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EFFECTS OF ETHNIC CONCENTRATION ON MIGRATION IN PENINSULAR MALAYSIA

Introduction

The role of social networks has been consistently recognized in migration research in explaining migration flows (for example, see Hugo 1981; MacDonald and MacDonald 1974; Portes and Rumbaut 1990). In the migration literature, network refers to a social process that links spatially distant places with kinship, friendship, and community ties (Boyd 1989). The concept of social networks has recently been receiving renewed interest among migration researchers especially in explaining sustenance of migration flows (Massey et al. 1994), and social process of migrant incorporation into host society after the move (Hagen 1998; Massey et al. 1987).

Research on social networks and migration emphasizes the vital role that social networks play; that is, social networks can lower costs and risks associated with the move (Taylor 1986). For example, presence of a migrant family member enables remaining members at origin to obtain information on possible job opportunities at destination. Short-term costs and risks incurred by the move are further lowered when housing is secured, and receiving communities made up of migrated individuals from the same origin, have well-established support network for newcomers. Potential migrants are assured of smooth landing on destination, when information and community-wide assistance are secured. With the help of migration network, practice of migration spreads continuously until migration becomes widespread phenomenon, sustaining the migration flows between specific places (Massey 1990; Massey et al. 1993, 1994).

Compared to the function of social networks that encourage migration sustenance and migrant incorporation, much less attention has been being paid to social contexts in which social networks discourage migration. Several studies that analyzed the relationship between deterrent effects of social networks on migration (see Tienda and Wilson 1992;

Uhlenberg 1973), are indifferent to the gender differences in the mechanism of migration, and are limited to social context of the United States. In this paper, I attempt to further the understanding of the links between social networks and migration, by focusing on ethnic ties in origin society. Specifically, I examine the deterrent effect of ethnic ties on migration in a multi-ethnic society of Peninsular Malaysia in the period between 1948 and 1988. At the same time, I demonstrate how the effects differ across gender by analyzing experiences of men and women separately.

To accomplish this objective, I analyze event-history data on individual migration experiences of both men and women in Peninsular Malaysia using a discrete-time survival analysis. Ethnic ties are operationalized as a dummy variable that distinguishes whether an individual resides in ethnically concentrated areas or not. By merging individual, family, and geographical event-history data, I attempt to address the importance of local social ties in influencing migration, utilizing a multi-level framework in a dynamic fashion.

Social Context in Peninsular Malaysia 1957-1990

Malaysia is ethnically diverse country. The Malays, Chinese, and Indians are the three major ethnic groups that comprise population in Peninsular Malaysia. The Malays[1] are the majority group in terms of population. The share of the Malays out of total Peninsular Malaysia population increased from 49.8 percent in 1957 to 58.3 percent in 1991 (Government of Malaysia 1983, 1992). During the same period, the proportion of Chinese decreased from 37.2 percent to 29.4 percent of the Peninsular population, while that of Indians decreased from 11.1 percent to 9.5 percent (Government of Malaysia 1983, 1995).

Population distribution in Peninsular Malaysia also reflects the distinct pattern by ethnic group. In 1990, states with a high share of the Malay population are those in East coast, such as Kelantan (94.1%), Terangganu (95.6%), and Perlis (83.1%). On the other

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[1] The Malays includes other indigenous groups. In the 1991 Census, the new ethnic classification is used. The 1991 Census classified ethnic groups within Malaysian citizens. Thus, the figure from the 1991 Census is the

hand, Non-Malays, especially Chinese, tend to concentrate in West coast states such as Pinang (50.1%), Kuala Lumpur (47.5%), and Johor (36.1%) (Government of Malaysia 1995:42). In general, the Malays are concentrated in rural areas, mainly in the eastern part of the Peninsula. Non-Malays, on the other hand, are found in the western part of the Peninsula where development and urbanization are marked (Hirato 1988).

Such geographic distribution of the ethnic groups in Peninsular Malaysia is relatively consistent over time. For example, of the 78 towns in West Malaysia enumerated in 1921, 72 continued to be classified as towns in 1970; and 54 of these (69.2 percent of the original 78 towns) continued to be dominated by the same ethnic group. On the contrary, only half of the town defined as mixed ethnic towns stayed mixed during the same period (Clarke and Sidhu 1981).

Social and economic dimension of the Malaysian society is also sharply divided along the ethnic lines, including the use of language, political power, employment pattern, and income distribution. The Malays are overrepresented in the primary industry especially in the agricultural sector, while Non-Malays are concentrated in the manufacturing and service sectors (Government of Malaysia 1960; 1977; 1983). The majority of the poor comprised of the Malays who engage in traditional occupations in rural areas (Government of Malaysia 1981). Non-Malays are the minority group in terms of population, but their economic standings, especially that of Chinese, are higher than that of Malays (Crouch 1994).[2] A division of labor between the Malays and non-Malays in the economic structure is well-reflected in an income distribution. Between 1957 and 1979, the mean household income of Chinese remained about twice as high as that of Malays (Government of Malaysia 1981:56; Snodgrass 1980).

