HETEROGENEOUS MIGRATION FLOWS ACROSS DESTINATION AND GENDER IN THAILAND

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Abstract

In an age of migration, anticipating, directing, or stemming migration flows is a leading dilemma for policy makers confronting a broad range of concerns. A critical research finding is that migration flows can develop a self-sustaining momentum that is difficult to redirect. This phenomenon, predicted by cumulative causation theory, hypothesizes that migration flows gain momentum and eventually become self-sustaining due to the accumulation of migration experience in the form of migrant social capital. Migration studies evaluating the theory are substantial, especially for the Mexican-U.S. case, but also for other sites, powerfully demonstrating how macro social structures influence behavior and vice versa. However, recent research also shows that rather than uniformity in the macro-micro migration dynamic, instead there is still substantial heterogeneity in migration patterns at both the community and individual level. We propose that this heterogeneity in patterning can be explained by further theorizing the mechanisms that underlie cumulative causation. Specifically, we propose that migrant social capital evolves differently depending the historical continuity of migration flows to and from a particular destination and the social proximity of migrants to potential migrants in origin communities. We examine longitudinal data from Thailand to test this theoretical modification by estimating migration models to substantively different destinations, observing migration experiences at multiple levels of social proximity (individual, household, and community). Our models also include a gender account of these patterns, since gender is a fundamental social organizing mechanism. We find significant cumulative differences in migration patterns that can be explained by historical continuities to destinations and social proximity within origin communities. In addition, men's and women's accumulated migration experiences, differential social proximity, and differential access to migrant social capital demonstrate that heterogeneity in migration flows is also driven by gender.

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This paper studies rural to urban migration flows in Thailand over a 10-year period in order to test and advance the theory of cumulative causation. Introduced to the migration literature by Massey's (1990a) seminal article to explain the perpetuation of migration, the cumulative causation theory holds that the accumulation of migration experience in origin communities makes migration flows increasingly self-sustaining over time, generating significant challenges for policy makers trying to redirect or stem those flows. The presumed mechanism underlying this dynamic feedback is the generation of migrant social capital through migrant networks that link origin and destination communities. Migrant social capital provides the information, cultural, and strategic resources that facilitate the movement of potential migrants from origin communities. A considerable number of empirical studies, have tested and confirmed the cumulative causation hypothesis for Mexican-U.S. migration (Davis, Stecklov, and Winters 2002; Massey, Goldring, and Durand 1994; Massey and Zenteno 1999; Espinoza and Massey 1999; Massey and Espinoza 1997; Winters, de Janvry, et al. 2001; Kanaiaupuni 2000), internal migration in Mexico (Lindstrom and Lauster 1999; Fussell 2001; Rivero-Fuentes and Curran, 2001) and more recently internal migration in Thailand (Curran et al. 2005).

Recent work, however, shows that this process of growth and sustained migration momentum is not uniform, but exhibits significant heterogeneity across origin communities, destinations, and among migrants. For example, Fussell and Massey (2003) demonstrate that cumulative causation varies in its influence across rural and urban origin communities, which they hypothesize to be a function of potential migrants' varying socio-physical proximity to migrant experiences. Others have shown how social proximity to migrant social capital, as defined by social categories of kinship, ethnicity, or community has differential impacts (Bauer & Zimmerman 1997; Curran et al. 2005; Winters et al. 2001). Taylor (1986) and Curran and Rivero-Fuentes (2003) also show how the influence of migrant social capital varies across destinations, but they suggest that the hypothesized mechanism is that particular historical continuities of destination-specific migration flows yield qualitatively different information and resources differences in migrant social capital. Similarly, the distribution of migrant social capital across the sexes has also proven significant in studies of the gendered nature of migrant networks in both origin and destination (Curran et al. 2005; Curran and Rivero-Fuentes

2003; Curran and Saguy 2001; Hagan 1998; Menjivar 2000). Taken together, these findings continue to provide evidence that supports the theory of cumulative causation, but they are also provocative and suggest that there are critical mechanisms fueling migration momentum that have yet to be systematically explored.

In this study, we undertake this endeavor by examining unique longitudinal data from Thailand. These data show surprising variation across 22 villages in the extent of migration within communities and the pace of growth in migration flows over a ten-year period. Thus, this variation and these data allow us to improve on prior work and better evaluate how accumulated migration experience influences subsequent migration patterns by (1) more precisely measuring migration experience through frequency and duration of trips, and (2) aggregating migration experience at different levels of observation (individual, household and village), as well as (3) disaggregating measures and models across gender and migrant destinations. In sum, our analysis proposes and evaluates a modification of cumulative causation theory, integrating concepts of continuity and social proximity as critical mechanisms underlying the essential features of the theory, namely the formation of migrant social capital and the generation of migration momentum.

Some researchers in the field of migration have examined how destination characteristics influence migration outcomes. A key element of the theory of cumulative causation is that as a migrant network matures between an origin and destination, the accumulated migration experience within the network serves to reduce the risks associated with migration and decrease migrant selectivity. High migration prevalence does reduce migrant selectivity (Garip and Curran 2008; Massey, Goldring and Durand 1996). However, destination characteristics may also differentiate migrants' social and economic ties to destination, affect their tendency toward settlement, and consequently affect the continuity of flows between origin and destination (Massey 1985; Massey et al. 1987). In some destinations, high levels of migration may lead to social structural changes, e.g. emergence of an ethnic enclave of migrants that acts as an additional magnet for future migration to that destination (Portes and Bach 1985; Portes and Manning 1986). Similarly, destination characteristics may determine migrant selectivity. If migration is viewed as a matching process between migrants' characteristics and employment opportunities in the destination, migrants may be selected differently

depending on the destination. Selectivity of migrant networks may then reinforce differential migration patterns across destinations. These studies imply that migration analyses should be attentive to historical continuities (and their inverse – discontinuities) in the migrant flows to a destination, however few studies have systematically compared the continuities between origin and destination and their relationship to the emergence and influence of migrant social capital.

We pick up where this research leaves off by specifying three different destinations in the Thai context with very different historical continuities in their migrant flows and labor market characteristics. We suggest that, in each destination, maturity and the episodic character of the migrant flow will moderate the mechanism of cumulative causation. More specifically, we expect that:

> **H1:** The more mature a migrant stream the more likely accumulated migrant experience will be widespread across members of an origin community and the less influential the role of migrant social capital for motivating an individual's migration decision.
>
> **H2:** The more episodically driven the migrant flow to a destination the less likely meaningful migrant networks will form, generating little accumulated migrant social capital beyond the individual's own experience.

A second underlying mechanism, driving cumulative causation and the formation and availability of migrant social capital, is the social proximity of accumulated migration experience to potential migrants within an origin community. Recent research indicates the importance of this factor, although these studies have not proposed a generalized, conceptual modification to cumulative causation theory. These studies have shown that migrant social capital within urban settings is less influential than migrant social capital in smaller, rural communities (Fussell and Massey 2003), that migrant social capital located in families has different impacts than migrant social capital located in communities (net of family level effects) (Curran et al. 2005; Winters et al. 2001); and that migrant social capital located in ethnic communities is more important influence upon migration than migrant social capital ties located in non-ethnic communities (Bauer & Zimmerman 1997). We follow this line of inquiry and account for the possibility of social proximity differences by accumulating migrant social capital at three different

levels of social proximity: the individual's experience, the experiences of their fellow household members (not including their own), and the experience of their fellow origin community members (not including their own or their fellow household members'). We predict that:

> **H3:** Migrant social capital located in closer social proximity to migrants is more influential upon the decision to migrate than is more distant migrant social capital.

