You, Me, or Us?

Conjugal Separation and Parent-Child Separation in Family Migration: a Case of Rural Thailand

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Abstract

The tenet of New Economics of Labour Migration is such that households are able to control risks to their economic well-being by diversifying the allocation of family labour to different labour markets. In essence, it introduces the idea that family members do not necessarily migrate together, but may send one or more members off as migrants. In a context of family migration, this research aims to understand the determinants of four different types of family migration i) father, mother and children migrate together, ii) father migrates alone, iii) mother migrates alone, and iv) both father and mother migrate, but leave their children behind. Using Stark & Fan (2007)'s theoretical framework which suggests a trade-off between the drive for higher income and consumption from migration and resulting separation that follows, this study investigates determinants of such trade-off and looks at different characteristics of parents, children, household/family's structure and how these might influence different family migration types.

Keywords:
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1. Introduction

In many developing countries, labour migration – both internally and internationally – is a way of life for many people and families. While it is rare in more developed countries to observe conjugal separation and parent-child separation in migration, it is a common scene in many developing countries across the world. Based on a nuclear family model and arguably in a context of developed countries, Mincer (1978) placed migration decision into the family framework and implicated "family migration" as migration of the entire family. The family migration in this model is treated as an aggregation of individual migration utilities and only takes place if the family's utility increases as a result of moving.[1] However, Stark and Bloom (1985) - with their research based on a context of developing countries - argued that households are able to control risks to their economic well-being by diversifying the allocation of family labour to different labour markets. In essence, this New Economics of Labour Migration introduces the idea that family members do not necessarily migrate together as in Mincer (1978)'s case, but may send one or more members off as migrants. The "strategy"[2] is not only to maximise

[1] The utility is derived by comparing the difference in both monetary and non-monetary returns and costs.

[2] While the term "strategy" in the New Economics of Labour Migration is very useful in ensuring that structural constraints are not neglected and that the freedom of individual actors is not overplayed, "strategy" itself at the same time implies that "human behaviour is based on well-defined motives and clear choices"(Engelen et al., 2004). It is further suggested that for such a claim to be true "human behaviour must be regarded as the result of rationality and that actions are preceded by an analysis of the costs and benefits of each alternative and that optimum use is made of the available knowledge, resources, and preferences." However, in reality, much of this behaviour is more or less unconscious.

expected income, but also to minimise risk and to loosen constraints associated with various kinds of market failures. To this extent, migration decisions are explicitly made by the family members and for the well-being of family as a whole.

Furthermore, conjugal separation and parent-child separation in family migration have led many researchers to try to assess impact on children being left behind (Asis & Baggio, 2003; Bryant, 2005; Hugo, 2002; Yeoh et al., 2002)[3]. Such research has demonstrated that the term "children left behind" is anything, but uniform – some children are left behind by either one of their parents while others are left behind by both, and the impact of being left behind by either one or both has been suggested to differ (Battistella & Conaco, 1998) and inconclusive (Booth & Tamura, 2009).

It must be emphasized from the outset that the aim of this research is *not* to better understand the impact of children left behind, but will take one step back and try to investigate any constraints or enabling factors which lead different families to select a particular type of family migration, as characterised by conjugal and/or parent-child separation. This research distinguishes family migration into following four different types: i) all migrate – i.e. father, mother and children migrate together, ii) father migrates alone, iii) mother migrates alone, and iv) both father and mother migrate, but leave their children behind. For ease of referencing, these four types will be abbreviated as FMC, F, M, and FM respectively.

[3] Children in this paper will be defined as those individuals aged below 15. Although the U.N. Convention on the Rights of the Child defines a child as a person aged below 18 and many developing countries have a party to, definitions of the child in other pieces of national legislation do not point to the same age (i.e. 18), and ages in these legislations do vary across the age spectrum. Thus, it is important to note that this study will define children as persons under the age of 15.

Migration is “a relocation not only of the place of residence, but also of activities in other life course trajectories” (Mulder & Hooimeijer, 1999). When families migrate, damage is done to various aspects of their lives – they lose their social contacts; one of the spouses might lose employment; and children might face discontinuity in their schooling. However, for many people in developing countries, this is simply their way of life – the concentration of wage employment opportunities in big cities and in few industrial hubs has created spatial separation of their work place and place they call home.

