

Gendered Migrant Social Capital: Evidence from Thailand

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Abstract

Employing longitudinal data from Thailand to replicate studies of cumulative causation, we extend current knowledge by measuring frequency of trips, duration of time away, level of network aggregation (village or household), and sex composition of migrant networks to estimate a model of prospective migration among men and women in Thailand. We find that trips and duration of time away have distinct influences upon migration; that household level migrant networks are more influential than village level migrant networks; that female migrant networks and male migrant networks have different influences upon migration outcomes; and, that migrant social capital influences men and women's migration differently. Our elaboration provides significant quantitative evidence as to how gender and family variously imbue migration dynamics.

Introduction

The idea that migrant networks can evolve, accumulate and generate higher than expected levels of migration out of communities of origin has yielded a considerable number of empirical studies and some policy attention (Massey 1990a; Massey 1990b; Massey and García-España 1987; Massey, Goldring, et al. 1994; Massey and Zenteno 1999). This idea, cumulative causation, is frequently equated with the concept of migrant social capital and is described as a process by which migration propensities, among those who are in origin communities (whether they are return migrants or otherwise), grow with each additional migrant in a migrant stream. It grows as information increases and reciprocal ties develop between origin and destination. Further, the theory holds that the importance of other factors predicting migration propensities becomes less important in a context of high levels of migration (Massey 1990a; Massey 1990b; Massey and García-España 1987; Massey, Goldring, et al. 1994; Massey and Zenteno 1999). Much of this research focuses upon Mexico-U.S. migration patterns and Mexican migration behaviors (Davis, Stecklov, et al. 2002;

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Massey, Goldring, et al. 1994; Massey and Zenteno 1999; Espinoza and Massey 1999; Massey and Espinoza 1997; Winters, de Janvry, et al. 2001). Because of the data requirements necessary to test the theory of cumulative causation, extensions to other settings outside of the Mexico-U.S. case have not been undertaken.

We examine longitudinal data from Thailand to replicate studies of cumulative causation that have previously only been tested in the Mexican-U.S. setting. The data we use is the only data currently available that affords an extension outside of the Mexican-U.S. setting. Given the profundity of the migration momentum described by the Mexican-U.S. case, we expect to find similar results in the Thai setting and therefore argue that demonstrating such effects in Thailand would portend heightened concern and need for understanding migration momentum in other settings around the world. We extend our theoretical understanding of the concept by examining how migrant networks convey different levels of trust and information when migrants make frequent trips or have extended lengths of stay in a destination; how migrant networks based in households differ from village-based networks; and, how sex composition of migrant networks further elaborates migrant social capital and its effect upon future migration. Further, we demonstrate how migration processes are differently experienced by men and women. Our study offers a significant contribution to the literature on the causes of migration, because, to date, no studies have systematically and simultaneously evaluated trips, duration of stay, levels of aggregate migrant experience and sex composition on the propensity of migration among men and women.

Our study is different from previous studies evaluating the effect of cumulative causation, not only because of the setting and our elaboration of migrant social capital, but also because our analysis concerns internal migration, mostly rural-urban migration. Previous work has suggested that cumulative causation will be less meaningful for internal migration processes (Taylor 1986), although recent analyses suggests that gender may explain differences in the effects of migrant networks for internal and international migration (Curran and Rivero 2003). There is also growing evidence that cumulative causation is particularly important for explaining migration out of rural communities and small cities, but not for migration out of large urban areas (Fussell and Massey 2004). We also find that cumulative causation is important for explaining rural-urban migration in the Thai context, net of other factors, and that incorporating measures that capture gender relations significantly improves our models. Specifically, we find that men and women convey different information and opportunities for migration through their migration behavior and experiences, and that men and women are differently affected by these effects among migrant social capital. The risks of migration for women are sufficiently high, and therefore migrant social capital is most useful when it is highly trustworthy and based on strong ties. For men, migrant social capital is most influential when it is based in more expansive networks.

Focusing upon gender as a critical aspect describing the content of migrant networks is important because of what is assumed about the way cumulative causation is understood to affect individual propensities to migrate and the overall rate of migration. Migrant networks and accumulated migrant experiences decrease the costs of migration, or increase the demonstrative effects (diminishing psychic costs or familial resistance), or increase information about and access to labor market opportunities. If men and women live the migration experience differently, then the magnitude of the decrease in costs and the increase in demonstrative effects, or the amount of information and access to labor markets will vary depending on the gender content of the accumulated experiences. In turn, this variation may yield distinctive sex composition distinctions in migration outcomes, which given the momentum implied by cumulative causation, may yield profound implications for the social organization of life in places of origin and destination.

In origin communities, this could influence the way care is provided to the elderly or children,

or the redistribution of wealth (shifting inheritance preferences away from daughters in the case of Thailand, for example) or investments (abandonment of upland agricultural plots that require significant male labor). If male and female migrants behave significantly differently with regards to maintaining contact with places of origin (either through remittances or visits), then a gender difference in migration rates and accumulated migration experience may also affect the amount and level of resource flows directed by migrants back to their villages of origin.

Alternatively, destination communities, if they are defined significantly by the sex composition of migrant patterns, may also be transformed. For example, if males predominate, then the organization of domestic work may be affected. In some cases, men may take on household work (Hondagneu-Sotelo 1994) or may outsource the work to entrepreneurs, if they can afford to do so. Or, if females predominate and establish a sector and occupational niche for themselves, they may affect a redefinition of women's and men's work. For example, in the case of Hong Kong, Filipina predominance in domestic work has meant that the Filipino male migrants following their female relatives are more likely channeled into domestic service, an occupation they would otherwise not have joined, either in other migrant destinations or in the Philippines (Constable 1997; Tyner 1996). Although we do not quantitatively evaluate these particular possibilities in this paper, we offer them as justification for why it is important to examine the influence of sex composition of migrant networks upon migrant behavior.

We examine 10-year retrospective longitudinal data from 22 villages in one district in Northeastern Thailand to evaluate the role of gender and migrant social capital for influencing the probability of being a migrant at any point in time during the 10 years, net of alternative explanations. We do so by distinguishing migrant experience as number of trips and duration of stay and by distinguishing the social distance of the migrant network as household-based or village-based. We evaluate these four distinct measures of migrant social capital upon men's and women's migration propensities. Then, we evaluate the effect of sex composition of experience and social distance upon men's and women's migration propensities. And, finally, we evaluate whether the sex composition of migrant experiences and networks matters more or less for women's and men's migration out of the district. In our discussion of results, we provide some insights from our qualitative fieldwork about the possible effects of gendered migration patterns upon the reorganization of social life in origin villages. We suggest that gender relations affect the migration process, in part, because gender influences the information and trust available through migrant social capital, as measured by trips and experience and as observed at different levels – household and village.

Background

To our knowledge there are very few studies quantitatively evaluating how gender relations might impact cumulative migration experiences, but numerous review articles and ethnographic research have pointed to the importance of considering gender relations when studying migration processes (Chant 1992; Grieco and Boyd 1990; Hondagneu-Sotelo 1994; Pessar 1999a; Pessar 1999b; Tienda and Booth 1991). Before discussing studies of gender, migration and cumulative causation, we briefly describe the concept of cumulative causation and its effect upon migration behavior.

Social networks, or social capital, in relation to migration are commonly understood as the links between residents in a community of origin and individuals living in another place, or with individuals who previously migrated regardless of their current residence (Hugo 1991; Massey and García-España 1987; Massey 1990). These ties to migrants are incorporated in most theories used to explain international migration including world systems theory (Portes 1978), dual labor

market theory (Piore 1979), social capital (Massey 1990) and new economics models (Stark and Levhari 1982; Stark 1991; Taylor 1986). The concept of networks for explaining migration has strong theoretical and empirical support. Typically, most studies measure migrant networks as simple counts of other people who have already migrated from a common social unit, either a village or family. The network tie is presumed to be based on a common social unit. Whether or not prior migrants actually participate in a network of relationships with the members of the social unit of origin is usually not quantified, although there is plenty of ethnographic evidence to suggest that on the whole a vast majority of migrants do participate in these networks. Therefore, we use the terms migrant network and migrant social capital interchangeably, reflecting the current literature and the presumption about the meaning of cumulative migration experiences.

Social networks facilitate migration in several ways. They convey information about relative livelihood opportunities (Hugo 1991), reduce travel costs through information on safe and cheap routes or smugglers, and diminish emotional costs by lessening "assimilation shock" if immigrants arrive in an environment where others speak their language (Choldin 1973) and where living among other foreigners can easily prevent deportation (Massey 1990). They also increase expected benefits of migration through job search assistance and reduce initial living expenses and other costs through financial assistance and shared living space. Migrant networks are frequently heralded as offering trusted and reliable information for prospective migrants. The network factor continues to be one of the most important contributing elements towards cumulatively caused migration, although other factors can also contribute.¹

Empirical evidence supporting the importance of migrant networks for predicting migration and for influencing a dynamic rate of migration are numerous and mostly focus upon Mexican-U.S. migration (Davis, Stecklov, et al. 2002; Espinoza and Massey 1999; Massey, Goldring, et al. 1994; Massey and Espinoza 1997; Massey and Zenteno 1999; Winters, de Janvry, et al. 2001). Qualitative evidence from numerous settings throughout the world further support these findings. (See, for example: Arizpe 1975; Arizpe 1980; Arizpe 1981; Arizpe 1985; Menjivar 1995; Menjivar 2000; Tyner 1996).

A few studies distinguish the content of migrant networks depending on the frequency of trips and the duration of stay in places of destination (Massey and Zenteno 1999). The number of preceding trips may demonstrate a strong tie to a place of origin and the face-to-face conveyance of information may enhance the degree of trust and accountability associated with migrant social capital of this type. Even though the number of preceding trips may indicate greater ties to an origin household or village, it may not convey high quality information or enough relevant information. Instead, the length of time migrants spend in a destination may increase the quality of information and the array of resources available to potential migrants, net of the number of trips made by migrants. The return flow of both amount and quality of information will depend on the nature of the ties between the migrant in a place of destination and the migrant's home village or community.

None of the quantitative studies, however, systematically distinguish between family-based migrant networks and community-based migrant networks. There is some suggestion in the qualitative studies that there are differences in the kinds of information available from family members versus those from a wider array of community members. Not only might information vary, but also the quality of the social capital will be different. Trust may distinguish social capital quality between family and community networks, but community networks may yield greater amounts and a wider array of information (e.g. Granovetter's weak ties theory (1983)). We distinguish migrant social capital along these two levels of aggregation, suggesting that household-based networks represent shorter social distances than village-based migrant networks.

In many different contexts gender has been shown to differentiate both the content and the character of migrant ties linking origin and destination households and communities

(Curran and Saguy 2001; Curran and Rivero 2003). In some cases, female migrants may be more likely to maintain ties to places of origin (Curran and Saguy 2001) and in other cases men may be more likely to do so (Grasmuck and Pessar 1991). To date, we know of no studies that have systematically disaggregated by sex the effects of trips and experience upon migration propensities. We suggest that in particular contexts gender may serve as a proxy for measuring the quality and quantity of migrant social capital or migrant networks. Of particular importance may be the way in which gender differentiates ties between migrants and places of origin and the trust and accountability associated with a particular form of migrant social capital. In Thailand, as we describe in the next section, men and women have very different social ties to their villages and natal households. These relationships may systematically affect the content of migrant networks or the quality of migrant social capital and thereby differently influence migrant behavior.