A significant line of research inquiry theorizes and finds that gender fundamentally organizes migration patterns and behavior (for a recent review see *International Migration Review* (2006 (40:1)). Specifically, the reasons and motives for men's and women's migration often differ, the barriers (psychic, social, or economic) to migration differ, their accessibility to migrant social capital differs, their participation in destination labor markets differs (especially in sex segregated labor markets), and the sex composition of migrant networks varies, including their patterns of remittances and visitation.

For example, using the Maya in Houston as a case study, for instance, Hagan (1998) observes that social networks assume different forms and functions for men and women, and hence, differentially affect the settlement outcomes, particularly opportunities to become legal, for each sex. While gendered networks operate to limit the women's ability to settle legally in the US, they enhance the men's ability to do so (because women typically work in small, unregulated, sex-segregated, etc. settings). Similarly, but using Mexican data, Curran and Rivero-Fuentes (2003) show that gender relations imbue the quality of migrant social capital with very different results for men's and women's migration outcomes. They 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-Fuentes 2003). Kanaiaupuni (2000), through her analysis of Mexican migration, reaches similar conclusions. Similarly, recent work by Curran et al. (2005) demonstrates the importance of gender for shaping migrant networks and the subsequent migration of men and women

out of a rural Thai setting. Similar to our study, these authors disaggregate accumulated migration experience at the individual, household, village level by sex and observe its differential effect on women's and men's migration propensities. Their results show that migration experience measured at the household and village level influences migrant outcomes, however the direction and magnitude of the effects depend on whether individuals are men or women and also on whether migration experience is male or female based. In this paper, we build upon these findings and the work of Curran and Rivero-Fuentes (2003) to show how gender also influences cumulatively caused migration to different destinations.

In sum, the gender and migration literature motivates a fully interactive model that decomposes the social proximity of migrant social capital and the destination-specific migrant social by sex, as well separately modeling men's and women's migration behavior. Therefore, we hypothesize that:

H4: There will be significant differences in the influence of social proximity to migrant social capital if it accumulates among women as opposed to men.

H5: There will be significant differences in the influence of men and women's destination-specific migrant social capital.

H6: Men and women will respond differently to the influences of social proximity and the historical continuities to specific destinations.

In the section that follows we describe the contemporary history and context of Thai internal to further motivate our expectations in light of the hypotheses above.

The Thai Context

Our study draws upon a longitudinal data file from one district in the northeastern region of the country.[1] This district is the source of many migrants both to rural destinations and urban destinations. In addition, the district is relatively poor and dependent upon rain-fed irrigation to cultivate rice paddies. Consequently, many

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[1] These data, the Nang Rong Surveys, were designed and collected by the Institute for Population and Social Research at Mahidol University and the Carolina Population Center, University of North Carolina. Information about the surveys is available at http://www.cpc.unc.edu/projects/nangrong/.

residents are increasingly dependent upon cash income from sources outside the district, including agricultural wage labor and migrant earnings in urban destinations.

-- Figure 1 about here --

In our study, we cover a 10-year time period from mid-1980s to mid-1990s, when 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, 1998; Warr 1993; Warr and Nidhiprabha 1996) and consequently migration took on added significance in Thai livelihoods. During this period, Thailand's economy grew on average 10 percent per year (Bello, Cunningham, et al. 1998; Warr & Nidhiprabha 1996), which was fueled by production in export manufacturing, 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; Phongphaichit and Baker 1998). 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 (Chamratrithirong et al. 1995; Mills 1997; Phongpaichit and Baker 1996).

Women's participation in rural-urban migrant streams was considerable, reaching as high as 60 % of all migrants (Tantiwiramanond 1995; Chamratrithirong et al. 1995). These rates were only surpassed in Asia by the migration rates of women from the Philippines and Japan (Tantiwiramanond 1995). It is important to note that these moves were rarely associational (family moves) but primarily for jobs for the women themselves (Chamratrithirong et al. 1995).

These positive characterizations of women's status are increasingly questioned by recent scholarship. This research 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; Tantiwiramanond 1995). Importantly women consistently earn one-third to one-half as much as men in similar occupations

(Phananiramai 1993; Richter and Havanon 1994; Tantiwiramanond 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. Besides the sex segregated export manufacturing work, women are also employed in domestic and other types of services, which are even more sex segregated.

Hence, in our study, we expect to observe gender differences in migration patterns, as well as on the effect of migration experience on migration patterns to the three migrant destinations: (a) a regional, primarily agricultural wage laborer market (North Eastern Province); (b) a primate city and its surrounding suburbs (Bangkok); and a newly industrialized, (c) state sponsored export processing zone/city (Eastern Seaboard). We suspect that the importance of cumulatively caused networks will be different in each case. These differences will depend on the relative distance of the destination, the characteristics of the labor market, and the maturity of the migrant stream. We will be testing one key dimension of the labor market, the gendered segregation of work opportunities.

Table 1 presents a typology we propose to characterize the three migration destinations. We define two dimensions key to our analysis: characteristics of the migration flow and level of segregation in the labor market. The first destination, North Eastern Province, is a mainly agricultural wage laborer market, and receives episodic migrant flows during farming season. Migrants are mostly male farmers, and the labor market is predominantly male-based. The second destination, Bangkok, is a primate city that has no clear labor market segregation by sex, and is equally likely to receive both male and female migrant streams. (Note that migrant stream to Bangkok has historically been male-dominated, but by beginning of the period this study covers, the sex composition of migrants has equalized.) Bangkok has been a primary migration destination for rural migrants for decades, hence the migration flows are mature and stable. The third destination, Eastern Seaboard, by contrast, is a newly established, state sponsored export-processing zone, with a female-based labor market. Because it is newly

established, migrant flows to this destination have not reached the level and maturity of flows to the other two destinations.

-- Table 1 about here --

Our hypotheses presented in a preceding section posit that when a migrant stream to a destination is mature, migration experience is more wide-spread, and hence less influential on subsequent migration outcomes. Similarly, we expect migration experience to be less influential when migrant flows to a destination are episodically driven, as such flows are less likely to generate meaningful migration networks. Finally, we expect level of sex segregation in the labor market to limit the availability and value of migration experience to men or women. If occupations in a labor market are bifurcated along gender lines, such that workplaces of men and women are separated, for instance, we expect the effect of migration experiences to be also differentiated along gender lines. In what follows, we apply these hypotheses to the three destinations characterized in the typology of Table 1, and identify our expectations regarding migration outcomes related to cumulative causation.

In the first destination, the primarily agricultural wage labor market in the Northeastern region of the country, the proximity of the destination will mitigate against the importance of migrant networks. Further, the episodic and variable needs of agricultural labor will mitigate against the development of a systemic relationship between origin and destination. Finally, agricultural wage labor is primarily a male-based occupation involving the planting or harvesting of upland field crops. These destination characteristics will limit the importance of migrant networks for affecting migration, increase the selectivity of the migrant stream (less educated and male), and the importance of prior migrant experience will rest only with the individual's own experience not other household or village members. Because agricultural labor is male-based, male-based migrant networks will have more effect on migration outcomes compared with female migrant networks, and the experience embedded in these networks will influence male rather than female migration.

