The Impact of Gender on the Intrahousehold Allocations of Remittances of Filipino Migrant Workers

WORKING PAPER

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Abstract

This paper adds to the intrahousehold allocation literature by incorporating migration and remittances using datasets from the Philippines. I examine whether the individual's bargaining power within the household affects how remittances are allocated or spent. I use gender of household head as a proxy for bargaining power. Female heads of households allocate remittances more on food and other expenditures, and less on medical goods, alcohol and tobacco, and household operations than their male counterparts. The results on food and alcohol and tobacco expenditure shares are consistent with the general findings of empirical tests on income pooling and the unitary model.

1. Introduction

Much of the recent literature on resource allocation within the household has been devoted to testing and rejecting the "unitary" model: the traditional view that individuals in a household either share the same preferences or a dictator decides on intrahousehold resource allocations. A testable implication of the unitary model is that household members pool their resources so that the identity of the income earner is irrelevant in allocating resources. The general findings of recent studies show that the individual's relative bargaining power within the household affects the intrahousehold allocation outcome. The higher the relative sources controlled by women, the higher the expenditure shares allocated to food and children's clothing and education, and the lower the shares for alcohol and cigarettes (Hoddinott and Haddad, 1995; Quisumbing and de la Briere, 2000; Quisumbing and Maluccio, 2003; Rubalcava *et al.*, 2004). In addition, resources in the hands of women improve the health status of children and have greater effects on the family's health (Thomas, 1990, 1994; Duflo, 2003).

These results have important policy implications and they affect the efficacy of public transfers. For example, in Mexico, since 1997, the government has provided cash and in-kind benefits to poor households in rural areas through the *Programa Nacional de Educación, Salud y Alimentación* (PROGRESA), which is a major government anti-poverty strategy. The aim is to transfer income to alleviate future levels of poverty by encouraging investments in education, health, and nutrition (Skoufias and McClafferty, 2001). The monetary and in-kind benefits are

transferred directly to mothers due to research findings that resources controlled by women tend to improve child health and nutrition (Adato *et al*., 2000).

This paper adds to the intrahousehold allocation literature by incorporating migration and remittances into the research using datasets from the Philippines. The primary goal of this study is to examine whether the individual's bargaining power within the household, *ceteris paribus*, affects how remittances are allocated or spent. I use gender of household head as a proxy for bargaining power and analyze whether male-headed households have different expenditure patterns than female-headed households.

The goal of this paper is significant in two ways. First, migration and remittances are relevant in intrahousehold allocation, and so it is important to develop ways to incorporate them into this area of study. Migration may affect the power structure in the household; women working abroad may gain bargaining power over the allocation of household resources due to an increase in their income. On the other hand, *de facto* female household heads whose husbands are working abroad might have more say about the actual allocation of resources since their spouses have limited ability to monitor the allocation. Depending on who has the bargaining power, the remittances may be spent and allocated differently, and the allocation of remittances may affect the welfare of the household members. Second, it is fitting to analyze intrahousehold allocations in the Philippines in the context of migration and remittances considering the number of Filipino migrant workers abroad and the role remittances play in the country. In 2008, approximately two million Overseas Filipino Workers (OFWs) were abroad (about 2% of the

total population in the Philippines); about 52% were male and 49% female (Survey on Overseas Filipinos, 2008). Most of the OFWs (20%) worked in Saudi Arabia; about 14% worked in Arab Emirates, Singapore, Hong Kong, Japan, Qatar, and Taiwan; 9% in Europe; and 8% in North and South America. One out of three OFWs were laborers and unskilled workers, which include domestic helpers, cleaners, and manufacturing laborers. The remittances that these OFWs send to their origin households in the Philippines are an important source of income for the households and for the economy as a whole. On average, remittances are about 58% of the total household income of remittance-receiving households (Annual Poverty Indicator Survey, 2008). They also totaled approximately 15 billion US dollars in 2008, which made these cash transfers the second largest source of foreign exchange in the Philippines, next to exports of goods and services (Central Bank of the Philippines, 2008). Given the importance of remittances, how these are spent and allocated by the households not only affects the welfare of households in the Philippines but also impacts the Philippine economy.

My research extends an earlier World Bank study by Guzman *et al*. (2008), which shows that gender of the household head had differential effects on how remittances were spent within the households of Ghana. They found that remittances affect expenditure shares in female-headed households but not in male-headed households. Contrary to common results of tests on intrahousehold allocation of resources, expenditure share on education was unaffected by increase in remittances in female-headed households. In my research, I use the actual cash remittance in analyzing the impact of bargaining power on the uses of remittances. I also distinguish between households with husband and wife present and households with a spouse

working abroad. This is to account for the possibility that the presence or absence of a spouse affects the allocation of resources. Analyzing households with husband and wife also controls for the consumption of the spouse.

A gender differential exists in how remittances are spent in the Philippine household after using gender of household head as a proxy for relative bargaining power of an individual. Female heads of households spend more on food, and less on medical goods, alcohol and tobacco, and household operations than their male counterparts. The results on food and alcohol and tobacco expenditure shares are consistent with the general findings of empirical tests on income pooling (Hoddinott and Haddad, 1995).

2. Intrahousehold Allocation

This paper draws on the voluminous literature on intrahousehold allocation and remittances to determine how the gender of the household head in the Philippines affects the allocation of remittances.

2.1 Gender Differentials and Intrahousehold Allocation in the Philippines

Households in the Philippines are interesting to analyze because some scholars view that wife and husband have equal control over resources (Israel-Sobritchea, 1994; Illo, 1995; Jefremovas, 2000). Eder (2006) contends that even if Filipino households are relatively

egalitarian compared to other societies, women are still disadvantaged at different levels when compared to Filipino men. Although the custom is for husbands to hand their wages over to their wives, which may suggest that women have control over resources, caveats exist. For example, women's access to economic assets is indirect, which limits their role in the allocation of resources (Eviota, 1986). In addition, in poor households, women have small amounts of money to allocate, which limits their economic planning decisions. Not only do women have indirect access to economic assets and limited power in allocating resources, they are also unable to refuse requests from husbands for money to drink or gamble (Chant and McIlwain, 1995).