Similarly, systematic analyses of the differences between how migrant social capital might differentially affect men's and women's migration behavior have been limited. Numerous studies have suggested that the factors affecting men's and women's migration differ and that men and women live the migration process differently. If women's migration is perceived as fraught with more risks, then several effects are anticipated. First, family migrant networks may be more important than village networks for ensuring high quality information and diminishing the risks associated with migration. Second, women need a greater accumulated social capital at the village or community to overcome barriers to migration. So, women's migration increases after the migration process has developed significantly (Boyd 1989). Or, women's migrant networks may be very different and offer significantly different information thereby differentially affecting both men's and women's propensities to migrate (Hondagneu-Sotelo 1994; Curran and Rivero 2003; Tyner 1996). Despite fairly strong expectations about differences, few quantitative studies have examined whether migrant social capital matters more or less to men or women and all of these studies have focused upon the Mexican-U.S. migration case.

Kanaiaupuni (2000) analyzes women's and men's first migration and finds that in a constrained model, family networks matter more for women's first move than for men's. Further, village networks appear to have a stronger effect upon men's migration than upon women's. And, finally, sex composition (a greater proportion of women in a network) positively affects women's first move, but discourages men's. With time, however, the positive effect of sex composition disappears for women, although a significant discouraging effect remains for men (Kanaiaupuni 2000). Cerrutti and Massey (2001) find that migration prevalence in the community has little effect on husbands' or wives' migration, but does significantly influence an eldest son's migration (and not the eldest daughter's). Family moves are more important for predicting migration than are community moves, in general. Sons' and daughters' prior moves raise the probability of both migrating, and husbands are significantly more influenced by their children's moves than are wives. Cerrutti and Massey (2001) also find that a mother's prior migration increases the probability of both a daughter and son migrating, but has a greater effect upon a daughter's migration. A father's prior migration significantly affects a son's migration, but not a daughter's.

Curran and Rivero (2003) find that the prior internal migration of women from a household facilitates the migration of both men and women, but international migration of female household members only facilitates the migration of other women, not men. Men's internal migration has no influence upon either men's or women's migration to internal destinations but has a significantly greater influence upon men's international migration probabilities than upon women's (Curran and Rivero 2003). The results from this study suggest that the effect of gender composition of prior household migrants upon international and internal migration can be explained both by the gender differentiated barriers to migration for international and

internal migration, as well as the sex-segregated labor market experience and the resulting exposure to sex-delimited migrant networks across the two types of destinations.

In all of the above cases, the empirical evidence shows a strongly gendered story about the migration process, which is supported by numerous ethnographic accounts. Kanaiaupuni's (2000) analysis of Mexican data comes closest to our analysis of Thai data by taking into account both family and community networks. We extend these analyses of the migration process by analyzing how cumulative migration at the individual, household and village level is differentially important for men and women. Further, we examine the extent to which the gendered content of family and village trips and accumulated experience, net of overall migration prevalence, might affect any migration as well as men's and women's migration. And, finally, we show how distinguishing between the number of migrant trips and months of migrant experience reveals more insights about the gender dynamics of the migration process.

Despite the fact that our analysis is conducted using Thai data, we find surprisingly similar results to some of the studies of Mexican migration. Our findings also offer further insights on how distinguishing between different types of migrant social capital illuminates the dynamics of the migration process. The Thai case provides an important opportunity to test a theory in a different setting where there are very different gender dynamics. The data, setting and analysis yield generalizations and further refinement for theories about how migrant networks influence migration outcomes, especially with regard to how gender might influence migrant social capital at different levels of observation (household and village).

Thailand: Gender, Migration and Distinctions Across Migrant Social Capital

Although migration from rural Thailand to urban Bangkok may not seem as dramatic as a move from rural Mexico to the United States, for many rural Thais during the mid-1980s it was. (The data for this study covers the period 1984-1994.) Although the dangers of the trip are not as dramatic or deadly as those for Mexicans crossing the border illegally, the experience in the place of destination regarding unsafe work environments and poor living quarters was similar. During our field work, rural Thai villagers told tales of failed migrants who had returned home and told of not being paid for weeks of work, of living in 6-by-6 cubicles, of being physically mistreated, and of losing all their money to drinking and gambling. Even more devastating for parents are the children who migrate and are never heard from again. During our fieldwork we learned of one such case and heard stories of others. Being able to trust someone and distinguishing between good information about jobs from acquaintances versus close friends and family were critical in determining whether a migrant trip would be worthwhile. Trustworthy networks were particularly important for young women and their families when considering migration. Preference for kin-based or immediate family networks was much more important when deciding whether to allow women to migrate. Fears of exploitation, in terms of either sex or labor, were of utmost concern. We observed during several episodes of fieldwork that young women would often travel in groups to construction sites or to apply for factory jobs.²

Seasonal migration is not unheard of in Thailand, especially in the Northeastern region (the site for these data) as the monsoon rains are often preceded by lengthy droughts that often required the movement of people to find alternative livelihoods, at least for a few months (Nartsupha 1999; Phongpaichit 1990). However, migration took on added significance in Thai livelihoods from the mid 1980s onward. It was then that Thailand's shift from an agriculture-based export economy to a manufacture-based export economy took place (Bello, Cunningham, et al. 1998; Phongpaichit 1980; Phongpaichit and Baker 1996; Phongpaichit and

Baker 1998; Warr 1993; Warr and Nidhiprabha 1996). From the mid-1980s to the mid-1990s some experts estimate that Thailand's economy grew on average 10 percent per year (Bello, Cunningham, et al. 1998; Warr and Nidhiprabha 1996). This growth was fueled by production in export manufacturing, which was a result of the rising value of the Yen, rising wages in nearby newly industrialized countries (NICs), changes in textile import quotas to the United States, and dramatic increases in foreign direct investment, primarily from Japan (Nidhiprabha 1994; Phongpaichit and Baker 1998). By 1985 Thai manufacturing exports had outpaced rice and other agricultural exports in value (Nidhiprabha 1994; Warr and Nidhiprabha 1996). With the growth in manufacturing export came an increased demand for labor. Rural migrants provided much of this labor, coming mostly from the Northeastern part of the country, many of them young, and many of them women (Chamrathirong, Archavanitkul, et al. 1995; Mills 1997; Phongpaichit and Baker 1996;). According to the 1992 National Migration Survey most migrants to the Bangkok metropolitan area were in their teens or early twenties and at least half of these migrants were women (Chamrathirong, Archavanitkul, et al. 1995). These women were not moving to urban areas for marriage. Theirs were economically motivated moves, primarily to help support their family of origin's household economy (De Jong, Richter, et al. 1996).

Thai rural women have long played an important role in household economies (Singhanetra-Renard and Prabhudhanitarn 1992). They work next to their husbands and brothers in the rice fields and are often described as "holding the purse strings" with regards to financial planning (Yoddumnern-Attig 1992). Also many historic and ethnographic studies describe women's relations with their husbands as egalitarian (Knodel, Chamrathirong, and Debavalya 1987). Women's participation in rural-urban migrant streams is considerable, reaching as high as 60 percent of all migrants (Chamrathirong, Archavanitkul et al. 1995; Tantiwiranond 1995). These rates are only surpassed in Asia by the migration rates of women from the Philippines and Japan (Tantiwiranond 1995). It is important to note that these moves are rarely associational (family moves) but primarily for jobs for the women themselves (Chamrathirong et al. 1995).

These positive characterizations of women's status are increasingly questioned by recent scholarship. These researchers note that women predominate in the low wage, low skill sectors of the economy, including low wage service jobs, prostitution, agricultural wage labor, and low skill manufacturing (like textiles, parts assembly for electronics, and food processing plants) (Sussangkarn 1993; Tantiwiranond 1995). Importantly, women consistently earn one-third to one-half as much as men in similar occupations (Phananiramai 1993; Richter and Havanon 1994; Tantiwiranond 1995). Outside of seasonal construction labor, much of the destination labor market is sex segregated. Men tend to work in heavier industries, taxi driving and motorcycle services, automobile servicing, and construction (Sussangkarn 1993). Hence, the kinds of information migrant men can provide for women may not be as helpful to women as the information from migrant women and vice versa.

Further, patterns of marriage and settlement adjudicate against strong household ties with sons and tend towards strong ties with daughters, especially in Northeastern Thailand (Blanc-Szanton 1990; De Jong, Richter, et al. 1996; Yoddumnern-Attig 1992). Thai households are matrilocal. That is, a husband moves to the wife's family's house for two days to five years (usually until the first child is a year old). In the ideal situation, the husband provides an important source of farm labor. The inheritance norm is bilateral, but sons usually abdicate their land inheritance to their sisters or brothers-in-law because they will be moving to their wife's household and receive, instead, some other form of inheritance either money, cattle or education (more recently) (Keyes 1984; Limpinuntana, Patanothai, et al. 1982). Youngest daughters are particularly advantaged with regards to household resources because they often inherit the homestead and a larger portion of the land. Access to these resources

comes at a price. These daughters and their husbands are expected to care for the daughter's parents in their old age (Keyes 1984; Yoddumnern-Attig 1992). On the other hand, sons are encouraged to develop outside, non-kin based networks, and daughters are socialized to cultivate their kinship ties. For men, this cultural emphasis has led to an interesting phenomenon of patron-client relations that crosscut kinship ties (Limpinuntana, Patanothai, et al. 1982; Hanks and Hanks 1963). The non-kin based network for men provides access to political patronage, jobs, and resources.

These gender and family relations also suggest different ways in which the social capital of migrant networks might influence migration probabilities. Different access to different types of labor markets may be more or less beneficial to members of the opposite sex. For example, migrant trips by women for clearly advertised female export manufacturing jobs may be less influential upon men's migration probabilities, especially if recruitment networks are highly sex specific. During previous fieldwork we found that factory managers often used their factory workers as recruiters back in their home villages. This strategy is not unusual and can be productive, providing a labor force that is controlled by social relations of obligation and minimizing training expenses since recruiters are responsible for training their kin and friends. Wolf (1994) also describes this type of management strategy in her study of women laborers in Indonesia factories. Besides the sex segregated export manufacturing work, women are also employed in domestic and other types of services, which are even more sex segregated.

Working against this sex-segregated effect of migrant social capital, might be the strength of ties between destination and village of origin and the length of time a migrant spends in a destination. Time in a place of destination serves to broaden the local ties a migrant has to information and contacts regarding other jobs. With time a migrant may be just as able to help the next migrant from their village regardless of their sex. This information may only be useful to potential migrants if current migrants maintain ties to places of origin, either through letters, messages sent via other return migrants, or return visits. If women are more likely to maintain ties to their natal villages because of cultural expectations or material reasons (maintaining access to their future inheritance), then the longer their experience in places of destination the greater the amount of information they may have and the more helpful they may be to potential men or women interested in migration. Further, given household members' expectations about women's commitment to other family members' well being, the ties generated by female migrants may be imbued with greater trust, especially ties based in the household. We share a few examples of these sex-differentiated expectations between men and women, particularly sons and daughters, as we heard them during our fieldwork:

"If girls go to work in Bangkok and make 5,000 baht³ they will send 5,000 baht. The boys would not send us any money! Boys would not even send money to their mothers. They do not make enough for themselves. We cannot depend on sons." (Focus Group, Women 40-49 years old).