For many families, balancing the priorities of employment and child care is a fundamental consideration for parents regardless of their employment opportunities or family configuration. Individuals or families as collective entities have some degree of “choice” in attempting to attach to the labour market, and the choices are affected by a number of factors, including the primacy of child care responsibilities (Michalski & Wason, 1999). In family migration, this balancing act is most at play and is reflected in the different types of family migration mentioned above.

Based on these four types of family migration, child care responsibilities might be assumed to fall automatically on the non-migrant parent in the case of F and M while FM and FMC seem to provide contradictions between those families who place priorities in employment (FM) and those who place their priorities in child care and children (FMC).

However, it is not a simple matter as labelling those parents choosing FM as caring about their employment more than their children. The couples/parents who migrate without their children (i.e. choosing FM) might want to maximise their income earning potential

and their working hours at destinations in order to earn and provide sufficient income for the family, rendering them to migrate without their children. Apart from this, other factors might also be at play, and it is the aim of this research to provide better understanding of factors determining FMC, F, M, or FM.

Assuming a one-breadwinner family where parents are altruistic and regard separation from family members as painful, a theoretical framework has been developed by Stark & Fan (2007) to show that the decision whether to migrate with or without their spouse and children involves a trade-off between i) the cost of living at the destination of the whole family and ii) the cost of separation if the spouse and children are left behind. Thus, for a given level of cost of living at destination, the cost of separation rises as the duration of separation/migration lengthens. In other words, for a given level of cost of living at destination, the breadwinner would likely migrate alone if he attaches less value to being with family members (i.e. lower cost of separation). However, if the breadwinner attaches more value to being with family members (i.e. higher cost of separation), then the breadwinner might choose to migrate with the whole family if he can afford the cost of living at destination. Otherwise, he would choose to migrate alone, but only seasonally and not permanently in order to keep the cost of separation in check.

To this extent, Stark & Fan (2007) only deals with i) separation of breadwinner and family members, and ii) time dimension (i.e. duration of separation – seasonally or permanently). Put differently and in this research's terminology, it deals only with F ("permanently alone" or "seasonally alone") and FMC (permanently together - assuming

the breadwinner is the husband), effectively treating the breadwinner's spouse as a passive actor and not acknowledging possibilities of M and FM in the framework.

While conceptualising migration decisions in terms of household strategy as suggested by the New Economics of Labour Migration is very useful, such approach often obscures the intra-household negotiations which underlie what appears to be household migration decision (Elmhirst, 2002). A number of feminist studies emphasise the importance of internal household dynamics and power relations between men and women. In this type of approach, the household is seen as a locus where uneven power relations between men and women shape the term of gender division of labour. In essence, the male breadwinner concept is no longer applicable even in many developing countries.

The rising women's educational attainment and "feminisation" of labour markets have also reshaped the economic, social and family landscapes. Thus, by relaxing the one-breadwinner assumption, the process of reaching the family migration outcome will involve, among other things, some sort of bargaining and negotiations among family members and the resulting outcome could be either FMC, F, M, or FM.

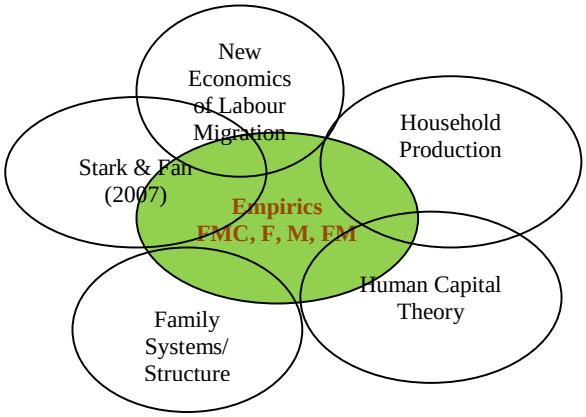
Section 2 of this paper will spell out the Stark & Fan (2007) framework in more detail, and will also introduce conjugal separation and gender dimensions to the framework using household production and human capital theories as well as empirical evidence in family and childcare literature. Section 3 of this paper will discuss data source for the analyses and empirical framework on combining information at origin and destination. Section 4 will, then, elaborate on the methodology and Section 5 will provide regression

results and findings in more detail. Lastly, Section 6 will conclude with summary of the results and discussions as well as policy implications arising from research findings.

