Remittances and the Transnational Family in South-East Asia

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ABSTRACT

There is a substantial body of literature on the impact of remittances on household, community and national development in the global south. Prior research provides inconsistent support for the effects of migrant remittances on those left behind, and in particular, there has been very little systematic investigation of the incidence and use of parental remittances within left-behind families with dependent children. The current study uses recent data from the CHAMPSEA survey collected in Indonesia, the Philippines, and Vietnam in 2008 to investigate remittances in the transnational family. Taking into account possible selection effect bias, multivariate binary probit models predicting the likelihood of remittance receipt and variation in self-reported use of remittances among mother- and father-migrant transnational households for basic survival, short-term and long-term investment are examined. After accounting for individual and household characteristics including variables such as duration of migration, parent occupation and education, household composition and wealth, findings indicate that there are some significant differences: mother migrant households are less likely to report recent remittance receipt, and more likely to report use of remittances for short-term investments such as education and durable good purchase. There are also significant differences in specific use of remittances according to household wealth and duration of migration, providing some evidence of a relationship between inequality and migration.

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INTRODUCTION

There is a substantial body of literature on the impact of remittances on household, community and national development in the global south. Indeed, one of the main precipitating factors for migration at the household level is access to earnings that provide for current subsistence and future investment in left-behind family members. Prior research provides inconsistent support for the effects of migrant remittances on those left behind with some studies suggesting positive impacts on health (Gulati, 1993), housing (Jones & Kittisuksathit, 2003), and schooling(Battistela & Gastardo-Conaco, 1998; Hadi, 2001; Sofranko & Idris, 1999), while others suggest that outmigration may result in worsening health outcomes such as poor nutrition because of a lack of remittances (Asis, 2003; Hadi, 1999), heavier workloads due to the absence of key family members and the introduction of communicable diseases (Kongsin, 1997; Smith-Estelle & Gruskin, 2003; Weerakoon, 1997). There is a general tendency in the literature to assume that left-behind children are especially vulnerable to negative effects where their mother is working abroad (Gamburd, 2003; Hugo, 2000; Jolly, Bell, & Narayanaswamy, 2003). Where care is inadequate or remittances do not benefit children, nutrition, health service usage and schooling may suffer(Kuhn, 2005). However, there is also evidence that suggests that mothers are more consistent and reliable remitters (Abrego, 2009; Vanwey, 2004) who ensure that money is used to promote the wellbeing of children who are left behind. To date there has been very little systematic investigation of the incidence and use of parental remittances within left-behind families with children. The CHAMPSEA (Child Health and Migrant Parents in South-East Asia) study seeks to fill this gap by providing new information about remittance receipt and use among transnational families with children under the age of twelve in four South-East Asian countries.

Decisions about how to use remittances may be influenced by factors other than the gender of the migrant parent. Some occupational niches and migrant destinations may require higher placement fees resulting in debt that must be paid off (Sofranko & Idris, 1999). Additionally, features of a nation's migration experience such as the duration of transnational migrant flows are likely to influence current migration conditions. Prior research suggests that during the initial stage of outmigration families of relatively higher socio-economic status are more likely to participate in transnational labour migration, and the use of remittances may reflect consumption and savings patterns of this relatively more prosperous demographic group(Brown & Jimenez, 2008). Overtime as the incidence of migration expands to include less prosperous households, differences in the use of remittances may reflect the needs and preferences of these wider socio-economic strata. The current study uses recent data from the CHAMPSEA survey collected in Indonesia, the Philippines, and Vietnam in 2008 to investigate remittances and their uses in the transnational family. The CHAMPSEA countries were chosen to reflect variability in the duration of national migration experience and migrant population characteristics such as gender composition offering a rich comparative framework. This paper specifically examines how gender and socioeconomic status affect the incidence and use of remittances in households with left-behind children under the age of twelve.

We employ multivariate binary probit models to predict the likelihood of remittance receipt, followed by individual models that examine variation in self-reported use of remittances among mother- and father-migrant transnational households for basic survival, short-term and long-term investment. There is a potential selection bias for the sample since only 84% of the households report monetary remittance receipt in the past 6 months. We test for the applicability of a

Heckman selection correction, and since both outcomes of interest are binary, we use probit models throughout all of the analyses for ease of comparability across the models. After accounting for individual and household characteristics including variables such as duration of migration, parent occupation and education, household composition and wealth, findings indicate that there are some significant differences between the incidence of remittance sending by gender and parent socioeconomic status, and that some of the specific uses of remittances appear sensitive to the gender of the migrant parent.

The paper is structured as follows. First, background and literature related to the determinants of remittances and use of remittances is discussed. Second, the hypotheses motivating the analysis are reviewed. Third, the data and methods are described. Finally, results are presented for pooled countries (N=1,356) and country-specific models followed by discussion of the study's contributions to the literature on families, gender and remittances.

BACKGROUND & LITERATURE

Remittances are arguably a primary reason for transnational labour migration. In South-East Asia where the typical migration is temporary contract work which does not allow for any family resettlement, remittances provide ongoing financial support to left-behind family members for immediate and future needs. The New Economics of Labour Migration (NELM) (Stark & Lucas, 1988) posits that altruism and self-interest are two important determinants of remittance sending back to countries of origin, and recent research provides some support for this. As reviewed by Hagen-Zanker & Siegel (2007) the concepts of altruism and self-interest have been extensively employed to investigate the determinants of remittance sending. However, mechanisms influencing remittance sending behaviours within households with young children, as in the CHAMPSEA study, have been much less systematically examined.

According to NELM theory, family members are likely motivated to remit based on altruistic, self-interested or a combination of the two traits (Hagen-Zanker J & Siegel M, 2007; Vanwey, 2004). Altruistic remittance behaviour is thought to be motivated by the caring sentiments of the migrant family member for those left-behind. Self-interested remittance behaviour reflects aspiration and expectation more so than sentiment as the migrant family member remits to illustrate intentions and earn future rewards such as inheritance. Tempered altruism or enlightened self-interest (Stark & Lucas, 1988) reflects more of a mutually beneficial arrangement between remittance sender and receiver, and refers to contractual arrangements such as exchange for services and loan repayment (Hagen-Zanker J & Siegel M, 2007).

The gender of the migrant parent has been found to have differential effects along various dimensions of remittance behaviours. A recent study on transnational families from El Salvador drawing on 130 in-depth interviews found that compared to migrant fathers, migrant mothers consistently remit a higher percentages of their earnings (Abrego, 2009)Abrego argues that while the migrant mothers face significant structural barriers to economic success, their families in country of origin often are thriving economically as the migrant mothers make significant sacrifices to fulfil cultural expectations about mothering. These findings are in line with previous research that has demonstrated that even though mothers may remit less in absolute sums compared to fathers, they are often more reliable and consistent remitters within the South-East Asian region (Vanwey, 2004). While the Abrego study does explicitly mention NELM, the literature review does discuss the one of the underpinning ideas

of NELM, the centrality of seeking economic wellbeing in transnational labour migration. The findings about the influence of cultural expectations of maternal commitment on remittance behaviour could be interpreted as providing support for the influence of *altruism* through a gendered lens.

