/se	b/se	
Does caregiver control earnings from work for wages activities?	0.04 (0.06)	0.09 (0.10)	0.07 (0.07)	0.05 (0.09)	0.04 (0.09)	
Does caregiver control earnings from any of the land?	-0.05 (0.05)	-0.16 (0.10)	-0.00 (0.06)	0.03 (0.08)	-0.13 (0.08)	*
R-Square	0.60	0.55	0.49	0.61	0.60	
N	736	354	382	347	389	
Mum controls animals	-0.04 (0.06)	-0.05 (0.07)	-0.00 (0.15)	-0.05 (0.10)	-0.03 (0.08)	
Mom controls some assets	0.22 (0.09)	** 0.28 (0.10)	** 0.13 (0.16)	0.15 (0.14)	0.32 (0.13)	**
Mom controls all assets	-0.01 (0.06)	0.03 (0.08)	-0.11 (0.11)	-0.02 (0.07)	-0.07 (0.10)	
R-Square	0.60	0.55	0.52	0.58	0.63	
N	769	537	232	383	386	
Parents education Differences	-0.02 (0.01)	** -0.01 (0.01)	-0.02 (0.01)	** -0.01 (0.01)	-0.02 (0.01)	**
Parents Age Differences	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	-0.00 (0.00)	0.00 (0.00)	
Differences in years living in community	0.00 (0.00)	-0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	
R-Square	0.58	0.55	0.45	0.58	0.60	
N	1232	594	638	617	615	

\* p<0.10, \*\* p<0.05, \*\*\* p<0.001

TABLE 21: SUMMARY OF RESULTS, ETHIOPIA

	PPVT					CDA					HAZ				
	All	Rural	Urban	Female	Male	All	Rural	Urban	Female	Male	All	Rural	Urban	Female	Male
<u>Income</u>															
Some income															
All income	0.23 SD		0.40 SD	0.31 SD											
Wage earnings	0.30 SD		0.34 SD		0.43 SD	0.19 SD		0.39 SD	0.24 SD						
Land earnings		-0.24 SD									-0.15 SD	-0.20 SD			-0.24 SD
<u>Other resources</u>															
Animals	0.27 SD	0.23 SD	0.54 SD		0.42 SD										-0.22 SD
Some assets						0.28 SD				0.40 SD					
All assets	-0.12 SD				-0.25 SD			0.69 SD							
<u>Parental differences</u>															
Education gap	-0.05 SD	-0.02 SD	-0.06 SD	-0.05 SD	-0.05 SD	-0.06 SD	-0.06 SD	-0.07 SD	-0.04 SD	-0.06 SD					
Age gap		0.00 SD													
Residency gap		0.01 SD				-0.00 SD	-0.01 SD	-0.00 SD	-0.01 SD	-0.00 SD					

TABLE 22: SUMMARY OF RESULTS, INDIA

	PPVT					CDA					HAZ				
	All	Rural	Urban	Female	Male	All	Rural	Urban	Female	Male	All	Rural	Urban	Female	Male
<u>Income</u>															
Some income	0.16 SD	0.24 SD			0.31 SD										
All income													0.27 SD		
Wage earnings	0.19 SD	0.15 SD	0.33 SD	0.21 SD											
Land earnings															
<u>Other resources</u>															
Animals					-0.28 SD										
Some assets				0.38 SD					0.42 SD						
All assets															
<u>Parental differences</u>															
Education gap	-0.03 SD	-0.03 SD	-0.05 SD	-0.04 SD	-0.03 SD	-0.03 SD	-0.03 SD				-0.04 SD				
Age gap											-0.03 SD		0.03 SD		
Residency gap							0.00 SD								

**TABLE 23: SUMMARY OF RESULTS, VIETNAM**

	PPVT					CDA					HAZ				
	All	Rural	Urban	Female	Male	All	Rural	Urban	Female	Male	All	Rural	Urban	Female	Male
<u>Income</u>															
Some income			0.77 SD			0.32 SD	0.27 SD	0.92 SD	0.33 SD	0.28 SD				-0.22 SD	0.25 SD
All income	0.34 SD	0.31 SD	1.06 SD	0.39 SD		0.35 SD	0.32 SD	0.80 SD	0.47 SD						
<u>Other resources</u>															
Animals									-0.27 SD		0.13 SD		0.12 SD		0.23 SD
Some assets										0.31 SD					
All assets															
<u>Parental differences</u>															
Education gap	-0.02 SD				-0.04 SD						-0.02 SD	-0.02 SD			-0.02 SD
Age gap													0.01 SD		
Residency gap	-0.00 SD				-0.00 SD	-0.20 SD	-0.18 SD	-0.25 SD		-0.23 SD					