The limited role of women in allocating resources, partly driven by their limited bargaining power, affects the welfare of household members since women allocate differently than men and they are more concerned with the welfare of the children. For example, Senauer *et al.* (1988) studied how the opportunity costs of husband and wife can influence intrahousehold allocation of food in rural Philippines. They estimated the equation using joint household utility function and a bargaining model. The estimated wage rate of the mother and wife is positively correlated with the relative calories allocated to both herself and her children and negatively correlated with those allocated to the husband. Inversely, an increase in the wage rate of the husband and father increases his own and his wife's allocation but decreases the children's.

In addition to the gender differential in intrahousehold allocation outcome, research also shows that gender bias exists in the Philippines. Estudillo *et al.* (2001) showed that there are gender preferences in allocation of land and investment in schooling for children in rural

Philippines. Better-educated fathers tend to invest in their sons' schooling while land-owning mothers prefer to bestow land on their daughters.

In light of gender differentials in resource allocation and the impact of relative bargaining power in intrahousehold allocation, it is important to incorporate migration and remittances into this research. I will explain below how migration may alter the relative bargaining power of an individual and eventually affect the expenditure pattern of the household. Studies of intrahousehold allocation in the Philippines exist but research in the context of migration and remittances in the Philippines is still to be explored. This paper aims to fill this gap in the literature.

2.2 Intrahousehold Allocation, Migration, and Remittances

Migration may affect the intrahousehold allocation of resources. This may be because a shift in bargaining power occurs as a household member migrates; for example, when a husband migrates, a wife gains relatively more control over resources as *de facto* household head. The change in allocation depends on the asymmetric preferences of men and women. Chen (2006) analyzed how migration may affect intrahousehold allocation in China in the presence of imperfect monitoring. Migration of fathers resulted in a decrease in mothers' household labor hours and an increase in children's household labor hours. The increase in labor of children was compensated by an increase in their nutritional intake. Consistent with the non-cooperative

model, mothers resorted to non-cooperation and increased consumption of the goods that they preferred if these were difficult to monitor (such as a mother's leisure).

Given that migration potentially affects the power structure within the household, some authors have explored how remittances are affected by relative bargaining power of individuals in the household. Guzman *et al*. (2008) used Ghana data and examined how gender of the household head, which served as proxy for decision-making power, affected how remittances are spent. To control for the ability of the migrant to monitor the intended use of remittances, the authors controlled for the relationship of the migrant to the household head and the destination of the migrant (whether inside Ghana or outside). While international remittances decreased the expenditure share for food and increased the expenditure shares for consumer and durable goods, housing, health, utilities, and transport in female-headed households, the share spent on education was unaffected. In male-headed households, remittances had no effect on any expenditure categories. Malone (2007) analyzed how the impact of remittances on children's education depended on the revealed preference of mothers, the *de facto* household heads. The study shows that asymmetric preferences exist and the allocation of remittances differs depending on the gender of the receiver.

The goal of this paper is similar to the aims of Guzman *et al.* (2008). I build on their study and use Philippine datasets, consider the actual remittances received, and include education of household head as an additional measure of bargaining power. I compare the allocation of

remittances in households where the female has more bargaining power to that in households where the female has relatively less bargaining power.

3. Models of Household Behavior

3.1 Unitary Model of Intrahousehold Allocation

The traditional economic model of intrahousehold allocation, referred to as the unitary model, views the household as a single unit that aggregates the preferences of all its members and maximizes a single welfare function. This model is also referred to as the "common preference model," the "unified preference model," and the "neoclassical model" in the literature (Strauss *et al*., 2000). In this model, a household pools its resources so that although the source of income matters, the distribution of income among its members is irrelevant. The household demand for goods is only influenced by total household income and is unaffected by individual income. The process of aggregating preferences is unclear. It could be that preferences are homogenous among all members across all goods, or that a member monitors and enforces allocations if preferences vary. In this sense, a household decision is like a black box (Strauss *et al.*, 2000).

Empirical tests do little to support the unitary model (Thomas, 1990, 1994; Pezzin and Schone, 1997; Quisumbing and de la Briere, 2000; and Quisumbing and Maluccio, 2003, to cite a few). Several authors have rejected income pooling. In Brazil, unearned income in the hands

of a mother has a larger effect on her family's health and child survival probabilities than income under the control of a father (Thomas, 1990). In addition, gender preferences exist: mothers prefer to allocate resources to improve the health status of daughters, fathers prefer sons. Similar results were found using Ghana and United States data: differences in the allocation of household resources by gender of the child vary with the gender of the parents (Thomas, 1994). Gender differences in resource reallocation may be attributable to differences in the preferences of parents whose relative education and non-labor income were used as indicators of power in household allocation decisions. In South Africa, Duflo (2003) found that pensions received by women affected the nutritional status of children while no effect was observed for pensions received by men. Pensions of women had a large effect on the anthropomorphic status (weight-for-height and height-for-age) of girls but little effect on boys.

3.2 "Collective Models" of Intrahousehold Allocation

Empirical and theoretical concerns over the unitary model prompted economists to create a new set of models, referred to as "collective models" (Chiappori, 1992, 1997; Browning *et al*., 1994; Browning and Chiappori, 1998; Basu, 2001; Koolwal and Ray, 2002; Maitra and Ray, 2003). These models only require Pareto-efficiency outcomes of resource allocation; no *a priori* assumption on the decision process is made, which allows for heterogeneity in preferences.[1]

[1] That is, equal marginal rate of substitution across household members between any two commodities.

The role of relative "bargaining power" of members is important in determining how resources are allocated. These models can be subdivided into those that depend on cooperative solutions to bargaining among individuals and those that are rooted in noncooperative game theory. In the cooperative models, individuals form a household when the benefits of doing so outweigh the advantages of remaining single (Haddad *et al*., 1997; Quisumbing, 2003). Household formation generates a surplus that is distributed among the members. The unitary model is a special case of the cooperative set of models where preferences are identical and individuals pool their resources.

Whereas the acceptance of the unitary model implies acceptance of collective models, the rejection of the unitary model does not support the alternative model (Bourguignon *et al.*, 1993; Chiappori, 1997; Quisumbing and Maluccio, 2003). Testing whether Philippine households follow the collective model approach of intrahousehold allocation (conditional on rejecting the unitary model) is beyond the scope of this paper and is reserved for future research.

