Using data from two Cambodian villages, this study examines the effect of household assets on individuals’ choice between domestic destinations and Thailand as migration destination, while also accounting for possible interaction effects of family bonds and Thai migrant networks. Results of econometric analysis show that those with large farmland tend to choose domestic destinations, apparently to avoid cross-border family separation. The probability of choosing Thailand as the destination is large for households with small farmland especially when informal channels are used for cross-border migration, the cost of which would be reduced by a developed migrant network. These findings imply that migrants to Thailand are more likely to come from asset-poor households, although that can happen only because of the existence of informal channels to cross the border. The possible psychological burden of cross-border family separation is also a matter of concern.

Key words: labor migration, international migration, migrant network, assets, psychological cost

1. Introduction

Since the late 1990s, labor migration from rural to urban areas has increased in Cambodia. In recent years, labor migration to Thailand has also been on the rise, because of the pull of wages. Remittances from family members working in Thailand can help raise the income levels of rural Cambodian households. If migration to Thailand is costly, however, only relatively better-off households can send its members to Thailand, which would increase economic inequality in rural communities.

The impact of increasing migration from Cambodia to Thailand can be better understood by comparing the selectivity of migration to Thailand with that of domestic migration. To our knowledge, there has been no study on this topic so far. Some studies have just descriptively compared migrants and non-migrants and thus failed to control for the effect of various factors (Chan, 2009; Hing et al., 2011). Although some econometric analyses, which help control the effect of various factors, have been conducted by some other studies, they focus only on migration to Thailand (Bylander, 2016; Molyaneth, 2012) or do not make a distinction between migration destinations (Mong, 2013). Molyaneth (2012) shows that households with smaller landholding are more likely to send migrants to Thailand, but does not examine the reasons for this.

As argued later, migration theories which take into account only the economic costs and benefits of migration conclude that migrants to Thailand come mainly from households with large assets while domestic migrants are from those with small assets. However, this is not the case when we consider other
factors. One such factor is “the migrant network”, or the social network that connects a sending community and those who live in a migration destination. By helping with transportation and job search in migration destinations, migrant networks can reduce cost for international migration and thus might increase cross-border migration from poor households.

Another factor to consider is the psychological cost of migration. Compared with domestic migration, international migration makes it more difficult for migrants to visit their families and this could result in long-term family separation. Separation of family members entails psychological distress and might have negative effects on the marital relationship and on child development, as reported by previous studies in other countries (Bryant, 2005). To avoid cross-border family separation, some choose domestic destinations even if the wage level is lower. Such decisions are less likely to be made by those with small assets because earning a higher income would be their foremost consideration. Many studies have examined the effect of household assets on the choice between international and domestic destinations (for example, Czaika, 2012; Davis et al., 2002; VanWey, 2005), but they do not account for the psychological cost of family separation.

Against the backdrop of the issues presented above, the objectives of this study are to examine (1) the effect of household asset size on the probability of household members’ migration to Thailand in comparison with domestic destinations and (2) how the effect is moderated by a migrant network and family bonds. The findings can help understand the nature of the selectivity of Cambodia-Thai migration and the possible impact of the increase in migration to Thailand on economic inequality in rural Cambodia.

To achieve this objective, we conduct an econometric analysis with data collected from two villages of Takeo province. Located in the southern part of Cambodia, Takeo province sends a number of migrants to both Thailand and domestic destinations, which enables us to compare migration selectivity between domestic and Thai migration. These two villages differ in the migration channels to Thailand: villagers of one village rely on formal channels but villagers of another village use informal ones. As is shown later, comparison of these two villages helps us elucidate the effect of the migrant network.

2. Theory and hypotheses

(1) Effects of household assets

If only economic costs and benefits are taken into consideration, household asset is seen as having two types of effect on migration and on the selection of destination. The first one can be called an “opportunity-cost effect.” The human capital theory of migration, as pioneered by studies such as those by Sjaastad (1962), posits that people migrate to where return on their human capital is the highest. The income that a potential migrant can earn at his place of origin is considered the opportunity cost of migration. Based on this theory, an increase in households’ productive assets, such as farmland in case a rural village is the place of origin, will reduce the incentive to migrate by raising the productivity of family labor at the place of origin.

The second effect can be called a “financing effect,” which will be observed when the migration cost is huge. An increase in asset size will boost household income and hence savings. It also enables a household to acquire a large loan with their assets as collateral. These would help finance costly migration.