Semyonov and Gorodzeisky (2008) find further support that migrant fathers send more in absolute amounts than migrant mothers to family members in the Philippines, which is contrary to prior research from the region. They argue that the main difference in the amount of remittances is due to gender differentials in occupation and wage in destination countries, and further posit that their findings are more representative of sending households of "mature married overseas contract workers with *children*"[emphasis added] (p.63) than earlier studies such as(Trager, 1984), Laudy and Stark (1988) and Tacoli (1999). However, Semyonov and Gorodzeisky's study does not mention the relationship between frequency of remittance sending and gender.

Another recent study provides information about the influence of culture on remittance sending behaviour using a comparative framework. Using survey data from four Latin American-Caribbean countries Sana and Massey (2005) find a larger effect of male over female migrant remittance behaviour from countries of origin with more traditional patriarchal norms such as Mexico. The authors argue that this reflects basic assumptions about patriarchal norms regarding family cohesiveness, remittance behaviours and male migration as a planned provider strategy which could be seen to draw on tempered altruistic perspective of NELM as migrant father fulfil household, and social, contractual agreements. This is in contrast to their findings for the Dominican country sample where females are more likely to remit, which, they argue, reflects differences in cultural heritage. Research from Thailand has also elaborated on NELM in showing not only gendered dimensions of altruistic remittance practices, with Thai women more likely to remit to fulfil cultural expectations, but also that household wealth is a significant remittance determinant. Wealthier households are more likely to follow a self-interested (contractual) approach to remittances (Vanwey, 2004). Both of these studies use survey data that includes information from migrants who are <u>not</u> parents of dependent children which influences the direct comparability with the Abrego (2009) study in El Salvador as well as with the current study of transnational families with children under the age of twelve. These studies do, however, underscore the need for comparative analysis that can better elucidate cultural variability in remittance behaviour.

In addition to providing insight into motivations for remittance sending behaviour, NELM theory also predicts that remittances may have varied effects on receiving household's behaviour, in particular that while the increase in income may reduce household budget constraints, it may also encourage riskier investments (with higher potential returns) that might not be otherwise considered. However, the specific use of remittances is likely influenced by individual and household characteristics such as household composition, gender and wealth.

Research from one significantly impoverished area in Oaxaca, Mexico indicates that the primary use of remittances is for subsistence (44% percent) with the second most frequent use being home construction/renovation (17%) (Cohen, 2005, 2010). Education and business start-up/expansion are the next most frequent use at much lower levels (6% and 5%, respectively). The overall level of remittance receipt in the community is high at 86%, likely reflecting a long-term history of outmigration from the Oaxacan region. Another study from a well-established sending area in El Salvador created three categories to describe the wellbeing (primarily economic) of

left-behind children in migrant households with “barely subsisting” for children who are unable to eat or attend school regularly, “surviving” for children who are usually able to cover basic necessities and attend school with no surplus, and “thriving” for children who attend private school, easily cover daily needs and have surplus money for savings, investments and luxury items(Abrego, 2009) p. 1075. Abgreo’s research finds evidence that children in households of migrant mothers are more likely to be categorised as thriving compared to children in father migrant households with the inverse true of the barely subsisting category as well. While this study does not explicitly describe what the remittances are used for, it is implied that children in mother migrant households are more likely to receive and benefit from remittances compared to those in father migrant households.

There are some recent advances in attempting to model the relationships among remittances and income distribution and poverty that should be considered in the international comparative framework that is used in the CHAMPSEA study. During the initial stages of a country’s international migration experience, it has been argued that families of relatively higher socioeconomic status are more likely to participate in migration, and the use of remittances may reflect consumption and savings patterns of this relatively more prosperous group (Akesson, 2009; Brown & Jimenez, 2008). Following this hypothesis, overtime the incidence of migration increases and expands to include less prosperous household, and differences in the use of remittances may reflect preferences of a wider socioeconomic strata. Brown and Jimenez (2008) use survey data from two Asia-Pacific islands, Tonga and Fiji, to examine the impact of remittances on income distribution and measures of poverty addressing another important aspect that contributes to understanding the use and impact of remittances. The authors use three different analytical techniques to estimate the comparability of poverty and inequality outcomes and find evidence that across the techniques remittances decrease the incidence of poverty in origin countries, although the precision of the estimates differs across the techniques. The effect of remittances on poverty reduction is especially true in Tonga which has a much longer history of established outmigration providing partial support for their hypotheses about poverty and inequality.

For the purposes of the following investigation we draw on the extant literature and structure the analysis on four measures of remittances (whether household received monetary remittances in past 6 months and remittances used for basic survival, short-term investments, and long-term investments. The CHAMPSEA survey asked about household receipt of goods in the past six months as well, and it is possible that there are gender effects related to the type of remittances sent to the household, although there is little research on this topic. It is possible that some migrants may remit goods instead of money. While there is a sizeable number of households that report receipt of remittances as goods (18%) only 1% of the sample reported receipt of goods and no monetary remittance. The following analysis examines the receipt and use of monetary remittances only. We use the following hypotheses to guide the analysis:

Hypothesis 1: There are significant differences in the incidence and use of remittances based on the gender of the migrant parent.

Hypothesis 2: There are significant differences in the incidence and use of remittances based on household wealth and the total duration of time away.

We also expect for there to be between-country differences across some of the key associations. There is likely to be country variability in the effects of migrant gender reflecting cultural differences in patrilineal and bilateral traditions. Vietnam, for example, has a traditionally patrilineal heritage similar to much of East Asia (Ofstedal, Knodel, & Chayovan, 1999) where sons are traditionally responsible for providing care and support to aging parents. This contrasts with bilateral societies, as in the Philippines, where daughters are considered to have an equal, if not more, important role than sons in providing for intergeneration care (Jordan, Graham, Yeoh, Asis, & Dang, 2009). Brown and Jimenez's (2008) hypothesis also lead to the expectation of differences based on length of national history of international migration, with newer entrants being more likely to report use remittances for short- and long-term investments reflecting the entrance of relatively higher income families into the migration market. Of the CHAMPSEA study counties, Vietnam is the newest entrant into the global labour market. It provides an interesting case study in relation to this expectation since its political ethos until relatively recently has put greater emphasis on social equality.