4. Theoretical Model

The model that I use here follows the "collective approach" used by Browning and Chiappori (1998) and Quisumbing and Maluccio (2003). Suppose a household consists of two individuals, a man (*m*) and a woman (*w*), who have altruistic preferences. Each member cares about the allocation of the other, such that an increase in the private consumption of one member

increases the welfare of the other. If the household behavior is Pareto-efficient, it will maximize the weighted sum of each member's utility subject to the budget constraint.

$$\text{Max } \mu U_m(x_m, x_w; \gamma) + (1-\mu) U_w(x_m, x_w; \gamma) \quad (1)$$

subject to:

$$p \cdot (x_m + x_w) = Y + R$$

The individual utility function U_j, with $j = m, w$, is a function of both members' private consumptions (x_j) and household characteristics (γ). Total household income net of remittances is Y, total household remittances received is R, and p represents a vector of prices for private goods x. The variable μ represents the welfare weight of members in household allocations; it lies between 0 and 1. When the utility functions for both members are identical (common preference) or when μ is equal to 0 or 1, suggesting dictatorship, equation (1) collapses into the unitary model that is a special case of the more general model.

The utility maximization yields a conditional demand function for good i, which is dependent on prices, pooled income, remittances, individual weight, and household characteristics:

$$x_i = x_i(p; Y; R; \mu; \gamma) \quad (2)$$

Equation (2) can be interpreted through a two-stage decision process (Strauss *et al.*, 2000; Quisumbing and Maluccio, 2003). In the first stage, members pool their resources and allocate

resources to each individual according to some household sharing rule, μ. The relative bargaining power of an individual within the household could be related to a household sharing rule; the one with relatively more bargaining power could get a greater share of the household resources. In the second stage, each person maximizes his or her individual sub-utility subject to the income allocated to him or her. The more power an individual has, the more resources are allocated to him or her.

If b_m and b_w are used as proxies for the individual's relative bargaining power then, ignoring prices, the conditional demand will take the form:

$$x_i = x_i(Y; R; \mu(b_m, b_w); \gamma) \qquad (3)$$

A key feature of the conditional demand function above is that the individual welfare weight or sharing rule, μ, is not constant. It is dependent on the individual's relative bargaining power within the household proxied by b_m, b_w. Different researchers have used different proxies to measure bargaining power. Some authors have measured it using non-labor income (Thomas, 1994), others have used assets at marriage, such as inherited land (Quisumbing and Maluccio, 2003), while still others have considered decision-making within the household (Frankenberg and Thomas, 2001).

Differentiating equation (3) with respect to the relative bargaining power of the individual, holding everything else constant, will yield a testable implication of the unitary approach, that income is pooled across household members:

$$\partial x_i / \partial b_j = 0 \quad \text{with } j = m,w. \tag{4}$$

The impact of relative bargaining power (b_j) on demand for good *i* can be considered as the effect of changing the share (μ) of household income allocated to each individual (Quisumbing and Maluccio, 2003). Income pooling under the unitary approach implies that, after controlling for household resources, the share of income or resources controlled by an individual member will not influence the structure of consumption or allocations of resources within the household (Strauss *et al.*, 2000). The identity of the income earner or the one who controls the household resources is irrelevant; the effect of individual bargaining power on demand for commodity *i* should be zero.

5. Effects of Bargaining Power on Intrahousehold Allocation of Remittances

In this paper, I examine whether individual bargaining power affects how remittances received from migrant members are allocated and spent. Under income pooling, relative bargaining power is irrelevant in the intrahousehold allocation of remittances.

Several authors have stressed the importance of exogenous measures of bargaining power, such as wealth or assets brought into a marriage (Quisumbing and Maluccio, 2003). Other researchers have worked on changes that affect the distribution of power, plausibly exogenous to the power, such as changes in divorce laws or benefit programs targeted at one member of the couple (Rubalcava *et al.*, 2004). However, these are not available in the national

representative dataset – Annual Poverty Indicator Survey (APIS) – that I am analyzing. I use gender of household head as proxy for bargaining power of an individual. In the Philippines, APIS defines a household head as the one who manages the finances of the family; in this sense, headship may signal bargaining power.

5.1 Empirical Model

To verify whether bargaining power matters in how Philippine households allocate the remittances they receive from migrant members abroad, I examine how female-headed households and male-headed households respond to increase in remittances. I use the following household level expenditure function, derived from equation (3), to analyze how expenditure shares on food, education, medical goods, alcohol and tobacco, household operations, clothing, and other goods respond to remittances in male- and female-headed households:

$$c_{ijh} = \beta_{0ij} + \beta_{1ij} r_{jh} + \beta_{2ij} X_{jh} + u_{ijh} \qquad (5)$$

where c_{ijh} is the expenditure share on the *i*th good of household *h* with *j* as the gender of household head (male, *m* or female, *f*); r_h are remittances received by household *h*; and X_h is a vector of household characteristics that affect allocation of resources, which includes a natural logarithm of total expenditure per capita and its square (which serve as proxy for total income of household), household size, age of household head, educational attainment of household head,

the proportion of demographic groups in the household, and location dummies; and u_h is the error term. I include square of per capita expenditure so that any observed differences in the effects of gender cannot be attributed to nonlinearities in the Engle Curve (Thomas and Chen, 1994).

Under the unitary model in a static framework, gender of the household head, which serves as proxy for bargaining power, should not affect how remittances are allocated once income effects are controlled for. However, in a dynamic framework, the effects of male and female bargaining power need not necessarily be zero (Strauss and Beegle, 1996; Quisumbing and Maluccio, 2003). Following Quisumbing and Maluccio (2003), I examine whether male and female household heads allocate remittances differently, that is, $\beta_{1im} = \beta_{1if}$ (but not necessarily equal to 0). To formally test whether a gender differential exists in allocating remittances, I pool the datasets, add an interaction term to reflect the different responses of male- and female-headed households, and test the following expenditure function:

$$c_{ih} = \beta_{0i} + \beta_{1i} r_h + \beta_{2i} f_h + \beta_{3i} r_h * f_h + \beta_{4i} X_h + u_{ih} \qquad (6)$$

where f_h is a dummy variable for female household head; $r_h * f_h$ captures the importance of gender of household head in allocating remittances; and the rest of the variables are the same as in equation (5). If income pooling holds then the relative bargaining power (gender of the household head) should not affect how remittances are allocated. The null hypothesis to be tested is $\beta_{3i} = 0$, which essentially tests $\beta_{1im} = \beta_{1if}$.