"I think girls will send more money because boys use money for cigarettes, whiskey, and bai tiaow⁴. Boys use a lot of money. If there is any money left over, they go out again. Girls have chances to tiaow but fewer than boys. Daughters have to think more about their future at home because they depend on our inheritance." (Focus Group, Women 40-55 years old).

"Yes, we send money home very often. When the end of the month comes, we save and send it all home. We do not have any personal responsibilities. We have to take care of the family. We all have to help. The younger ones are still little, and we do not want them to have it tough. We would like them to study. I would like to improve our financial status at home." (Interview with migrant woman, 22 years old).

Men's extended time in places of destination may be less useful to households and villages of origin, because they are less likely to maintain contact with households and villages of origin, there is a lower expectation that they do so, and they are perceived to be less vested in the household and village economies. Some men overcome these social expectations and one way to demonstrate commitment to households of origins is through frequent visits home, as well as remittances. In several cases during our fieldwork several parents described their sons as "good" sons because they remitted their earnings from their migrant work and they visited frequently. Pramuarathana (1991) makes a similar observation in his study of the elderly in central Thailand, when he draws a correlation between a son's status of "goodness" and having daughter-like characteristics. Again, these relationships are expected to be more meaningful for the odds of migrating at the household level than at the village level.

Migrant social capital, as described in the literature, is a combination of both information and trust, decreasing the risks and costs of migration. Thai villagers' discussion of migration and the differential patterns of migration also suggest that migrant social networks convey information and are evaluated by potential migrants and their families in terms of their trustworthiness. Thus, based on our fieldwork and common sense, we suspect that household migrant social capital and village social capital are distinct from each other in two ways. The former is more likely to be imbued with greater trust and expectations about reciprocity. The former is therefore more important for diminishing risk and the perceptions of risk. The latter, on the other hand, is a reflection of information and more information is available within a village migrant network. However, that information is much more likely to be transmitted via return trips and the personal conveyance of news and job opportunities. Time spent away by migrant villagers is likely to diminish the conveyance of that information.

We therefore propose three sets of hypotheses, based on previous research about migration, gender and migration, and gender in Thailand, as well as based on our own field work experiences in Thailand:

1. *Migrant trips and duration of stay offer distinctly different types of information about migration, with trips reinforcing social ties and trustworthiness of information and duration of stay widening and deepening knowledge about a destination, but weakening the ties to origin households and communities.*
2. *The source of migrant social capital significantly distinguishes its relevance and influence upon migration outcomes.*
 - a. *The narrower the social distance, the greater the perceptions of trustworthiness about migration opportunities, but the less rich and diverse the information about migrant possibilities. Hence, household-based migrant networks will proffer more trustworthy information, but possibly less information than village-based networks. Therefore, household-based networks will be more influential upon migration outcomes than village-based networks, especially for risk averse potential migrants.*

b. Sex segregated labor markets and gender relations within households significantly distinguish the information and trustworthy expectations of male and female migrant networks as sources of influence upon the migration process.

3. Migrant social capital as distinguished by experience (trips and duration), social distance (household-based and village-based), and sex composition will affect men and women in significantly different ways, because men and women face different sets of constraints and risks with regards to migration.

Study Site and Data

The data for this study comes from one district in Northeastern Thailand, Nang Rong, in Buriram province. Because of poverty, past high fertility and limited arable land for future development, the region has become an important source of migrants to urban centers in Thailand, primarily Bangkok. Nang Rong is located in the southern portion of the Northeast region along a major highway built during the 1970s by the United States, linking Bangkok with the Laotian border. This highway serves as an important conduit of people and resources to and from central Thailand. Figure 1 displays a map of the study site and its relative location within Thailand and the province of Buriram. In 1990, Nang Rong was one of the largest districts in the country with a population of over 200,000 within an area of about 240,000 hectares.

The Nang Rong Surveys are a longitudinal data collection effort conducted by the Carolina Population Center at the University of North Carolina and the Institute for Population and Social Research at Mahidol University in Thailand.⁵ We employ the first two waves of data for this analysis (the 1984 and 1994 surveys). The 1984 data collection was a census of 50 villages and included information on individual demographic data, household assets and village characteristics. The 1994 data collection not only replicated the 1984 survey, including a census of all households and information about former 1984 village members, but also included a 10-year retrospective life history about education, work, and migration, as well as key social and demographic events such as marriage, births (asked only of women), and entrance into military service or the Buddhist Sangha (asked only men)⁶, information about siblings and their current residence, and a special survey of migrants.

We employ the information from the life history survey and the migrant follow-up, as well as information from the 1984 survey. The migrant follow-up component was conducted in 22 of the original 1984 villages and counted a migrant as someone who was a member of a 1984 household and had since left a village for more than two months to one of four destinations: the provincial capital, Buriram; the regional capital, Korat or Nakhon Ratchasima; Bangkok and the Bangkok Metropolitan Area; and, Eastern Seaboard provinces (Chachoensao, Chonburi, and Rayong). Figure 2 shows the location of the four destinations of interest. In related project manuscripts it has been documented how successful the surveys were at following households and individuals (Rindfuss, Kaneda, et al. 2002). For this kind of migrant follow-up, the success at finding migrants is considered remarkably high (Rindfuss, Kaneda, et al. 2002). On average, for the twenty-two villages, about 44 percent of the migrants were successfully interviewed at some point in the six months following the 1994 village surveys.

In our analysis we build a data file that starts with 1984 household members that are 8-25 years old from the twenty-two migrant follow-up villages⁷ and are matched with data from the 1994 surveys. We use the life history information to construct a person-age file that begins with those individuals that are 13-25 years old in 1984 and then add persons to our dataset, as they become 13 years old. We chose 13 years old as the lower bound because it marks the end of primary schooling and the beginning of exposure to the risk

Figure 1. Map of Study Site

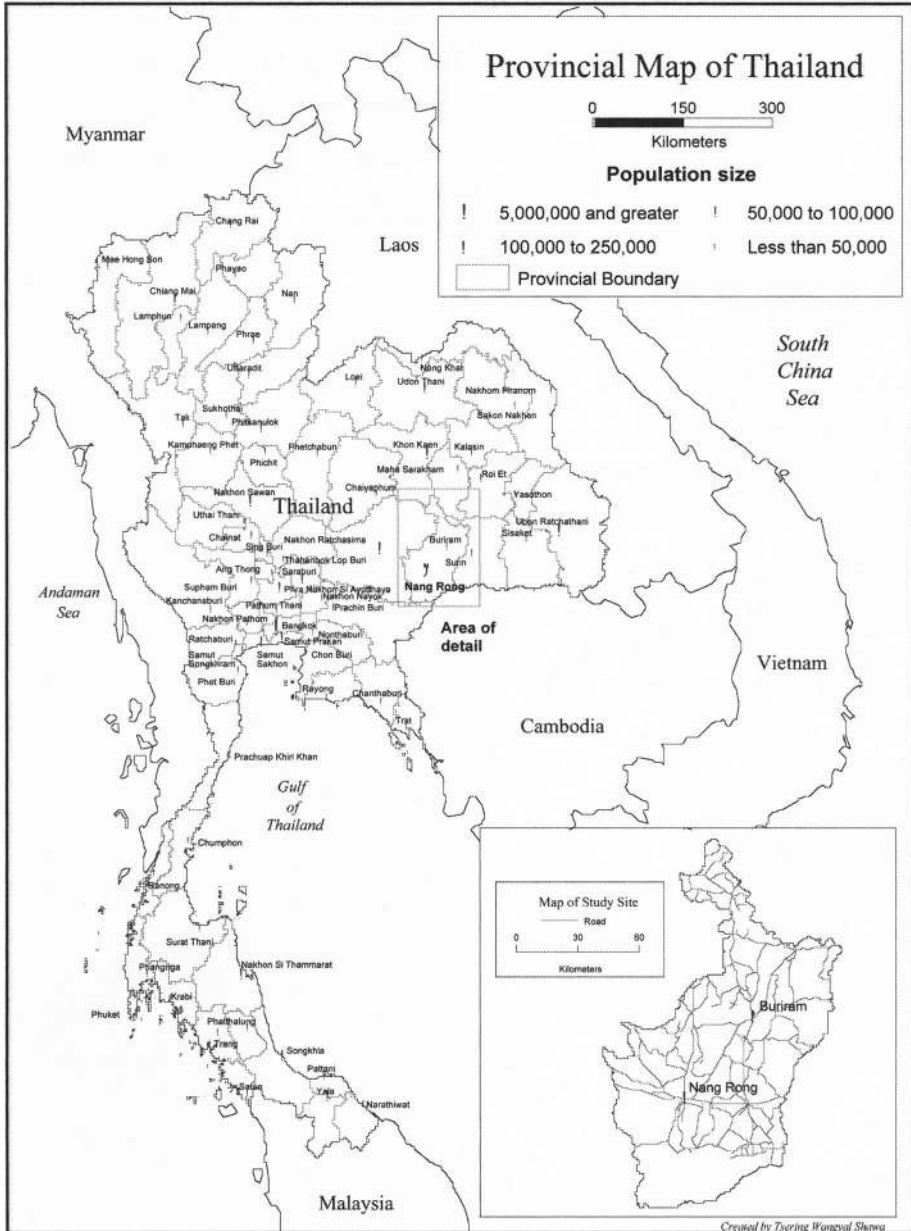
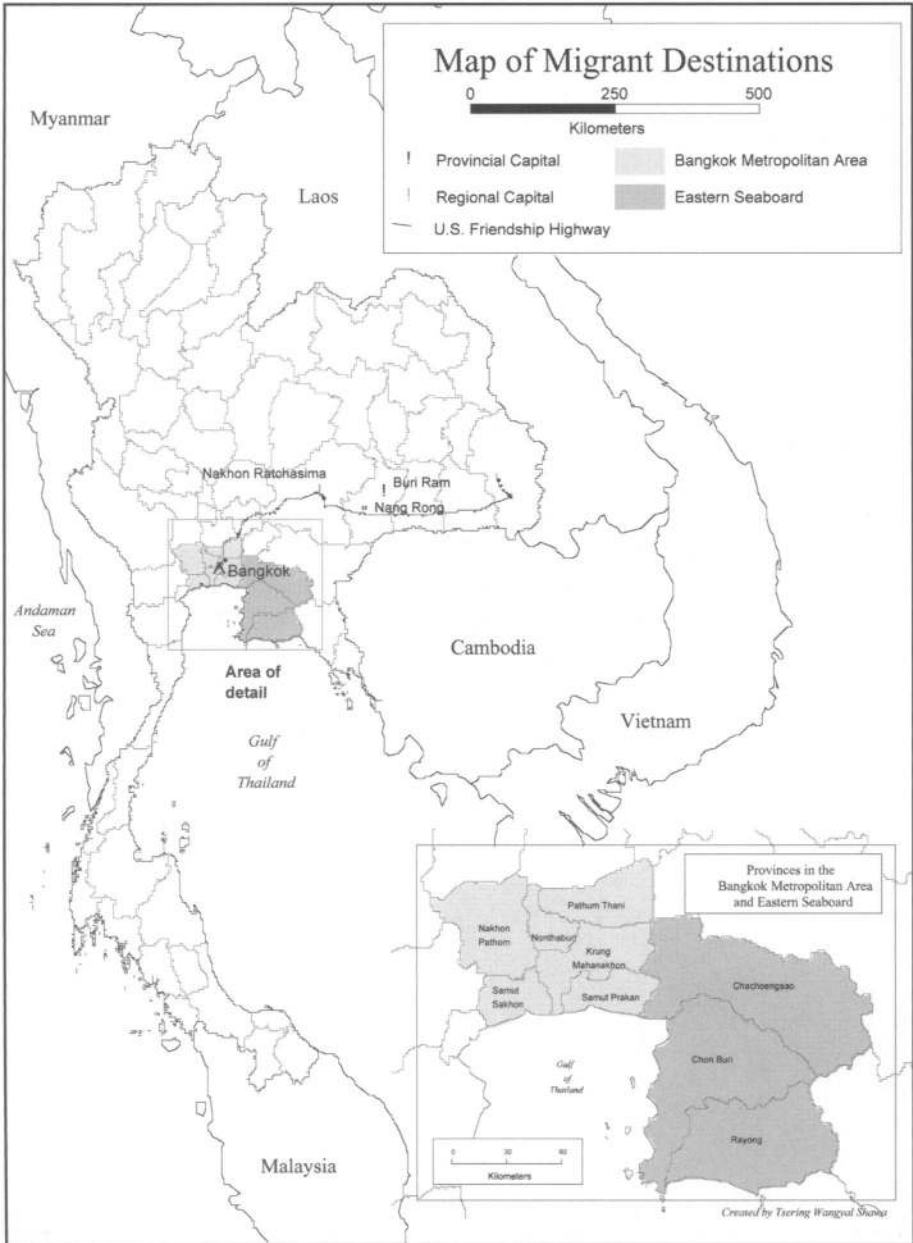