In the second destination, Bangkok and the surrounding communities defining the Bangkok Metropolitan Area, the maturity of the migrant stream could result in at least two different outcomes. On the one hand, the fact that Bangkok has been a destination for migrants for many years may mean that the migration experience in Bangkok within a village or household may have reached such a high level that an additional migrant adds few new resources or little impetus for affecting someone else's migration. On the other hand, the migrant stream, although well-developed, may not be so developed as to have saturated an origin community. Instead, particular patterns, especially those based on gender may have been cemented and enhanced, increasing their importance in affecting migrant outcomes. In Bangkok, we also expect a fairly sex-segregated labor market, but not because of the selectivity of the migrant stream. Instead, we suspect that men and women are equally likely to migrate to Bangkok, but end up in labor markets that are generally sex-segregated – either light weight manufacturing and service sector jobs (for women) or heavier manufacturing, construction, or transportation sector jobs (for men). The cumulative effect of these experiences will positively influence women's and men's migration, respectively, but not vice versa.

Further, we suspect that migration experiences at the household level will be more important than at the village level for influencing migrant outcomes to Bangkok. This stems from two conjectures. First, other members of a household are very likely to have had some experience in Bangkok and this information will be more useful than that from other villagers. Second, and in a related vein, the maturity of the migrant stream to Bangkok is likely to have conveyed both positive and negative experiences back to prospective migrants. The quality of the information from a migrant network and its trustworthiness will be important. Household networks, because of their kin-based character, are likely to be more valuable and more trustworthy than village-based migrant networks.

In the third destination, a new export processing zone – developed in the mid- to late 1980's, the migrant cumulative experience may be particularly influential when the ties are defined by strength of relationship – either based in the household or demonstratively through frequent return trips, rather than extended stays in the destination. This is because a new destination where few people have had experiences

may be perceived as fraught with risk. Only trusted, strong ties, may be perceived as good sources of information about destinations.

Our predictions about this destination also have a gender component. Because the Eastern Seaboard's initial export was packed fish and shrimp, which drew upon the fishing industry, the first migrants to the region from Nang Rong were men who fished and lived on the fishing boats supplying the shipping and packing industry. As the export transportation infrastructure expanded and grew, light manufacturing along the Eastern Seaboard expanded. Alongside factories, dormitories were built to house workers in sex-segregated housing units. Initial female migrants to the Eastern Seaboard drew upon their factory connections via their factory jobs in Bangkok to gain access to the new jobs in the Eastern Seaboard. In both cases, the relatively new destination means that migrant experience will be extremely helpful and be a significant influence upon migrant outcomes. The relative scarcity of information about the destination will mean frequent return trips by migrants will serve as the main way of conveying information. Further, we suspect that household networks will contain significantly fewer resources than village networks and therefore be less useful than village networks. Again, given the sex-segregated experiences, female village networks will influence women's migration and not men's and male village networks will influence men's migration to the Eastern Seaboard and not women's.

Given these gender- and destination-specific characteristics of migration flows, Thailand is a substantively interesting site for the purposes of this study. We expect that the context of gender relations in Thailand with 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 and sex-segregated labor markets in destinations would create differential migration outcomes for men women across destinations.

Data

The data for this study comes from one district in Northeastern Thailand, Nang Rong, in Buriram province. The Northeastern region of Thailand is known for supplying seasonal and permanent migrants to both rural and urban destinations (Chamratrithirong

et al. 1995), mostly because of the relative poverty of the region. Rice paddies dominate the landscape, which are irrigated with rain. Frequent droughts and poor soil quality are severe limitations to the agriculturally based economy. The region, a frontier until the 1970's (Phongphit 1990), no longer has unclaimed arable land (Siamwalla et al. 1993). The northeast region is also known for its relative poverty compared with other parts of the country (Phongphit 1990). 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.

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. We employ the first two waves of data for this analysis, the data for the 1984 and 1994 survey rounds. 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), 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 51 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). 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 is considered remarkably high (Rindfuss, Kaneda, et al. 2002). On

average, for the twenty-two villages, about 43% 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 villages and are matched with information 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 of moving as an independent adult. In this data set, migration prevalence grows dramatically over the 10-year time period. The panels in Figure 2 display the overall migration prevalence rates by destination and by gender for all individuals for whom life history information was collected. A migration prevalence rate measures the proportion of people (among all surveyed community members) that have ever migrated up to a point in time (Massey et al. 1994).

-- Figure 2 about here --

The top two panels show that migration prevalence to each destination increases in time, but the increase in migration to Bangkok (BKK) is much steeper than the increase in either Eastern Seaboard (ESB) or North Eastern Province (NE). By 1994, almost 40% of the entire sample has migrated to BKK at least once, while only 5% to ESB and 3% to NE. Migration prevalence of men and women increase at similar rates as seen in top right panel, however there are clear differences in migration prevalence to different destinations by sex. As clear from bottom left panel of Figure 2, almost 60% of migrants to BKK are female, a value that remains stable over the 10-year period. On the other hand, only 10% of migrants to ESB are female in 1984, a value which increases to 30% by 1994. It is this significant variability in migration prevalence over time and across the sexes and destinations that is of interest and provides an opportunity to evaluate their impact on 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, taking into account
sample attrition. 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 is living outside of Nang Rong district or not in time t. 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):

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

where Prob(Mig_{ijt}) is a person$_i$'s probability of migrating to destination j in year t; Mig_{ijt}
is 1 if person$_i$ moved out of Nang Rong to destination j in year t and 0 otherwise, Itrips_{ijt-1}
is the number of trips made by person$_i$ to destination j up through year t-1, Imonths_{ijt-1} is
the number of months experienced as a migrant by person$_i$ in destination j up through
year t-1[2], Htrips_{ijt-1} is the number of trips made by other people in person$_i$'s household to
destination j up through year t-1, Hmonths_{ijt-1} is the number of months experienced as a
migrant in destination j by other people in person$_i$'s household up through year t-1.
Similarly, Ctrips_{ijt-1} is the accumulated number of trips made by other community
members to destination j up through year t-1, and Cmonths_{ijt-1} is the months of experience

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[2] 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 round one trip in one year.

accumulated by other community members in destination j through year t-1.[3] 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, and the migration prevalence rate. Except for age, these are all included in the models as measured in time t-1. We also include as controls a vector of time invariant measures[4], including: sex and whether the person lived in a somewhat remote village or a very remote village in 1984. A village is considered somewhat remotely located if there are one or 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 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.

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; and third, we include a measure of village migration prevalence in 1984 as suggested by Massey, Goldring and Durand

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[3] 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.

[4] All of these, except for the measure of sex, were data collected during the 1984 survey.

(1994). We do so because we are particularly interested in the effect of the quantity and quality of social capital, net of the exposure to migration experiences.