5.2 Descriptive Analysis

I use the 2008 Annual Poverty Indicators Survey (APIS), which is the latest national-representative household dataset available in the Philippines as of this writing. This survey, which was conducted by the National Statistics Office (NSO) as a rider to the July 2008 Labor Force Survey (LFS), provides socio-economic information on Philippine households. I analyze two sets of data: households that have both husband and wife present (3,088 observations) and households where a spouse is not present (1,235 observations). The presence of a spouse may affect how resources are allocated; as noted in the literature, even though women control the resources, husbands can still request money for alcohol and tobacco (Chant and McIlwain, 1995). In addition, a spouse who is not present may have less or no bargaining power because of imperfect monitoring and moral hazard.

Table 2 shows that almost all of the households with both husband and wife present are headed by men (98%). On the other hand, households with a missing spouse are mostly headed by women (65%), which suggests that they are *de facto* heads whose husbands are working somewhere else. These households have lower incomes but they receive more remittances (about 54,000 pesos more), on average, than the other set of households. More than half of the heads whose spouses are not present (52%) are college-educated, compared to only 32% of the heads in which both husband and wife are present. The household heads whose spouse is not present are younger, on average, and their households have a larger proportion of children under the age of 15. This explains why they spend more on education, at 7% of the total household

expenditure, while the other group of households spends 5% on education (Table 1). The households mostly headed by men spend more on alcohol and tobacco, 1% more, on average, than the other households. They also spend more on medical goods and food.

6. Results of Expenditure Regression

6.1 Households with Spouse of Household Head Not Present

I test equation (5) separating male and female households and including only gender of household head as measure of bargaining power. Table 3 displays the complete regression results for households where a spouse is missing. I use fractional logit given that the dependent variables are shares of total household expenditures with values ranging from 0 to 1. The results show that, after controlling for income effects, the interaction term that captures the gender differential in the allocation and uses of remittances (*remittance*male*) is statistically significant at the 1% level in the medical expenditure share regression. The marginal effects suggest that male-headed households spend about 6.5% more on medical goods than female-headed households.

The same interaction term is marginally significant in the alcohol and tobacco expenditure share equation. Male-headed households spend about 8.8% more on alcohol and tobacco than female-headed households. In the same regression, college-educated household heads spend less on these goods.

6.2 Households with Husband and Wife Present

Table 4 shows that for households where husband and wife are present, the interaction term (*remittance*female*) is statistically significant in the medical, house operations, and other expenditures regression. This implies that gender differences in the allocation of remittances in these goods exist. However, the marginal effects show that the gender differential is small (less than 1%) in these regressions.

Consistent with the result in the previous regression, male-headed households spend more on medical goods, about 0.3% more than female-headed households. Female-headed households, on the other hand, spend less on house operations goods (0.3%) and more on other categories of goods (0.1%). The interaction term is marginally significant in the food expenditure share regression. Female-headed households spend about 0.02% more than male-headed households. In this regression, as the proportion of children (aged 15 and below) increases, the higher the share on food expenditures.

The regression results using two datasets (with and without spouse) are consistent with the findings of Hoddinott and Haddad, 1995: if women have relatively more bargaining power, which I proxy with gender of the household head, then the expenditure share on food increases while the budget share of alcohol and tobacco decreases. As to the higher expenditure share on medical goods in male-headed households, I can conjecture that female heads spend more to improve the health and nutrition of the family. If this is the case, there is less need to visit the

hospital or spend on medicines, which are part of medical expenditures. The lower expenditure share on household operations by female-headed households may suggest that they do not need to spend as much to keep the house in good condition.

Philippine households behave differently in terms of intra-household allocation of remittances, depending on who has control over resources. In the context of remittances, the relative bargaining power of an individual affects how resources (remittances) are allocated or used.

7. Conclusion

The primary goal of this paper is to test whether bargaining power affects how remittances are spent. This paper contributes to the literature on intrahousehold allocation by incorporating the importance of Filipino migrant workers and the remittances that they send to their origin households in the Philippines into the study. I extend the previous World Bank study of Guzman *et al*. (2008), which analyzes how the gender of the household head, as a measure of bargaining power of an individual, and characteristics of migrants affect the uses of remittances. I use the actual cash transfers sent and separate the analysis between the households where a spouse is missing and the households where both husband and wife are present. This controls for the possibility that the allocation decisions of the household head are influenced by the presence or absence of the spouse. On one hand, if the husband is working abroad, the wife as the *de facto* household head has control over allocation of resources. On the other hand, if the wife

migrated and is earning more, she may have more bargaining power due to increased income. In addition, analyzing households where both husband and wife are present eliminates the bias that may result if the spouse's consumption is not controlled for.

It is important to know how remittances contribute to the consumption and welfare of household members given that remittances are a major source of income for Philippine households: the average remittances that a Philippine household receives are about 58% of the total household income. In addition, how remittances are spent by Philippine households has macroecomic implications, given that these cash transfers serve as the second major source of foreign currency after exports.

The relative bargaining power of an individual, proxied by gender of the household head, affects how remittances are spent. Controlling for income effects, households with female heads spend less on medical goods, alcohol and tobacco, and household operations, and more on food and other expenditures than their male counterparts when remittances increase. The results on medical and food expenditure shares support the general results of empirical studies that test the unitary model of intrahousehold allocation.

As important as it is to know that bargaining power affects how remittances are spent in a household, it is equally relevant to understand why. Higher expenditures on alcohol and tobacco in male-headed households support common findings that men spend more on these consumer goods than on other expenditure types (Hoddinott and Haddad, 1995). The increased expenditures on medical goods should be interpreted with caution. It is possible that male-

headed households have relatively more members with illnesses than female-headed households. Control variables for illnesses and percentage of ill people in the household are unaccounted for in this paper due to data limitations.

This research is a work in progress; I am working on addressing the possible bias in the estimated coefficient of remittances due to endogeneity of remittances and headship. The endogeneity of remittances may be due to omitted variable bias or reverse causation. I am also analyzing rainfall shocks as a possible instrumental variable for remittances. Other measure of bargaining power is being considered, such as educational attainment of husband and wife. An exogenous measure of bargaining power such as assets before marriage (land holdings) is preferable; however, land holdings and other assets before marriage (at the individual level) are unavailable at a national-representative level of data at this time. I am also examining the effects of remittances on children's health outcomes based on the relative bargaining power of an individual.

References

Adato, M., de la Briere, B., Mindek, D., and Quisumbing, A.R. (2000). The Impact of PROGRESA on Women's Status and Intrahousehold Relations. Final Report. International Food Policy Research Institute, Washington, D.C.