Taking into account these effects, we can predict that households with small assets tend to select domestic destinations while those with large assets go for international ones. As an opportunity to earn higher income, destinations abroad attract members of both asset-rich and asset-poor households. However, cross-border migration is costly and hence only asset-rich households can afford it (the financing effect). Asset-poor households have no choice but to select domestic destinations, while asset-rich households have no incentive to select domestic destinations due to the opportunity-cost effect. This prediction is
largely consistent with the empirical findings of previous studies of other developing countries (for example, Czaika, 2012; Gray, 2009).

However, the arguments above ignore the psychological cost of family separation owing to migration. Once the psychological cost is taken into account, asset-rich households would prefer domestic destinations to international ones under certain conditions. This proposition is based on a mathematical model (see the appendix A of the online appendix), the essence of which is as follows. We consider the migration choice by a utility-maximizing rural household with the following assumptions.

1. Migration of family members entails a psychological cost of family separation (\(H\)) and a higher psychological cost is associated with a higher wage rate in the migration destination. (2) Household’s utility \(U\) is a positive function of household’s per-capita income \(y\) and a negative function of the psychological cost. (3) The marginal utilities of income are diminishing \((\partial^2 U/\partial y^2 < 0)\) and the marginal disutility of the psychological cost is increasing \((\partial^2 U/\partial H^2 < 0)\). (4) The marginal disutility of the psychological cost increases with income \((\partial^2 U/\partial y \partial H < 0)\). (5) Households’ income is the sum of migrating member’s wage and income earned through income-generating activities of the household in the village, with the latter being a positive function of household’s productive assets. Under these assumptions and with no migration cost, asset-rich households, who can earn high income in the village, select destinations with lower psychological costs but lower wage rates—domestic destinations—because the marginal utility of income is small and the marginal disutility of the psychological cost is large for them. We call this the “separation-aversion effect.” In case households have sufficiently large asset holdings, or when domestic wages are too low, “not migrating” is the optimal choice because of the opportunity-cost effect. On the other hand, asset-poor households, who can earn less in their village, select international destinations—where the wage rate is high but the psychological cost is large—because the marginal utility of income is large and the marginal disutility of the psychological cost is small for them.

The effect of assets is also moderated by the migrant network. As a source of information and for helping with job search, the migrant network reduces cost (“cost-saving effect”) and uncertainty (“risk-reduction effect”) associated with migration and thus promotes international migration which entails a larger cost and a higher risk (Davis et al., 2002; Deléchat, 2001). The cost-saving effect is predicted to be stronger for asset-poor households because they lack the financial capacity necessary for costly cross-border migration. This prediction is supported by empirical studies on migration from Mexico to the United States (Dolfin and Genicot, 2010; McKenzie and Rapoport, 2007).

However, a migrant network would only reduce the uncertainty but not the monetary cost of migration when migration is only possible through formal channels, where the monetary cost is predetermined by the government or registered recruitment agencies and not affected by the migrant network. In such a case, the migrant network will increase the probability of international migration only for asset-rich households and not for asset-poor households.

(2) Summary of predicted effects

Table 1 shows the predicted effects of asset size and moderating variables on the probability of migration and the selection of destination, according to the underlying types of effects based on the theory presented above.

When the marginal effect of assets is positive on the probability of “not migrate” and negative on that of “migrate” (to either domestic destinations or Thailand), it indicates the opportunity-cost effect of asset holding. The magnitude of the negative effect is predicted to be larger for domestic migration than for migration to Thailand because the wage rate is generally lower in the former than in the latter. On the other hand, if assets have a positive effect on the probability of migration to Thailand, it suggests the
financing effect of assets.

With the separation-aversion effect caused by the psychological cost of family separation, an increase in asset size reduces the probability of migration to Thailand and increases that of migration to domestic destinations. Furthermore, when the psychological cost is large enough, an increase in asset size will decrease the probability of migration in general and increase the probability of “not migrate” as demonstrated above.

To verify the significance of the separation-aversion effect, we also examine the effect of the number of young children in a household. An increase in the number of young children in a household is supposed to increase their parents’ psychological cost of migration. The psychological cost would deter parents’ migration, especially migration to Thailand, and increase the probability of “not migrate” especially when asset size is large. For households with smaller asset size, an increase in the number of young children would just cause a shift of destination from Thailand to domestic ones.