DATA & METHODS

Study background

CHAMPSEA is a mixed-method cross-sectional research programme currently investigating the impacts of parental migration on children left-behind in Indonesia, the Philippines, Thailand and Vietnam. The survey data analyzed here is selected from Phase 1 of the study and was collected during 2008 from around 1,000 households in each of the study countries. Sampling was conducted in three stages. First, two provinces with high levels of international out- migration were identified by migration researchers in each country. Second, communities were screened to identify eligible households. Eligible households were those with a child in a specified age range where, at the time of the survey, either one or both parents were transnational migrants (transnational households), or where both parents were present in the household ('usually resident' households). Third, a flexible-quota sampling design was used to recruit households for two age cohorts of children (age 3, 4, 5 'young child' and age 9, 10, 11 'older child'. To qualify as a transnational household, at least one parent must have been absent and working abroad for a continuous period of at least six months prior to the survey. Although the specification of the qualifying time period is somewhat arbitrary, six months was considered sufficient time for parental absence to have had some lasting impact on the child, and is comparable to similar prior research of households with left-behind children in Sri Lanka (Save the Children, 2006).

CHAMPSEA Survey Data

The sample used in this analysis is a subsample from the larger study and includes households with either a mother or father migrant who was working overseas and had left their children and other family members behind in the country of origin (N=1,356). Households from Thailand were excluded because only three households with migrant mothers were able to be located, making it impossible to test the hypotheses about the influence of migrant gender. Additionally, households with both parents migrants were excluded as these cases also would make it more difficult to examine the independent effects of migrant gender on the outcomes of interest, and the total numbers are too small at the country level.

The measures are selected from the Household Survey which was most often completed by the non-migrant spouse. Measures of the whether a household received remittances in the past six months and the primary use of these remittances were selected along with measures of individual and household characteristics which are discussed in detail under the subsection entitled measures. All of the study materials were translated into local language, and back-translated by a third party to ensure the original intent of questions remained. Ethics approval was obtained from the National University of Singapore, University of St. Andrews, Scalabrini Migration Center (Philippines), Center for Population and Policy Studies, Gadjah Mada University (Indonesia), Institute for Population and Social Research, Mahidol University (Thailand), and Asia-Pacific Economic Center (Vietnam).

Methods

This analysis utilizes listwise deletion as the percent of missing across all variables is quite low (<5% overall). Means and percent distributions were calculated for all of the measures. We employ multivariate binary probit models to predict the likelihood of remittance receipt and use of remittances for *basic survival*, *short-term* and *long-term investment* within migrant households. There is a potential selection bias for the sample since only 84% for the pooled sample (see Table 1) of the households reported monetary remittance receipt in the past six months. To address this, we test for the applicability of a Heckman selection correction model using the 'heckprob' procedure in Stata 11. We use probit models throughout all of the analyses for ease of comparability across the models. We model the four outcomes for the pooled sample and country-specific models. Table 1 also highlights that the level of remittance receipt for the Filipino country sample is very high at 99%. Therefore, there is no need for selection models for this subsample.

Measures

Table 1 displays the percent distribution and mean values across the outcome and predictor variables. The first column has the overall values for the pooled sample (N=1,356) followed by the values at the country-level.

We created the following measures for this analysis. The four outcome measures of remittances are drawn from separate sections on mother and father current migration in the household questionnaire. The first is a measure of whether or not the household has received any monetary remittances in the past six months, and the rate is quite high at 84% for the analysis sample. This partially reflects the sampling strategy which focused on areas with high percentage of migration in order to fulfil the sampling quota. The remaining three outcome measures are created from a follow-up question to the previous indicator, and thus the sample is restricted to those households which have received remittances in the past six months. The question asked was, "Thinking about the money sent by {migrant parent name}, what was this money used for" and reflected the primary use. Remittances used for basic survival combines affirmative responses for meeting basic daily needs and paying off debts (37.6%). Remittances used for short-term investment combines affirmative responses for child schooling/education, house building/renovation and durable goods (39.2%), and remittances used for long-term investment combines responses for setting up business and general savings (6.6%). We excluded responses coded as 'other' since there was no further information available. The categories were combined for substantive clarification, and also to bolster low numbers, thus enabling a more comprehensive statistical analysis.

<<INSERT TABLE 1 ABOUT HERE>>

The following measures of migration characteristics are included: mother is migrant, total duration of international migration measured in months during the lifetime of the index child, and whether or not a fee was paid to arrange the migration.[1]

Three measures of socioeconomic status are included: migrant occupation, migrant completed education, and household wealth. Migrant occupation is created from detailed occupational data that were collected and coded into four categories: unskilled/domestic labour (*reference*), manufacturing/semi-skilled labour, skilled labour, and other, which mostly included higher status occupations that are grouped together because of low numbers. The majority of the sample is classified as unskilled/domestic(41.5%) followed by skilled labour (32.3%), and the distribution across the occupational classification reflects distinct gender differences as more women are employed in unskilled/domestic work while more men are employed as skilled labour. The second measure of socioeconomic status is migrant completed education which is a three category variable for less than primary, primary but less than secondary, and completed secondary or higher education. The third measure is categorical household wealth index which was created using methodology developed by the Young Lives Project and is described in previous papers(Graham & Jordan, Under Review). The wealth indices were created at the country level, and then categorized at the pooled sample level including the entire sample (i.e., cases from Thailand and other dropped variables). The distribution of this measure in Table 1 shows an under-representation of households in the lowest wealth category for this subsample from the larger CHAMPSEA study which reflects the exclusion from this analysis of households within the same communities without a current migrant. Comparisons of socioeconomic status and wealth between the usually resident households and transnational households are the subject of a future paper.

Four measures of household characteristics are included, a dummy variable for index child female (51%), index child older (50.4%), three generation household (34.2%) and the total number of children less than 16 in the household (M=1.9, sd=.96).

All of the measures are not included in all of the models predicting remittance receipt and uses. The following measures are included in the remittance receipt models: mother is migrant, duration of time away, fee paid, migrant occupation, migrant education, household wealth, three generation household, total number of children, and country (as appropriate) as there is evidence to support possible relationships between these variables and remittance receipt. The following measures are used to predict the remittance use outcomes: mother is migrant, duration of time away, household wealth, index child is female, index child is older, three generation household, total number of children, and country (as appropriate).

FINDINGS

Pooled Country Models

[1] The measure of total duration away may be biased as families with younger children have a shorter possible time away than those households with older children. However, we include a dummy variable to indicate older child in the models and the correlation between the two variables is only .20

Table 2 contains the results from multivariate probit models predicting remittance receipt, use of remittances for basic survival, short-term investment and long-term investment for the pooled sample (N=1,356). The Philippines is used as the reference group since there is a more significant body of literature available about related research topics and the overall levels of remittance receipt are so high for the sample. Throughout the reporting of the results, we follow (Gubert, 2002) and focus on the discussion of the results that are significant across the different model specifications when more than one type of model was estimated.