Basu, K. (2001). Gender and Say: A Model of Household Behavior with Endogenously-determined Balance of Power. Unpublished ms., Department of Economics, Cornell University, Ithaca, NY.

Bourguignon, F., Browning, M., Chiappori P.A., and Lechene, V. (1993). "Intra Household Allocation of Consumption: A Model and Some Evidence from French Data." Annales d'Economie et de Statistique **29**:137-156.

Browning, M., Bourguignon, F., Chiappori P.A., and Lechene, V. (1994). "Income and Outcomes: A Structural Model of Intrahousehold Allocation." Journal of Political Economy **102**(6): 1067-1096.

Browning, M., and Chiappori, P.A. (1998). "Efficient Intrahousehold Allocations: A General Characterization and Empirical Tests." Econometrica **66**(6): 1241-1278.

Chant, S.H., and McIlwain, C. (1995). Women of a Lesser Cost: Female Labour, Foreign Exchange, and Philippine Development. City: Pluto Press.

Chen, J.J. (2006). "Migration and Imperfect Monitoring: Implications for Intrahousehold Allocation." American Economic Review **96**(2): 227-231.

Chiappori, P.A. (1992). "Collective Labor Supply and Welfare." Journal of Political Economy **100**(3): 437-467.

Chiappori, P.A. (1997). Collective Models of Household Behavior: The Sharing Rule Approach. In Haddad, L., Hoddinott, J., and Alderman, H. (Eds.), Intrahousehold Resource Allocation in Developing Countries: Models, Methods, and Policy. Baltimore and London: The Johns Hopkins University Press.

De, P., and Ratha, D. (2005). "Remittance Income and Household Welfare: Evidence from Sri Lanka Integrated Household Survey." Unpublished ms., World Bank, Washington, D.C.

Duflo, E. (2003). "Grandmothers and Granddaughters: Old Age Pension and Intrahousehold Allocation in South Africa." World Bank Economic Review **17**(1).

Eder, J. (2006). "Gender Relations and Household Economic Planning in the Rural Philippines." Journal of Southeast Asian Studies **37**(3): 397-413.

Estudillo, J.P., Quisumbing, A.R., and Osuka, K. (2001). "Gender Differences in Land Inheritance and Schooling Investments in the Rural Philippines." Land Economics **77**(1): 130-143.

Eviota, E. (1986). The Articulation of Gender and Class in the Philippines. In Leacock, E. and Sala, H. (Eds.), Women's Work. Westport: Bergin and Garvey.

Frankenberg, E., and Thomas, D. (2001). Measuring Power. Food Consumption and Nutrition Division Discussion Paper 113. International Food Policy Research Institute, Washington, D.C.

Guzman, J.C., Morrison, A.R., and Sjöblom, M. (2008). The Impact of Remittances and Gender on Household Expenditure Patterns: Evidence from Ghana. In Morrison, A.R., Schiff, M., and Sjöblom, M. (Eds.), The International Migration of Women. Palgrave Macmillan.

Haddad, L., Hoddinott, J., and Alderman, H., eds. (1997). Intrahousehold Resource Allocation in Developing Countries: Models, Methods, and Policy. Baltimore, MD: Johns Hopkins University Press for the International Food Policy Research Institute.

Hoddinott, J., and Haddad, L. (1995). "Does Female Income Share Influence Household Expenditures? Evidence from Cote d'Ivoire." Oxford Bulletin of Economics and Statistics **57**(1): 77-96.

Illo, J. (1995). Who Heads the Households in the Philippines? In Torres, A.T. (Ed.), The Filipino Woman in Focus: A Book of Readings. Quezon City: Ateneo de Manila University Press.

Israel-Sobritchea, C. (1994). Gender Roles and Economic Change in a Fishing Community in Central Visayas. In Ushijima, I. and Zayas, C.N. (Eds.), Fishers of the Visayas, . Quezon City: College of Social Sciences and Philosophy, University of the Philippines.

Jefremovas, V. (2000). Women are Good with Money: The Impact of Cash Cropping on Class Relations and Gender Ideology in Northern Luzon, Philippines. In Spring, A. (Ed.), Women Farmers and Commercial Ventures: Increasing Food Security in Developing Countries. Boulder: Lynn Rienner.

Koolwal, G., and Ray, R. (2002). Estimating the Endogenously Determined Intrahousehold Balance of Power and Its Impact on Expenditure Patter: Evidence from Nepal. Unpublished ms., Department of Economics, Cornell University, Ithaca, NY.

Maitra, P., and Ray, R. (2003). On a New Test of Collective Household Model: Evidence from Australia. Unpublished ms., Department of Economics, Monash University, Clayton, Australia.

Malone, L. (2007). Migrants' Remittances and Investments in Children's Human Capital: The Role of Asymmetric Preferences in Mexico. UC Santa Cruz: Center for Global, International and Regional Studies. Retrieved from: http://www.escholarship.org/uc/item/23n6s2p3

Pezzin L.E., and Schone, B.S. (1997). "The Allocation of Resources in Intergenerational Households: Adult Children and Their Elderly Parents." American Economic Review **87**(2): 460-464.

Quisumbing, A.R., ed. (2003). Household Decisions, Gender, and Development: A Synthesis of Recent Research. Baltimore, MD: John Hopkins University Press for International Food Policy Research Institute.

Quisumbing, A.R., and de la Briere, B. (2000). Women's Assets and Intrahousehold Allocation in Rural Bangladesh: Testing Measures of Bargaining Power. Food Consumption and Nutrition Division Discussion Paper 86. International Food Policy Research Institute, Washington, D.C.

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**(3): 283-327.

Rubalcava, L., Teruel, G., and Thomas, D. (2004). Spending, Saving and Public Transfers Paid to Women. UC Los Angeles: California Center for Population Research. Retrieved from: http://www.escholarship.org/uc/item/95m9f476

Senauer, B., Garcia, M., and Jacinto, E. (1988). "Determinants of the Intrahousehold Allocation of Food in the Rural Philippines." American Agricultural Economics Association **70**(1): 170-180.

Skoufias, E., and McClafferty, B. (2001). Is PROGRESA Working? Summary of the Results of an Evaluation by IFPRI. Food Consumption and Nutrition Division Discussion Paper 118. International Food Policy Research Institute, Washington, D.C.