TABLE 22: SUMMARY OF RESULTS, PERU

	PPVT					CDA					HAZ				
	All	Rural	Urban	Female	Male	All	Rural	Urban	Female	Male	All	Rural	Urban	Female	Male
<u>Income</u>															
Wage earnings	0.11 SD			0.28 SD			0.26 SD		0.26 SD						
Land earnings	0.10 SD		0.09 SD			0.15 SD		0.24 SD	0.20 SD						-0.13 SD
<u>Other resources</u>															
Animals			0.20 SD												
Some assets		0.20 SD									0.22 SD	0.28 SD			0.32 SD
All assets															
<u>Parental differences</u>															
Education gap	-0.04 SD	-0.03 SD	-0.06 SD	-0.05 SD	-0.04 SD	-0.02 SD		-0.05 SD		-0.03 SD	-0.02 SD		-0.02 SD		-0.02 SD
Age gap															
Residency gap		-0.00 SD							0.00 SD	-0.01 SD					

## BIBLIOGRAPHY

Adhikari, Ramesh, and Yothin Sawangdee (2011). "Influence of women's autonomy on infant mortality in Nepal." *Reproductive health* 8, no. 7.

Allendorf, Keera (2007) "Do Women's Land Rights Promote Empowerment and Child Health in Nepal?". *World Development*, Elsevier, 35(11) : 1975-1988.

Barnett I., Ariana P., Petrou S. et al. (2012) Cohort Profile: The Young Lives Study. *International Journal of Epidemiology*: 1-8.

Beegle, K., Frankenberg, E. and Thomas, D. (2001), "Bargaining Power Within Couples and Use of Prenatal and Delivery Care in Indonesia". *Studies in Family Planning*, 32 (2) : 130-146.

Bhagowalia, P., Menon, P., Quisumbing, A., and Soundararajan, V. 2012. "What Dimensions of Women's Empowerment Matter Most for Child Malnutrition? Evidence Using Nationally Representative Data from Bangladesh." IFPRI Discussion Paper 01192. June 2012.

Behrman, Jere (1997). "Intrahousehold Distribution and the Family". In *Handbook of Family and Population Economics*, ed Mark Rosenzweig and Oded Stark, 125-187. Amsterdam: Elsevier Science.

Chiappori, P. (1992) "Collective labor supply and welfare," *Journal of Political Economy*, 100(3), 437-467.

Cueto, S., J. Leon, G. Guerrero and I. Munoz (2009) *Psychometric Characteristics of Cognitive Development and Achievement Instruments in Round 2 of Young Lives*, Technical Note 15, Oxford: Young Lives.

Doss, Cheryl (2013) "Intrahousehold Bargaining and Resource Allocation in Developing Countries " *World Bank Research Observer* 2013 28:1, 52-78.

Doss, Cheryl (2006) "The effects of intrahousehold property ownership on expenditure patterns in Ghana" *Journal of African Economies* 15(1): 149-180

Doss, Cheryl (1996) *Testing Among Models of Intrahousehold Resource Allocation*. *World Development* 24(10): 1597-1609.

Doss, Cheryl & Kim, Sung Mi & Njuki, Jemimah & Hillenbrand, Emily & Miruka, Maureen, 2014. "Women's individual and joint property ownership: Effects on household decisionmaking" IFPRI discussion papers 1347, International Food Policy Research Institute (IFPRI).

Doss, C., Deere, C., Oduro, A., Swaminathan, H., Suchitra J. Y., Lahoti, Rahul, Baah-Boateng, L. Boakye-Yiadom, Contreras, J., Twyman, J., Catanzarite, Z, Grown, C., and Marya Hillesland (2011). *The Gender Asset and Wealth Gaps: Evidence from Ecuador, Ghana, and Karnataka, India*. Indian Institute of Management, Bangalore. Bangalore, India.

Duflo, Esther (2003). "Grandmothers and Granddaughters: Old-Age Pensions and Intrahousehold Allocation in South Africa," *World Bank Economic Review*, Oxford University Press, vol. 17(1):1-25.

Duflo, Esther and Christopher Udry, (2004). "Intrahousehold Resource Allocation in Cote d'Ivoire: Social Norms, Separate Accounts and Consumption Choices," NBER Working Papers 10498, National Bureau of Economic Research, Inc.

Escobal, Javier and Flores, Eva (2008). "An assessment of the Young Lives sampling approach in Peru." YOUNG LIVES TECHNICAL NOTE NO. 3.

Marcel Fafchamps & Bereket Kebede & Agnes R. Quisumbing, 2009. "Intrahousehold Welfare in Rural Ethiopia," *Oxford Bulletin of Economics and Statistics*, Department of Economics, University of Oxford, vol. 71(4), pages 567-599, 08.