<<INSET TABLE 2 ABOUT HERE>>

Model 1 displays the estimates for whether or not a household received remittances. The gender of the migrant parent is significantly related to the likelihood or remittance receipt with migrant mother households less likely to report receiving remittances in the past six months. The other migration characteristics are not significantly associated with the outcome. Occupational classification and completed education of the migrant parent are not significantly associated either. Higher wealth is associated with increased remittance receipt as would be expected, with the wealthiest households having the largest effect. We included an interaction between wealth and total duration since wealth accumulation is likely related to the duration of migration. In the non-interacted model both the middle and highest wealth categories are associated with increased likelihood of remittance receipt. Once a possible interaction is accounted for, the direct effect of middle wealth become insignificant and is replaced by the positive interaction between middle wealth and total duration of time away suggesting that the association between middle wealth households is more important for households where migrants have not been away as long. However, the coefficient of highest wealth is little changed providing some support for distinct effects across different wealth strata. There are significant country differences with households in both Indonesia and Vietnam less likely to report remittance receipt in the past six months compared to the Philippines.

The possible responses used in Models 2, 3 and 4 are restricted to those households who reported remittance receipt in the past six months (n=1133). Two-stage probit models with Heckman selection corrections were conducted and analysed for suitability based on the significance of likelihood ratio tests of independent equations testing ρ(rho). [2]Model 2 contains the estimates for predicting use of remittances for basic survival needs. There is a negative migrant gender effect, as Model 1, showing that households with mothers away are less likely to report remittances used for basic survival including daily subsistence and debt repayment. The duration of time migrant has been away (during the lifetime of index child) is negatively related to the likelihood that remittances are used for meeting basic survival needs, which is as anticipated. Higher wealth is associated with decreased use of remittances for meeting basic survival needs, with the wealthiest households showing the largest effect. There is a significant positive interaction between the highest wealth category and total duration away. The coefficients for total duration are smaller, but still significant while the individual wealth effects are stronger for the highest wealth category in the interacted model. There is also a significant association where households with female index children are more likely to use remittances to meet basic survival needs compared to those households with male index children.

[2] ρ is an indication of the correlation coefficient between error terms.

There is again a significant country effect with estimates for both Indonesia and Vietnam indicating an increased likelihood of remittance use for basic survival needs.

The estimates for predicting remittance use for short-term investment are displayed in Model 3, Table 2. There is a positive effect for mother migrant households, suggesting that mother migrant households are more likely to use remittances for short-term investments such as education, house building/renovation and purchase of durable goods. The duration of time the migrant has been away is also positively associated with short-term investment, which is not unexpected given that a longer time away during the index child's lifetime is likely associated with older child age (school attendance) and accumulation of some financial stability beyond subsistence. Household wealth is associated with increased use of remittances for short-term investment, and there is a significant interaction effect for the highest wealth category with duration of time away. This interaction effect is negative (compared to the previous two models). The coefficient for duration is practically the same compared to the non-interacted model; however, the highest wealth category coefficient is larger in the interacted model, suggesting that longer duration away is related to the effect of wealth on use of remittances for short-term investments for the wealthiest households. Households in both Indonesia and Vietnam are less likely to use remittances for short-term investments compared to the Philippines, with the magnitude of the effect being stronger for Vietnam.

Model 4 predicts remittance use for long-term investments such as business and general savings. The percentage of affirmative responses was quite small (6%) which is likely to affect the results for the pooled model, and also influence the possibility of examining this outcome more closely within each country separately. As shown in Table 1 approximately two-thirds of the affirmative responses are in Vietnam. For the moment, Table 2, Model 4, indicates that there are significant positive associations for both of the higher wealth statuses, and a significant negative association for female index children with the likelihood of using remittances for long-term investments. There is no significant interaction effect for wealth and total duration of migration in contrast to the three previous models. The only other significant variables are the country dummies, with both Indonesia and Vietnam more likely to report remittance use for long-term investment compared to the Philippines.

Country-Specific Models

We re-estimated all of the models for each country separately in order to examine the associations between the measures more closely since the results indicated that there were significant differences between the countries. What this does, essentially, is allow for a fully interacted model by country. Table 3a and 3b presents selected models from these re-estimations for Indonesia (Table 3a) and Vietnam (Table 3b). The results for the Philippines are included in the Appendix A (Table 4) as there was no significant variation on the key predictor variables, suggesting that the sample was fairly homogenous on the variables of interest. All of these models are probit estimates as the estimated selection models did not support the use of selection correction procedures.[3]

[3] The numbers for long-term investments were too small in relation to the number of parameters, and thus these models are excluded. Additionally some of the categories of occupational classification were dropped for the same reason. The full results are available from the authors upon request

Indonesia: Models 1a, 2a and 3a, Table 3a, indicate that there is a consistent association between the likelihood of receiving remittances and the use of remittances for basic survival and short-term investment and households with a migrant mother in Indonesia. The pattern follows that of the pooled models with migrant mother households less likely to report remittance receipt and use for basic survival and more likely to use remittances for short-term investments. Model 1a (Received remittances) has the largest coefficient for migrant mother compared to the other two models. In Model 1a there is also a significant association of skilled labour with the outcome variable, indicating that households with migrants employed in skilled labour are less likely to report receiving remittances. In Indonesia, this occupational category (as well as manufacturing and semi-skilled) is generally applicable to male migrants. One possible interpretation is that although father migrants are more likely to remit than mother migrants, those father migrants employed in skilled labour are less likely to remit. As the comparison group is unskilled domestic, this is some indication that these father migrants are less likely to remit than mother migrants, although it is not certain from the data. There is also a significant association between household wealth and remittance receipt and total duration of migration and receipt, both of which mirror the pooled estimates in Model 1, Table 2. The wealthiest households are more likely to report receipt, and the inclusion of the interaction terms removes the direct effect of medium wealth suggesting that it is important to take into account the relationship between households with medium levels of wealth and duration of time away in order to better understand the incidence of remittance receipt (Appendix A, Table 2 has non-interacted full models).

<<INSERT TABLE 3A ABOUT HERE>>

In addition to the decreased likelihood of mother migrant households reporting use of remittances for basic survival that is mentioned above, Model 2a, Table 3a shows significant associations between total duration of migration and household wealth in the expected directions for Indonesia. Following the pattern of the pooled models, interaction effects between these two variables were tested, but as they were not significant, they were not included. Finally, Model 3a displays the estimates predicting use of remittances for short-term investments. Mother migrant households are more likely to report use of remittances for this purpose. Additionally, a longer duration of time away is associated with increased use of remittances for short-term investments.