Before proceeding further, it is appropriate to establish some definitions and terms used in this study. First of all, a district census (see more details in Section 5) from a rural part of Thailand is used in the analysis and, oftentimes, definitions of family and household are not always straight-forward. Although the nuclear family is the most prominent family type, the last three nation-wide population censuses (1980, 1990, and 2000) showed a decline in its proportion from 70.6 to 60.3 percent. On the other hand, the proportion of extended families has increased from 25.2 to 29.6 per cent (Prachuabmoh & Mithranon, 2003). The data contradict the assumption that changes in socio-economic and demography would lead to fewer extended families and more nuclear families. However, by closer examination, Chayovan (1995) pointed out that in Thailand households that are considered as extended families are often the ones with an elderly household head (aged 60 or over). Based on such insight, it is suggested that changes in socio-economic and demography have resulted in smaller family sizes but the family composition has not changed much (Prachuabmoh & Mithranon, 2003) - average family size was 5.2 in 1980 and 3.9 in 2000 while the TFR was 3.88 in 1980 and 1.82 in 2000. With this backdrop, this study follows Cravey (1997)'s argument of resisting a restrictive priori definition of the household/family, and loosely defines the household/family as a group that shares a residence and remaining alert to the internal and external linkages that may define additional domestic groupings (Cravey, 1997). Thus, the terms household and family are sometimes used interchangeably in this study.

2. Theoretical underpinnings

The purpose of this section is to introduce some theoretical grounds to help explain the empirics of family migration in many developing countries (FMC, F, M, and FM). Central to this research's analytical construction is the utility-based framework by Stark & Fan (2007). It captures the inherent factors involved in the breadwinner's decision whether to migrate with or without the spouse and children and pins down the decision to a trade-off between i) the cost of living at the destination of the whole family and ii) the cost of separation if the spouse and children are left behind. However, the empirics cannot be explained solely by this framework, and the sub-sections of this Section 2 will introduce other theories to help provide better understanding of the phenomena.



2.1. Causes of migration

Although it is not the aim of this paper to identify causes of migration or family migration, it is important to note that many scholars have theorised and discussed those causes and constraints at the macro, meso, and micro levels (Harbison, 1981; Harris & Todaro, 1970; Kok, 2004; Mackenzie & Rose, 1983; Mincer, 1978; Parreñas, 2005; Piore, 1979; Root & De Jong, 1991; O. Stark & Bloom, 1985; Wallerstein, 1997).

At a macro level, earning differentials ($R_G - R_P$) are associated with inequalities between migration sending and receiving regions, and this is observed in international as well as internal migration – despite differences in determinants and circumstances. In sending regions, poverty and job scarcity act as push factors encouraging migrant parents to leave for better income and higher consumption. In receiving regions, job availability and a demand for migrant labour act as pull factors.

At the meso level, the New Economics of Labour Migration links individual migration decision to communities. With its concept of relative deprivation (rather than absolute levels of poverty), it underscores the fact that people migrate because they feel *relatively deprived* with respect to their reference group (e.g. people in their communities).

At the micro level, the human capital view of migration provides some insights into the question of migrant selectivity. As Todaro (1980) pointed out that "migrants typically do not represent a random sample of the overall population. On the contrary, they tend to be disproportionately young, better educated, less risk-averse, and more achievement oriented and to have better personal contacts in destination areas than the general population in the region of out-migration."

Furthermore, individual migration decisions have been placed within the family and social context. This further complicates the understanding of the migration process to a certain extent. As remarked by Harbison (1981) that "it is precisely the pervasiveness of the influence of the family that makes the specification of its influence on the migration decision-making process so difficult"

2.2. One-breadwinner, utility-based framework - Stark & Fan (2007)

Essential elements

Stark & Fan (2007) assumes a family with one breadwinner and this breadwinner is altruistic towards his/her family. Furthermore, the breadwinner's own consumption is assumed away from the utility function.[4] He/She is viewed as an agent who migrates on behalf of his/her family in order to maximise the wellbeing of the family. An altruistic breadwinner takes into account pain of separation from his family and the family's pain of separating from the breadwinner. The "cost of separation" – which will be defined below in a functional form S – rises in the duration of separation and it becomes increasingly difficult to sustain the separation as its duration lengthens.

Based on such assumptions, let the breadwinner's utility function be:

$$U = u(C, S) = C - S$$

where "C" denotes the consumption of the breadwinner's family, and "S" denotes the cost of separation.

If the breadwinner spends t fraction of his unit endowment of time working in "Good" area, and 1−t working in "Poor" area,[5] and R_G and R_P are the earnings in the respective areas, then the earning profile will be:

$R_G t + R_P(1-t)$, where 0<t<1

[4] The assumption is plausible when considering that basic needs of food and accommodation of the migrant breadwinner is provided by the employer. Put differently, in line with the "New Economics of Labor Migration" (O. Stark & Bloom, 1985), we view the breadwinner as an agent who migrates on behalf of his family in order to maximize the wellbeing of the family.