The Thai migrant network is predicted to have both the cost-saving and the risk-reduction effects, both of which increase the probability of choosing migration to Thailand. We can identify which effect is stronger by examining the interaction effect of the Thai migrant network and asset size. The cost-saving effect is stronger if the marginal effect of the Thai migrant network is larger for households with small assets than for those with large assets. When no association is found between asset size and the size of the marginal effect of the Thai migrant network, or when it is larger for households with large assets, we can conclude that it has only the risk-reduction effect.

### 3. Data collection and survey villages

We collected data from households in Svay and Trapeang Ang villages (hereinafter denoted as S and T villages) in Treang district, Takeo province. The two villages are located about 80 km south of Phnom Penh. We conducted two rounds of questionnaire surveys. The first was conducted in May and June 2014 and the second in January 2015. At the time of the survey, the number of households was 135 in S and 154 in T village. The survey was administered to all households in the two villages and interviews were conducted in principle with the head of each household except in cases where the head was absent because of migration (in such cases, other adult members or close relatives

<table>
<thead>
<tr>
<th>Variable</th>
<th>The sign and size of the marginal effect(^1)</th>
<th>Effect type</th>
<th>Condition (Asset size)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asset</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not migrate</td>
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<td>Opportunity-cost effect</td>
<td></td>
</tr>
<tr>
<td>Domestic</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thailand</td>
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<td></td>
</tr>
<tr>
<td>null</td>
<td>+</td>
<td>Financing effect</td>
<td></td>
</tr>
<tr>
<td>+/−</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Separation-aversion effect</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>+/−</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>+/−</td>
<td>+</td>
<td>Separation-aversion effect</td>
<td></td>
</tr>
<tr>
<td>Young children</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>null</td>
<td>+</td>
<td>Separation-aversion effect</td>
<td>Small</td>
</tr>
<tr>
<td>+/−</td>
<td>+</td>
<td></td>
<td>Large</td>
</tr>
<tr>
<td>+/−</td>
<td>+</td>
<td>Separation-aversion effect</td>
<td>Small</td>
</tr>
<tr>
<td>Thai migrant network</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>null</td>
<td>+</td>
<td>Cost-saving effect</td>
<td>Small</td>
</tr>
<tr>
<td>+/null</td>
<td>+</td>
<td></td>
<td>Large</td>
</tr>
<tr>
<td>+/null</td>
<td>+</td>
<td>Risk-reduction effect only</td>
<td>Small</td>
</tr>
</tbody>
</table>

\(^1\) ++ (− −) indicates stronger positive (negative) effect.

Source: Prepared by the author.

Table 1. Predicted effects of major variables
of the household head were interviewed).

Both villages are farming villages with rice as the major crop. Some households are also engaged in small-scale off-farm businesses such as grocery shops and some villagers engage in agricultural wage labor during farming season. However, other employment opportunities are scarce and that explains why labor migration has been common in the two villages since the early 2000s. Migration to Thailand from the two villages began to increase around 2010 and became widespread in a few years.

On average, the area of farmland owned by a household is smaller in T village (0.57 ha) than in S village (0.87 ha). Rice can be grown in both the wet and the dry seasons in S village while only in the wet season in T village. For these reasons, 35% of households in T village run off-farm businesses and on average 2.3 members per household migrated to work between April and December 2014. In S village only 15% of households run off-farm businesses and the average number of migrants per household is 1.4.

All data presented hereinafter is migration data for eight months, from May 2014 until the end of 2014, unless otherwise noted. The period overlaps with the farming season for wet season rice in the two villages. For this period, the destination of international migration from the two villages is limited to Thailand, except for one case of a man from T village who went to South Korea. His case is excluded from this analysis.

Over eight months, of the working-age population—those who aged 15 to 64—37% from S village and 52% from T village migrated for some time. The prevalence of migration was higher for younger generation, as the migration rate for those who aged 15–29 was 58% in S village and 75% in T village. Most of young migrants were the children of the household head.

Migration to Thailand was more common in T village than in S village, as 46% of migrants from T village went to Thailand while only 28% from S village chose Thailand. Among domestic destinations, Phnom Penh attracted most domestic migrants from the two villages, followed by Sihanouk Ville. Other domestic destinations attracted a few migrants. The majority of migrants were engaged in wage labor in their destination, such as garment factory work, construction work, and agricultural wage labor, though a third of migrants from T village in Thailand were employed in shops or restaurants.