Vietnam: Table 3b contains the country-specific models predicting remittance receipt and use of remittance for basic survival and short-term investment for Vietnam. Model 1b predicts remittance receipt. Of note, there is not a significant effect for mother migrant households. Model 1b contains the interaction between wealth and total duration of time away, and there is a significant negative association with remittance receipt. Before taking this interaction into account, there was a direct effect of households of highest wealth and remittance receipt (results in Appendix A, Table 3), but none for total duration. After taking a possible interaction into account, there is a significant interaction for medium wealth households and total duration (positive), no direct effect for the wealthiest households, and a negative association between duration away and remittance receipt. The analysis suggests that taking into account the combined relationship between wealth and time away uncovers the negative effect

of time away on household remittance receipt in the Vietnamese sample. This merits further examination.

There is no significant association between migrant gender and use of remittances for basic survival in Vietnam (Model 2b, Table 3b). The results are quite similar to those for remittance receipt with a negative association of time away on use of remittances for basic survival, a significant interaction effect between wealth and total duration away, and direct effect of household wealth on decreased likelihood of using remittances for basic survival. The direct effect of duration of time away on basic survival remittance uses is consistent with and without inclusion of the interaction. However, the added value of accounting for the interaction is that in doing so it becomes clearer that the relationship between decreased use of remittances for basic survival is strongest for the wealthiest households with longer durations of migrations—which is not surprising. The final model in Table 3b is for remittance uses for short-term investments. There is a significant association between mother migrant households and increased use of remittances for short-term investments such as education, durable goods and home building/renovation. The relationship between wealth and duration of time away appears to follow the familiar pattern with longer duration of times away and higher wealth associated with increased use of remittances for short-term investments. These associations operate in the opposite direction to those discussed for Model 2b which is not surprising given that short-term investments will often be considered after basic needs, such as subsistence and debt repayment, are met. The interaction effect between the highest level of wealth and total duration away is negative, demonstrating again the importance of taking the relationship between these two predictors into account for understanding the relationship between migration characteristics, remittance use and household wealth.

<<INSERT TABLE 3B ABOUT HERE>>

DISCUSSION

The examination of the relationship between gender of the migrant parent and remittances was central to the examination of Hypothesis 1 that states: *There are significant differences in the incidence and use of remittances based on the gender of the migrant parent.* There is evidence of differential patterns of remittance receipt and use between mother and father migrant households in both the pooled (Table 2 and country-specific models (Table 3). The pooled models suggest that mother migrant households are less likely to report receipt of remittances in past six months, less likely to use remittances to meet basic survival needs and more likely to use remittances for short-term investments. This finding provides some support for recent research by Abrego (2009) that found children in mother migrant households were more likely to be ‘thriving’ (defined as living in households where they had the opportunity to attend private school, easily cover daily needs and have surplus money for luxury items) and less likely to be classified as ‘barely subsisting’. While the methodology and data from the Abrego study is not directly comparable to the CHAMPSEA study, the reinforcement of differential effects and use of remittances in mother and father migrant households is noteworthy, especially since in some countries such as the Philippines there has been a public backlash against mother migrant households based on value judgements about mothers neglecting their maternal responsibilities(Parreñas, 2003). Building up a cohesive body of evidence within different cultural contexts about the positive impacts of maternal migration could help to influence such public debates.

This current analysis has focused on the receipt and allocation of remittances, rather than examining the amounts of remittances received. Much of the existing research has focused on receipt and amount received (Gubert, 2002; Semyonov & Gorodzeisky, 2008), and while this is important to consider, we chose to focus the analysis on allocation rather than amount, thus contributing information to an area of remittance behaviour that is less often investigated. However, this has excluded direct consideration of the gender differences in the amount sent, and therefore our findings can not either support or counter the previous findings that father migrants remit higher absolute amounts.

The country-specific models for Indonesia (Table 3a) suggest Indonesian mother migrant households are following a similar pattern to the pooled sample. However, there is some indication that subgroups of father migrants, those who work in skilled labour (which includes agricultural labour) from Indonesia may be less likely to remit. A significant number of Indonesia migrants are undocumented migrants who travel across the borders into Malaysia to perform agricultural work, and future research could consider close examination of the relationship between documentation status, occupational classification and remittance sending behaviour. The country-specific models from Vietnam do not conform to the established pattern. In particular, there is no significant difference in mother migrant households of remittance receipt and use of remittances for basic survival compared to father migrant households. As illustrated by the pooled models, households in Vietnam are more likely to use remittances for basic survival needs compared to the Philippines. During the analysis, we rotated the reference category using Indonesia as reference to see if there was a difference in reported use of remittances for basic survival needs between Indonesia and Vietnam, and found this to be not significant. This suggests that households in Vietnam and Indonesia are generally equally likely to report the use of remittances for this category, so the finding that there is not a gender effect in the Vietnamese households is of interest. There are a number of possible ways to interpret this. One is to consider that it is a reflection of the relatively poorer socio-economic composition of the Vietnamese sample where a more significant share of the population is positioned at the subsistence level. Another possible interpretation is that differences in cultural and gender expectations about provision for family may be operating to influence the results. Since prior research has found evidence that cultural expectation about patriarchal norms for provision of family roles(Sana & Massey, 2005) are related to remittance receipt, it is entirely possible that the strong influence of patrilocal norms and filial duty may exert a differential influence within the Vietnamese context compared to other countries in the region. To further complicated interpretation in the Vietnamese context is the influence of socialist egalitarian principles. These issues could be elaborated on with further research, possibility utilising mixed methodologies to explore gender dynamics and family responsibilities over the life course.

Hypothesis 2 states that *there are significant differences in the incidence and use of remittance based on household wealth and the total duration of time away*. Across the pooled and country-specific models there was evidence of differential associations of household wealth and duration of time away. It is important to underscore that the measure of duration away is imperfect. As described by Gubert (2002) Brown (1997) and Funkhouser(Funkhouser, 1995) there are limitations of using a measure of duration from a cross-sectional survey such as CHAMPSEA as it captures an experience effect (whereby cumulative experience is associated with higher wages),

as well as cohort and period effects. The problem with our measure is further complicated as it is not a measure of true duration, but instead duration during the index child's lifetime. The models do include a control for whether the index child is younger or older, and as mentioned previously, the correlation between child age and duration away was not very high. Recognising these limitations, there are nevertheless some consistent associations between duration of time away and the remittance outcomes which are of interest. In particular, we find that longer durations of time away are associated with decreased use of remittances for basic survival and increased use for short-term investments, as would be expected. These findings are consistent across the pooled and country-specific models for both Indonesia and Vietnam. There is no evidence of an association between duration of time away and remittance receipt for the pooled model or for the Indonesian model, suggesting that for this sample of migrant parents with dependent children the pattern of remittance receipt does not vary based on duration of time away. This is in contrast to studies which have found a decreasing pattern of remittance sending over time (Itzigsohn, 1995) and provides some support for NELM-directed theory of motivations to remit. However, as the data is cross-sectional, it is not possible to say anything conclusive about changing remittance behaviours over time for individual households.