Figure 2. Map of Migrant Destinations in 1994 for Migrants from Nang Rong



of moving as an independent adult. We conducted our analyses on two sets of data, one for the entire set of 13 to 25 year olds and subsequent individuals that age into the file over the 10-year period, and one for a subset of those – that are 13-15 years old (to limit the historical bias of prior migration experience among those older individuals). Here, we report only the results for the larger dataset, but the results from the subset of data are also available upon request.⁹

As has been done with the MMP data to demonstrate the cumulative dynamic of migration, we also estimate community migration prevalence rates for each year for each community (Massey, Goldring et al. 1994). A migration prevalence rate measures the proportion of people that have ever migrated up to a point in time (Massey, Goldring, et al. 1994). Migration prevalence in the Nang Rong villages grows dramatically over the 10-year time period of the study. The top image in Figure 3 displays the overall migration prevalence rate for each village for all individuals for whom life history information was collected. In the Thai case, there is considerable variation across the 22 villages and that variation is maintained over time. In 1985, at the low end, in one village only 5 percent had ever migrated in the past year and at the higher end 50 percent had ever migrated in the past year. By 1994 all villages had increased their prevalence rates, but the wide range between high and low villages was still apparent.

The middle and bottom images in Figure 3 display villages' female and male migration prevalence rates, respectively. There is similarly wide variation across villages in both images, although female prevalence rates are generally lower than male migration prevalence rates. The patterns for male and female migration prevalence in a particular village do not always mirror each other either.

These descriptive data demonstrate how the cumulative migration dynamic does build in the Thai case as it does in the Mexican case. These data also show that there is significant variability in migration prevalence over time and across the sexes. This variability provides an opportunity to evaluate how gender affects the dynamic between cumulative migration experience and individual migration propensities.

Measures and Analytic Approach

Our analytic approach builds on a model developed in Massey and Zenteno (1999) to measure the dynamics of mass migration. We employ their approach for a number of reasons. Our data are limited in that we do not know the date of first migration and without making some very large assumptions cannot presume to estimate it. We do have a population of villagers 8-25 years old in 1984 and observe them forward in time, much like Massey and Zenteno (1999) do with their communities. We build on their model by adding a set of baseline attributes of individuals that might account for possible unobserved heterogeneity related to our explanatory factors and the dependent variable. We are interested in predicting whether a person in time t is living outside of Nang Rong district or not. Our model takes the following form and takes into account the correlated error structure of multiple observations from individuals (we estimate a random effects logistic equation):

$$(1) \text{Prob}(\text{Mig}_{it}) = f(\text{Itrips}_{it-1}, \text{Imonths}_{it-1}, \text{Htrips}_{it-1}, \text{Hmonths}_{it-1}, \text{Ctrips}_{it-1}, \text{Cmonths}_{it-1}, \text{Variant}_{it}, \text{Invariant}_i)$$

where $\text{Prob}(\text{Mig}_{it})$ is a person's probability of living outside of Nang Rong in year t , Mig_{it} is 1 if person i moved out of Nang Rong at some point during year t and 0 otherwise, Itrips_{it-1}

Figure 3. Variation in Migration Prevalence Rates Across Villages and Time

Each shaded dot represents a village coded to reflect a village's ranking in 1984 (gray lowest and black highest). Lines are drawn from highest, mid-point, and lowest values in 1994.

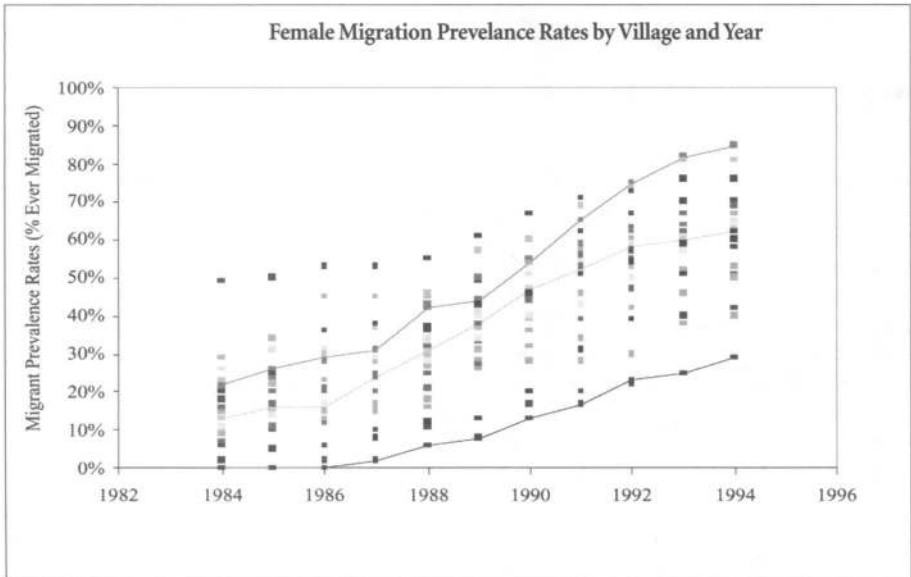
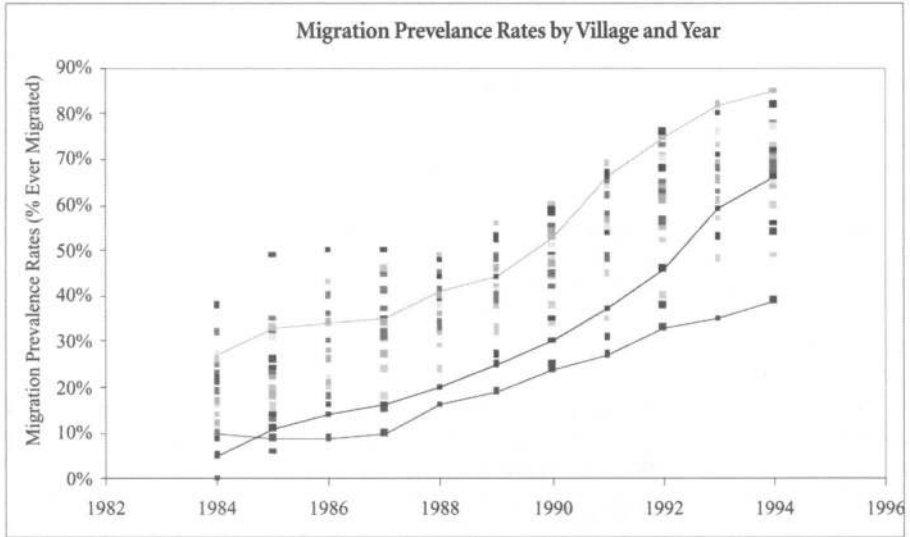
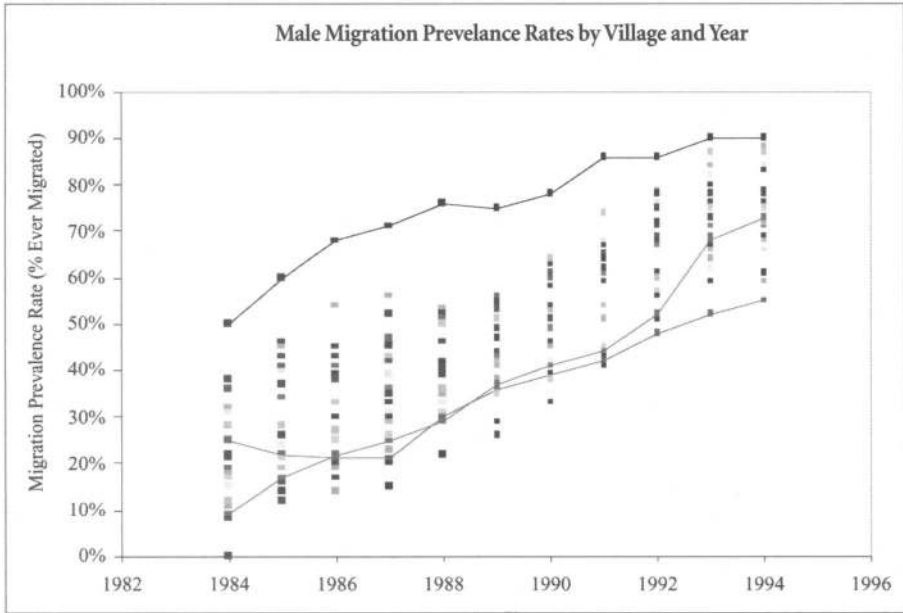


Figure 3. (continued)

Each shaded dot represents a village coded to reflect a village's ranking in 1984 (gray lowest and black highest). Lines are drawn from highest, mid-point, and lowest values in 1994.



is the number of trips made by person_i up through year $t-1$, $l_{months_{it-1}}$ is the number of months experienced as a migrant by person_i up through year $t-1$, $H_{trips_{it-1}}$ is the number of trips made by other people in person_i's household up through year $t-1$, $H_{months_{it-1}}$ is the number of months experienced as a migrant by other people in person_i's household up through year $t-1$, $C_{trips_{it-1}}$ is the number of trips made by other community members up through year $t-1$, and $C_{months_{it-1}}$ is the months of experience accumulated by other community members through year $t-1$.¹⁰ The community migrant trips and months of migrant experience do not include the experience of the observed individual or the members of the observed individual's household.