A table of means and proportions presented below provides a summary of all the variables in the model. Average person in the sample is 20.9 years old, while average migrant is slightly older (21.5 years old). Percentage of men in all sample is 46%, while among migrants it is higher with 52%. The gender percentage varies significantly across destinations. While only 48% of migrants to Bangkok (BKK) are men, the value is 64% for migrants to the Eastern Seaboard (ESB) and 59% for migrants to the northeast (NE). Of migrants to ESB, only 21% has some secondary education and 29% has completed secondary education. On the other hand, the percentages are higher among migrants to BKK or NE (23% and 36% respectively for BKK; 25% and 42% respectively for NE). 41% of migrants to NE are married, while only 29% of migrants to ESB and 36% of migrants to BKK are married. Average migrant to BKK has made 1.4 prior trips, while average migrant to ESB and NE have 1.5 and 1.1 prior trips, respectively. Looking at the values of household and village trips by destination, we see that average migrant to ESB lives in a household with 0.78 trips per person and in a village with 0.83 trips per person. These values are slightly lower for a migrant to BKK (0.78 and 0.79 trips respectively), and lowest for a migrant to NE (0.54 and 0.64 trips respectively).

-- Table 2 about here --

Our modeling approach introduces a set of baseline controls, the vectors of time varying and invariant factors, and measures of destination-specific migration experience at the individual, households and village level. We evaluate this model for each destination separately (results are found in Table 3). Our next step involves further disaggregating migration experience by sex (Table 4). Then, in our final step, we evaluate these models separately for men and women (Tables 5 and 6). Below, we briefly discuss our baseline model and then move on to discuss the results evaluating the effect of migrant social capital on the probability of migrating in the Thai context.

Results

To summarize the findings, modeling migration to three destinations separately, we first see that migrant characteristics as well as the effect of prior migration experience vary dramatically by destination. We see that female migrants tend to migrate to BKK, while male migrants migrate to ESB or NE. Interestingly, ESB receives the younger and less-educated migrants, while BKK receives more single migrants than married. Disaggregating migration experience by destination, we find that experience in each destination increases the propensity of migrating to that destination significantly. However, the magnitude of this increase is different in each destination. Prior individual trips have the greatest effect in NE, followed by ESB and BKK. On the other hand, prior household trips have the greatest effect on migration to ESB, followed by NE and BKK. Village experience has no significant effect on migration to NE or BKK, however it is the most important determinant of migration to ESB. The fact that the effect of household or village experience has the least effect on migration propensities to BKK, compared with other destinations, supports our hypothesis that the maturity of the migrant stream limits the influence of prior experience. Similarly, the finding that household experience has a low effect on migrating to NE, and village experience has no effect, supports our expectation that episodic nature of the flows will mitigate against cumulative causation. (Note that prior experience at the individual level is a significant determinant of migrating to NE. This finding provides further evidence that experience from other sources, such as household or village members, is either unavailable or not influential on migration when moves are primarily episodic to a destination.)

Further disaggregating migration experience by sex, we obtain a more refined story. We find that in all three destinations, female trips have a stronger effect at the individual, household and village levels on future migration compared to male trips. Finally, modeling men's and women's migration separately, we find that the effect of migration experience also depends on migrant's sex. We observe that female trips have a stronger effect on female migration, and similarly male trips have a stronger effect on male migration. For women, in all three destinations, individual trips to destination are the most important determinant of migration. For men, men's and women's household

and village trips to destination as well as individual trips become important in producing migration outcomes. In what follows, we explain the estimates in detail.

-- Table 3 about here --

Table 3 reports estimates from three models predicting migration to each destination (BKK, ESB and NE) separately. When we compare these estimates, we see considerable differences. First of all, while age increases the probability of migration to each destination, the rates of this increase are quite different (by 173% to BKK, by 38% to ESB and by 73% to NE). Similarly, while being a man increases the probability of migrating to ESB and NE by 119% and 113% respectively, it has no effect on the probability of migrating to BKK. We also see clear differences in the effects of education. Having some secondary education rather than primary education increases the probability of migrating to BKK by 37% and to NE by 82%, but it decreases the probability of migrating to ESB by 29%. Again surprisingly, the effect of marital status also depends on destination. While it decreases the probability of migrating to BKK and NE by 66% and 25% respectively, it has no effect on migration to ESB. Living in a remote village increases the probability of migrating to BKK by 81%, it decreases the probability of migrating to ESB by 36%, and has no effect on the probability of migrating to NE.

The models in Table 3 also include destination-specific migration experience indicators disaggregated at the individual, household and community levels to predict migration to each destination. The estimates of the first model show that individual trips to BKK increase the probability of migrating to BKK by 84%. Similarly, previous individual trips to ESB increase the probability of migrating to ESB by 180%, and previous individual trips to NE increase the probability of migrating to NE by 192%. Household trips to BKK and ESB have a positive effect on the probability of migrating to that destination (increase by 21% to BKK and by 78% to ESB). Interestingly while previous community experience in a destination has no significant effect on migration to BKK or NE, it increases the migration probability enormously in the case of ESB.

We next disaggregate the migration experience by gender and destination. The results presented in Table 4 show striking differences in the effects of gendered migration experience on the probability of migration to any destination. Starting with individual trips to BKK, we see that female trips increase the probability of migration to BKK by 128% and male trips only by 54%. Similarly, while female trips to ESB increase migration by 340%, male trips have no significant effect. For NE, the results are similar, female trips to NE increase the probability of migrating to NE by 181% while male trips increase it by 200%. In short, in all BKK and ESB female trips have a stronger effect on future migration compared to male trips, while the situation is reversed in the case of NE. Similarly, when we look at household trips, we find that male trips in the household only have a significant effect on migration to NE (an increase by 97%), whereas female trips in the household to BKK to ESB increase the probability of migration to those destinations by 35% and 229% respectively. Again, at the village level, female trips to BKK increase migration to BKK by 248%, while male trips have no effect. Female or male trips at the village level have no significant effect in either ESB or NE.

The results presented above clearly show that defining migration experience as both gender- and destination-specific is crucial to understand the migration patterns to different destinations. Previous work on migration in Thailand also shows that migration experience may operate differently for men and women in producing migration outcomes (Curran et al. 2005). Therefore, in the next analysis, we take into account this possibility and model migration of men and women to each destination separately. The results are given separately for men and women in Tables 5 and 6.

We observe striking differences in effects of migration experience on migration by destination and sex. While the odds of migrating increase with age for all destinations and for both men and women, the rates of this increase are significantly different. The probability of migrating to BKK increases by 145% for women and by 219% for men with a unit increase in age. This pattern (i.e. older age for men) can also be identified in

the model estimates of ESB and NE. (Maybe this is explained by family expectations, older women are expected to get married and/or stay home and take care of children.) The probability of migrating to ESB and to NE increase by 19% and 55% for women and by 51% and 102% respectively for men with a unit increase in age. The effect of educational attainment on migration to specific destinations is also gender-specific. While having some secondary education rather than only primary education has no significant effect on women's migration, it increases men's migration to BKK by 51%, to NE by 228% and decreases migration to ESB by 41%.