[5] The breadwinner's single-year time, t, is normalised to 1 (O. Stark & Fan, 2007)

It is further assumed that the consumption of the family is equal to the breadwinner's total earnings, namely:

$C = R_G t + R_P(1-t)$, while

$S = \theta t^2$

that is, the cost of separation rises and it becomes increasingly difficult to sustain the separation as the duration lengthens. This separation cost also varies across parents, depending on how each parent values the separation from their children and family members – to some, it might be harder to cope with the separation; and to others it might be easier. This varying degree in separation cost is reflected in the θ coefficient, which is a random variable with a probability distribution in the domain $(0,\infty)$.

Hence, the framework provides a scene where a family which decides to engage in migration will face a trade-off between higher family consumption, C, (through increased earnings of breadwinner) and cost of being separated from family members, S.

Capturing inherent factors

As seen above, the consumption-separation trade-off hinges on the duration. The longer time t spent in the "Good" area, the more consumption the breadwinner's family can have, but at the same time, the longer the time t spent being separated from the family, the more painful it becomes for the breadwinner.

With this trade-off in mind, the breadwinner will choose an *ex-ante*, optimal migratory duration t* which maximises his/her utility *ceteris paribus*.[6]

[6] In other words, the breadwinner will maximise his/her utility with respect to t

$$t^* = \frac{(R_G - R_P)}{2\theta}$$

The optimal t* (t fraction of his unit endowment of time working in "Good" area) will always be greater than zero if R_G is greater than R_P. The interesting dynamic here is the interplay between the cost of separation, θ, and t. If θ is very large – it is too painful for the family members to be separated – t (unit endowment of breadwinner's time working in "Good" area) will go towards zero, and vice versa.

Since 0<t<1, there exists θ* which makes t=1 (spends entire unit endowment of his/her time working in "Good" area), that is

$$\theta = \frac{(R_G - R_P)}{2} = \theta^*$$

Based on this framework, the decision to migrate "seasonally" (t<1) or "permanently" (t=1), thus, impinges upon how the breadwinner evaluates the cost of separation – i.e. his/her coefficient of cost of separation θ.

If the cost of separation is relatively small, $\theta \leq \theta^*$, thus t=1 (discounting t>1 since it is assumed that 0<t<1), the breadwinner will migrate "permanently". However, a follow-on question for the breadwinner is whether to migrate "permanently" alone or with his entire family. Here we can substitute t=1 to obtain the utility of both cases, and compare them:

Thus, the indirect utility from breadwinner migrating "permanently" without family is:

$$u^* = R_G - \theta$$

that is, breadwinner's utility will consist of earnings in the "Good" area, less the θ cost of separation; while the indirect utility from breadwinner migrating "permanently" along with the entire family is

$$u^{\star} = \frac{R_G}{P_G}$$

that is, the breadwinner's utility will consist of his earnings, normalized by the cost of living of the entire family in the "Good" area, $P_{G.}$

If the cost of separation is relatively large, $\theta > \theta^*$, thus $t<1$, the question for the breadwinner is whether to migrate "seasonally" alone or "permanently" with the family. For the former, we substitute t* into the utility function to obtain the indirect utility of "seasonal" migration.

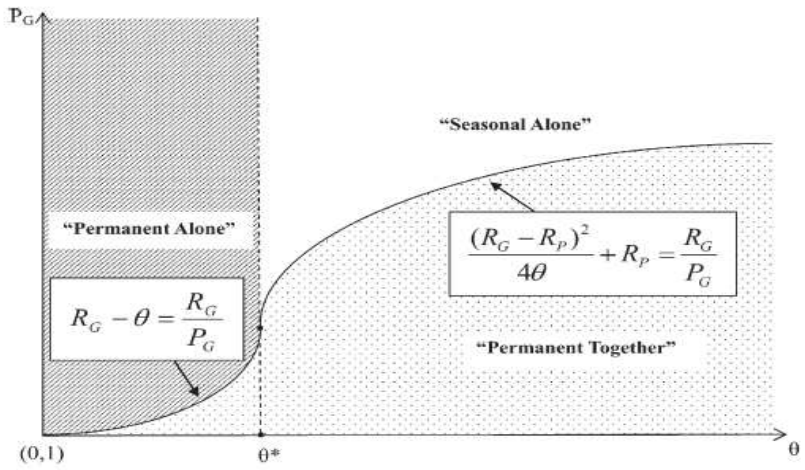
By substituting $t^* = \frac{(R_G - R_P)}{2\theta}$ into the utility function, we obtain:

$$u^{\star} = \frac{(R_G - R_P)^2}{4\theta} + R_P$$

Hence, the breadwinner will choose to migrate "seasonally" alone rather than "permanently" with family, if

$$u^{\star} = \frac{(R_G - R_P)^2}{4\theta} + R_P > \frac{R_G}{P_G}$$

Figure 1: Optimal patterns of family migration



Source: Stark & Fan, 2007

Given R_P and R_G - earnings in the "Poor" and "Good" areas - the optimal patterns of migration are determined by the cost of separation, **θ**, and $\mathbf{P_G}$ - the cost of living in the "Good" area. The implication from this framework is that there exists a combination of **$(R_G - R_P)$, P_G, θ, and t** that leads the breadwinner to choose to migrate without his spouse and children. In simple terms, a parent migrant takes into consideration i) the perceived, net earning differential, ii) the cost of living at the destination, and weigh these against his values towards family separation, which hinges upon *ex-ante* **t** duration of migration[7].

2.2.1. Interplay of $(R_G - R_P)$, t, and θ coefficient

Stark & Fan (2007) also draws some linkages among $(R_G - R_P)$, t, and θ coefficient. From the utility maximization problem, the optimal t* (t fraction of his unit endowment

[7] Note that although it is not inconceivable that a parent migrant might decide to migrate permanently alone, the empirical evidence does suggest that most parent migrants eventually return home - unless migration is instigated by potential union dissolution or union dissolution has is a result of migration and separation. Thus, in normal circumstances, parent migrant deciding to migrate alone permanently can be ruled out.

of time working in "Good" area) is a function of the earning differential and coefficient of the cost of separation:

$$t^* = (R_G - R_P)/2\theta$$

From this relationship and for a given level of θ, an individual's skills or occupations – among other things – dictate the earning differential, and this is positively correlated with the duration of migration (or time t spent working in "Good" area). Using Mexican data, del Rey Poveda (2007) found *not* only skill-duration relationship suggested here, but also found linkages of skill-duration relationship and types of migration and family resources/wealth. More specifically, he found that

- migration to traditional markets often involves short distances and durations, and allows many comings and goings while continuing to be linked with agricultural production. This type of migration is mainly of survival and/or transitory; does not require special skills and does not provide large earnings that will lead to a change in the conditions of production or that will displace agricultural production as the main economic activity;
- migration towards the manufacturing industry involves a longer distance and duration; offers good professional prospects; and is demanding with regard to the level of training of migrants. For rural families with few resources migration of this type offers a good alternative for improving their living conditions, provided that migrant(s) possesses the right set of skills and training/education being demanded in the labour market; and
- international migration, which involves a heavy financial investment and is coupled with legal barriers for home visits, is a move that would entail staying

away for several years. Migrants will tend to prolong the migration duration in order to make the initial investment worthwhile by first paying off the cost of the journey and then accumulating sufficient savings to fulfil the objectives that triggered migration in the first place. This type of migration is open to all rural families that can mobilise sufficient resources.

Thus, for a given level of θ, duration of migration t is determined by the interplay of potential earning differential ($R_G - R_P$) which is influenced by migrant's skills/education, types of migration or occupations (e.g. jobs in manufacturing industry Vs jobs in agricultural industry) at the destination, and the migrant family's resources.

2.2.2. Migration networks as channels of information on ($R_G - R_P$), t, and P_G

From the migration network literature, it has been suggested that a migrant planning a migration project might have received information from his/her migrant networks and is aware of the nature of the job, the pay, and possibly the ex-ante duration of stay at the destination prior to his departure (Fawcett, 1989). In other words, the potential migrant already has some expectation/information on the perceived, net earning differential **($R_G - R_P$)**, the ex-ante duration **(t)** for the migratory trip, and even the cost of living **(P_G)** at the destination. To this extent, the decision of a one-breadwinner family to migrate alone or with the family will evolve around an evaluation of such information against the cost of being separated from the family. Thus, what constitutes the coefficient, **θ**, of parent's cost of separation then becomes an interesting question and will be further explored in Section 2.2.5.