The average duration of migration in the eight months was 5.3 months for migrants from S village and 6.6 months for migrants from T village. However, 49% of migrants from S village and 75% from T village migrated for seven to eight months, or for (almost) the entire eight-month period.

Sixty-four percent of migrants from S village and 63% from T village remitted money or brought money back when they returned to (or visited) their home in the eight-month period. On average, migrants to Thailand sent or brought back larger amounts of money (US$650 and US$525 for S and T villages, respectively) than domestic migrants (US$325 and US$350).

Our field interview suggests that family separation is an important factor in the choice of migration destination. Some respondents told us that they migrated inside the country but not to Thailand for family reasons such as “cannot meet my children,” “there is no one to take care of my family” and “we can meet our parents and siblings frequently if [we] migrate within [the] country.”

The Thai migrant network is represented here by the number of close relatives—household head’s independent adult children and the siblings of household heads and their spouses—living or working in Thailand as of May–June 2014. Households in the two villages on average have similar size of network defined in this way. The proportion of households having the network is 23% in S village and 20% in T village, and the average size of the network (the number of persons) for households with the network are 1.5 in S village and 1.8 in T village.

To examine whether and how the migrant network facilitated migration to Thailand, we interviewed those
villagers who had ever migrated to Thailand and asked them the way and cost to migrate to Thailand. Data was collected for 13 cases from S and 34 from T village. Among these, eight from S village used formal channels—using recruitment agencies registered with the government and crossing the national border with passport. In contrast, in T village, a formal channel was used in only one case and informal channels were used in other 33 cases. In 24 cases of the latter, migration was brokered in some way by migrant’s relatives, friends, or acquaintances. It is worth noting that the case of T village reflects the general situation of Cambodia-Thai migration at that time. As of November 2014, of around 800,000 estimated Cambodian workers in Thailand, only 90,757 used formal channels (International Organization of Migration Thailand office, 2014). Under this situation, it is puzzling why S villagers mostly use formal rather than informal channels to migrate to Thailand even their Thai migrant networks are similar in size to those of T villagers. One possibility is that migrants from S village in the early period happened to use formal channels. Migrants using formal channels would be less likely to serve as mediators of migration through informal channels because their Thai employers would rely on formal channels to recruit Cambodian workers. Average migration costs, which include payments to agents or brokers and transportation costs, came to US$127 for migrants from S village but only US$69 for migrants from T village. Besides the higher cost, some S villagers who migrated through a formal channel told us that they had to wait for many months after applying to the agency, before they were dispatched to Thailand.

4. Econometric analysis

(1) Methodology

We apply the multinomial logit model, where individuals are assumed to pick one of three choices: “not migrate,” “migrate to domestic destinations” or “migrate to Thailand” in the eight-month period from May 2014 until the end of 2014. For those who migrated to both a domestic destination and to Thailand in the eight-month period, the destination where they stayed longer is regarded as their choice. The duration of migration is not taken into consideration and hence those who migrated only for a short period are also regarded as having migrated.

The model is estimated by pooling the data from the two villages. Because the effect of explanatory variables can differ by village, a village dummy variable is included in the model and interacted with other explanatory variables. The sample observations for the analysis are limited to villagers aged 15 to 64. Those for whom some variables are missing as well as one villager who migrated to South Korea are excluded from the sample. That leaves us with 388 observations for S village and 485 for T village.

As variables representing the size of households’ productive assets, the area of farmland owned, the number of draft animals (cattle or buffalo) owned and the total value of other productive assets (such as agricultural machines) are used. The square of each of the asset variables are also included in the model to reflect possible nonlinear effects of those assets.

The number of young children in the household is represented by two variables: the number of children aged 0 to 14 of the household head and the number of children aged 0 to 14 other than children of the household head (these are mostly the grandchildren of the household head). Note that children who are not members of the household are not included in these variables. Besides the number of young children, the number of other household members by age groups is also used as variable.

The variable representing the Thai migrant network is defined as the sum of the number of relatives of the household head who lived or stayed in Thailand as of May 2014. Here, the relatives include only the siblings of the household head and his/her spouses and household head’s adult children separated from their parents’ household.

Asset variables are interacted with the number of young children and the Thai migrant network, because
the effect of the latter variables is predicted to vary with household asset size, which enables us to isolate the types of effects, as shown in Table 1.

The number of siblings of the household head and his/her spouses who lived in the village at the time of the interview (but members of other households) is also included as a variable, because relatives in the village might also affect the decision to migrate by, for example, helping take care of children and household chores (which makes migration easier).