As a part of strategy to remedy the economic gap among ethnic groups and to promote economic development, the Malaysian government implemented the New

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share of the Malays including other indigenous groups. The Censuses before 1991 did not distinguish between Malaysian and Non-Malaysian citizens.

Economic Policy (NEP) in 1971. The NEP had two objectives to be accomplished by 1990: (1) to eradicate poverty irrespective of race, and (2) to restructure society to eliminate the identification of race with economic functions (Government of Malaysia 1981). In order to raise the economic status of the Malays, the government adopted various measures such as recruiting the Malays into the public sector (Crouch 1994), giving the Malays privileged access to business opportunities in the private sector (Cho 1990), and the use of Malays in education (Pong 1988).

At the same time, an export-led growth strategy was promoted to generate economic growth necessary to attain the goals of the NEP (Government of Malaysia 1981). The government took advantage of the global restructuring of industrialization by setting environment for attracting foreign investment and production to promote export and economic growth (Ali and Kam 1993; Jomo and Edwards 1993). Between 1970 and 1980, the number of manufacturing jobs for women increased by 209.0 percent, while it increased by 79.5 percent for men (Taylor and Ward 1994). The increase in the women's job was especially salient in the typical Free Trade Zone (FTZ) industries such as textiles and electrical industry in which females accounted for more than half of the labor force in 1980 (Taylor and Ward 1994).

Between 1970 and 1980, the major form of migration was the move from rural to rural, which accounted for 44 percent of the total internal migration in Peninsular Malaysia[3] (Government of Malaysia 1983:78). During the same time, urbanization proceeded rapidly together with the process of structural change and economic growth spurred by the NEP. The urbanization was especially marked for the Malays (Government of Malaysia 1981: 79). Autonomous migration of single Malay females to work in Free Trade Zones primarily concentrated in the western part of the peninsula, became prevalent after 1970 (Arrifin 1984; Kusago 1998; Lim 1993). The so-called "second generation problem" - the rural-urban

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[2] This ethnic division in socioeconomic and geographic spheres has a root in the colonial history under British control (for more detail, see Andaya and Andaya 1982).

[3] Information on internal migration was collected for the first time in the 1970 census.

migration of the children of settled families consist mainly of Malay, in Government

sponsored land settlement project, also became an issue (Bahrin 1988). Increased

education and preference for employment in the modern sector are said to be one of the most

important reasons of their migration (Oberai 1988).

Social Networks and Nonmigration

Past research on the relationship between social networks and migration focused

primarily on the role of social networks in sustaining migration (Hugo 1981; Massey et al.

1993; 1994), and in explaining migrant incorporation into host society (Boyd 1989; Hagen

1998). These foci are understandable given the persistent nature of current migration.

However, much less attention has been paid to social contexts in which social networks

discourage migration. Under some social contexts, social networks at origin may be a

determinant of nonmigration. As Petersen (1970:52) argues, the basic question is why

some do not migrate, in the face of growing migration sustenance.

Research on residential mobility in the United States, shows that social factors at

origin play an important role for an individual in determining where to live. For example,

studies on the duration of residence and migration consistently show that the duration of

residence is negatively associated with the likelihood of migration. These studies attribute

this tendency to social ties established at origin (see McHugh 1984; Toney 1976).

Residential mobility and migration, however, are different concepts[4] (Roseman 1971), and

thus interpretation should be made with a grain of salt. Recent work by Tienda and Wilson

(1992) implies that ethnicity may be a determinant of non-migration. Using the U.S.

Census data, they found that the residence in concentrated ethnic areas deters migration for

Hispanic men even though they experience modest penalties in earnings. Tienda and

Wilson reasoned that intra-ethnic social and cultural exchanges are valued and taken into

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[4] Residential change and migration differ in terms of information gathering processes in the pre-moving stage, as well as in the assimilation process in the post-moving stage.

account in the process of migration decision-making, independent of economic vitality of local labor markets.

Study by Uhlenberg (1973) also implies that the presence and strength of social networks that link individuals in a community are important factors in determining non-migration. Analyzing the experiences of three groups[5] in the United States, he argues that dependence upon local community and potential for assimilation elsewhere appear as critical determinants of migration decision-making. According to his study, those stayed on tend to be those most integrated and supported by the tight-knit ethnic community, while single and young, who had potential for assimilation into the outer-society left for resettlement.

These studies suggest that; (1) local social networks may deter migration, and (2) the deterrent effect may be strong for individuals embedded tightly to local social networks. Unfortunately, all these studies neglect gender dimension in the relationship between local social ties and migration. Although growing number of theoretical and empirical studies focus on the independent mechanism of female migration (see Donato 1993; Guest 1993; Kusago 1998; Lim 1993), Boyd's call (1989) for deepening the understanding on the role of gender in an area of social networks and migration, still remains a challenge.