2.2.3. Away from one-breadwinner assumption - household production theory and gender division of labour

As earlier pointed out that Stark & Fan (2007), based on a one-breadwinner assumption, only deals with i) breadwinner's separation from family, and ii) time dimension (i.e. duration of separation – seasonally or permanently). Thus, in the terminology of this research, it deals only with F ("permanently alone" or "seasonally alone") and FMC (permanently together - assuming the breadwinner is the husband), effectively treating the breadwinner's spouse as a passive actor. Thus, before proceeding to examining the coefficient, $\boldsymbol{\theta}$, of parent's cost of separation, one should understand implications that would follow if the assumption of one breadwinner is relaxed.

In the case of one-breadwinner family, the decision centres around the breadwinner, and is constrained by the possible scenarios (F or FMC) mentioned above. In the case of two (or more)-earner family, the decision involves the same trade-off, but becomes more complicated and many more factors will have to be taken into consideration. By relaxing the one-breadwinner assumption, the process of reaching the outcome will involve, among other things, some sort of bargaining and negotiations among family members and the resulting outcome could be either FMC, F, M, or FM.

Main concern of household/family strategy approach to migration is the problematisation of divisions of labour and power within households and how these affect the propensity and freedom of different individuals (Chant, 1998). More specifically, the household/family strategy approach obscures the intra-household negotiations which underlie what appears to be household migration decision (Elmhirst, 2002).

Becker (1965, 1981) was the first to articulate the role of comparative advantage in the intra-household division of labour. In particular, he argues that if one member of the household must stay at home to take care of domestic chores, economic efficiency dictates that it should be the one with the lowest expected wage relative to their productivity in domestic chores (Becker, 1981). However, the situation in domestic economy is further complicated by the increased 'feminisation' of the global labour force in most regions of the world (UNRISD, 2005). Kabeer (2007) observes that the rise in female labour force participation has often been in the context of stagnant and even declining rates of male labour force participation and their earnings, which further generates an even greater need for a dual-earner family model, with greater importance of women as providers of financial resources to the family. In this context, rural women in Thailand have access to the low wage, low skill manufacturing jobs located in the export processing zones outside Bangkok and along the eastern seaboard of the country. Also these women have access to the rapidly growing service sector jobs in the country. These jobs are generally more stable than those for men, who continue to predominate in the seasonal and transitory occupations of construction and agricultural wage labour (Curran & Saguy, 2001). For women, these steadier jobs might allow them to remit more than men, rendering different types of family migration of M or FM as opposed to only F or FMC in the one-breadwinner world.

However, despite these changing economic opportunities among men and women, the gender division of labour might still be attributed to systematic differences between men and women or "social norms", and it is not inconceivable that intra-household division of

labour is solely motivated by a desire to follow social norms or satisfy individual preferences, and not by an effort to capture gains from comparative advantage or specialisation (Fafchamps & Quisumbing, 2003).

2.2.4. Cost of living at destination of the whole family - P_G

Considering the "cost of separation"–"cost of living" trade-off discussed earlier, if cost of separation is very high (this could be because of the high θ and/or the actual length of separation "t"), then the earning differential ($R_G - R_P$) will need to be sufficiently high to cover the living cost (and consumption) of the family (P_G) at the destination. However, with the concentration of wage employment opportunities in big cities and in few industrial hubs, migrant parents whose θ cost of separation is relatively high still decide to migrate even though the earning differential is not high enough to cover living expenses of the whole family at the destination. As such, it can be hypothesised that certain arrangements (as subsequently detailed below) will need to be made to help reduce the cost of living at the destination and to enable the spouse and children to migrate together. However, if such arrangements could not be made or are not viable, then family separation might result.

When parents decide whether to migrate with their children, the first primary concern often centres around child care responsibilities. For some families, child care considerations primarily affect the mother's employment situation and the concept of the man as primary breadwinner is still held firmly. In these situations, it is necessary that one breadwinner's earnings are sufficiently large enough to cover family's living expenses, and these families might be able to migrate all to the destination, with the wife

performing the role of “traditional mother” and/or compromising for a part-time job or no employment in order to take care of the children.