The variables introduced above are all household-level attributes. Individual-level attributes, namely, age, sex, educational level and marital status are also included in the explanatory variables. In addition, we also include a dummy variable called “household-head dummy” which takes value one if he/she is the household head or his/her spouse, and zero otherwise (that is, “non-household heads”). Of the sample individuals, household heads and their spouses make up 53% for S villagers and 43% for T villagers.

The household-head dummy is interacted with the asset variable, the two variables of the number of young children and the Thai migrant network because the effect of these variables might vary according to an individual’s status in the household. Regarding the effect of asset size, its opportunity-cost effect is predicted to be stronger for household heads and their spouses than for other household members, as it is the household heads and their spouses who would be chiefly engaged in income-generating activities in the village such as farming. As the major caregiver, household heads and their spouses are predicted to be more affected by the number of young children in the household while making their decisions on migration.

The unit of observation is the individual but they are grouped by household. To capture the effects of unobservable household-level factors, household-level random effects are incorporated into the multinomial logit model. In addition, individual-level unobservable effects can be correlated within households. To account for this, the standard errors of coefficients are estimated with an assumption that the correlation of error terms between members of each household is not zero; that is, the cluster-robust standard errors are estimated with household as the unit of the cluster.

(2) Estimation results

As estimated coefficients do not directly represent the sign and the size of the effect of explanatory variables for the multinomial logit model, we calculate the average marginal effect (AME) of explanatory variables on the probability of selecting each choice. Due to space limitations, the results are shown in the appendix B of the online appendix. To see the difference by village, AMEs are calculated separately for S and T villages by fixing the value of the S village dummy at one for the former and at zero for the latter. The log-likelihood ratio test rejects the null hypothesis that the variances of the random effects are zero ($p<0.01$), and thus the presented results are based on estimations with the random effects.

Table 2 summarizes the magnitude or the sign of the AMEs of asset size. Table 2 also shows the range of the value of asset variables where AMEs are statistically significant because the square of asset variables are included in the model and hence AMEs vary with the size of assets.

In S village, regardless of asset type and especially for household heads and their spouses, an increase in the size of assets mostly reduces the probability of domestic migration. These results suggest that assets have an opportunity-cost effect for S villagers. On the other hand, AMEs on migration to Thailand are mostly not significant, implying, that the financing effect does not exist or is offset by the opportunity-cost effect in S village. The separation-aversion effect, which increases the preference for domestic migration over cross-border migration with asset size, is not clear for S villagers because no asset has a significant positive effect on domestic migration.

For T villagers, the effect of assets differs greatly from that for S villagers. As for farmland, it increases the probability of “not migrate” for household heads and their spouses when land size is 0.1 ha or less. This seems to exhibit the opportunity-cost effect, but that
conjecture is not supported because farmland does not have a negative effect on domestic migration. For non-household heads, farmland even has a negative effect on “not migrate” and a positive effect on domestic migration when the size of land is large.

The opportunity-cost effect of farmland for domestic migration is only observed for S villagers and not for T villagers supposedly because of differences in the rice-farming environment and farming technology between the two villages. In S village, most farmers have access to irrigation water and thus irrigate their rice frequently even in the wet season. This suggests that the opportunity cost of migration is large, especially for large-scale farmers. In contrast, most of the rice fields in T village have no access to irrigation water and hence the labor input required for farming is small after planting until harvest season. Under such conditions, for farmers in T village, the opportunity cost of migration is not large even in the wet season.

On the other hand, the estimation result indicates that farmland has the separation-aversion effect in T village because it has a significant negative effect on migration to Thailand while it has no significant negative effect on domestic migration. Other assets also seem to have the separation-aversion effect for non-household heads as their effect on migration to