Some studies on social processes of immigrant incorporation focus on gender differences in settlement outcomes. For example, Hagen's work (1998) illustrates how social networks change forms and functions for men and women that differentially affect settlement outcomes. Studies on ethnic enclaves (Portes and Jensen 1989; Semyonov 1988; Semyonov and Lewin-Epstein 1994; Zhou and Logan 1989) also imply the possibility of ethnic ties in deterring migration and of gender difference in economic returns to ethnic enclave employment. It is argued that ethnic enclaves provide ethnic-specific opportunities and benefits to the members, such as demand for ethnic goods, job openings, networks and information (Portes and Jensen 1989; Zhou and Logan 1989). Ethnic enclaves also

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[5] He analyzed the experiences of three groups in the United States: (1) migration of African Americans from the South during 1920 to 1960, (2) Japanese-American migration from internment camps during World War II, and (3) exodus from Southern Appalachia between 1930 and 1960.

function as a shelter for minority members from economic competition with majority group members (Semyonov 1988; Semyonov and Lewin-Epstein 1994). Some work on ethnic enclaves detected gender differences in economic returns to ethnic enclave employment (Portes and Jensen 1992; Semyonov and Lewin-Epstein 1994).[6] These works also suggest the quality of social networks in ethnically concentrated area differ between men and women. Unfortunately, however, most of these studies are conducted in the context of the United States; not enough work has been done in the context of developing countries.

Two hypotheses on the relationship between social networks and migration are tested in this study. Social networks are postulated as ethnic ties in this study since ethnicity is an important social factor in the context of Peninsular Malaysia. I hypothesize that; (1) for both men and women, the likelihood of migration is lower for individuals residing in ethnically concentrated areas than individuals residing in ethnically mixed areas. Second, since economic and social benefits gained from residing in ethnically concentrated areas may differ between men and women, I hypothesize that, (2) the effect of residing in ethnically concentrated areas on migration is different between men and women. I describe the data and method used in the analysis in the following section.

Data

The Second Malaysian Family Life Survey (MFLS-2) is used in the analysis. The fieldwork for the MFLS-2 was carried out in Peninsular Malaysia from August 1988 to January 1989 (Haaga et al. 1993). The survey was a collaborative project between the RAND and the National Population and Family Development Board of Malaysia. Women were the primary respondents of the selected households in the MFLS-2. The husbands of married women also were interviewed. The MFLS-2 produced retrospective and current data covering traditional topics of demographic research such as fertility, nuptiality,

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[6] Portes and Jensen (1992) demonstrated that enclave employment has a negative effect on the earnings of Cuban men in Miami, but no significant impact on the earnings was observed for Cuban women. Semyonov and Lewin-Epstein (1994) found that working in Arab labor market in Israel is associated with increase in the earnings of women, but employment in the Arab market is actually associated with lower earnings for men.

migration, and mortality. Among the four samples[7] contained in the MFLS-2, the New

Sample women and the corresponding husbands in the Spouse Sample (husbands aged 50 or

older are included in the Senior Sample) constitute the basis of the analysis. The New

Sample consists of 2,184 women aged 18-49 selected without regard to marital status, and

ever-married women under age 18. The Spouse Sample consists of 1,636 husbands of

which 129 spouses were aged 50 or older.

The unit of observation of the migration data in the MFLS-2 is a "move." For the

respondents in the MFLS-2, the migration data contain one record for each move that was

made by the respondent since age 15. The MFLS-2 migration data provide information on

the place of birth, the place where s/he lived at age 15, the date (year and month) and age

when the move occurred, the district, the state and the type of place in which s/he originated

and moved. Respondents who did not change the residence since age 15 have only two

records, one for his/her residence of birth and one for his/her residence at age 15.

The first move made between age 15 and 30 is examined.[8] The age and the year

in which the event occurred form the basis of the data structure. The data have been

restructured so that the unit of analysis is a person-year observation, each representing one

year in which a person is at the risk of migrating. This study is focused exclusively on the

first move because the first occurrence is the most generalizable among all moves

(Yamaguchi 1991). Re-entries may not occur for every subject in the sample, and thus

findings from the re-entries are limited with respect to generalizability (Yamaguchi 1991).

Previous research also documents that repeated moves are primarily affected by the nature of

the prior move (Massey 1987), and those who have migrated before tend to move again (Da

Vanzo 1983; Massey 1987; Taylor 1987). By focusing on the first move alone, the analysis

provides more detailed information on the mechanisms that govern the first experience.

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[7] The four samples include the Panel, the New, the Children, and the Senior.

[8] I selected this age range because; (1) age 15 may represent a starting point at which individuals make transitions into vital life-cycle events, especially in a developing country, (2) age 30 may represent a time point in which individuals finish their first experiences of a series of important life-cycle events, and (3) empirically, it was found

All information except for the data on district level ethnic composition was drawn from the respective data file from the MFLS-2. Information of the ethnic composition of a district was collected from the 1947, 1957, 1970 and 1980 Censuses. Since data are available for only the census years, the values from the nearest time point are appended to each interval. Some observations were deleted if the ethnicity is other than Malay, Chinese, and Indians, if respondents refused to recall migration histories, if no information on job, marriage, pregnancy histories and education were available, and if the respondents' age was younger than 18 at the time of survey. The final data set for women contains 18342 intervals and 1265 number of events contributed by 2082 women. The final data set for men contains 12831 intervals and 967 number of events contributed by 1432 men. The observation period for women begins in 1953 - the year in which the oldest women in the sample were aged 15 - and ends in 1988. The observation period for men ranges from 1948 to 1988.