Having completed secondary schooling rather than only primary education increases the odds of migrating to BKK by 79% for women and by 215% for men, to NE by 158% for women and by 150% for men, and has no effect on migration to ESB of both men and women. Living in a remote village does not effect migration to NE or ESB, but increases the propensity to migrate to BKK by 98% for both men and women. The effect of gender-specific migration experience also depends on whether the migrant is a man or a woman. For female migrants to BKK, previous migrant trips increase the odds of migrating by 123%, while trips of women in the household increase the odds of migrating by 81%. Surprisingly, migrant trips by men in the household or community have no significant effect on women's migration. For male migrants to BKK, previous migrant trips increase the odds of migrating by 51%, migrant trips of men or women in the household or community has no significant effect upon migration, but migrant months of both men and women in the household increase the odds by 2%. Interestingly, male migrant trips to ESB by village members increases men's migration by an enormous amount (4E+12 times), while the effect of individual trips is only an increase by 211%. Contrarily, village migration experience of men or women has no significant effect on women's migration to BKK. Moving to migration patterns to ESB, we see that for female migration, the odds of migrating to ESB increases by 375% with each individual trip to ESB. Household experience of women also increases the odds by 439% for women. Migrant trips of women in the village increase the odds of migration by an enormous amount for women ($2*10^8$ times), while migrant months of women in the village to ESB decreases women's migration by 68%. Female migrant months to ESB in the household increase men's migration by 7%, a small effect compared to the increase of 211%

provided by individual trips. Similar to women's migration, male migrant trips to ESB in the village increase men's migration infinitely ($4*10^{23}$ times), while male migrant months to ESB in the village decrease it by 59%. Finally observing model estimates of migration to NE, we see that women's migration propensity increases by 216% with each individual trip to NE. The odds of female migration to NE also increase by 5% with each female migrant trips to BKK in the household. For men, the odds of migrating increase by 180% with each individual trip, by 257% with each male trip to NE in the household.

Conclusion

In this paper, we examine the differential effect of migrant networks on migration propensities of men and women across destinations in order to extend our theoretical understanding of the role of cumulative causation for influencing migration patterns. Using a unique longitudinal data set from Thailand, we observe migration to three different destinations: a regional, primarily agricultural wage laborer market (North Eastern Provinces - NE); a primate city and its surrounding suburbs (Bangkok - BKK); and a newly industrialized, state sponsored export processing zone/city (Eastern Seaboard - ESB). Because each destination is defined by different labor market characteristics related to gender and places of origin are also marked by different gender relations, we propose and find that there are significantly different patterns of migration when disaggregating the accumulated migrant experience by sex, destination, and levels of observation (individual, household or village).

In the first destination, the primarily agricultural wage labor market in the Northeastern region of the country, we expect that migrant networks will have limited effects (due to the proximity of the destination). Further, since agricultural wage labor is primarily a male-based occupation involving the planting or harvesting of upland field crops, we suspect that migrant networks will be centered upon male-based networks and influence male migrant outcomes, rather than be centered upon female-based networks and influence female migration.

In the second destination, Bangkok and the surrounding communities defining the Bangkok Metropolitan Area, we suspect a fairly sex-segregated labor market, but not because of selectivity of the migrant stream. Instead, we suspect that men and women

both migrate to Bangkok but end up in labor markets that are generally sex segregated – either light weight manufacturing and service sector jobs (for women) or heavier manufacturing, construction, or transportation sector jobs (for men). We predict that the cumulative effect of these experiences will positively influence women's and men's migration, respectively, but not vice versa. Further, we suspect that migration experiences at the household level will be more important than at the village level for influencing migrant outcomes.

In the third destination, a new export processing zone – developed in the mid- to late 1980's, the migrant cumulative experience may be particularly influential when the ties are defined by strength of relationship – either based in the household or demonstratively through frequent return trips, rather than extended stays in the destination. The relative scarcity of information about the destination will mean frequent return trips by migrants will serve as the main way of conveying information. Further, we suspect that household networks will contain significantly fewer resources than village networks and therefore be less useful than village networks. Again, given the sex-segregated experiences, female village networks will influence women's migration and not men's and male village networks will influence men's migration to the Eastern Seaboard and not women's.

Our empirical analyses support majority of these predictions. We observe that ESB receives the younger and less-educated migrants, while BKK receives more single migrants than married. Prior migration experience increases migration probabilities to each destination but at significantly different rates. Disaggregating migration experience by destination, we find that experience in each destination increases the propensity of migration to that destination significantly. However, the magnitude of this increase is different in each destination. As we have predicted, prior individual trips have the greatest effect in NE, followed by ESB and BKK. On the other hand, prior household trips have the greatest effect on migration to ESB, followed by NE and BKK. Village experience has no significant effect on migration to NE or BKK, however it is the most important determinant of migration to ESB. Further disaggregating migration experience by gender, we obtain a more refined story. We find that in all three destinations, female trips have a stronger effect at the individual, household and village levels on future

migration compared to male trips. Finally, modeling men's and women's migration separately, we find that the effect of migration experience also depends on migrant's sex. We observe that female trips have a stronger effect on female migration, and similarly male trips have a stronger effect on male migration. For women, in all three destinations, individual trips to destination are the most important determinant of migration. For men, men's and women's household and village trips to destination as well as individual trips become important in producing migration outcomes.

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TABLES

Table 1. Typology of Destinations

	Character of the Migration Flow	Level of Segregation in the Labor Market
Northeastern Provinces	Episodic	Male
Bangkok	Mature	Male/Female
Eastern Seabord	New	Female

Table 2. Means and Proportions of Explanatory Variables

	All Sample	All Migrants	Migrants to BKK	Migrants to ESB	Migrants to NE
Variable					
Age	20.91	21.46	21.74	21.07	20.88
Men	0.46	0.52	0.48	0.64	0.59
Some 2ndary School	0.21	0.23	0.23	0.21	0.25
Completed 2ndary School	0.31	0.35	0.36	0.29	0.41
Married	0.30	0.26	0.25	0.33	0.28
Remote Village	0.83	0.87	0.88	0.81	0.85
Migration Prevalence Rate	37.16	44.72	46.26	47.06	38.75
# Migrant *Trips* Among Indiv.	0.62	1.35	1.40	1.47	1.11
# Migrant *Months* Among Indiv.	13.45	33.88	34.64	35.67	32.24
# Migrant *Trips* for HH Members Per Person	0.49	0.74	0.79	0.78	0.54
# Migrant *Months* for HH Members	10.92	17.65	18.58	17.34	15.54
# Migrant *Trips* for Vill. Members Per Person	0.62	0.76	0.79	0.83	0.64
# Migrant *Months* for Vill. Members	13.51	17.34	18.22	18.33	14.27

Table 3. Logistic Estimation of the Odds of Being a Migrant in Destination Disaggregating Migration Experience by Destination