Strauss, J., and Beegle, K. (1996). Intrahousehold Allocations: A Review of Theories, Empirical Evidence and Policy Issues. Michigan State University International Development Working Paper 62. Retrieved from: http://purl.umn.edu/54688

Strauss, J., Mwabu, G., and Beegle, K. (2000). "Intrahousehold Allocations: A Review of Theories and Empirical Evidence." Journal of African Economies **9**(AERC Supplement 1): 83-143.

Thomas, D. (1990). "Intrahousehold Resource Allocation: An Inferential Approach." Journal of Human Resources **25**(4): 635-664.

Thomas, D. (1994). "Like Father, Like Son; Like Mother, Like Daughter: Parental Resources and Child Height." Journal of Human Resources **29**(4, Special Issue: The Family and Intergenerational Relations): 950-988.

Thomas, D., and Chen, C.L. (1994). "Income Shares and Shares of Income." Labor and Population Working Paper 94-08. RAND Corporation, Santa Monica, CA.

Table 1: Description, Mean and Std. Deviation of the Dependent Variables

Dependent Variables	Description	*Spouse Missing*	*Husband and Wife Present*
Food	Share of food expenditures to total household expenditures	0.45	0.49
Education	Share of education fees, allowances, books, and school supplies to total household expenditures	0.07	0.05
Clothing	Share of expenditures on clothing, footwear, and accessories to total household expenditures	0.06	0.05
Medical	Share of expenditures on drugs, medicines, hospital room charges, medical and dental charges, herbal medicines, etc. to total household expenditures	0.02	0.04
Household Operations	Share of expenditures on laundry soap, cleanser, air freshener, fluorescent, etc. to total household expenditures	0.02	0.02
Alcohol and Tobacco	Share of expenditures on alcoholic beverages and tobacco to total household expenditures	0.01	0.02
Other Expenditures	Share of expenditures on utilities, transportation, communication, materials for personal care, recreation, house maintenance, and miscellaneous expenditures to total household expenditures	0.37	0.34
Total Household Expenditures		124,092	109,714
No. of obs.		***1,235***	***3,088***

Table 2: Description, Mean, and Standard Deviation of the Independent Variables

Independent Variables	Description	*Spouse Missing*	*Husband and Wife Present*
Household Income	Total household income net of remittances in 6 months	59,324	86,617
Remittances	Total household remittances received from migrant members in 6 months	89,056	35,269
Male	=1 if gender of household head is male	0.35	0.98
Per Capita Expenditures	Total household expenditure per capita in 6 months	36,107	24,088
Household Size	Total number of individuals in the household	3.9	5.1
Age of Head	Age of household head	43	52
Educational attainment of household head			
Elementary and less	=1 if educational attainment of household head is elementary or less, or no grade completed	0.13	0.33
High school	=1 if educational attainment of household head is high school	0.35	0.36
College	=1 if household head is at least college-educated	0.52	0.32
Household composition shares			
Female 0-5 years	Proportion of female household members aged 0-5	0.06	0.05
Female 6-15 years	Proportion of female household members aged 6-15	0.14	0.10
Female 16-65 years	Proportion of female household members aged 16-65	0.31	0.31
Female 66 and above	Proportion of female household members aged 66 and above	0.02	0.04
Male 0-5 years	Proportion of male household members aged 0-5	0.06	0.05
Male 6-15 years	Proportion of male household members aged 6-15	0.16	0.10
Male 16-65 years	Proportion of male household members aged 16-65	0.24	0.30
Male 66 and above	Proportion of male household members aged 66 and above	0.01	0.05
No. of obs.		***1,235***	***3,088***

Table 3: Effect of Gender of Household Head on Uses of Remittances (Spouse Missing)

	Food		**Education**		**Clothing**		**Medical**	
	GLM	$\partial E(y\|x)$ / ∂x_j	GLM	$\partial E(y\|x)$ / ∂x_j	GLM	$\partial E(y\|x)$ / ∂x_j	GLM	$\partial E(y\|x)$ / ∂x_j
Remittance*Male [a/]	-0.040	-0.005	-0.070	-0.013	0.048	0.009	0.327***	0.065
	(0.030)		(0.109)		(0.043)		(0.118)	
Remittance [b/]	0.009	0.005	0.261***	0.218	-0.02	-0.021	-0.10	-0.088
	(0.026)		(0.054)		(0.030)		(0.117)	
Male	0.027	0.005	0.074	0.024	-0.11*	-0.037	-0.16	-0.057
	(0.047)		(0.159)		(0.064)		(0.271)	
Ln Per Capita Expenditure	-0.79	-4.514	4.831***	46.587	0.254	2.461	4.498**	45.344
	(0.490)		(1.500)		(0.623)		(2.117)	
Ln Per Capita Expenditure Square	0.010	0.621	-0.21***	-21.283	-0.01	-1.456	-0.18*	-18.770
	(0.023)		(0.072)		(0.030)		(0.099)	
Household size	-0.03***	-0.076	0.086***	0.318	-0.007	-0.028	0.048	0.188
	(0.008)		(0.026)		(0.012)		(0.058)	
Age of household head	-0.001	-0.029	0.007	0.318	-0.008***	-0.343	-0.00	-0.345
	(0.001)		(0.005)		(0.002)		(0.012)	
Educational attainment of household head (*College omitted*)								
Elementary and less	0.096**	0.007	-0.26*	-0.033	0.011	0.001	0.117	0.015
	(0.044)		(0.146)		(0.061)		(0.249)	
High school and less	0.045	0.009	-0.03	-0.010	0.065	0.022	0.188	0.065
	(0.029)		(0.096)		(0.046)		(0.184)	
Proportion of members (*16-65 Female omitted*)								
5>= Female	0.271**	0.009	-2.24***	-0.125	-0.37**	-0.021	0.701	0.041
	(0.120)		(0.425)		(0.148)		(0.641)	
6-15 Female	0.079	0.006	0.035	0.005	-0.36***	-0.047	-0.44	-0.060
	(0.089)		(0.290)		(0.118)		(0.597)	
> 65 Female	0.214	0.002	-0.72	-0.012	-0.58***	-0.010	0.653	0.011
	(0.201)		(0.626)		(0.220)		(0.667)	
5>= Male	0.143	0.005	-1.83***	-0.102	-0.05	-0.003	-0.26	-0.015
	(0.127)		(0.399)		(0.181)		(0.605)	