Furthermore, Cravey’s (1997) compares two industrial sites in Mexico and found that the first site which was characterised by factory regimes that had emerged in association with the earlier import-substituting period of industrialisation and had an older, better paid, educated and largely male labour force had helped to structure largely nuclear households which survived on the wages and benefits of a single male household head. On the other hand, the second site which was characterised by the new *maquiladora* (assembly line) system of production and a younger and more mixed labour force with lower wages and less security of employment had led to a greater diversity of family forms, including many more extended families made up of siblings, cousins and friends, as well as sub-nuclear families. Thus, parent migrants might rely on sub-nuclear arrangements and a variety of extended forms to help reduce the cost of living at the destination and to sustain responsibility of some domestic tasks such as child care.

Qualitative data also suggest that the need for cash might drive many parents to leave their children behind, and having only one target earner does not provide sufficient money for the household (Piotrowski, 2009). In such cases, migrant parents will typically work long hours and have no time to care for children. If these parents decide to migrate with children, they would have to rely on some forms of alternative care, such as living or staying with relatives, or other formal childcare institutions. If the former is not an option, then it is likely that added expense of formal childcare is prohibitive for many migrant parents, and that their effectiveness as target earners would be reduced if they did not

take advantage of relatively inexpensive childcare from extended relatives in origin communities (Piotrowski, 2009; Richter, 1996; Richter et al., 1992; Wahyuni, 2000).

In addition, the cost of living with children at the destination could be viewed through another lens – i.e. costs to the children themselves. Recent studies have found that parents perceived the rural environment as more beneficial for young children; modern mechanised places pose many dangers to young children's safety; and there is often little faith in quality or safety of childcare services on offer (Brewster & Rindfuss, 2000; Richter, 1996; Richter et al., 1992).

Parents who migrate without their children might consider themselves as target-savers/earners or sojourners (Banerjee, 1984; Piore, 1979). Oftentimes, these parent migrants seek to accumulate surplus to meet specific needs and plan to return once they have achieved their objectives. In order to achieve the target savings, these migrant parents may want to migrate without their children in order to reduce the cost of living at the destination. People who regard themselves as target-savers/earners or sojourners in the city will seek different kinds of housing, demand fewer amenities and services, behave differently than will people committed to the city as their permanent home (Nelson, 1976). Additionally, these target-savers/earners or sojourners might regard such kinds of housing at the destination as less suitable for bringing up their children. On the other hand, migrant parents whose employment provides free housing or housing allowances will be able to cut a large part of their living expenses at the destination and find it easier and will probably be more likely to migrate with the family.

Also, for families that have all migrated, this round of migration might not be their first. In a sense, the breadwinner might have already "tested the water", i.e. migrated to the destination before and the wife has followed the husband once he has found suitable accommodation and settled down in his job at the destination or vice versa (Banerjee, 1984). With this regard, if the breadwinner has "tested the water", already settled at the destination, and secured some financial and other means of bringing the family to the destination, there might be more chance of the family migrating together at a later stage.

Lastly, in the case of international migration, legal barriers and employment contract restrictions could be viewed as P_G going towards ∞, i.e. it is not possible to take the children with them when they migrate, regardless of their θ coefficient.

2.2.5. Hypothetical cost of separation in family migration - θ

In recent years, incidence of conjugal separation and parent-child separation in developing countries has received attention among scholars and policymakers in various fields, but it should be stated at the outset that such incidence does not present us with any novelty: Anderson (1971) found a similar phenomenon in his study of the family in nineteenth century Lancashire, England. Such historical parallels indicate that at a given space and time, individuals are subjected to structural constraints and they are bound to operate within such environment.

As argued earlier that a potential migrant planning a trip will already have received some information on the perceived, net earning differential **$(R_G - R_P)$**, the ex-ante duration **(t)** for the migratory trip, and even the cost of living **(P_G)** at the destination prior to their

departure. To this extent, the decision of a one-breadwinner family to migrate alone or with the family will evolve around an evaluation of such information against the cost of being separated from the family. Thus, what constitutes the coefficient, **θ**, of parent's cost of separation then becomes an interesting question. Furthermore, in the case of a two (or more)-earner family, gender division of labour, gender roles and norms will also play a role in determining a family migration type also.

Ideally speaking, since the dependant variable of this study is the four different types of family migration (FMC, F, M, and FM), one would want to have evidence suggesting factors that might influence the likelihood of a family selecting a particular type of family migration. However, this particular aspect has not been studied much in migration studies and available literature is linked either to "children left behind", conjugal separation, and family migration in general.