Variables

Definitions of the variables in the model are listed in Table 1. As a proxy for ethnic networks, a dummy variable used by Tienda and Wilson (1992) is adopted. First, for each ethnic group, a district is classified as an ethnically concentrated area if; (1) the share of the group's population out of the district's population exceeded its share in the total Peninsular Malaysia population, and (2) the share of an ethnic group residing in the given district out of the group's total population in Peninsular Malaysia exceeded the share of that district out of total districts in Peninsular Malaysia. The first condition measures the degree of ethnic concentration in a district relative to the average of whole Peninsular Malaysia. The second condition measures the degree of ethnic distribution across districts.

The dummy variable "ethnically concentrated area" is then created to delineate whether an individual resides in the area where co-ethnics are concentrated. If an

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that 43 percent of internal migrants who moved between 1970 and 1980 were concentrated in age 15-29 in

individual resides in ethnically concentrated area at time point t, then "ethnically concentrated area" equals one. If not, then "ethnically concentrated area" equals zero. A few caveats are in order here. First, since the district-level data used to create the co-ethnic enclaves are available for only the census years, the values from the nearest time point is appended to each interval. Second, a district is chosen as a unit of geographical area because the data on ethnic composition are not available for smaller units, such as community. The district is the lowest geographical level with information on ethnic composition consistently available from the Censuses.

As a measure of migration, the variable "move " was used. The RAND and the National Population and Family Development Board of Malaysia determined the definition of the variable "move" which differ across gender. For women, migration is defined as "changes in residences of at least three months' duration." For men, it is defined as "inter-district moves of at least three months' duration." The definition of the "move" for women is redefined by selecting only the "moves" that crossed the district border to make the definitions consistent with men and to avoid overestimating the extent of migration among women.[9]

The model includes a set of control variables that may affect migration. The major sources of variation at the individual level are age (Castro and Rogers 1983; Long 1984b; Sandefur and Scott 1981), education (Long 1984a), and the nature of work (De Jong and Blair 1994; Greenwood 1985; Sandefur 1985; Sandefur and Scott 1981). An exposure to marriage is a crucial factor in the case of women (Guest 1993; Hugo 1993; Thadani and Todaro 1984). The relationship between ethnicity and migration appears to be an empirical question. Ethnicity is included as a control, since past studies in Malaysia consistently show that Malays are more migratory than non-Malays (Baydar et al. 1990; Cho 1990; Khoo

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Peninsular Malaysia (Government of Malaysia 1982).
[9] Smith and Thomas also used the redefined version of "move" for women in their analysis (Smith and Thomas 1993).

and Pirie 1984).   Age is the major time indicator for a discrete-time survival analysis used in this study.

Some source of variation in making the move may come from household characteristics as well.   The number of children at each specific interval is included to ensure a proper specification.[10] This variable is expected to have a negative effect in the case of female migration.   The occupational characteristics of women's husbands are also included as a control in the women's model, since female migration may be strongly tied to the employment opportunities of their husbands (Chattopadhyay 1997, 1998).

Geographical characteristics of an area such as the degree of urbanization and industrialization compose another source of variation in the likelihood of migration (Brown and Goetz 1987; Bilsborrow et al. 1987).   Rural-urban migration of the second generation children of the settled families directed by Malaysian government, and of young women attracted by the employment opportunities in Free Trade Zones (Guinness 1992; Lim 1993) imply that the type of origin places exert influence on the probability of migration.   The " type of place "[11] is classified into eight categories: (1) estates, (2) land settlement, (3) New Village,[12] (4) small town, (5) large town, (6) city, (7) Kampung (Malay village), and (8) other.

Method

A discrete-time survival analysis is selected as a method because the exact date and month of the move were not available for all the observations.[13]   The first move made

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[10] Past studies show that family size is related to the likelihood of migration, although its direction unclear (for example, see Sandefur and Scott 1981, Massey 1987; Root and De Jong 1991; Taylor 1987).   Since information on family size was not available, the number of children is included instead.

[11] It needs to be cautioned that this variable depends entirely on the self-report of each interviewee.   It reflects how potential migrants perceived the place where s/he resided at certain point of time.

[12] New Village refers to Chinese settlement areas during the 1950s.   The government relocated rural Chinese fearing the civilian support to Communist guerrillas who were active during this time.   It is estimated that by 1952, 400,000 Chinese were resettled in 400 New Villages (Andaya and Andaya 1982).