We include as controls a vector of time-varying factors, including age, educational attainment, marital status, village electrification, and the migration prevalence rate. We also include as controls a vector of time invariant measures¹¹, including: sex, household land ownership in 1984¹², whether the person was a temporary migrant in 1984,¹³ whether there were any temporary migrants in their household in 1984, the person's village's proportion of 13 to 30 year olds in 1984 that were temporary migrants, the female temporary migration rate, and whether the person lived in a somewhat remote village or a very remote village in 1984.¹⁴

In this specification, the probability of living outside of Nang Rong depends not only on the age and sex of the individual, but also on a person's prior migratory experience (i.e., on his or her accumulated human capital) and on the degree to which he is surrounded by other villagers with migratory experience (the quantity of social capital). Our model is different from Massey and Zenteno's model in the following ways: first, we add a measure of household migrant trips and experience (because we suspect that the quality of information available to potential migrants is different at the household level than at the

village level); second, we add a larger array of time varying and invariant factors that might be related to the migration decision; third, we control for sample attrition due to the data collection design by measuring at the village-level the success in following migrants over time; and fourth, we include a measure of the village's temporary migration rate in 1984 (which measures temporary migration between 1983 and 1984 – see footnote 13) as suggested by Massey, Goldring and Durand (1994).

Table 1 displays the means for all the variables in the model. The time invariant factors are shown in the 1984 panel and the time variant factors displayed in the 1994 panel. In 1984 the men in the sample are slightly younger, probably reflecting life course related migration for marriage by men. Older men will have migrated out of the village for marriage, following a tradition of matrilineal postnuptial residence, yielding a younger sample of men in the village. A majority of the sample originates in households with some land. A vast majority were not temporary migrants (gone for 2 or more months in the year preceding 1984). On the other hand almost a third of the individuals in the sample lived in households that did have a temporary migrant at some point between 1983 and 1984. On average the individuals in the sample came from villages where approximately 46 percent of the 13 to 30 year olds were temporary migrants in 1984 and about 35 percent of women were migrants. So, there were fairly high levels of pre-existing levels of migration at the start of the 10-year period. In 1984 most lived in very remote villages and only a third lived in a village with electricity. In 1984, most respondents had only a primary education, but some secondary education was not unusual.

Although very few had been temporary migrants between 1983 and 1984, by 1994 more than 60 percent had ever migrated out of the Nang Rong district. This rate was higher among men. Over half of women had married by 1994, whereas only 36 percent of men had done so. By 1994, all the villages had electricity. With regards to schooling, ten percent of women had completed secondary schooling in both samples and 15 percent of men in the overall sample had done so.

On average women had made little more than one trip out of the district, whereas men had made closer to 1.5 trips. On average, women had spent more than two years out of the district over the past 10 years, and the men had spent almost three years outside of the district. On average, respondents in our sample came from households where other household members had ever migrated, although other members were more likely to have spent fewer months outside of Nang Rong (this measure is standardized by the number of people in the household contributing to the measure). We standardized our measure of village trips and months by the number of people in the village contributing to the measure. The average number of trips by individuals in each individual's village is about one and a third and the average number of months outside of the village is more than two years. The gendered version of each of these variables shows that the contribution of men and women to each of these patterns is roughly equal.

Our modeling approach introduces a set of baseline controls, the vectors of time varying and invariant factors, measures of migrant social capital (not yet disaggregated by sex), and we include a measure of year effects to control for changes in economic and structural opportunities. We evaluate the model on a pooled sample and then separately for men and women (results are found in Table 2). We sex disaggregate our measures of migrant social capital. These last models evaluate the importance of the gendered content of social capital for the pooled sample of men and women and for men and women separately (Table 3). First, we briefly discuss the effects of the other factors in our models. Then we move on to discuss the results evaluating the effect of migrant social capital on the probability of migrating in the Thai context.

Table 1: Descriptive Statistics for All Variables in 1984 and 1994

	<i>Individual Level Means in 1984</i>	
	Women	Men
Age	18.05	17.82
Married in 1984	.22	.13
Land Owned 1-10 rai	.13	.11
Land 11-25 rai	.19	.18
Land >25 rai	.27	.28
Temporary Migrant in 1984 (0/1)	.08	.12
HH Any Temporary Migrant (0/1)	.31	.32
% 13-30 yr old Temporary Migrants in Village	46.35	46.47
% Female in Temporary Migrants in Village	35.44	35.40
Somewhat Remote (0/1)	.19	.18
Very Remote (0/1)	.65	.63
Electricity (0/1)	.32	.30
No Education (0/1)	.00	.01
Primary Education (0/1)	.68	.60
Some Secondary Schooling (0/1)	.25	.33
Completed Secondary School (0/1)	.03	.05
	<i>Individual Means in 1994</i>	
Ever Migrated Out of Nang Rong by 1994	.59	.72
# Migration <i>Trips</i> Among <u>Indiv.</u>	1.14	1.55
# Migrant <i>Months</i> Among <u>Indiv.</u>	27.59	35.03
# Migrant <i>Trips</i> for <u>HH</u> per HH Member	.65	.66
# Migrant <i>Months</i> for <u>HH</u> per HH Members	16.14	15.92
# Migrant <i>Trips</i> for <u>Vill.</u> Per Person	1.34	1.34
# Migrant <i>Months</i> for <u>Vill.</u> Per Person	31.33	31.13
# Migrant <i>Trips</i> by <u>Women, Indiv.</u>	1.14	-
# Migrant <i>Months</i> by <u>Women, Indiv.</u>	27.59	-
# Migrant <i>Trips</i> for <u>Women in HH</u> Per Person	.29	.30
# Migrant <i>Months</i> for <u>Women in HH</u> Per Person	7.67	7.76
# Migrant <i>Trips</i> for <u>Women in Vill.</u> Per Person	.61	.61
# Migrant <i>Months</i> for <u>Women in Vill.</u> Per Person	14.82	14.88
# Migrant <i>Trips</i> by <u>Men, Indiv.</u>	-	1.55
# Migrant <i>Months</i> by <u>Men, Indiv.</u>	-	35.03
# Migrant <i>Trips</i> for <u>Men in HH</u> Per Person	.36	.35
# Migrant <i>Months</i> for <u>Men in HH</u> Per Person	8.47	8.15
# Migrant <i>Trips</i> for <u>Men in Vill.</u> Per Person	.72	.72
# Migrant <i>Months</i> for <u>Men in Vill.</u> Per Person	16.51	16.25
Age	25.06	24.65
Married by 1994 (0/1)	.55	.36
Village Migrant Follow-up Rate	43.97	43.68
Village has Electricity (0/1)	1.00	1.00
No Education (0/1)	.02	.02
Primary Education (0/1)	.71	.63
Some Secondary Schooling (0/1)	.18	.21
Completed Secondary School (0/1)	.09	.14

Results

Table 2 displays the results of the models evaluated on the pooled sample in the first three columns and then the results for the models evaluated on separate samples for men and women. Looking at the results for the control variables evaluated on the pooled sample we show that as a person gets a year older their odds of being a migrant (in time t) increase but this rate of increase diminishes the older a person gets. For example, when an individual is 15 years old the predicted probability from this model show that the odds of being a migrant are 0.09. When the same individual ages to 20 years old, the odds of being a migrant are .34. However, by the time the individual is 25 years old, the odds of being a migrant have only increased to .35. Men have 2.4 times the odds of being migrants than women. Some secondary schooling also increases the odds of being a migrant relative to primary schooling, but completing secondary school does so dramatically (by almost three times). Not surprisingly, marriage decreases the odds of being a migrant quite dramatically, by almost 65 percent.

Land ownership is not significantly associated with being a migrant, although the effect becomes significant in Models 2 and 3. Individuals from households that are near landless (1-10 rai) have higher odds of being migrants, relative to landless households.

If individuals are temporary migrants in 1984 then they have higher odds of being a migrant in any subsequent year. Similarly, if their origin household had a temporary migrant in 1984 their odds of being a migrant are 50 percent greater. Village level rates of temporary migration have no effect on the odds of subsequent migration in model 1, but in subsequent models it has significant but small effect upon the odds of being a migrant. The gender composition of the migration prevalence rate has no effect upon the odds of being a migrant.

Living in either a somewhat remote village or a very remote village significantly increases the odds of being a migrant by 2.3 times. We suspect that this is an effect of not being near local labor market opportunities which are available in the district town. Electrification has no significant effect on the odds of being a migrant. The success of the 1994 field work in following migrants from each village also has no effect on the odds of being a migrant at a point in time.

There are a few differences and similarities across the control variables for the men and women. The age effect is similar for both men and women. Schooling, however, is different for men and women. Having some secondary schooling relative to primary schooling increases the odds of men's migration, but only completing secondary schooling relative to primary schooling increases the odds of women's migration. Marriage is a greater deterrent of migration for women than for men, but it is a deterrent for both sexes. Land ownership, especially near landlessness approaches significance for men, increasing the odds of out migration, but is not significant for women. Prior temporary migration experience between 1983 and 1984 dramatically increases women's odds of moving and also increases the odds of men's migration, but much less dramatically. The presence of temporary migrants in a household only increases the odds of women's migration. On the other hand, village temporary migration rates increase the odds of men's migration, but not women's. The sex composition of those rates has no effect on either men's or women's odds of being a migrant.

Migrant Social Capital and Its Effects on Migration

Table 2 also shows the results of the models that account for the effects of migrant social capital net of the factors included in the baseline model for the pooled sample and the split sample by sex. This model is a similar to the model suggested by Massey and Zenteno

Table 2: Logistic Estimation of the Odds of Being a Migrant (Living Outside of Nang Rong)