	Model 1 - BKK		Model 2 - ESB		Model 3 - NE	
	OR	z	OR	z	OR	z
Age	2.73	21.00 ***	1.38	3.31 **	1.73	5.54 ***
Age*Age	0.98	-20.68 ***	0.99	-3.94 ***	0.99	-5.61 ***
Men	1.01	0.12	2.19	4.77 ***	2.13	3.37 **
Some 2ndary School	1.37	2.62 *	0.71	-1.82	1.82	2.17 ‡
Completed 2ndary School	2.52	10.47 ***	1.44	2.13 ‡	2.34	3.18 **
Married	0.34	-13.23 ***	0.88	-0.77	0.65	-2.47 ‡
Remote Village	1.81	4.48 ***	0.64	-2.04 ‡	0.96	-0.19
Migration Prevalence Rate	1.02	4.53 ***	1.01	2.47 ‡	0.98	-3.22 **
# Migrant *Trips to BKK* Among <u>Indiv.</u>	1.84	14.92 ***				
# Migrant *Months to BKK* Among <u>Indiv.</u>	1.01	2.80 *				
# Migrant *Trips to BKK* for <u>HH</u> Members Per HH	1.21	3.06 *				
# Migrant *Months to BKK* for <u>HH</u> Members	1.01	3.75 ***				
# Migrant *Trips to BKK* for <u>Vill.</u> Members Per Person	1.93	1.46				
# Migrant *Months to BKK* for <u>Vill.</u> Members	0.99	-0.89				
# Migrant *Trips to ESB* Among <u>Indiv.</u>			2.80	8.49 ***		
# Migrant *Months to ESB* Among <u>Indiv.</u>			1.00	0.78		
# Migrant *Trips to ESB* for <u>HH</u> Members Per HH			1.78	2.36 ‡		
# Migrant *Months to ESB* for <u>HH</u> Members			1.02	2.39 ‡		
# Migrant *Trips to ESB* for <u>Vill.</u> Members Per Person			2.E+06	6.54 ***		
# Migrant *Months to ESB* for <u>Vill.</u> Members			0.58	-6.95 ***		
# Migrant *Trips to NE* Among <u>Indiv.</u>					2.92	9.80 ***
# Migrant *Months to NE* Among <u>Indiv.</u>					1.00	-0.77
# Migrant *Trips to NE* for <u>HH</u> Members Per HH					1.49	1.89
# Migrant *Months to NE* for <u>HH</u> Members					1.02	2.75 *
# Migrant *Trips to NE* for <u>Vill.</u> Members Per Person					0.47	-0.41
# Migrant *Months to NE* for <u>Vill.</u> Members					1.02	0.44
s.e. (u)	2.20		2.69		2.71	
Rho	0.60		0.69		0.69	
Wald Chi-square	2765.16	***	416.61	***	260.11	***

‡p<.05, *p<.01, **p<.005, ***p<.001

Table 4. Logistic Estimation of the Odds of Being a Migrant in Destination for the POOLED SAMPLE Disaggregating Migration Experience by Destination and Sex

	Model 1 - BKK		Model 2 - ESB		Model 3 - NE	
	OR	z	OR	z	OR	z
Age	2.73	20.92 ***	1.38	3.35 **	1.76	5.98 ***
Age*Age	0.98	-20.46 ***	0.99	-3.92 ***	0.99	-6.21 ***
Men	1.15	1.38	2.68	5.56 ***	2.32	4.24 ***
Some 2ndary School	1.31	2.24 ‡	0.68	-1.73	1.86	3.03 **
Completed 2ndary School	2.50	10.41 ***	1.40	1.93	2.43	4.67 ***
Married	0.34	-13.15 ***	0.84	-1.06	0.68	-2.31 ‡
Remote Village	1.74	4.16 ***	1.08	0.31	0.93	-0.36
Migration Prevalence Rate	1.02	4.32 ***	1.00	0.83	0.98	-2.95 **
# Female Migrant *Trips to BKK* Among <u>Indiv.</u>	2.28	12.79 ***				
# Female Migrant *Months to BKK* Among <u>Indiv.</u>	1.00	0.89				
# Female Migrant *Trips to BKK* for <u>HH</u> Members Per HH	1.35	3.15 **				
# Female Migrant *Months to BKK* for <u>HH</u> Members	1.01	3.05 **				
# Female Migrant *Trips to BKK* for <u>Vill.</u> Members Per Person	3.48	2.00 ‡				
# Female Migrant *Months to BKK* for <u>Vill.</u> Members	1.02	0.89				
# Male Migrant *Trips to BKK* Among <u>Indiv.</u>	1.54	7.20 ***				
# Male Migrant *Months to BKK* Among <u>Indiv.</u>	1.01	3.61 ***				
# Male Migrant *Trips to BKK* for <u>HH</u> Members Per HH	1.06	0.70				
# Male Migrant *Months to BKK* for <u>HH</u> Members	1.01	2.85 **				
# Male Migrant *Trips to BKK* for <u>Vill.</u> Members Per Person	1.35	0.42				
# Male Migrant *Months to BKK* for <u>Vill.</u> Members	0.94	-1.85				
# Female Migrant *Trips to ESB* Among <u>Indiv.</u>			4.40	4.76 ***		
# Female Migrant *Months to ESB* Among <u>Indiv.</u>			1.03	2.62 *		
# Female Migrant *Trips to ESB* for <u>HH</u> Members Per HH			3.29	2.91 **		
# Female Migrant *Months to ESB* for <u>HH</u> Members			1.04	2.37 ‡		
# Female Migrant *Trips to ESB* for <u>Vill.</u> Members Per Person			2.04	0.15		
# Female Migrant *Months to ESB* for <u>Vill.</u> Members			0.84	-1.11		
# Male Migrant *Trips to ESB* Among <u>Indiv.</u>			2.93	6.19 ***		
# Male Migrant *Months to ESB* Among <u>Indiv.</u>			1.00	0.35		
# Male Migrant *Trips to ESB* for <u>HH</u> Members Per HH			1.63	1.57		
# Male Migrant *Months to ESB* for <u>HH</u> Members			0.98	-1.31		
# Male Migrant *Trips to ESB* for <u>Vill.</u> Members Per Person			2.E+09	7.81 ***		
# Male Migrant *Months to ESB* for <u>Vill.</u> Members			0.51	-6.61 ***		
# Female Migrant *Trips to NE* Among <u>Indiv.</u>					2.81	6.04 ***
# Female Migrant *Months to NE* Among <u>Indiv.</u>					1.01	1.16
# Female Migrant *Trips to NE* for <u>HH</u> Members Per HH					0.87	-0.46
# Female Migrant *Months to NE* for <u>HH</u> Members					1.04	3.90 ***
# Female Migrant *Trips to NE* for <u>Vill.</u> Members Per Person					0.07	-0.91
# Female Migrant *Months to NE* for <u>Vill.</u> Members					0.96	-0.54
# Male Migrant *Trips to NE* Among <u>Indiv.</u>					3.00	8.41 ***
# Male Migrant *Months to NE* Among <u>Indiv.</u>					0.99	-2.07 ‡
# Male Migrant *Trips to NE* for <u>HH</u> Members Per HH					1.97	2.69 *
# Male Migrant *Months to NE* for <u>HH</u> Members					1.00	-0.01
# Male Migrant *Trips to NE* for <u>Vill.</u> Members Per Person					1.54	0.14
# Male Migrant *Months to NE* for <u>Vill.</u> Members					1.07	0.54
s.e. (u)	2.19		2.31		2.74	
Rho	0.59		0.62		0.70	
Wald Chi-square	2747.71	***	391.53	***	278.89	***

‡p<.05, *p<.01, **p<.005, ***p<.001

Table 5. Logistic Estimation of the Odds of Being a Migrant in Destination for FEMALES
Disaggregating Migration Experience by Destination and Sex