[13] If the time unit selected is large, then many failures are reported at the same time and consequently the number of tied observations - the observations that fall into the same time interval - gets high.   Then, continuous-time methods, especially Cox's proportional hazard model yields severely biased estimates (Cox and Oakes 1984: 103). Without the perfect information on the exact month and the date of the move, it is almost certain that there will be a large number of tied observations that experience the move within a same year.

between age 15 and 30 constitutes the core of the analysis.   If a respondent did not move and aged 30 or older, the observation stops at age 30.   If a respondent did not move and younger than age 30, the observation stops at the age of the interview.   Thus the data file is structured as a multiple observation per person record.   For each single-year age interval, the data on the covariates at corresponding time point are appended.

In this approach the moves between districts are characterized as transition rates that serve as dependent variables in the analysis.   In a discrete-time survival analysis, a hazard rate represents a conditional probability that a person under the risk of moving will cross a district border given that the person has not experienced migration before.   The discrete-time hazard h_{it} is defined as

$$h_{it} = P_r[T_i = t \mid T_i \geq t] \tag{1}$$

where T is the discrete random variable that indicates the time period t when the event occurs for an individual i.   In the analysis, h_{it} is defined as the conditional probability that an individual i will move in time period t, given that s/he did not experience the move prior to time t.   Since the hazard rates are probabilities, they can be reparameterized so that they have a logistic dependence on the covariates as follows (Allison 1982; Singer and Willett 1993).

$$\ln(h_{it} / (1 - h_{it})) = \alpha_t + \beta X_{it} \tag{2}$$

where X_{it} denotes a vector of covariates at time t that can either be constant or change over time. Equation (2) now allows for variation in the hazard at each point in time; α_t (t = 1,2,....t) captures the baseline level of hazard in each time period.

Results

The baseline survival and hazard profiles of men and women are contrasted in

Figure 1 to see the difference in the risk of migration between men and women in a tangible

way.[14] The upper panel shows the baseline survival function of men and women estimated

separately for each sex.   About half of men experience a move by age 21, while half of

women migrate by age 23.   By the time both groups reach age 30, about 30 percent of the

men and 35 percent of the women remain without experiencing migration.

A comparison of baseline hazard profiles is displayed in the lower panel of Figure

1.   Hazard functions show that there exist substantial differences in the pattern of age

effects on the risk of migration across gender.   The high risk period for men is concentrated

in late teens, between age 17 and 21.   The risk peaks at age 18, lowers sharply with age and

hits the bottom at age 28.   The risk pattern of women is more evenly spread and actually

gets higher than men between age 22 and 28.   The graphical comparison shows that the

separate analysis by gender is reasonable, not only in terms of theoretical underpinnings, but

also in terms of age effects on the risk of migration.

Table 2 presents the gender-specific results of the effects of local social ties on

migration controlling for individual, family, and geographic characteristics.   To see the

differences in the effects of coefficients between men and women, the results of the

statistical test[15] are also displayed in the table.   Caution is warranted in interpreting the

results in this statistical test, since variables included in the analysis are different between

men and women; the model for men does not include occupational characteristics of

husbands, and the number of children squared.

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[14] Instead of plotting the hazard function as a step function, the linear interpolation between discrete sample
hazard probabilities was adopted as Singer and Willet (1993).

[15] The formula $b_1 - b_2 / (SE_{b1}^2 + SE_{b2}^2)^{1/2}$ is used to test the difference in coefficients between the gender
specific models is significant.   The test statistics will be approximately normally distributed (Clogg and Eliason
1986:423).

The result of the analysis unveils an intriguing gender contrast In the effect of residing in ethnically concentrated areas on migration.   For men, whether residing in ethnically concentrated areas or not, does not influence the probability of migration.   On the other hand, women residing in ethnically concentrated areas is only 0.77 times as likely to move compared to women residing in ethnically mixed areas.   This strong deterrent effect of residence in ethnically concentrated areas is consistent with the first hypothesis that ethnic networks reduce the probability of migration.   The difference in the estimated coefficients of ethnically concentrated areas between men and women also is statistically significant.   Thus, the result is consistent with the second hypothesis that the effect of residing in ethnically concentrated area on the probability of migration differs between men and women.

There are two possible reasoning in explaining differential effects of residence in ethnically concentrated areas on migration between men and women.   According to Uhlenberg(1973), those who are most integrated in society are less likely to migrate, while those whose potential for assimilation into outer society is high, are more likely to move. This may be especially so for women in Peninsular Malaysia, since Malaysian social values associate women with family and children (Chattopadhyay 1997).   Women may be more tightly integrated into local ethnic networks than men, due to childcare needs and the presence of family support groups.   Ethnic boundary may be distinct in society where the arrival of immigrant workers is a relatively recent incidence in the host country's history. This distinctiveness may have been reinforced in Peninsular Malaysia, because immigrants are racially and culturally different from native Malays.

Second, ethnic composition of geographic area may affect the degree of participation in social, economic, and political organization, which may influence local social ties.   In the case of Peninsular Malaysia, the relationship is especially strongly manifested in the case of women (Nagata 1979).   Traditionally, the Malays and Southeast Asian married women enjoy the freedom of activity in commercial and social spheres.