	Pooled		Women		Men	
	OR	z	OR	z	OR	z
Cumulative Migration Experience						
# Migration Trips Among <u>Indiv.</u>	1.48	11.15***	1.80	9.74 ***	1.27	5.39 ***
# Migrant Months Among <u>Indiv.</u>	1.01	7.21***	1.01	5.38 ***	1.00	2.95 **
# Migrant Trips for <u>HH</u> Per HH Member	1.40	4.51***		‡		
			1.27	2.33	1.57	3.98 ***
# Migrant Months for <u>HH</u> Per HH Member	1.01	3.00 **				
			1.00	1.40	1.01	2.96 **
# Migrant Trips for <u>Vill.</u> Per Person	.57	-1.58	1.66	1.00	.17	-3.42 **
# Migrant Months for <u>Vill.</u> Per Person	.95	-4.71***	.94	-3.96 ***	.97	-2.38 ‡
Controls						
Age	2.71	22.09***	2.25	12.64 ***	3.39	18.81 ***
Age*Age	.97	-22.94***	.98	-13.35 ***	.97	-19.16 ***
Men	1.59	4.89***				
Some 2ndary School	1.26	2.19 ‡	1.22	1.34	1.46	2.69 *
Completed 2ndary School	2.28	8.71***	1.88	4.79 ***	2.66	7.07 ***
Married	.38	-12.23***	.23	-13.96 ***	.75	-2.31 ‡
Own 1-10 Rai of Land	1.57	3.30 **	1.54	2.33 ‡	1.94	3.15 **
Own 10-25 Rai of Land	1.20	1.53	1.02	.14	1.45	2.17 ‡
Own More than 25 Rai	.90	-.86	.86	-.87	.95	-.26
Temporary Migrant	4.47	7.47***	6.36	4.87 ***	2.34	3.10 **
Temporary Migrants in Household	1.40	2.95 **	1.53	2.78 *	1.34	1.69
% 13-30 Year Olds that are Migrants	1.01	3.22 **	1.01	2.05 *	1.01	3.05 **
% 13-30 Year Old Women Migrants	1.00	.85	1.01	3.10 **	.98	-2.16 ‡
Remote Village	1.40	2.38 ‡	1.63	2.31 ‡	1.20	.93
Very Remote Village	1.84	3.34 **	2.37	3.12 **	1.57	1.69
Migrant Follow Up Rate	1.01	1.23	.99	-.79	1.03	2.50 ‡
Village has Electricity	1.09	1.10	.96	-.28	1.18	1.47
Migration Prevalence Rate	1.04	6.75***	1.04	4.00 ***	1.06	5.78 ***
Year Effects						
1984	1.24	.60	1.51	.79	1.05	.11
1985	.61	-1.59	.59	-1.19	.62	-1.06
1986	.73	-1.07	.73	-.76	.74	-.72
1987	.67	-1.53	.73	-.86	.63	-1.22
1988	.75	-1.17	.82	-.59	.73	-.91
1999	.83	-.87	1.02	.09	.70	-1.15
1990	.78	-1.36	.85	-.63	.74	-1.16
1991	.88	-.76	1.10	.45	.74	-1.34
1992	1.03	.29	1.06	.35	1.03	.19
1993	1.42	3.38 **	1.51	2.80 *	1.37	2.16 ‡
s.e. (u)	2.01		1.95		2.14	
Rho	.80		.79		.82	
Wald Chi-square	3135.40	***	1694.80	***	1435.11	***

‡p < .05 *p < .01 **p < .005 ***p < .001

(1999). First, we discuss the results for the pooled sample. We find that each additional trip by an individual increases the odds of being a migrant by 48 percent. And with each additional month of experience at the individual level a person is significantly more likely to migrate again (the odds increase by about 1.5 percent). Trips and months of experience by other household members also have similar effects on the odds of migration. Trips by other villagers have no significant effect upon the odds of being a migrant and months of migrant experience among other villagers actually has a negative effect on the likelihood of migration. The odds of being a migrant are reduced by about 4 percent if all village members increased their months of migrant experience by one month. Experience as measured by trips and duration appears to have distinct and sometimes different effects upon migration outcomes.

The effect of migrant social capital is significant and distinct for household-based and village-based migrant networks, as well. Household cumulative migration experience also increases the odds of being a migrant. However, village cumulative migration experience decreases the odds of migrating, but only significantly for months of experience. The greater the social distance at the village-level then the less useful the migrant network for increasing the odds of migration. Before speculating further, we turn to the analysis on the split samples for men and women.

Individual migration experience is important for both men and women. The odds of women being migrants are 80 percent higher with each additional previous trip. The odds of men being migrants increase by 28 percent with each additional prior trip. Trips by other household members are also important for both men and women. Each additional trip taken by other household members increases the odds of a man being a migrant by 57 percent, but only increases the odds for a woman by 27 percent. Months of household migrant experience have no significant effect upon the odds of being a migrant for women, but do have a positive effect upon the odds of men being migrants. Trips by other villagers have no significant effect upon women's migration (the direction of the effect is positive), but a strong negative effect upon the odds of being a male migrant. For both men and women the number of migrant months experienced by other villagers significantly decreases the odds of migration.

Again, the analysis of the split sample shows that migrant social capital measured by different experiences (trips and duration) and at different levels (household and village) has different consequences for men and women. Household migrant experience is significantly important for predicting the odds of men being migrants and not at all significant for predicting the odds of women being migrants. Finally, village migrant trips have practically opposite effects for men and women and village migrant months of experience significantly reduce the odds of being migrants for both men and women.

These last puzzling results, regarding the contradictory effects of village trips and household migrant experiences upon men's and women's behavior, suggest to us that there may be further information not yet distilled about the influence of migrant social capital, particularly about the gendered content of migrant networks. So, before discussing the preceding results further we turn to the effects of the gendered content of migrant social capital.

Engendering Migrant Social Capital

When we disaggregate our migrant social capital measures into those capturing men's and women's experiences, several interesting findings stand out. These results are found in Table 3.

Table 3 presents the results for a full model, which disaggregates the measures of cumulative migration experience by sex and includes baseline controls and year effects. We present results for the model evaluated on a pooled sample and on separate samples of men and women. As with the results in Table 2, the effects of an individual's prior migrant

Table 3: Evaluating Gender Relations and Migrant Networks (Logistic Estimation of the Odds of Being a Migrant (Living Outside of Nang Rong))

	All		Women		Men	
	OR	Z	OR	Z	OR	Z
Cumulative Migration Experience						
# Individual Trips	1.48	10.96 ***	1.80	9.66 ***	1.28	5.35 ***
# Individual Months Experience	1.01	7.09 ***	1.01	5.26 ***	1.00	2.88 **
Female Cumulative Migration Experience						
# Migrant Trips for Women in HH Per Member	1.28	2.31 ‡	1.21	1.23	1.28	1.52
# Migrant Months for Women in HH Per Member	1.02	4.51 **	1.01	2.28 ‡	1.03	4.18 ***
# Migrant Trips for Women in Vill. Per Person	.41	-2.13 ‡	1.90	1.08	.07	-4.35 ***
# Migrant Months for Women in Vill. Per Person	.99	-.15	.94	-2.84 **	1.06	2.90 **
Male Cumulative Migration Experience						
# Migrant Trips for Men in HH Per Member	1.50	4.03 ***	1.31	1.99 ‡	1.98	4.17 ***
# Migrant Months for Men in HH Per Member	1.00	.13	1.00	-.07	.99	-.23
# Migrant Trips for Men in Vill. Per Person	1.92	1.12	1.21	.23	3.01	1.33
# Migrant Months for Men in Vill. Per Person	.90	-5.33 ***	.95	-1.71	.85	-5.87 ***
Year Effects						
1984	1.32	.73	1.38	.61	1.29	.49
1985	.66	-1.25	.54	-1.34	.80	-.47
1986	.81	-.71	.68	-.91	.96	-.09
1987	.74	-1.09	.68	-1.01	.83	-.48
1988	.84	-.70	.76	-.75	.96	-.12
1989	.92	-.37	.97	-.09	.90	-.31
1990	.86	-.74	.80	-.79	.95	-.18
1991	.97	-.14	1.05	.25	.93	-.28
1992	1.12	.85	1.03	.16	1.25	1.19
1993	1.48	3.73 ***	1.48	2.62 *	1.54	2.88 **
Baseline Controls Also Included						
s.e. (u)	2.03		1.96		2.15	
Rho	.80		.79		.82	
	3139.08 ***		1699.10 ***		1438.14 ***	
Wald Chi-square						

‡p < .05 *p < .01 **p < .005 ***p < .001

experiences have a strong influence upon the probability of being a migrant. What is more revealing is that the effects of household and village cumulative migration experience are significantly different when gender composition is taken into account. We begin with a discussion of the effects for the pooled sample of men and women and we then discuss the separate results for women and men.

The results for the pooled sample in Table 3 show how prior trips and months of experience at the individual level continue to positively and significantly influence the odds of being a migrant. An additional prior trip increases the odds of being a migrant by 48 percent and an additional month of experience increases the odds of being a migrant by 1.5 percent. Trips by both other males and females in the household have a positive and significant effect upon the odds of being a migrant. An additional trip by other male household members increases the odds of migration by 51 percent and an additional trip by other female household members increases the odds of migration by 29 percent. An additional month of migrant experience by other female household members increases the odds of being a migrant by 2 percent, but months of migrant experience by other male migrant members has no significant effect. At the village level, migrant trips by female villagers significantly reduce the odds of being a migrant by 59 percent, but duration of experience has no effect on the odds of being a migrant. On the other hand, migrant trips by male villagers has a positive but insignificant effect upon the odds of being a migrant, but duration of migrant experience among other male villagers significantly reduces the odds of being a migrant (an additional month reduces the odds of being a migrant by 9 percent). Household migrant social capital has a positive impact, whether male or female, and village migrant social capital appears to have mixed or negative effects upon the odds of being a migrant.

Comparing the results for men and women, individual migration experiences increase the odds of being a migrant for both samples. At the household level the effects are similar to those for the pooled sample. Migrant trips by other female household members increase the odds of being a migrant for both men and women, but not significantly. Duration of experience among other female household members significantly increases the odds of being a migrant for both men and women. For men the odds of being a migrant are 3.4 percent higher with each additional month of experience by other female household members, whereas it is only 1.6 percent higher for women. Migrant trips by other male household members significantly increase the odds of being a migrant for men and women, increasing the odds of being a male migrant by 99 percent and increasing the odds of being a female migrant by 31 percent. Months of migrant experience among other male household members have no significant impact upon the odds of being a migrant for either men or women, although the direction of the effect is negative.

A comparison of village level effects across the samples of men and women reveals startling differences. Sex decomposition of migrant social capital at the village level reveals some contrary effects for men and women. Migrant trips by female villagers increase the odds of being a migrant among women (although not significantly) and decrease the odds of being a migrant among men (significantly). An additional trip by all female villagers reduces the odds of being a migrant by 93 percent among men. Duration of experience among female villagers also has contrary effects for men and women. An additional month of experience among all female migrants in a village reduces the odds of being a migrant among women by 5 percent, but it increases the odds of being a migrant among men by 7 percent. On the other hand, migrant trips by other male villagers have no significant effect upon the odds of being a migrant for either men or women (although the direction of the effect is positive). Months of migrant experience by other male villagers has a negative effect upon the odds of migration for both men and women, but only

significantly for men. An additional month of migrant experience among all male villagers would decrease the odds of a man being a migrant by 14 percent.

Discussion of Results: Gendered Nuances of Migrant Social Capital

In this study we extend a model of migration previously tested in only one other location (Mexico-U.S. migration) to the case of Thailand. We argued that the process of out migration from rural areas was similarly profound and fraught with risks in the Thai case and that migrant social capital should also have a meaningful influence upon migration behavior. We also expected that the very different context of gender relations in Thailand, a relatively high status of women with some freedom to migrate, dramatic economic growth creating jobs outside of the local economy for both men and women, and gendered social ties with natal households would create very different types of migrant social capital with different effects for men's and women's probabilities of being migrants.

We began our analysis by replicating a model tested by Massey and Zenteno (1999). In that model, Massey and Zenteno argue for distinguishing between trips and duration of stay and we follow their lead. Our extensions of the model included disaggregating household migrant social capital from village migrant social capital, evaluating separate models on men and women, and further disaggregating migrant social capital by sex composition. Our motivation for this approach was based on a review of the literature which suggests conceptual distinctions about the character of migrant social capital, including the importance of strong ties for overcoming the risks women face when migrating and the importance of weak ties for diversifying sources of information. Based on the literature and the Thai context we proposed measuring these two concepts by distinguishing between frequent trips versus extended migrant experiences and by taking into account the sex composition of each form of migrant social capital. We find that this distinction improves our understanding of the Thai data.