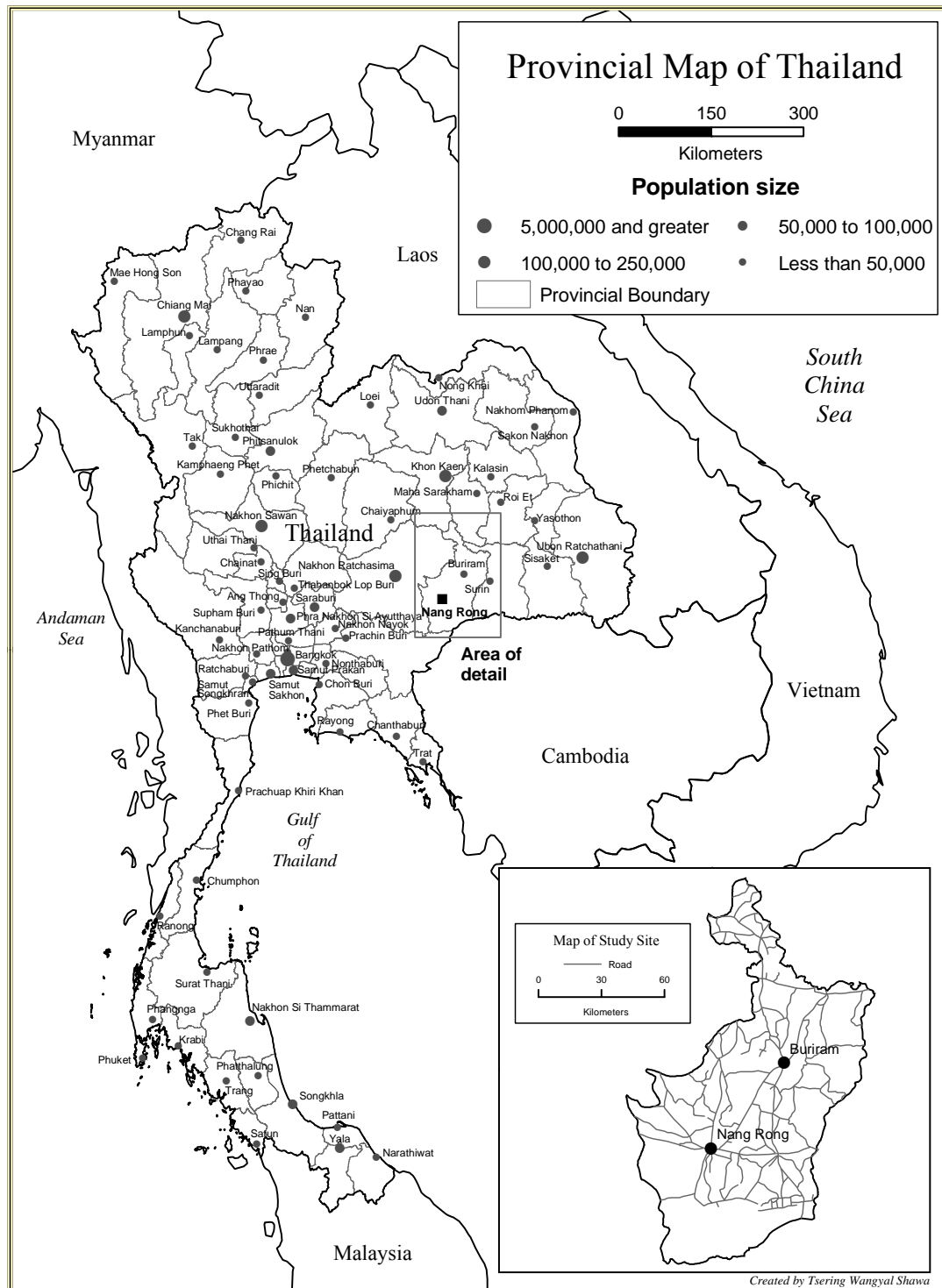|	Model 1 - BKK		Model 2 - ESB		Model 3 - NE	
	OR	z	OR	z	OR	z
Age	2.45	13.10 ***	1.19	1.03	1.55	2.97 **
Age*Age	0.98	-13.26 ***	0.99	-1.60	0.99	-3.14 **
Some 2ndary School	1.24	1.24	1.12	0.31	1.04	0.14
Completed 2ndary School	1.79	4.41 ***	1.09	0.30	2.58	3.58 ***
Married	0.19	-15.03 ***	0.80	-0.89	0.76	-1.15
Remote Village	1.98	3.46 **	0.73	-0.81	1.51	1.35
Migration Prevalence Rate	1.02	3.70 ***	1.01	1.70	0.97	-3.34 **
# Female Migrant *Trips to BKK* Among Indiv.	2.23	12.20 ***				
# Female Migrant *Months to BKK* Among Indiv.	1.00	0.89				
# Female Migrant *Trips to BKK* for HH Members Per HH	1.81	4.16 ***				
# Female Migrant *Months to BKK* for HH Members	1.00	-0.12				
# Female Migrant *Trips to BKK* for Vill. Members Per Person	7.49	2.30 ‡				
# Female Migrant *Months to BKK* for Vill. Members	0.97	-0.85				
# Male Migrant *Trips to BKK* for HH Members Per HH	1.04	0.29				
# Male Migrant *Months to BKK* for HH Members	1.01	1.20				
# Male Migrant *Trips to BKK* for Vill. Members Per Person	1.78	0.54				
# Male Migrant *Months to BKK* for Vill. Members	0.99	-0.22				
# Female Migrant *Trips to ESB* Among Indiv.			4.75	6.56 ***		
# Female Migrant *Months to ESB* Among Indiv.			1.03	2.70 *		
# Female Migrant *Trips to ESB* for HH Members Per HH			5.39	3.42 **		
# Female Migrant *Months to ESB* for HH Members			1.01	0.66		
# Female Migrant *Trips to ESB* for Vill. Members Per Person			2.E+08	2.47 ‡		
# Female Migrant *Months to ESB* for Vill. Members			0.32	-3.81 ***		
# Male Migrant *Trips to ESB* for HH Members Per HH			2.15	1.17		
# Male Migrant *Months to ESB* for HH Members			0.99	-0.56		
# Male Migrant *Trips to ESB* for Vill. Members Per Person			981.37	1.38		
# Male Migrant *Months to ESB* for Vill. Members			0.84	-0.95		
# Female Migrant *Trips to NE* Among Indiv.					3.16	6.37 ***
# Female Migrant *Months to NE* Among Indiv.					1.01	0.79
# Female Migrant *Trips to NE* for HH Members Per HH					0.77	-0.59
# Female Migrant *Months to NE* for HH Members					1.05	3.25 **
# Female Migrant *Trips to NE* for Vill. Members Per Person					0.03	-0.69
# Female Migrant *Months to NE* for Vill. Members					0.97	-0.21
# Male Migrant *Trips to NE* for HH Members Per HH					1.38	0.70
# Male Migrant *Months to NE* for HH Members					1.01	0.45
# Male Migrant *Trips to NE* for Vill. Members Per Person					471.17	1.11
# Male Migrant *Months to NE* for Vill. Members					0.99	-0.04
s.e. (u)	2.30		2.20		2.96	
Rho	0.62		0.59		0.73	
Wald Chi-square	1521.08	***	215.37	***	147.18	***

‡p<.05, *p<.01, **p<.005, ***p<.001

Table 6. Logistic Estimation of the Odds of Being a Migrant in Destination for MALES
Disaggregating Migration Experience by Destination and Sex