Across the models there also is evidence of associations between household wealth and remittance behaviours. In general the associations are as expected with higher levels of wealth predicting increased remittance receipt, decreased use of remittances for basic needs, and increased use of remittances for both short-and long-term investments. The associations between wealth and the outcomes are strongest for the wealthiest households (compared to the poorest households). The wealthiest households are more likely to report remittance receipt in the pooled model. Again, the country-specific models for Indonesia follow this pattern, while those for Vietnam diverge. We noted earlier that prior studies have hypothesised that migrant populations from countries in different stages of international migration may vary along socioeconomic dimensions. In particular Brown & Jimenez (2008) suggest that migrant populations may be composed of relatively wealthier households in the early stages of national movements. They found some evidence for longer duration of migration at the national level and lower levels of poverty, and inconclusive evidence for a relationship between duration of migration and increasing inequality and which is often argued to be a potentially negative bi-product of transnational migration (and rural to urban internal migration) in origin societies.

In general, from the current analysis we found significant interaction effects between the highest category of wealth and the duration variable in predicting the type of remittance uses. The direction of the interaction effect was generally the opposite to the direction of the individual variable associations. For example, in the pooled models (Table 2, duration away and wealthiest households are both associated with decreased likelihood of using remittances to meet basic needs (Model 2.2), while the relevant interaction effect is positive suggesting there is a relationship between wealth and total duration away for the wealthiest households. The country specific models for Vietnam reflect a similar pattern. These findings suggest that there may be some relationship between economic inequality and migration and merits further study. The full CHAMPSEA sample includes a substantial number of non-migrant households with children under twelve drawn from the same communities as the migrant samples, and future analysis can compare the migrant and groups on wealth and socioeconomic characteristics in order to further investigate the possible

associations between wealth accumulation, parent migration and community social and economic inequality.

The current findings also provide further information about the potential lack of viable economic and employment opportunities in community of origin necessitating international migration as a livelihood strategy. There was little evidence of remittance use for long-term savings including business start-up, and it is possible to speculate that this indicates a lack of reinvestment in the origin communities. The idea of remittances as panacea for underdevelopment in countries of origin remains prevalent in the development literature (Ellerman, 2005; Levitt & Jaworsky, 2007; Taylor, 1999), although critical perspectives also continue to provide a counterpoint(Deneulin, 2006) Given that the CHAMPSEA study targeted a specific population, married parents of child-bearing age with young children, it is possible that community investment could be a future target of remittances once the more immediate needs of child-rearing are met. A further round of data collection with the CHAMPSEA sample would provide important information about changing patterns of remittance uses over the family life course.

Limitations

As with all studies, there are some limitations to the current findings. In particular, the dataset is cross-sectional which only allows for examination of relationships between variables as opposed to testing of casual ordering. As mentioned previously, a second round of data collection would allow for a closer examination of these findings. There is also low incidence of some of the outcome variables, in particular long-term investments which limited the possibility of examining within country variation more closely. Another significant limitation is the potential selection bias due to the censored observation for households with no reported remittance receipt in the past six months. In order to address this, we presented models accounting for selection bias where appropriate with standard probit models and focused the discussion on the results that reached statistical significance across the models.

Conclusions

Despite these limitations, the findings from this study provide some important findings about remittance receipt and allocation of remittances to different uses. There is evidence of gender differences in the incidence of remittances receipt with migrant mothers less likely to remit than migrant fathers providing some counter argument to other studies which have suggested that mothers may be more consistent remitters than fathers. There also is evidence of consistently statistically significant interactions between duration of time away and wealth, indicating that transnational migrant remittances may be contributing to inequality in origin communities, warranting future research. There are differences at the country level which highlights the importance of considering cultural differences at the national level in tandem with international comparative analysis. International comparative analysis allows for increased statistical power to test hypotheses about patterns that can help to inform policy planning on international migration, but may obscure some of the cultural nuances that hinder efforts to design effective policy strategies to support the international flow of migrants and remittances to their families in countries of origin.

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Table 1: Percentages and mean value

	Pooled	Philippines	Indonesia	Vietnam
REMITTANCES				
Household received remittances in past 6 months	83.6	99.33	71.9	79.21
Use of remittances				
Basic survival	37.6	35.94	33.02	43.24
Short-term investment	39.2	62.05	33.02	23.28
Long-term investment	6.6	1.12	5.85	12.47
MIGRATION CHARACTERISTICS				
Mother is migrant	45.9	20.09	61.59	56.13
Total duration of migration	35.3(26.2)	38.2(30.3)	36.4(27.1)	31.5(20.3)
Fee paid to arrange migration	76.0	56.92	85.95	84.82
SOCIOECONOMIC STATUS				
Migrant Occupation				
Manufacturing /Semi-skilled	18.4	25.22	22.01	8.73
Unskilled/Domestic	41.5	18.30	56.21	49.90
Skilled labor	32.3	37.05	21.08	37.84
Other	7.9	19.42	0.70	3.53
Migrant completed education				
Less than primary	19.1	5.58	47.54	6.44
Less than secondary	49.0	37.72	29.74	76.72
Completed secondary	31.9	56.70	22.70	16.84
Household wealth				
Low	26.9	8.48	28.57	42.62
Medium	31.9	27.46	34.66	33.47
High	41.2	64.06	36.77	23.91
HOUSEHOLD CHARACTERISTICS				
Index child is female	51.0	50	50.59	52.18
Index child is older (9,10,11)	50.4	51.79	48.71	50.73
Total number children (less than 16) in household	1.9(.96)	2.4(1.1)	1.7(.82)	1.7(.68)
Grandparents live in household	34.2	27.46	30.91	43.45
COUNTRY OF RESIDENCE				
Philippines	33.0	-	-	-
Indonesia	31.5	-	-	-
Vietnam	35.5	-	-	-
N	1356	448	427	481

Table 2: Two-stage probit model for remittance receipt and use for basic survival (N=1356)