<table>
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<tr>
<th>Village</th>
<th>Variable</th>
<th>Choice</th>
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<th>Range(4)</th>
<th>NHH(2) Average(3)</th>
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<td></td>
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<td>n.s.</td>
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<td>Farmland (ha)</td>
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<td>(−)(0.0)</td>
<td>−0.06</td>
<td>n.s.</td>
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<td></td>
<td></td>
<td></td>
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<td>Not migrate</td>
<td>**(+) *<strong>0.24</strong></td>
<td>(+)(0.0–1.0)</td>
<td>0.05</td>
<td>n.s.</td>
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<td></td>
<td></td>
<td>**(+) *<strong>−0.19</strong></td>
<td>(−)(0.0–0.5)</td>
<td>−0.08 *</td>
<td>(−)(0.0–1.0)</td>
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<td></td>
<td></td>
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<td>n.s.</td>
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<td>(+(0.0)/(−)(3.0)</td>
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<tr>
<td></td>
<td>Other assets (million riel)</td>
<td>Not migrate</td>
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<td>n.s.</td>
<td>−0.01</td>
<td>n.s.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>−0.02</td>
<td>(−)(2–5)</td>
<td>0.01</td>
<td>n.s.</td>
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<tr>
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<td>n.s.</td>
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<td></td>
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<tr>
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<td></td>
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<td>(−)(1–2)</td>
<td>0.03 **</td>
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<td>(−)(1–2)</td>
<td>0.03 **</td>
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</tr>
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<td>Domestic</td>
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<td>(−)(1–2)</td>
<td>0.03 **</td>
<td>(+(0–2)</td>
</tr>
<tr>
<td><strong>(2/0–51)</strong></td>
<td></td>
<td>Thailand</td>
<td>−0.28</td>
<td>n.s.</td>
<td>−0.05 ***</td>
<td>(−)(0–14)/(+(44–51)</td>
</tr>
</tbody>
</table>

Source: Prepared by the author based on the estimation results.
1) (#/#–#) indicate the mean and the range of each asset variable for respective villages.
2) HH refers to household heads and their spouses and NHH refers to non-household heads.
3) Significance level: ***1%, **5%, *10%.
4) "(+) n–m" indicates that the marginal effect is positive and significant with the p-value being smaller than 0.10 where the value of that variable is in the range of n and m. (−) refers to negative effect. “n.s.” indicates the marginal effect is not significant at any value in the range of the values for sample individuals.

Table 2. Average marginal effects (AME) of asset variables

Average marginal effects (AME) of asset variables

Village Variable Choice HH(1) Average(3) Range(4) NHH(2) Average(3) Range(4)
S Farmland Not migrate 0.42 *** (+)(0.0) 0.01 n.s.
          (ha) Domestic −0.54 *** (−)(0.0) −0.06 n.s.
          (1.1/0.0–6.3) Thailand 0.12 n.s. 0.04 n.s.
Draft animal Not migrate 0.24 *** (+)(0.0–1.0) 0.05 n.s.
          (head) Domestic −0.19 *** (−)(0.0–0.5) −0.08 * (−)(0.0–1.0)
          (0.8/0.0–4.0) Thailand −0.05 n.s. 0.03 (+(0.0)/(−)(3.0)
Other assets Not migrate 0.02 n.s. −0.01 n.s.
          (million riel) Domestic −0.02 (−)(2–5) 0.01 n.s.
          (4/0–25) Thailand 0.00 n.s. 0.00 n.s.
T Farmland Not migrate 0.13 (+)(0.0–0.1) 0.01 (−)(2.5–3.3)
          (ha) Domestic 0.05 n.s. 0.05 (+)(2.1–3.3)
          (0.7/0.0–3.3) Thailand −0.18 ** (−)(0.0–1.5) −0.06 (−)(1.2–1.5)
Draft animal Not migrate 0.00 (−)(9.0–10.5) 0.01 n.s.
          (head) Domestic −0.03 (−)(3.0–5.5) 0.00 (−)(10.0–10.5)
          (1.8/0.0–10.5) Thailand 0.02 (+)(8.5–10.5) 0.00 n.s.
Other assets Not migrate 0.33 ** (+)(0–2) 0.02 (+)(0)
          (million riel) Domestic −0.05 (−)(1–2) 0.03 ** (+)(0–2)
          (2/0–51) Thailand −0.28 n.s. −0.05 *** (−)(0–14)/(+(44–51)
Thailand is significantly negative while that on domestic migration is significantly positive. The type of the effect of draft animals appears to differ from that of farmland and other assets in T village. For household heads and their spouses, draft animals have a negative effect on domestic migration and a positive effect on migration to Thailand when the herd size is large, implying the opportunity-cost effect and the financing effect. But the effect on migration to Thailand is significant only when the herd size is exceptionally large and hence the number of draft animals is unlikely to be a major determinant of cross-border migration.