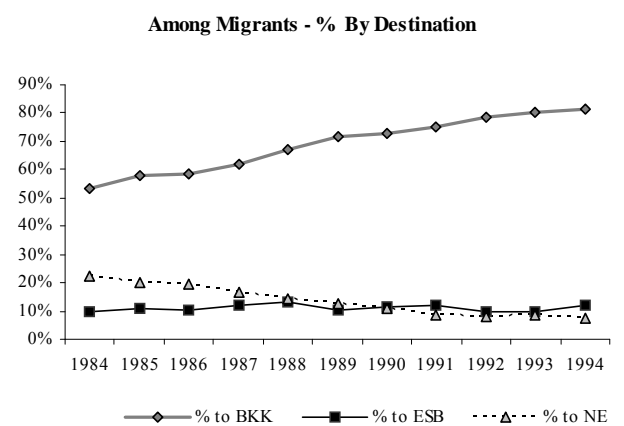|	Model 1 - BKK		Model 2 - ESB		Model 3 - NE	
	OR	z	OR	z	OR	z
Age	3.19	17.05 ***	1.51	3.39 **	2.02	5.31 ***
Age*Age	0.98	-16.47 ***	0.99	-3.71 ***	0.98	-5.52 ***
Some 2ndary School	1.51	2.48 ‡	0.59	-2.07 ‡	3.28	3.66 ***
Completed 2ndary School	3.15	9.20 ***	1.51	1.83	2.50	3.75 ***
Married	0.72	-2.65 *	0.90	-0.44	0.65	-1.93
Remote Village	1.61	2.44 ‡	1.40	1.11	0.65	-1.66
Migration Prevalence Rate	1.02	2.47 ‡	1.00	-0.20	0.99	-1.33
# Female Migrant *Trips to BKK* for <u>HH</u> Members Per HH	1.09	0.72				
# Female Migrant *Months to BKK* for <u>HH</u> Members	1.02	4.29 ***				
# Female Migrant *Trips to BKK* for <u>Vill.</u> Members Per Person	2.43	1.02				
# Female Migrant *Months to BKK* for <u>Vill.</u> Members	1.04	1.33				
# Male Migrant *Trips to BKK* Among <u>Indiv.</u>	1.51	7.33 ***				
# Male Migrant *Months to BKK* Among <u>Indiv.</u>	1.01	2.45 ‡				
# Male Migrant *Trips to BKK* for <u>HH</u> Members Per HH	1.11	0.70				
# Male Migrant *Months to BKK* for <u>HH</u> Members	1.01	2.07 ‡				
# Male Migrant *Trips to BKK* for <u>Vill.</u> Members Per Person	1.29	0.26				
# Male Migrant *Months to BKK* for <u>Vill.</u> Members	0.92	-1.76				
# Female Migrant *Trips to ESB* for <u>HH</u> Members Per HH			1.79	0.87		
# Female Migrant *Months to ESB* for <u>HH</u> Members			1.07	2.83 *		
# Female Migrant *Trips to ESB* for <u>Vill.</u> Members Per Person			0.00	-1.73		
# Female Migrant *Months to ESB* for <u>Vill.</u> Members			1.42	1.70		
# Male Migrant *Trips to ESB* Among <u>Indiv.</u>			3.11	7.45 ***		
# Male Migrant *Months to ESB* Among <u>Indiv.</u>			1.00	0.10		
# Male Migrant *Trips to ESB* for <u>HH</u> Members Per HH			1.38	0.97		
# Male Migrant *Months to ESB* for <u>HH</u> Members			0.98	-1.71		
# Male Migrant *Trips to ESB* for <u>Vill.</u> Members Per Person			4.E+12	8.70 ***		
# Male Migrant *Months to ESB* for <u>Vill.</u> Members			0.41	-7.11 ***		
# Female Migrant *Trips to NE* for <u>HH</u> Members Per HH					0.71	-0.84
# Female Migrant *Months to NE* for <u>HH</u> Members					1.06	2.71 *
# Female Migrant *Trips to NE* for <u>Vill.</u> Members Per Person					0.11	-0.67
# Female Migrant *Months to NE* for <u>Vill.</u> Members					0.96	-0.40
# Male Migrant *Trips to NE* Among <u>Indiv.</u>					2.80	8.93 ***
# Male Migrant *Months to NE* Among <u>Indiv.</u>					0.99	-1.07
# Male Migrant *Trips to NE* for <u>HH</u> Members Per HH					3.57	2.61 *
# Male Migrant *Months to NE* for <u>HH</u> Members					0.99	-0.98
# Male Migrant *Trips to NE* for <u>Vill.</u> Members Per Person					1.92	0.18
# Male Migrant *Months to NE* for <u>Vill.</u> Members					1.00	-0.02
s.e. (u)	2.17		2.26		2.70	
Rho	0.59		0.61		0.69	
Wald Chi-square	1239.55	***	283.46	***	171.71	***

‡p<.05, *p<.01, **p<.005, ***p<.001

FIGURES

Figure 1 Map of Study Site

Among All -- % of Migrants By Destination

Among All -- % of Migrants By Gender

Among Migrants to Destination - % Female

Among Migrants - % By Destination
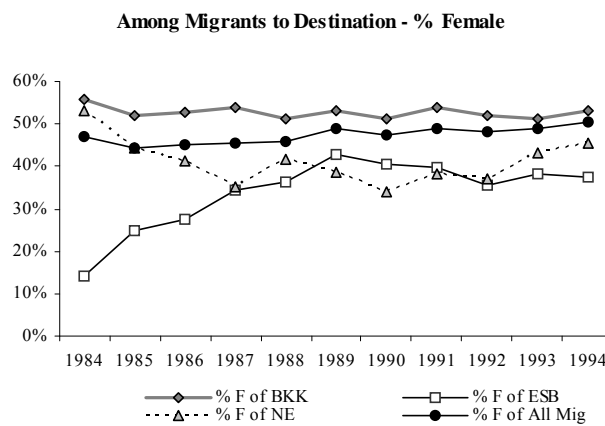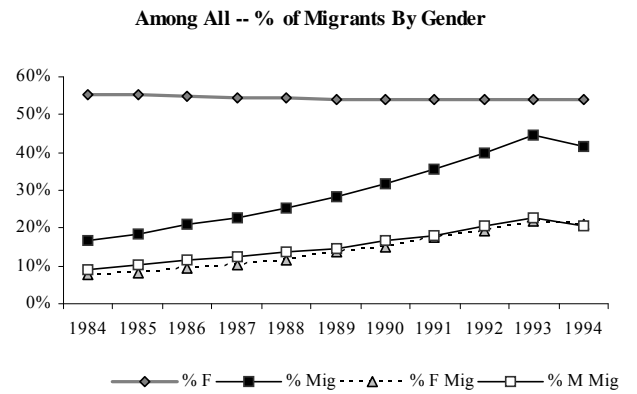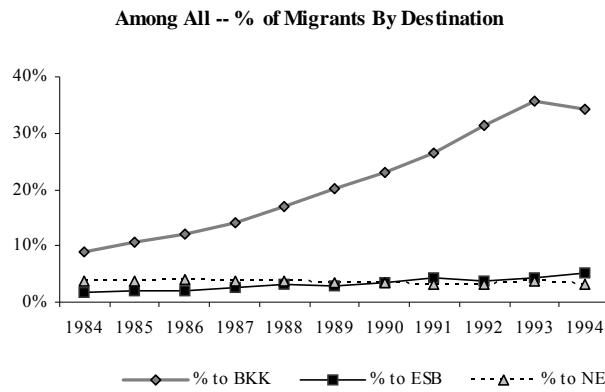
Figure 2 Migration Prevalence Trends in 1984-1994 period