	Model 1 Received remittances			Model 2.1 Basic Survival †			Model 2.2 Basic Survival			Model 3.1 Short-term Investment †			Model 3.2 Short-term Investment			Model 4 Long-term Investment		
	B	(SE)		B	(SE)					B	(SE)		B	(SE)		B	(SE)	
Constant	2.453	(.421)	***	0.992	(.281)	***	1.139	(.279)	***	-0.776	(.285)	**	-0.910	(.284)	**	-3.174	(.474)	***
Mother is migrant	-0.570	(.118)	***	-0.198	(.096)	*	-0.3592	(.086)	***	0.230	(.095)	*	0.364	(.088)	***	0.012	(.128)	
Duration of time away	-0.006	(.004)		-0.020	(.005)	***	-0.0233	(.005)	***	0.016	(.005)	**	0.021	(.005)	***	0.009	(.007)	
Fee paid to arrange	0.196	(.127)		-			-			-			-			-		
Migrant occupation																		
Manufacturing/ Semi-skilled	-0.021	(.155)		-			-			-			-			-		
Skilled labor	0.044	(.125)		-			-			-			-			-		
Other	0.746	(.402		-			-			-			-			-		
Migrant education																		
Less than primary																		
Less than secondary	0.172	(.132)		-			-			-			-			-		
Completed secondary	0.134	(.158)		-			-			-			-			-		
Household wealth																		
Low																		
Medium	-0.153	(.190)		-0.477	(.176)	**	-0.5333	(.186)	**	0.289	(.188)		0.360	(.193)		0.610	(.300)	*
High	0.713	(.234)	***	-1.026	(.171)	***	-0.9767	(.183)	***	0.720	(.179)	***	0.695	(.187)	***	0.970	(.299)	**
wealth2Xtotal duration	0.017	(.006)	**	-0.020	(.006)		0.0124	(.006)	*	0.016	(.006)		-0.012	(.006)	*	-0.004	(.008)	
wealth3Xtotal duration	0.004	(.005)		0.014	(.005)	**	0.0172	(.005)	**	-0.011	(.005)	*	-0.016	(.005)	***	-0.007	(.007)	

Index child is female	-			0.149	(.073)	*	0.1643	(.078)	*	-0.029	(.074)		-0.034	(.078)		-0.320	(.122)	**
Index child is older	-			-0.009	(.081)		-0.0025	(.087)		-0.029	(.083)		0.040	(.088)		-0.111	(.139)	
Three generation household	-0.077	(.099)		0.051	(.082)		0.0381	(.086)		-0.123	(.083)		-0.115	(.087)		0.165	(.130)	
Total number children (less than 16) in household	0.114	(.064)		-0.063	(.043)		-0.0494	(.044)		0.052	(.043)		0.040	(.044)		0.009	(.081)	
Philippines																		
Indonesia	-1.445	(.252)	***	0.445	(.110)	***	0.259	(.106)	*	-0.633	(.111)	***	-0.472	(.105)	***	0.978	(.216)	***
Vietnam	-1.276	(.249)	***	0.444	(.106)	***	0.343	(.108)	**	-0.912	(.107)	***	-0.849	(.110)	***	1.530	(.213)	***
Log likelihood	-466.039			-1174.354			-709.32			-1163.029			-699.155			-263.347		
N	1356			1356			1133			1356			1133			1133		

* p<.05, ** p<.01, ***p<.001.

† first stage coefficients available upon request

Table 3a: Country-specific probit models for remittance receipt and remittance uses

	INDONESIA								
	Model 1a Received remittances			Model 2a Basic Survival			Model 3a Short-term Investment		
	B	(SE)		B	(SE)		B	(SE)	
Constant	2.844	(.809)	***	1.447	(.514)	**	-1.309	(.508)	*
Mother is migrant	-1.543	(.331)	***	-0.594	(.157)	***	0.460	(.156)	**
Duration of time away	0.966	(.006)		-0.007	(.003)	*	0.007	(.003)	*
Fee paid to arrange	0.374	-0.201		-			-		
Migrant occupation									
Unskilled/Domestic									
Manufacturing/Semi-skilled	-0.228	(.271)		-			-		
Skilled labor	-0.741	(.358)		-			-		
Other	-			-			-		
Migrant education									
Less than primary									
Less than secondary	0.194	(.175)		-			-		
Completed secondary	0.044	(.214)		-			-		
Household wealth									
Low									
Medium	-0.174	(.299)		-0.456	(.206)	*	0.231	(.203)	
High	0.966	(.336)	**	-0.540	(.214)	*	-0.093	(.213)	
wealth2Xtotal duration	0.022	(.008)	*	-			-		
wealth3Xtotal duration	0.001	(.007)		-			-		
Index child is female	-			0.076	(.149)		0.010	(.148)	
Index child is older	-			0.054	(.170)		0.116	(.169)	
Three generation household	-0.174	(.162)		0.072	(.170)		-0.134	(.170)	
Total number children (less than 16) in household	-0.174	(.096)		-0.121	(.097)		0.067	(.095)	
Log likelihood	-202.572			-198.710			-202.240		
N	427			307			307		

* p<.05, ** p<.01, ***p<.001.

† first stage coefficients available upon request

Table 3b: Country-specific probit models for remittance receipt and remittance uses

	VIETNAM								
	Model 1b Received remittances			Model 2b Basic Survival			Model 3b Short-term Investment		
	B	(SE)		B	(SE)		B	(SE)	
Constant	0.883	(.505)		1.486	(.492)	**	-0.255	(.524)	***
Mother is migrant	-0.225	(.148)		-0.224	(.152)		0.440	(.157)	**
Duration of time away	-0.011	(.006)	*	-0.046	(.008)	***	0.039	(.008)	***
Fee paid to arrange	-0.054	(.192)							
Migrant occupation									
Unskilled/Domestic									
Manufacturing/Semi-skilled	-0.300	(.249)		-			-		
Skilled labor	-0.073	(.149)		-			-		
Other	0.435	(.428)		-			-		
Migrant education									
Less than primary									
Less than secondary	0.002	(.268)		-			-		
Completed secondary	0.016	(.315)		-			-		
Household wealth									
Low									
Medium	-0.409	(.273)		-0.292	(.344)		0.456	(.361)	
High	0.530	(.434)		-0.826	(.398)	*	0.954	(.413)	*
wealth2Xtotal duration	0.020	(.008)	*	0.008	(.010)		-0.017	(.009)	
wealth3Xtotal duration	0.020	(.009)		0.021	(.010)	*	-0.029	(.010)	**
Index child is female	-			0.180	(.144)		0.096	(.146)	
Index child is older	-			0.084	(.159)		-0.041	(.162)	
Three generation household	0.111	(.138)		0.099	(.154)		-0.255	(.157)	
Total number children (less than 16) in household	0.195	(.101)		0.052	(.110)		-0.255	(.112)	
Log likelihood	-234.151			-201.288			-196.417		
N	481			381			381		

* p<.05, ** p<.01, ***p<.001.