	Food		**Education**		**Clothing**		**Medical**	
	GLM	$\partial E(y\|x)$ / ∂x_j	GLM	$\partial E(y\|x)$ / ∂x_j	GLM	$\partial E(y\|x)$ / ∂x_j	GLM	$\partial E(y\|x)$ / ∂x_j
6-15 Male	0.148*	0.013	-0.37	-0.058	-0.41***	-0.064	-1.00**	-0.162
	(0.087)		(0.258)		(0.117)		(0.498)	
16-65 Male	0.007	0.001	-0.22	-0.050	-0.22	-0.049	-0.63	-0.147
	(0.083)		(0.277)		(0.140)		(0.431)	
> 65 Male	0.005	0.000	-3.52***	-0.050	-0.37	-0.005	1.789**	0.026
	(0.128)		(0.720)		(0.254)		(0.743)	
Constant	6.726***		-29.7***		-3.03		-30.9***	
	(2.534)		(7.824)		(3.238)		(11.28)	
Deviance	55.04		113.66		21.61		59.47	
No of obs.	1,235		1,235		1,235		1,235	

Notes: *indicates significant at 10%, ** at 5%, and *** at 1%. Parentheses indicate standard errors.
Location dummies (representing 17 regions in the Philippines) are included in the regression
[a/] The coefficient and standard error of Remittance*Male variable are expressed in ($x10^{-5}$)
[b/] The coefficient and standard error of Remittance variable are expressed in ($x10^{-5}$)

Table 3: (Continued) Effect of Gender of Household Head on Uses of Remittances (Spouse Missing)

	House Operations		**Alcohol & Tobacco**		**Others**	
	GLM	$\partial E(y\|x)$ / ∂x_j	GLM	$\partial E(y\|x)$ / ∂x_j	GLM	$\partial E(y\|x)$ / ∂x_j
Remittance*Male	-0.006	-0.001	0.436	0.088	-0.001	-0.0003
	(0.096)		(0.29)		(0.051)	
Remittance	0.081	0.072	-0.98***	-0.873	-0.12***	-0.068
	(0.057)		(0.273)		(0.031)	
Male	-0.03	-0.012	0.815***	0.281	-0.05	-0.013
	(0.113)		(0.299)		(0.060)	
Ln Per Capita Expenditure	-2.33***	-23.568	4.508**	45.984	1.255**	8.140
	(0.908)		(1.945)		(0.598)	
Ln Per Capita Expenditure Square	0.127***	13.267	-0.22**	-23.291	-0.03	-2.549
	(0.043)		(0.095)		(0.029)	
Household size	-0.01	-0.069	0.131***	0.514	0.022**	0.055
	(0.019)		(0.036)		(0.010)	
Age of household head	-0.001	-0.062	-0.01**	-0.585	0.002	0.063
	(0.004)		(0.006)		(0.001)	
Educational attainment of household head (*College omitted*)						
Elementary and less	0.020	0.003	0.501***	0.066	-0.08	-0.007
	(0.096)		(0.167)		(0.055)	
High school and less	0.026	0.009	0.263**	0.092	-0.07**	-0.018
	(0.070)		(0.127)		(0.034)	
Proportion of members (*16-65 Female omitted*)						
5>= Female	1.156***	0.067	0.260	0.015	0.140	0.005
	(0.327)		(0.552)		(0.144)	
6-15 Female	0.839***	0.114	0.132	0.018	-0.02	-0.002
	(0.221)		(0.414)		(0.106)	
> 65 Female	2.122***	0.037	1.105	0.019	-0.29	-0.003
	(0.521)		(0.776)		(0.268)	
5>= Male	1.441***	0.083	0.143	0.008	0.196	0.007
	(0.319)		(0.606)		(0.139)	

Table 3: (Continued) Effect of Gender of Household Head on Uses of Remittances (Spouse Missing)

	House Operations		**Alcohol & Tobacco**		**Others**	
	GLM	$\partial E(y\|x)/\partial x_j$	GLM	$\partial E(y\|x)/\partial x_j$	GLM	$\partial E(y\|x)/\partial x_j$
6-15 Male	0.804***	0.129	0.123	0.020	0.101	0.010
	(0.250)		(0.398)		(0.101)	
16-65 Male	0.409*	0.095	2.118***	0.498	0.016	0.003
	(0.217)		(0.378)		(0.099)	
> 65 Male	-0.08	-0.001	1.522***	0.023	0.076	0.001
	(0.410)		(0.590)		(0.202)	
Constant	6.338		-28.3***		-9.40***	
	(4.694)		(9.903)		(3.094)	
Deviance	18.04		23.92		70.39	
No of obs.	1,235		1,235		1,235	

Notes: *indicates significant at 10%, ** at 5%, and *** at 1%. Parentheses indicate standard errors.
Location dummies (representing 17 regions in the Philippines) are included in the regression
[a/] The coefficient and standard error of Remittance*Male variable are expressed in ($x10^{-5}$)
[b/] The coefficient and standard error of Remittance variable are expressed in ($x10^{-5}$)

Table 4: Effect of Gender of Household Head on Uses of Remittances (Spouse Present)

	Food		**Education**		**Clothing**		**Medical**	
	GLM	$\partial E(y\|x)/\partial x_j$	GLM	$\partial E(y\|x)/\partial x_j$	GLM	$\partial E(y\|x)/\partial x_j$	GLM	$\partial E(y\|x)/\partial x_j$
Remittance*Female	0.0437	0.0218	-0.020	-0.019	0.0385	0.036	-0.388***	-0.372
	(0.028)		(0.138)		(0.033)		(0.149)	
Remittance	-0.01	-0.003	0.147***	0.050	0.002	0.001	0.248***	0.085
	(0.021)		(0.052)		(0.027)		(0.078)	
Female	0.055	0.001	-0.11	-0.003	-0.13*	-0.003	0.539**	0.012
	(0.060)		(0.217)		(0.074)		(0.272)	
Ln Per Capita Expenditure	0.544**	2.707	4.690***	44.272	1.49***	13.915	1.481	14.120
	(0.260)		(0.778)		(0.317)		(1.213)	
Ln Per Capita Expenditure Square	-0.05***	-2.868	-0.20***	-19.163	-0.07***	-7.009	-0.02	-2.767
	(0.013)		(0.038)		(0.016)		(0.059)	
Household size	-0.02***	-0.073	0.187***	0.925	0.015**	0.076	0.016	0.080
	(0.005)		(0.015)		(0.006)		(0.026)	
Age of household head	-0.003***	-0.084	-0.00***	-0.411	-0.001*	-0.094	0.017***	0.881
	(0.0009)		(0.003)		(0.001)		(0.004)	
Educational attainment of household head (*High school omitted*)								
Elementary and less	0.008	0.001	-0.003	-0.001	-0.02	-0.006	0.062	0.020
	(0.021)		(0.087)		(0.028)		(0.118)	
College	-0.04**	-0.008	0.182**	0.056	-0.002	-0.001	-0.28**	-0.086
	(0.019)		(0.074)		(0.027)		(0.122)	
Proportion of members (16-65 Female omitted)								
5>= Female	0.300***	0.007	-3.06***	-0.143	0.087	0.004	0.574	0.027
	(0.097)		(0.409)		(0.124)		(0.597)	
6-15 Female	0.207***	0.010	-0.64**	-0.060	0.063	0.006	-0.05	-0.005
	(0.077)		(0.277)		(0.102)		(0.485)	