To confirm whether the observed pattern of the sign of the AME of farmland is caused by the separation-aversion effect, we examine the interaction effect of farmland and the number of young children. Table 3 shows the AME of the number of household heads’ children aged 0 to 14 for household heads and their spouses by the size of farmland, which indicates that in both villages farmland has the separation-aversion effect. In S village, the AME of the number of household heads’ children on migration to Thailand is significantly negative when land size is relatively large, and its absolute value increases with land size. In addition, the AME on domestic migration is significantly positive when farm size is 2.0 or 6.0 ha. In T village, when a household owns only small sized farmlands or is landless, an increase in the number of young children significantly increases the probability of domestic migration (AME is significant when land size is 0.4 ha or less), though it has no significant effect on migration to Thailand. When farm size is large, the AME of the number of young children is not significant, but its sign is negative for domestic migration and positive for “not migrate”.

Table 3. Average marginal effects (AME) of the number of household head’s children and Thai migrant network by the size of farmland

<table>
<thead>
<tr>
<th>Village</th>
<th>Size of farmland (ha)</th>
<th>Household heads’ children aged 0–14</th>
<th>Thai migrant network</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HH(1)</td>
<td>Domestic(2)</td>
<td>Thailand(2)</td>
</tr>
<tr>
<td></td>
<td>Not migrate(2)</td>
<td>Domestic(2)</td>
<td>Thailand(2)</td>
</tr>
<tr>
<td>S</td>
<td>0.0</td>
<td>0.02</td>
<td>−0.03</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
<td>0.08 ***</td>
<td>0.02</td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td>0.12 **</td>
<td>0.04 *</td>
</tr>
<tr>
<td></td>
<td>3.0</td>
<td>0.14 *</td>
<td>0.04</td>
</tr>
<tr>
<td></td>
<td>4.0</td>
<td>0.14</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td>5.0</td>
<td>0.14</td>
<td>0.06</td>
</tr>
<tr>
<td></td>
<td>6.0</td>
<td>0.15</td>
<td>0.07 *</td>
</tr>
<tr>
<td>T</td>
<td>0.0</td>
<td>−0.03</td>
<td>0.06 **</td>
</tr>
<tr>
<td></td>
<td>0.5</td>
<td>−0.03</td>
<td>0.03</td>
</tr>
<tr>
<td></td>
<td>1.0</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>1.5</td>
<td>0.03</td>
<td>−0.04</td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td>0.07</td>
<td>−0.08</td>
</tr>
<tr>
<td></td>
<td>2.5</td>
<td>0.10</td>
<td>−0.11</td>
</tr>
<tr>
<td></td>
<td>3.0</td>
<td>0.12</td>
<td>−0.13</td>
</tr>
</tbody>
</table>

Source: Prepared by the author based on the estimation results.
1) HH refers to household heads and their spouses and NHH refers to non-household heads.
2) Significance level: ***1%, **5%, *10%.
There is also the possibility that combining farming with migration is the reason for the preference for domestic destinations. If the destination is inside the country, migrants would be able to return to their village relatively frequently to do farm work, while those who migrate to Thailand cannot do so. However, our data do not fit well with this hypothesis. For non-household heads of S village and household heads of T village, of those who migrated in the eight-month period from households with farmland, the proportion of those who were also engaged in farming is even lower for domestic migrants than for those who migrated to Thailand (2% versus 6% for non-household heads of S village and 20% versus 29% for household heads of T village).

There is also a possibility that households sending migrants to domestic destinations had been engaged in domestic migration for a long time and had increased their land size by buying land using remittances from migrants. We cannot examine this possibility for lack of detailed retrospective data and we also cannot reject the effect of past migration experiences. Even so, the effect of past migration experience cannot explain the interaction effect of the number of young children and the size of farmland shown above, and hence the presence of a separation-aversion effect is not rejected too.

Turning now to the effect of the Thai migrant network, its AME on migration to Thailand is significantly positive for both S and T villagers, but the size of AME is larger in T village (0.20) than in S village (0.05), and the difference in the size is statistically significant (see the appendix B of the online appendix).

As discussed above, we can discern whether the Thai migrant network has a risk-reducing or a cost-saving effect by examining how it’s AME varies with land size. The cost-saving effect is indicated if AME decreases with land size. The AME of the Thai migrant network by farmland size is demonstrated by Table 3. The result indicates that the cost-saving effect does not exist or very weak for S villagers. For household heads and their spouses, AME is significantly positive only for those who have farmland. For non-household heads AME is not significant irrespective of the size of farmland. In contrast, the cost-saving effect is clearly exhibited in T village. For household heads and their spouses as well as non-household heads, the AME of the Thai migrant network decreases with land size, reaching maximum value when land size is zero.