† first stage coefficients available upon request

Appendix A Table 1 : Supplementary: Pooled probit models for remittance receipt and remittance uses (non-interacted full models)

	Model 1 Received remittances			Model 2.1 Basic Survival †			Model 2.2 Basic Survival			Model 3.1 Short-term Investment †			Model 3.2 Short-term			Model 4 Long-term		
	B	(SE)		B	(SE)					B	(SE)		B	(SE)		B	(SE)	
Constant	2.251	(.412)	***	0.729	(.247)	**	0.813	(.257)		-0.553	(.248)	*	-0.594	(.259)	*	-3.048	(.445)	***
Mother is migrant	-0.562	(.118)	***	-0.181	(.089)	*	-0.355	(.086)		0.204	(0.087)	*	0.359	(.087)	***	0.015	(.128)	
Duration of time away	0.000	(.002)		-0.009	(.002)		-0.010	(.002)		0.007	(.002)	***	0.008	(.002)	***	0.004	(.003)	
Fee paid to arrange	0.204	(.127)		-			-			-			-			-		
Migrant occupation																		
Manufacturing/ Semi-skilled	-0.005	(.154)		-			-			-			-			-		
Skilled labor	0.042	(.125)		-			-			-			-			-		
Other	0.699	(.395)		-			-			-			-			-		
Migrant education																		
Less than primary																		
Less than secondary	0.186	(.131)		-			-			-			-			-		
Completed secondary	0.143	(.157)		-			-			-			-			-		
Household wealth																		
Low																		
Medium	0.335	(.138)	**	-0.314	(.102)	**	-0.236	(.109)	*	0.166	(.106)		0.070	(.113)		0.521	(.177)	**
High	0.751	(.111)	***	-0.622	(.107)	***	-0.492	(.113)	***	0.394	(.109)	***	0.248	(.114)	*	0.728	(.184)	***
Index child is female	-			0.152	(.071)	*	0.175	(.078)		-0.034	(.071)		-0.045	(.078)		-0.321	(.122)	**
Index child is older	-			-0.013	(.079)		-0.008	(.089)		0.049	(.081)		0.045	(.088)		-0.107	(.138)	
Three generation household	-0.082	(.099)		0.038	(.080)		0.021	(.086)		-0.111	(.082)		-0.099	(.086)		0.173	(.129)	
Total number children (less than 16) in household	0.114	(.064)		-0.063	(.042)		-0.048	(.044)		0.052	(.042)		0.038	(.043)		0.011	(.081)	

Philippines															
Indonesia	-1.446	(.251)	***	0.459	(.106)		0.257	(.106)	**	-0.659	(.105)	***	-0.473	(.105)	***	0.979	(.216)	***
Vietnam	-1.268	(.249)	***	0.453	(.104)		0.346	(.108)	**	-0.911	(.106)	***	-0.849	(.110)	***	1.524	(.214)	***
Log likelihood	-471.429			-1177.486			-715.197			-1166.100			-703.895			-263.920		
N	1356			1356			1133			1356			1133			1133		

* p<.05, ** p<.01, ***p<.001.

† first stage coefficients available upon request

Appendix A Table 2 : Supplementary: Country-specific probit models for remittance receipt and remittance uses (non-interacted full models)- Vietnam

	VIETNAM								
	Model 1b Received remittances			Model 2b Basic Survival			Model 3b Short-term Investment		
	B	(SE)		B	(SE)		B	(SE)	
Constant	0.684	(,493)		0.128	-0.474	**	-0.175	-0.495	***
Mother is migrant	-0.247	(.147)		-0.215			0.420	-0.155	**
Duration of time away	-0.002	(,004)		-0.036	-0.004	***	0.023	-0.004	***
Fee paid to arrange	-0.028	(,189)		-			-		
Migrant occupation									
Unskilled/Domestic									
Manufacturing/Semi-skilled	-0.249	(,247)		-			-		
Skilled labor	-0.062	(,148)		-			-		
Other	0.398	(,421)		-			-		
Migrant education									
Less than primary									
Less than secondary	0.032	(.265)		-			-		
Completed secondary	0.030	(,313)		-			-		
Household wealth									
Low									
Medium	0.161	(.151)		-0.090	-0.171		-0.019	-0.177	
High	0.641	(.202)	**	-0.122	-0.199		-0.079	-0.202	
Index child is female	-			0.184	-0.144		0.086	-0.553	
	-								
Index child is older				0.082	-0.157		-0.039	-0.161	
Three generation household	0.105	(.134)		0.095	-0.153		-0.247	-0.155	
Total number children (less than 16) in household	0.167	(.099)		0.028	-0.109		0.080	-0.109	
Log likelihood	-237.306			-203.304			-200.547		
N	481			381			381		

* p<.05, ** p<.01, ***p<.001.

† first stage coefficients available upon request

Appendix A Table 3 : Supplementary: Country-specific probit models for remittance receipt and remittance uses (non-interacted full models)- Vietnam

	INDONESIA								
	Model 1b Received remittances			Model 2b Basic Survival			Model 3b Short-term Investment		
	B	(SE)		B	(SE)		B	(SE)	
Constant	2.503	(.769)	***	1.447	(.514)	**	0.067	(.508)	*
Mother is migrant	-1.456	(.325)	***	-0.594	(.157)	***	0.460	(.156)	**
Duration of time away	-0.001	(.003)		-0.007	(.003)	*	0.107	(.003)	*
Fee paid to arrange	0.370	(.199)							
Migrant occupation									
Unskilled/Domestic									
Manufacturing/Semi-skilled	-0.220	(.268)		-			-		
Skilled labor	-0.695	(.354)	*	-			-		
Other	-			-			-		
Migrant education									
Less than primary									
Less than secondary	0.216	(.173)		-			-		
Completed secondary	0.065	(.212)		-			-		
Household wealth									
Low									
Medium	0.503	(.177)	**	-0.456	(.206)	*	0.231	(.231)	
High	0.868	(.213)	***	-0.540	(.214)	*	0.107	(.213)	
Index child is female	-			0.076	(.149)		0.010	(.148)	
Index child is older	-			0.054	(.170)		0.116	(.169)	
Three generation household	-0.192	(.159)		0.072	(.170)		-0.134	(.170)	
Total number children (less than 16) in household	0.113	(.094)		0.072	(.097)		0.067	(095)	
Log likelihood	-207.239			-198.710			-202.240		
N	427			307			307.000		

* p<.05, ** p<.01, ***p<.001.

† first stage coefficients available upon request

Appendix A Table 4: Country-specific probit models for remittance receipt and remittance uses- Philippines

	Model 2b Basic Survival		Model 3b Short-term Investment	
	B	(SE)	B	(SE)
Constant	0.065	(.417)	-0.031	(.414)
Mother is migrant	0.037	-0.162	0.022	(.162)
Duration of time away			0.004	(.002)
Fee paid to arrange	-		-	
Migrant occupation				
Unskilled/Domestic	-		-	
Manufacturing/Semi-skilled	-		-	
Skilled labor	-		-	
Other				
Migrant education				
Less than primary	-		-	
Less than secondary	-		-	
Completed secondary				
Household wealth				
Low				
Medium	0.073	(.242)	-0.137	(.242)
High	-0.418	(.232)	0.342	(.232)
Index child is female	0.226	(.125)	-0.175	(.124)
Index child is older	-0.151	(.144)	0.099	(.143)
Three generation household	0.016	(.141)	-0.034	(.140)
Total number children (less than 16) in household	-0.008	(.058)	-0.006	(.057)
Log likelihood	-280.048		-283.833	
N	445		445	

* p<.05, ** p<.01, ***p<.001.

† first stage coefficients available upon request