Table 4: Effect of Gender of Household Head on Uses of Remittances (Spouse Present)

	Food		**Education**		**Clothing**		**Medical**	
	GLM	$\frac{\partial E(y\|x)}{\partial x_j}$	GLM	$\frac{\partial E(y\|x)}{\partial x_j}$	GLM	$\frac{\partial E(y\|x)}{\partial x_j}$	GLM	$\frac{\partial E(y\|x)}{\partial x_j}$
> 65 Female	0.122	0.002	-1.49***	-0.058	-0.35**	-0.014	-0.17	-0.007
	(0.118)		(0.526)		(0.157)		(0.515)	
5>= Male	0.293***	0.008	-4.08***	-0.208	-0.11	-0.006	1.278**	0.066
	(0.102)		(0.460)		(0.133)		(0.559)	
6-15 Male	0.293***	0.014	-0.64**	-0.060	-0.05	-0.005	0.235	0.022
	(0.079)		(0.265)		(0.106)		(0.464)	
16-65 Male	0.211***	0.033	-0.71**	-0.211	-0.13	-0.038	0.040	0.012
	(0.077)		(0.318)		(0.108)		(0.478)	
> 65 Male	0.182	0.005	-1.73***	-0.085	-0.46**	-0.022	1.176	0.058
	(0.136)		(0.558)		(0.187)		(0.723)	
Constant	0.294		-28.5***		-9.98***		-16.3***	
	(1.302)		(3.980)		(1.558)		(6.140)	
Deviance	144.60		240.48		45.75		260.52	
No of obs.	3,088		3,088		3,088		3,088	

Notes: *indicates significant at 10%, ** at 5%, and *** at 1%. Parentheses indicate standard errors.
Location dummies (representing 17 regions in the Philippines) are included in the regression
[a/] The coefficient and standard error of Remittance*Male variable are expressed in ($x10^{-5}$). The marginal effect is expressed in ($x10^{-2}$)
[b/] The coefficient and standard error of Remittance variable are expressed in ($x10^{-5}$)

Table 4: (Continued) Effect of Gender of Household Head on Uses of Remittances (Spouse Present)

	House Operations		**Alcohol & Tobacco**		**Others**	
	GLM	$\partial E(y\|x)$ / ∂x_j	GLM	$\partial E(y\|x)$ / ∂x_j	GLM	$\partial E(y\|x)$ / ∂x_j
Remittance*Female	-0.293*	-0.284	-1.03	-0.997	0.138**	0.091
	(0.173)		(0.805)		(0.060)	
Remittance	-0.06	-0.022	-0.09	-0.033	-0.15***	-0.036
	(0.049)		(0.068)		(0.034)	
Female	0.182	0.004	0.101	0.002	-0.12*	-0.002
	(0.142)		(0.264)		(0.066)	
Ln Per Capita Expenditure	-2.28***	-22.036	0.802	7.710	1.170***	7.660
	(0.546)		(0.836)		(0.318)	
Ln Per Capita Expenditure Square	0.115***	10.978	-0.06	-6.035	-0.03**	-2.245
	(0.028)		(0.043)		(0.016)	
Household size	-0.04***	-0.202	-0.04***	-0.237	-0.002	-0.009
	(0.012)		(0.014)		(0.005)	
Age of household head	0.005*	0.306	-0.007***	-0.365	0.004***	0.158
	(0.003)		(0.002)		(0.001)	
Educational attainment of household head (*High school omitted*)						
Elementary and less	-0.01	-0.003	0.047	0.015	-0.006	-0.001
	(0.043)		(0.057)		(0.026)	
College	0.093	0.029	-0.28***	-0.087	0.076***	0.016
	(0.057)		(0.065)		(0.025)	
Proportion of members (16-65 Female omitted)						
5>= Female	0.556**	0.026	0.554*	0.026	0.024	0.001
	(0.269)		(0.283)		(0.118)	
6-15 Female	-0.05	-0.005	0.207	0.020	-0.10	-0.007
	(0.192)		(0.229)		(0.093)	

Table 4: (Continued) Effect of Gender of Household Head on Uses of Remittances (Spouse Present)

	House Operations		**Alcohol & Tobacco**		**Others**	
	GLM	$\partial E(y\|x)/\partial x_j$	GLM	$\partial E(y\|x)/\partial x_j$	GLM	$\partial E(y\|x)/\partial x_j$
> 65 Female	-0.36	-0.014	-0.48	-0.019	0.117	0.003
	(0.261)		(0.385)		(0.145)	
5>= Male	0.254	0.013	0.695**	0.036	0.091	0.003
	(0.254)		(0.289)		(0.123)	
6-15 Male	0.291	0.028	0.196	0.019	-0.24***	-0.016
	(0.187)		(0.234)		(0.093)	
16-65 Male	-0.29	-0.090	1.523***	0.454	-0.18*	-0.038
	(0.214)		(0.215)		(0.101)	
> 65 Male	0.040	0.002	0.247	0.012	-0.27	-0.009
	(0.386)		(0.413)		(0.178)	
Constant	6.899***		-5.48		-8.84***	
	(2.655)		(4.108)		(1.579)	
Deviance	31.56		88.57		192.21	
No of obs.	3,088		3,088		3,088	

Notes: *indicates significant at 10%, ** at 5%, and *** at 1%. Parentheses indicate standard errors.
Location dummies (representing 17 regions in the Philippines) are included in the regression

[a/] The coefficient and standard error of Remittance*Male variable are expressed in ($x10^{-5}$) . The marginal effect is expressed in ($x10^{-2}$)

[b/] The coefficient and standard error of Remittance variable are expressed in ($x10^{-5}$)