Table 4 provides a summary of our results organized according to our three sets of hypotheses: 1. trips and duration of stay measure distinct dimensions of migrant experience as conveyed via migrant social capital; 2. the source of migrant information will affect the content of migrant social capital, specifically (a.) if the source comes from a greater social distance (village-based) it offers more information, but is potentially less trustworthy and (b.) if the source of information comes from men or women the relevant migrant information is distinctly hued by gender relations and sex segregated migrant experiences; and 3. women and men experience the effects of migrant social capital in distinctly different ways.

In general, trips and duration of stay appear to measure different aspects of migration, displaying significant independent effects in most models. Greater frequency of trips has primarily positive effects upon migration, supporting our hypotheses that trips reinforce the trustworthiness of migrant social capital. Duration of stay shows a more mixed set of results, varying across social distance and sex composition. We discuss this variation and its implications shortly.

The social distance of the migrant information source also imbues migrant social capital. Closer distances as measured by household-based migrant networks generally encourage migration. More socially distant sources of migrant information, as measured by village-based networks mostly deters migration, except in the case of female migrant villagers' influence via months of experience upon male migration. The finding that household migrant social capital has a consistent positive effect upon the likelihood of being a migrant and that village migrant social capital may even be a hindrance suggests that the quality of information may be more trustworthy, significantly better or more helpful than that from village-based migrant networks. This is not surprising and has also been found in studies of Mexican-U.S. studies of

Table 4: Summary of Results from Table 3 (not statistically significant log-odds coefficient)

	Women	Men	HYPOTHESIS 3
HYPOTHESIS 1:			
Migrant Social Capital as Trips			
# Migrant Trips for Women in Vill. Per Person	(+)	-	*
# Migrant Trips for Men in Vill. Per Person	(+)	(+)	
# Migrant Trips for Men in HH Per Member	+	+	
# Migrant Trips for Women in HH Per Member	(+)	(+)	
Migrant Social Capital as Months of Experience			
# Migrant Months for Women in HH Per Member	+	+	
# Migrant Months for Women in Vill. Per Person	-	+	*
# Migrant Months for Men in HH Per Member	(0)	(-)	
# Migrant Months for Men in Vill. Per Person	(-)	-	
HYPOTHESIS 2a – social distance:			
Household Level Migrant Social Capital			
# Migrant Months for Men in HH Per Member	(0)	(-)	
# Migrant Trips for Men in HH Per Member	+	+	
# Migrant Months for Women in HH Per Member	+	+	
# Migrant Trips for Women in HH Per Member	(+)	(+)	
Village Level Migrant Social Capital			
# Migrant Trips for Men in Vill. Per Person	(+)	(+)	
# Migrant Trips for Women in Vill. Per Person	(+)	-	*
# Migrant Months for Women in Vill. Per Person	-	+	*
# Migrant Months for Men in Vill. Per Person	(-)	-	
HYPOTHESIS 2b – sex composition:			
Female Migrant Social Capital			
# Migrant Trips for Women in HH Per Member	(+)	(+)	
# Migrant Trips for Women in Vill. Per Person	(+)	-	*
# Migrant Months for Women in HH Per Member	+	+	
# Migrant Months for Women in Vill. Per Person	-	+	*
Male Migrant Social Capital			
# Migrant Trips for Men in HH Per Member	+	+	
# Migrant Trips for Men in Vill. Per Person	(+)	(+)	
# Migrant Months for Men in HH Per Member	(0)	(-)	
# Migrant Months for Men in Vill. Per Person	(-)	-	

* Significant Differences Between Men and Women

migration (Cerrutti and Massey 2001; Kanaiaupuni 2000; Espinoza and Massey 1999; Massey and Espinoza 1997). Stronger ties and greater degrees of trust may characterize household- or family-based migrant social capital significantly decreasing the costs of migration.

When the source of migrant information comes from men the effects on migration are distinctly different than if the source of information comes from women. Estimating sex disaggregated migrant social capital demonstrates that women offer significant information about migration possibilities the longer they stay in a destination, especially via household-based migrant networks. Whereas the longer men are away the less influence they have on migration. On the other hand, frequent trips by men, especially when the migrant network is household-based, reinforces social ties and conveys valuable and encouraging information about migration possibilities.

Men's and women's migration propensities are somewhat dissimilar and the factors influencing those outcomes are different, particularly migrant social capital as measured by village-based networks. These differences mostly conform to our expectations about how women's experiences convey different information about the migration experience. For men, frequent migrant trips by women villagers actually deter migration. We predicted this possibility, if we assumed that the migration experience in a destination is relatively sex segregated as we know it is in most cases. Frequent trips reflect shorter durations and less, broad-based information about migration opportunities outside of a female labor market. On the other hand, as we expected to find, frequent migrant trips by other village women positively influences women's migration.

As duration of stays extend for migrant women from the village, migration propensities increase for men but are significantly reduced for women. We expected the former finding, but are surprised by the latter. We speculate that both findings might also reflect villagers' reactions to the loss of women from a village community, especially as duration of stay may weaken social ties to village and household communities and raise concerns about expected social relations. This speculation is not unfounded as the following quotes from fieldwork suggest:

"We don't want daughters to go. There are only a few of them. If they go, who will fetch water? Who will cook the food for me, their mother, or their father?" Another mother interrupts her, "But usually migrant daughters can save more money than sons. Men spend more easily, women know how to save money, men like to have fun. Like their fathers!" (Focus group interview among mothers)

"We need factory jobs in our village to keep our daughters from leaving." (interview with 60-year-old mother)

In conclusion, our study has demonstrated that migrant social capital is also important in the Thai context, even when considering rural-urban migration. With this extension to Thailand, the case can be made for similar studies in other locales, especially if those studies afford the collection of longitudinal, multilevel migrant information from both men and women. Because of the very different patterns of migration in the Thai case and the data available to us, specifically that there is significant variation in the gendered patterns of migration and that data were collected from both men and women, we are able to offer refinements on theories about migrant social capital. We confirm what ethnographic researchers have previously found in their qualitative studies and expand upon the few prior studies of gender and migration.

Gender relations imbue the quality of migrant social capital with very different results for men's and women's migration outcomes. The patterning of these effects can be quite profound

and have implications for understanding the rate and pace migration out of rural areas. Although we do not explore these effects, we suspect that this patterning will influence gendered social organization in villages and households of origin, as well as differentially influence the impact of migration upon village and household economies. One example might be that high rates of migration by women may yield very different flows of remittances back to villages of origin than if men predominate in a migrant stream. As the quotes from our interviews indicate, in the Thai context women are considered more reliable remitters than are men (Curran and Saguy 2001). On the other hand, high rates of female migration may also weaken their ties to natal villages and shift patterns of care provision from daughters to sons, especially if high rates of female migration are a significant deterrent of male out migration (Curran and Saguy 2001). These are offered as tentative speculations that require more exploration.

Our study adds to the small but growing collection of quantitative research which builds on what ethnographers have been suggesting for a long time: ignoring the gender content of migrant social capital may mask important insights about the dynamics of the migration process. Our analysis presumes that because gender is such a profound social category, organizing many aspects of social life, that it inevitably influences the quality of migrant social capital, as well. We speculate that this is because men and women live the migrant experience very differently. In part because men and women face different barriers to moving, maintain different relationships with households and villages of origin, and experience completely different opportunities in places of destination. Future research should explore these particular dimensions more explicitly, taking into account variability across destinations, work experiences, patterns of remittances and visits home, and varying barriers to migration.

Notes

1. Cumulatively caused migration may also be initiated and maintained through mechanisms other than social networks or in combination with social networks. These may include inequality in community income distributions, inequality in landholdings, or cultural change. Massey, Ariango et. al (1994) provide an excellent review on how these factors also affect a cumulative migration dynamic.
2. The first author conducted fieldwork in Nang Rong and the Bangkok Metropolitan Area for extended stays between 1992 and 2000 (identifying citation removed).
3. This is the Thai currency – 25 baht was equivalent to \$1 during the period of this study.
4. A term literally meaning “to take a trip,” but in colloquial terms means to have fun and party.
5. The data and information about the surveys are available at <http://www.cpc.unc.edu/projects/nangrong/>.
6. Entrance into the Buddhist Sangha as a monk is a tradition, but a temporary life event that can be as short as three days or as long as one year. Typically, entrance into the Sangha occurs after school and some work and before marriage, around age 25.
7. The sample selection bias resulting from migration significantly affects the composition of our life history data file if we were to examine data from all 50 of the original villages. Out migrants from the 22 villages in the survey have significantly different patterns of migration, education and work experiences than those who were living in the villages during the 1994 survey.

8. The direction of the bias is unclear. If rural out migration takes a life course path (decreasing with age) then this may diminish the possible effects of cumulative migration. Significant unobserved prior migration may also be related to some of the right hand side variables increasing the possibility of spurious results. We do have some reason to suspect that these effects are relatively minimal. The baseline data captures the very start of the period of rapid economic growth and the beginning of large movements of young people out of rural villages in northeastern Thailand. Our model includes measures of migration experience in 1983 that should help to diminish the possible biases. The younger sample upon which we replicate our models, reflects the youngest cohorts in the data. Given the overwhelming rise in migrant prevalence in the villages, these migrants may be much less influenced by the increase in quantity and quality of social capital, given high levels migrant experience saturation. We expect that our results from the analysis of the overall sample will be significantly dampened when evaluating the effects on the younger cohorts. Finally, there is no difference in the substantive results from the smaller subset, although the year effects are significantly more important because they capture the effects of aging for this smaller age cohort. Given the demands of our model, the analysis of the larger data file yields more robust results.
9. Exact time in a place of destination was not measured by the survey. The survey did allow for multiple trips within one year (up to six trips – including return trips) and the survey links trips with work, education and destination information. To measure months of migrant experience we took the number of trips taken within one year and divided it into 12 months. For one trip in one year we calculated the amount of experience as six months, for two trips we counted it as four months for each trip. Only 10 percent of the sample ever made more than one round trip in one year.
10. This equation and data file are a replication of Massey and Zenteno's model and data (1999) except that we add measures of household migrant trips and experience and a vector of individual, household and community controls.
11. All of these, except for the measure of sex, were data collected during the 1984 survey.
12. This is measured with four categories of land ownership: landless, near landless 1-10 rai, somewhat landed (11-25 rai) and landed (more than 25 rai). A rai is 0.46 acres.
13. A temporary migrant is a person identified in the household roster as a permanent household member who migrated out of the house for two or more months prior to the survey but plans to return.
14. A village is considered somewhat remotely located if there are one to two obstacles to traveling to the district town. A village is considered very remotely located if there are three or more obstacles to traveling to the district town. The obstacles we include in our measure are the presence of a portion of the route to the district town that is a cart path (unpaved, rutted, and narrow), the lack of public transportation to the district town, travel to the district town takes an hour or more (as reported by a village headman or key informant), that during the year there are four or more months of difficult travel to leave the village (this is also a measure of road conditions and susceptibility to flooding) and it is 20 or more kilometers to the district town.