Thai migrant network’s cost-saving effect underlies the negative AME of farmland on the probability of migrating to Thailand for T villagers shown in Table 2. Though not shown in Tables, the AME of farmland on migration to Thailand is insignificant when evaluated by fixing the value of Thai migrant network at zero, and it is significantly negative when evaluated with positive values of Thai migrant network.

The result that the Thai migrant network has the cost-saving effect only for T villagers is consistent with the above-mentioned difference between the two villages in migration channels to Thailand. As shown above, most of migrants from S village use formal channels to migrate to Thailand. For formal channels, migration cost consists of the fee for formal recruitment agencies, which is unlikely to be affected by the informal network of applicants, and thus the Thai migrant network does not have a strong cost-saving effect for S village. In contrast, for T village, the Thai migrant network reduces migration costs because the villagers use informal channels as shown above, through which they can sneak into Thailand and get a job with the help of their relatives and avoid high brokerage fees.

5. Conclusion

In Cambodia labor migration from rural to urban areas as well as to Thailand has increased in recent years. To understand the distributional impacts of the migration, we examine the effect of household’s asset holdings on the choice of migration destinations with taking account of the possible moderating effects of the psychological cost of family separation and the
Thai migrant network. Specifically, we estimate the multinomial logit models for individual-level migration choices using data of working-age population from two rural villages in Takeo province. Our analysis reveals the following.

First, especially in T village, domestic migration is preferred to migration to Thailand for those with large size of landholdings, which suggests that the separation-aversion effect deters cross-border migration. Existence of the separation-aversion effect is confirmed for household heads and their spouses in both villages by the estimation result that an increase in the number of household head’s children aged 0 to 14, which is supposed to increase the psychological cost of migration, affects the decision to migrate differently based on land size.

Second, the financing effect of farmland, which is indicated by a positive correlation between the size of farmland and the probability of migration to Thailand, is not clearly observed for both S and T villagers. For T villagers, this result is consistent with the fact that they use less expensive informal channels. For the case of S villagers, the lack of the financing effect of farmland is puzzling because many of them use costly formal channels to migrate to Thailand. One possibility is that the financing effect is offset by the opportunity-cost effect in S village.

Third, the Thai migrant network increases the probability of migration to Thailand to a large degree especially for T villagers. In addition, the cost-saving effect of the network is clearly observed only for T villagers, which promotes the cross-border migration from households with no or small landholdings. This is also interpreted as a reflection of the difference in the migration channel between the two villages.

Although these findings are obtained from the data of only two villages, they still imply that migrants from Cambodia to Thailand would be more likely to come from asset-poor households than from asset-rich households, because the psychological cost of family separation deters migration to Thailand from asset-rich households, and because migrant network helps migration from asset-poor households by reducing the cost of the cross-border migration. The problem is that the Thai migrant network can help asset-poor households only because people can migrate to Thailand through informal channels, which is illegal and needs to be repressed from the Cambodian and Thai governments’ point of view. This argument also suggests that clacking down on “illegal” migration would have adverse effects especially on asset-poor households without effective measures to slash the costs and time for cross-border migration through formal channels.

Secondly, as a downside of migration to Thailand, the psychological burden of cross-border family separation is predicted to be felt mostly by asset-poor households. From this point of view, international migration also has a negative side effect.

Notes

1 Some migrants went to both Thailand and a domestic destination in the eight months. For such cases, the destination where they spent the longer time is regarded as their destination.
2 The distance from the two villages to Poipet, a Cambodia-Thai border town, is about 500 km. Villagers go to Poipet by bus or shared taxi, which costs around US$10.
3 Migrating to Thailand through informal channels involves a risk of getting caught and deported by Thai authorities. Getting passport and work permit in Thailand to avoid deportation entails a significant cost. But these problems can be omitted from the analysis because they do not affect the cost of entering and getting a job in Thailand.
4 We apply the statistical software STATA’s gsem command for the estimation.
5 AME of variable \( X_i \) on choice \( C_i \) is expressed as \( \frac{N}{\sum_{i=1}^{N} aP_i/aX_i} \), where \( N \) is the number of observations and \( P_i \) is the predicted probability of selecting \( C_i \) for observation \( i \).
6 AMEs shown in Table 3 are calculated by fixing the value of “Farmland” at specific values.

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