According to Nagata (1979), social activities of Malay women in urban ethnically mixed areas, are discouraged due to the overwhelming presence of other immigrant groups and of strict Indian Muslims. On the other hand, Malay women in rural Malay towns more actively participated in commercial, political and religious organizations. Although we cannot generalize from case studies, it is highly likely that ethnic composition influences the degree of social activeness of ethnic group, that in turn, affects the degree of embeddedness in local ethnic networks.

Not surprisingly, the study confirms that migrants are a highly selected group. Individual attributes including age, ethnicity, education, work status, earnings, marital status and number of children all turned out to be important factors in influencing the moves of men and women in Peninsular Malaysia. The pattern of the effect of age, the major time indicator in this analysis, confirms the profiles observed in Figure 1. The timing of the first move is concentrated in late teens for men, while that of women is more widely spread throughout teens and twenties. As the overview of Malaysian context suggests, ethnicity is an important factor; for both men and women, the Malays are more than 1.5 times mobile than Non-Malays, which is consistent with the census results (Government of Malaysia 1983).

Human capital variables affected the move of men and women in the same direction, as theory indicates. Regardless of gender, migrants are an educated group and the likelihood of migration increases as the level of education rises. Especially, those with post-secondary education are 3.7 times more likely to migrate relative to those with primary education only. In terms of work status, for both men and women, paid employees are more likely to move but the effect of being paid worker on migration is much smaller for women. On the other hand, self-employed are less likely to move when compared to those not working. This result is consistent with the previous work showing that individuals with location-specific capital are less likely to migrate (Baydar et al. 1989; Da Vanzo 1983;

Massey 1987).   Earnings have independent and significant effect on migration; the higher

the earnings, the higher the likelihood of migration for both men and women.

Significant contrasts between men and women are revealed in the effects of life-

course variables such as marital status and the number of children.   While marital status

positively affects the likelihood of migration for women, it negatively affects that of men.

It was found that married women are about 4.5 times more likely to move than single

women.   The result is consistent with the finding by Khoo and Pirie (1984) that about a half

of rural-urban migrant women who moved between 1965 and 1970 were married.   On the

other hand, married men are less likely to move relative to single men.   A cautious

interpretation regarding the association between marital status and migration is required,

especially in the case of women.   It is common for women to migrate in order to get

married.   It was assumed in this analysis, however, that marital status and migration is

independent due to data limitation.[16]

The number of children strongly conditions the move of women, while it does not

have any influence for men.   Not only the effect of the number of children negative for

women, but it is curvilinear; the relationship between a number of children woman has and

her migration probability is a U shape.   Thus, the likelihood of migration is relatively

higher for women with a small number of children and for women with a large number of

children, compared to women in the middle range.   This curvilinear effect may be that

women with large number of children are more mobile because older children are of much

help rather than constraints.   The differential effect of the number of children across gender

appears to demonstrate social norms concerning division of labor between men and women

in Peninsular Malaysia.

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[16] A caution is warranted in interpreting the association between marital status and migration, especially in the
case of women.   Past research shows that women tend to migrate in order to get married and start a new life at
her husband's home town (Tienda and Wilson 1992; Sandefur and Scott 1981).   If migration is a part of
marriage process, then migration is determined endogeneously with marital status.   If this is the case, the
statistical model predicting migration as a function of marital status suffers from simultaneous bias.   In the data
set, it was impossible to determine whether migration was preceded by marriage or not, because the exact date of
the move was not available.   Because the unit of analysis in the data is a person-year, the marital status at the
time of move was coded as "married" if marriage and migration took place in the same year.   Although it is

The occupational characteristics of husbands do affect the move of women. Women whose husbands are in the modern white-collar sector are about 1.7 times more likely to migrate than women without husband or women whose husbands are in agriculture related occupations. The result suggests that women married to men working in modern sector, are likely to be tied movers.

Geographical characteristics of origin areas do affect the probability of migration for both men and women but in a very different way. For men, urban residence as represented by large town and city, significantly lowers probability of migration compared to Kampung residence. Large town residents are only 0.6 times as likely to move, while city residents are only 0.7 times as migratory as Kampung residents. The lower likelihood of migration for men in urbanized areas may be reflecting the availability of employment opportunities in these areas.

Interestingly for women, the probability of migration is higher for those residing in estates, land settlements, and small towns, compared to those in Kampung. Residence in these rather rural areas increases the probability of moving by more than 1.2 times relative to residence in Kampung. The movement of women from estates, land settlement areas and small towns may be reflecting outflow of young women especially Malay, from rural areas beginning in the 1970s along with the growth of female employment in the manufacturing sector (Arrifin 1984; Kusago 1988; Lim 1993).

Conclusion

This study suggests that a shift in an analytical point of view from " why people move?" to "why people do not move?" may be of worthy. Most of research on migration attempts to answer why people move, irrespective of discipline. In sociology of migration, the focus is on how social networks sustain migration, and how migrant networks provide social capital to ease incorporation process, but does not illuminate the deterrent effects of

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possible that women migrate for marriage, it was assumed that marital status and migration is independent in this

local social networks on migration. Considering social context in Peninsular Malaysia, I sought to examine how social networks, operationalized as ethnic networks based in origin areas, deter migration of men and women in Peninsular Malaysia.