References

- Arizpe, Lourdes. 1975. *Indigenous En La Ciudad De México: El Caso De Las Marías*. Secretaría de Educación Pública.
- . 1980. *La Migración Por Relevos y La Reproducción Social Del Campesinado*. Mexico: Centro de Estudios Sociológicos, El Colegio de Mexico.
- . 1981. "Relay Migration and the Survival of the Peasant Household." *Why People Move*, editor Jorge Balan. UNESCO.
- . 1985. *Campesinado y Migración*. Secretaría de Educación Pública. Mexico D.F., Mexico
- Bello, Walden, Shea Cunningham and Li K. Poh. 1998. *A Siamese Tragedy: Development and Disintegration in Modern Thailand*. Zed Books, Ltd.
- Blanc-Szanton, M. C. 1990. "Gender and Inter-Generational Resource Allocation Among Thai and Sino-Thai Households." Pp. 79-102 in *Structures and Strategies: Women, Work and Family*, vol. 3, editors Leela Dube and Rajni Palriwala. Sage Publications.
- Boyd, Monica. 1989. "Family and Personal Networks in International Migration: Recent Developments and New Agendas." *International Migration Review* 23(3):638-70.
- Cerrutti, Marcela, and Douglas Massey. 2001. "On the Auspices of Female Migration From Mexico to the United States." *Demography* 38(2):187-200.
- Chamrathirong, Aphichat, Kritaya Archavanitkul, Kerry Richter, Philip Guest, Thongthai Varachai, Wathinee Boonchalaksi, Nittaya Piriathamwong and Panee Vong-ek. 1995. *National Migration Survey of Thailand*. Institute for Population and Social Research, Mahidol University, Bangkok, Thailand.
- Chant, Sylvia. 1992. *Gender and Migration in Developing Countries*. Belhaven Press.
- Choldin, Harvey M. 1973. "Kinship Networks in the Migration Process." *International Migration Review* 10:163-75.
- Constable, Nicole. 1997. *Maid to Order in Hong Kong: Stories of Filipina Workers*. Cornell University.
- Curran, Sara, and Estela Rivero. 2003. "Engendering Migrant Networks: The Case of Mexican Migration." *Demography* 40(2).
- Curran, Sara and Abigail C. Saguy. 2001. "Migration and Cultural Change: A Role for Gender and Social Networks." *Journal of International Women's Studies* 2(3):54-77.
- Davis, Benjamin, Guy Stecklov and Paul Winters. 2002. "Domestic and International Migration From Rural Mexico: Disaggregating the Effects of Network Structure and Composition." *Population Studies* 56:291-309.
- De Jong, Gordon, Kerry Richter and Pimonpan Isarabhakdi. 1996. "Gender, Values, and Intentions to Move in Rural Thailand." *International Migration Review* 30(3):748-70.
- Espinoza, Kristin, and Douglas Massey. 1999. "Undocumented Migration and the Quantity and Quality of Social Capital." *Migration and Transnational Social Spaces*, Ludger ed. Pries. Aldershot: Ashgate.
- Fussell, Elizabeth, and Douglas S. Massey. 2004. "The Limits to Cumulative Causation: International Migration from Mexican Urban Areas." *Demography* (forthcoming).
- Granovetter, Mark. 1983. "The Strength of Weak Ties: Network Theory Revisited." *Sociological Theory*. 1: 201-233.
- Grasmuck, Sherri, and Patricia R. Pessar. 1991. *Between Two Islands: Dominican International Migration*. Pp. 1-161. University of California Press.

- Grieco, Elizabeth M. and Monica Boyd. 1990. "Women and Migration: Incorporating Gender Into International Migration Theory." *Working Paper Series*. College of Social Science, Florida State University.
- Hanks, Lucien M., Jr., and Jane R. Hanks. 1963. "Thailand: Equality Between the Sexes." Pp. 424-51 in *Women in the New Asia: The Changing Social Roles of Men and Women in South and South-East Asia*, editor Barbara E. Ward. Paris and Amsterdam: UNESCO.
- Hondagneu-Sotelo, Pierrette. 1994. *Gendered Transitions: Mexican Experiences of Immigration*. University of California Press.
- Hugo, Graeme. 1991. "Village-Community Ties, Village Norms and Ethnic and Social Networks: A Review of the Evidence From the Third World." Pp. 186-225 in *Migration Decision Making*, editors Gordon DeJong and Robert W. Gardner. Pergamon Press.
- Kanaiaupuni, Shawn M. 2000. "Reframing the Migration Question: An Analysis of Men, Women and Gender in Mexico." *Social Forces* 78(4):1311-48.
- Keyes, Charles. 1984. "Mother or Mistress but Never a Monk: Buddhist Notions of Female Gender in Rural Thailand." *American Ethnologist* 11(2):223-41.
- Landwehr, J.M., D. Pregibon and A. Shoemaker. 1984. "Graphical Methods for Assessing Logistic Regression Models." *Journal of American Statistical Association* 79: 61-71.
- Limpinuntana, Viriya, Aran Patanothai, Terd Charaoenwatana, Gordon Conway, Manu Seetisarn and Kanok Rerkasem. 1982. *An Agroecosystem Analysis of Northeastern Thailand*. Khon Kaen University.
- Massey, Douglas S. 1990. "The Social and Economic Origins of Immigration." *ANNALS, AAPSS* 510:60-72.
- _____. 1990a. "Social Structure, Household Strategies, and the Cumulative Causation of Migration." *Population Index* 56(1):3-26.
- Massey, Douglas S., Joaquin Arango, Graeme Hugo, Ali Kouaouci, Adela Pellegrino and J. Edward Taylor. 1994. "An Evaluation of International Migration Theory: The North American Case." *Population and Development Review* 20:699-752.
- Massey, Douglas S., and Felipe Garcia-Espana. 1987. "The Social Process of International Migration." *Science* 237:733-38.
- Massey, Douglas S., and Kristin E. Espinoza. 1997. "What's Driving Mexico-U.S. Migration? A Theoretical, Empirical and Policy Analysis." *American Journal of Sociology* 102(4):939-99.
- Massey, Douglas S., Luis Goldring and Jorge Durand. 1994. "Continuities in Transnational Migration: An Analysis of Nineteen Mexican Communities." *American Journal of Sociology* 99:1492-533.
- Massey, Douglas S., and Rene Zenteno. 1999. "The Dynamics of Mass Migration." *Proceedings of the National Academy of Sciences* :5328-35.
- Menjivar, Cecilia. 1995. "Kinship Networks Among Immigrants: Lessons From a Qualitative Comparative Approach." *International Journal of Comparative Sociology* 36(3-4):219-32.
- _____. 1997. "Immigrant Kinship Networks: Vietnamese, Salvadoreans and Mexicans in Comparative Perspective." *Journal of Comparative Family Studies*.
- _____. 2000. *Fragmented Ties: Salvadoran Immigrant Networks in America*. University of California Press.
- Mills, Mary B. 1997. *Thai Women in the Global Labor Force: Consuming Desires, Contested Selves*. Rutgers University .
- Nartsupha, Chatthip. 1999. *The Thai Village Economy in the Past*. Silkworm Press.
- Nidhiprabha, Bhanupong. 1994. *Determinants of Private Investment Expenditures and Direct Foreign Investment in Thailand*. Thailand Development Research Institute.

- Pessar, Patricia. 1999a. "Engendering Migration Studies: The Case of New Immigrants in the United States." *American Behavioral Scientist* 42(4):577-600.
- . 1999b. "The Role of Gender, Households, and Social Networks in the Migration Process: A Review and Appraisal." Pp. 53-70 in *Handbook of International Migration: The American Experience*, editors Charles Hirschman, Philip Kasinitz and Josh DeWind. Russell Sage Foundation.
- Phongpaichit, Pasuk. 1980. "The Open Economy and Its Friends: The "Development" of Thailand." *Pacific Affairs* 53(3):440-460.
- Phongpaichit, Pasuk and Chris Baker. 1996. *Thailand's Boom!* Allen and Unwin.
- . 1998. *Thailand's Boom and Bust*. Silkworm Press.
- Phongphit, Seri. 1990. *Thai Village Life: Culture and Transition in the Northeast*. Mooban Press.
- Piore, Michael. 1979. *Birds of Passage: Migrant Labor in Industrial Societies*. Cambridge University Press.
- Portes, Alejandro. 1978. "Migration and Underdevelopment." *Politics and Society* 8(1):1-48.
- Pramualrathana, Anthony. 1991. "Consensual Neglect: An Interpretive Analysis of Adult Children's Support to the Old in Rural Thailand." Paper presented at the Annual Meeting of the Population Association of America, Washington, D.C. March 21-23.
- Rindfuss, Ronald, Toshiko Kaneda, Chattopahyay and Chanya Sethapat. 2002. "Panel Studies and Migration." *Carolina Population Center, University of North Carolina*.
- Siamwalla, Ammar, Suthad Setboonsarng and Direk Patamasirawat. 1993. "Agriculture." Pp. 81-117 in *The Thai Economy in Transition*, editor Peter Warr. Cambridge University Press.
- Singhanetra-Renard, Anchalee and Nitaya Prabhudhanitisarn. 1992. "Changing Socio-Economic Roles of Thai Women and Their Migration." Pp. 154-73 in *Gender and Migration in Developing Countries*, editor Sylvia Chant. Belhaven Press.
- Stark, Oded. 1991. *The Migration of Labor*. Basil Blackwell.
- Stark, Oded, and Mario Levhari. 1982. "On Migration and Risk in LDCs." *Economic Development and Cultural Change* 31:191-96.
- Sussangkarn, Chalongphob. 1993. "Labour Markets." Pp. 355-400 in *The Thai Economy in Transition*, editor Peter G. Warr. Cambridge University Press.
- Tantiwiranond, Darunee. 1995. "Gender and Development in Thailand." Paper presented to the Southeast Asian Studies Seminar, University of Washington, Seattle, Washington, December.
- Taylor, Edward. 1986. "Differential Migration, Networks, Information and Risk." *Research in Human Capital and Development: Migration, Human Capital and Development* 4:147-71.
- Tienda, Marta, and Karen Booth. 1991. "Gender, Migration and Social Change." *International Sociology* 6(1):51-72.
- Tyner, James A. 1996. "The Gendering of Philippine International Labor Migration." *Professional Geographer* 48(4):405-16.
- Warr, Peter, editor. 1993. *The Thai Economy in Transition*. Cambridge University Press.
- Warr, Peter, and Bhanupong Nidhiprabha. 1996. *Thailand's Macroeconomic Miracle: Stable Adjustment and Sustained Growth*. The World Bank.
- Winters, Paul, Alain de Janvry and Elisabeth Sadoulet. 2001. "Family and Community Networks in Mexico-US Migration." *Journal of Human Resources* 36(1):159-84.

Yoddumnern-Attig, Bencha. 1992. "Thai Family Structure and Organization: Changing Roles and Duties in Historical Perspective." Pp. 8-24 in *Changing Roles and Statuses of Women in Thailand*, editors Bencha Yoddumnern-Attig, Kerry Richter, Amara Soonthornhdada, Chanya Sethaput and Anthony Pramualrathana. Institute for Population and Social Research, Mahidol University.