Gaiha, R., & Kulkarni, V. (2005). Anthropometric Failure and Persistence of Poverty in Rural India. *International Review of Applied Economics*, 19(2), 179-197.

Imai, Katsushi S. & Annim, Samuel Kobina & Kulkarni, Veena S. & Gaiha, Raghav, 2014. "Women's Empowerment and Prevalence of Stunted and Underweight Children in Rural India," *World Development*, Elsevier, vol. 62(C), pages 88-105.

Kiani, Adiq K. and Jere R. Behrman. 2013. "Mothers' Empowerment, Children's Inoculations and Schooling in Pakistan: Urban vs Rural Areas, Daughters vs Sons and 1998-99 vs 2007-08." GCC Working Paper Series, GCC 13-06.

Kishor, S. 2000. Empowerment of women in Egypt and links to the survival of their infants. In *Women's empowerment and demographic processes: Moving beyond Cairo*, ed. H. Presser and G. Sen. New York: Oxford University Press.

Kumar, Neha & Quisumbing, Agnes R., 2012. "Beyond "Death Do Us Part": The Long-Term Implications of Divorce Perceptions on Women's Well-Being and Child Schooling in Rural Ethiopia," *World Development*, Elsevier, vol. 40(12), pages 2478-2489.

Maitra, Pushkar, 2004. "Parental bargaining, health inputs and child mortality in India," *Journal of Health Economics*, Elsevier, vol. 23(2), pages 259-291, March.

Menon, Nidhiya & van der Meulen Rodgers, Yana & Nguyen, Huong, 2014. "Women's Land Rights and Children's Human Capital in Vietnam," *World Development*, Elsevier, vol. 54(C), pages 18-31.

Novella, Rafael (2013) "Parental education, gender preferences and child nutritional status: evidence from four developing countries," ISER Working Paper Series 2013-06, Institute for Social and Economic Research.

Lépine, Aurélie & Strobl, Eric, 2013. "The Effect of Women's Bargaining Power on Child Nutrition in Rural Senegal," *World Development*, Elsevier, vol. 45(C), pages 17-30.

Lixing Li & Xiaoyu Wu, (2011). "Gender of Children, Bargaining Power, and Intrahousehold Resource Allocation in China," *Journal of Human Resources*, University of Wisconsin Press, vol. 46(2), pages 295-316.

Qian, Nancy, (2008). "Missing Women and the Price of Tea in China: The Effect of Sex-Specific Earnings on Sex Imbalance," *The Quarterly Journal of Economics*, 123( 3): 1251-1285.

Quisumbing, Agnes R., (1994). "Intergenerational transfers in Philippine rice villages: Gender differences in traditional inheritance customs," *Journal of Development Economics*, 43(2), 167-195.

Quisumbing, M.A.R. (Ed.), 2003. *Household decisions, gender, and development: a synthesis of recent research*. International Food Policy Research Institute ; Distributed by the Johns Hopkins University Press, Washington, D.C. : [Baltimore, Md.].

Quisumbing, A. R. and Maluccio, J. A. (2003), *Resources at Marriage and Intrahousehold Allocation: Evidence from Bangladesh, Ethiopia, Indonesia, and South Africa*. *Oxford Bulletin of Economics and Statistics*, 65: 283-327.

Quy-Toan Do and Lakshmi Iyer, (2008). "Land Titling and Rural Transition in Vietnam," *Economic Development and Cultural Change*, University of Chicago Press, vol. 56, pages 531-579.

Reggio Iliana (2011) "The influence of the Mother's Power on their Child's Labor in Mexico". *Journal of Development Economics* 96(1) 95-105.

Whitney B. Schott, Benjamin T. Crookston, Elizabeth A. Lundeen, Aryeh D. Stein, Jere R. Behrman, the Young Lives Determinants and Consequences of Child Growth Project Team (2008) *Periods of child growth up to age 8 years in Ethiopia, India, Peru and Vietnam: Key distal household and community factors*, *Social Science & Medicine*, Volume 97, November, Pages 278-287.

Smith, L.C., Ramakrishnan, U., Ndiaye, A., Haddad, L., & Martorell, R. (2003). "The Importance of Women's Status for Child Nutrition in Developing Countries." *International Food Policy Research Institute. Research Report 1313*: 1-174.

Thomas, Duncan (1990). "Intra-Household Resource Allocation: An Inferential Approach." *The Journal of Human Resources*, 25(4): 635-664.

WHO Multicentre Growth Reference Study Group (2006). *WHO Child Growth Standards based on length/height, weight and age*. *Acta Paediatrica Supplement*, 450: 76-85.