The empirical results support the first hypothesis that residence in ethnically concentrated area lowers the likelihood of migration for women. Women residing in a concentrated ethnic area are less likely to migrate compared to women in non-concentrated areas. Interestingly for men, residence in a ethnically concentrated area or not, does not affect their migration probability. Although I reiterate the caution is necessary in interpreting the results, the statistical test confirms the second hypothesis that the effects of ethnic ties are different between men and women. The result implies that the effect of ethnic networks in deterring migration is stronger for women than men.

It was argued that women may be more tightly integrated into and dependent upon local ethnic networks due to child and family care responsibilities. In addition, it was also suggested that the ethnic composition of a local area may affect the degree of participation in organizational activities, especially for women. Traditionally, Southeast Asian married women enjoy freedom of social activity. Participation in these activities is discouraged when faced with the overwhelming presence of immigrants with different social values.

Throughout the analysis, I assumed that residence in concentrated ethnic area means that there exist ethnic ties, since ethnicity often defines the boundaries for social and cultural interaction (Tienda and Wilson 1992). More micro-level data, preferably community-level data, are needed to actually delineate the relationship. Future work on the role of social networks in affecting migration should also be more sensitive in incorporating the quality of social ties. For instance, recent literature on the relationship between women's natal kin ties and fertility distinguishes between contact and support as two distinct dimensions (Axinn and Fricke 1996). Massey and his associates (1993) also point out the need to differentiate the existence of ties and the strength of ties.

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analysis.

In addition to the nature of social networks, enlarging the concept of social networks also has potential to enrich migration studies. As Hagen (1998) emphasizes, the concept of social networks in migration research is restricted to personal ties. The concept of social networks should include contacts with, and participation in organizational activities based in origin areas. Such refinements in the concept of social networks and a shift in an analytical point of view to study nonmigration, may contribute to deepen the understanding towards social determinants of migration.

Table 1. List of Variables

Covariates	Description
Ethnically Concentrated Area	Ethnically concentrated area (district) = 1
	Other than ethnically concentrated area (district) = 0
Age	Age is the duration measure.
	Age 15 forms the reference group.
	Each age is represented by a single dummy variable.
Ethnicity	Non-Malay (Chinese and Indian) = 0
	Malay = 1
Education	Primary schooling or less = 0
	Secondary, Post-Secondary
Work Status	not working = 0
	Paid employee, self-employed, employer,
	unpaid family worker
Earnings	The initial value of monthly earnings in Ringgit
Marital Status	Single (never married, divorced, separated, widowed) = 0
	married = 1
Number of Children	Number of children at age x
Husband's Occupation	Women with no husband
	Husband is in modern white-collar occupation
	Husband is in agriculture related occupation
Type of Place	Kampung = 0
	Estate, Land Settlement, New Village, Small Town,
	Large Town, City, Other

Table 2. Effects of Ethnic Ties on Men and Women's First Move: Estimated parameters and the Goodness of Fit

| Covariates	Men	Odds-ratio	Women	Odds-ratio	
Ethnically Concentrated Area	-0.073	0..929	-0.262 **	0.770	+
Age					
16	0.683 **	1.980	1.271 **	3.565	++
17	0.895 **	2.447	1.340 **	3.821	
18	1.387 **	4.001	1.427 **	4.165	
19	1.172 **	3.228	1.291 **	3.635	
20	1.025 **	2.788	1.153 **	3.167	
21	0.831 **	2.296	1.255 **	3.507	
22	0.481 **	1.617	0.915 **	2.497	
23	0.368	1.444	0.931 **	2.536	+
24	-0.037	0.964	0.631 **	1.880	+
25	0.112	1.118	0.812 **	2.253	+
26	-0.268	0.765	0.608 **	1.837	++
27	-0.308	0.735	0.831 **	2.295	++
28	-0.727 *	0.484	0.297	1.346	++
29	0.213	1.237	0.334	1.396	
30	0.321	1.379	0.547 *	1.728	
Ethnicity	0.506 **	1.658	0.430 **	1.538	
Education					
Secondary	0.479 **	1.615	0.272 **	1.313	+
Post-Secondary	1.320 **	3.744	1.331 **	3.784	
Work Status					
Paid	0.918 **	2.505	0.315 **	1.370	++
Self	-0.456 **	0.634	-0.451 **	0.637	
Earnings	0.323 **	1.381	0.505 **	1.657	
Marital Status	-0.274 *	0.761	1.512 **	4.534	++
# of Children	0.018	1.018	-0.802 **	0.448	++
# of Children sq			0.090 **	1.094	
Husband occupation					
Modern			0.543 **	1.721	
Agriculture			-0.088	0.916	
Place					
Estate	-0.091	0.913	0.336 **	1.399	++
Land Settlement	-0.064	0.938	0.476 **	1.610	
New Village	-0.269	0.764	-0.056	0.946	
Small Town	0.012	1.012	0.204 **	1.227	
Large Town	-0.340 **	0.712	0.018	1.018	++
City	-0.496 **	0.609	-0.151	0.860	
Other	1.008 *	2.739	-0.237	0.789	++
Intercept	-4.118 **		-4.587 **		
N	12831		18342		
-2LL	5552.445		7902.305		

* p<0.1
** p<0.05
+The difference in the coefficients between men and women is significant at the 0.1 level
++The difference in the coefficients between men and women is significant at the 0.05 level

Figure 1

Survival and Hazard Function by Sex

Survival Probability

Logit Hazard
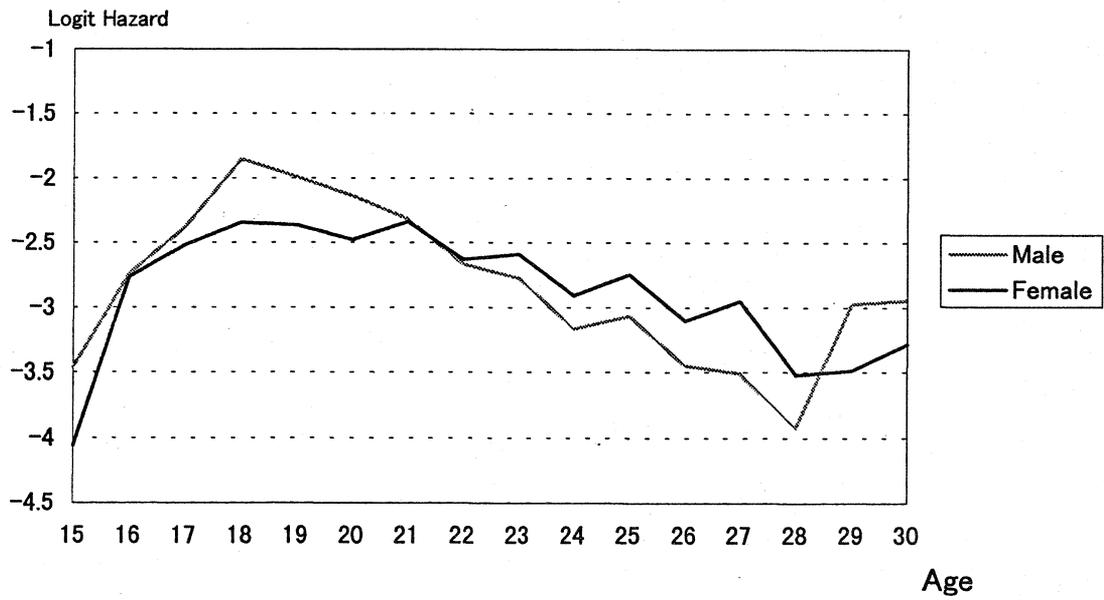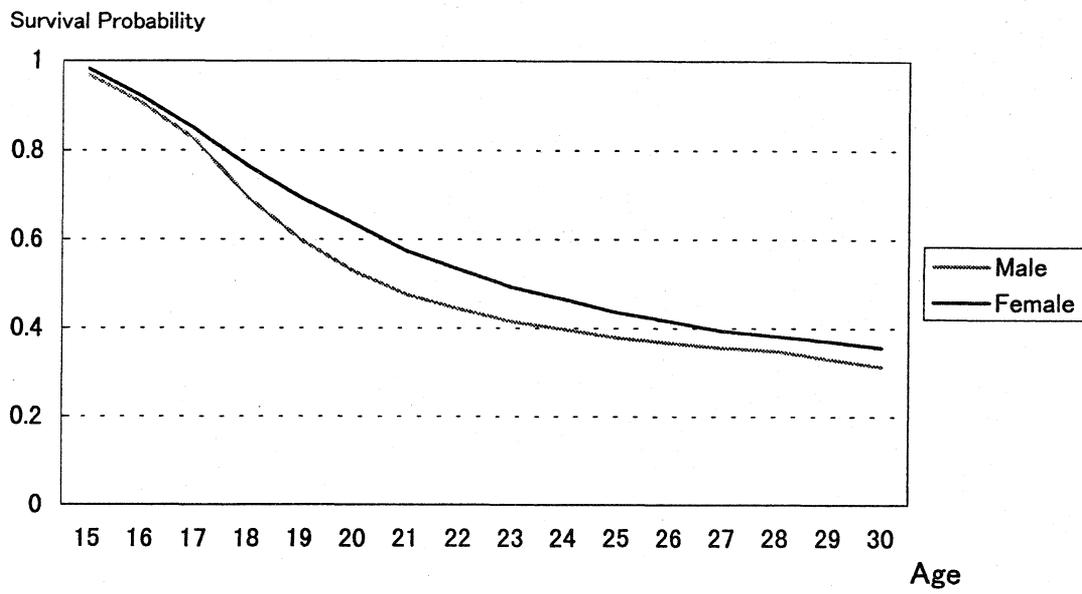
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