Household size

In a context of a developing country, (Nicholson, 2006) notes in her study that one of the important aspects contributing to mothers' willingness to leave their children and spouse behind is the fact that her respondents invariably saw their children as belonging to a family that extends beyond nuclear unit; they saw themselves, in turn, as primarily, but not exclusively, responsible for the care and nurturing of their children. Aranda (2003) suggests also that parents who have to work away from home, either for short or long durations, depend on alternative care provided by other family/household members to assist in the raising of their children. Thus, alternative care arrangements will be more readily available in case of a larger family size, and if the parent(s) decides to migrate,

the likelihood of them leaving the spouse and/or children behind could be higher, knowing that extended family members will care for children which will help reduce the cost of separation.

Family system

The difference in postnuptial residence practices (patrilocal, matrilocal, or neolocal residence upon marriage)[8] – can constrain or give rise to different household strategies, family networks, and migration patterns (Kok, 2008). Neolocal practice might make it too painful or not possible for both parents to migrate (FM) and leave their children behind without anyone caring for them, or make it more likely for father/mother to migrate alone (F or M). However, how patrilocal and matrilocal practices could influence the cost of separation and lead to selecting a particular type of family migration is ambiguous.

Traditionally, childcare from maternal relatives was common in the north-eastern part of Thailand (location from which data for this research is based on), as newlyweds predominantly practiced matrilocality, or more specifically uxorilocality[9], whereby they moved in with wife's family for a short time following marriage (Limanonda, 1995; Limanonda & Kowantanakul, 2002; Podhisita, 1984). The postnuptial residence practice of matrilocality or uxorilocality can be explained by the logic of land inheritance, which favours daughters, particularly youngest daughters, with sons relinquishing their claims

[8] Patrilocal (or matrilocal) versus neolocal residence upon marriage: in the former case, men bring their wives (or women bring their husbands) into their parent's households, whereas the newlyweds leave home to set up a new household in the case of neolocaliy.

[9] In social anthropology, matrilocal residence or matrilocality (also uxorilocal residence or uxorilocality) is a term referring to the societal system in which a married couple resides with or near the wife's parents, thus the female offspring of a mother remain living in (or near) the mother's house

to parental land in return for other sorts of resources, such as money or education (Yoddumnern-Attig, 1992). In this system, daughters have strong obligations to their parents and to look after the land, which could influence the wife's cost of separation from spouse and/or her children – that is matrilocality could make family migration type M or FM less likely to occur. However there are certainly exceptions to the rule, and such gender roles might shift depending on "how cultural expectations and economic opportunity associated with gender shape migration and its impact upon society" (Curran & Saguy, 2001).

Parent migrant originally from this village

Dense (or lack of) local kin networks at the destination has been reported to account for parents' decisions to take (or leave behind) their children when they migrate (Richter et al., 1992; Wahyuni, 2000). By the same token, local kin networks at the origin could be a key determinant in the decision of migrant parents. Miller (1976) finds that the proximity of relatives outside the household discourages out-migration of the entire families (FMC). Thus, for the parent who is originally from the village behind which he/she leaves the children and spouse, they could feel more at ease leaving their children in an environment with which they are familiar and that a lot of helping hands would be available within the community, lowering the cost of separation.

Propensity to migrate

Previous mobility experience has been consistently linked to future migration of individuals and families (De Jong et al., 1985; Lee, 1985). However, it is equally debatable whether future decisions to migrate are path-dependant or subject to

individual's heterogeneity. In her work examining separate living arrangements for mothers and their children under 5 years of age in urban Thailand, Richter (1996) found that mothers who migrated at a young age as single adults are unlikely to combine work and childcare. Thus, when they become mothers and have their children, they may still rely on kin rural areas if they do not have others to trust with child care. However, such findings might only be applicable to early stages of marriage when children are still under 5 years of age.

The propensity to migrate might also capture spouse's willingness to move or to become a tied mover as suggested by Mincer (1978). For instance, the wife/husband's cost of separation from each other is too high, rendering them to migrate together (FMC).

Spouse's willingness to move might also reflect their failure to find jobs at origin communities and availability of jobs that better match their skills at the destination. If a family with the husband having high propensity to migrate (for whatever reasons) but not wife, then it could result in a family migration type of F rather than M and vice versa. In this context, the high propensity to migrate or previous mobility experience might downplay the θ coefficient, increasing likelihood of family separation in the forms of either F, M, or FM.

Children's ages and family life cycle stages

Ages of the children might also play an important part. Chamratrithirong et al (1988) found that living apart during the early stages of marriage is relatively common. There are various reasons for this, including different employment locations (Pongsapich, 1990).

In addition, Piotrowski (2009) found that when women become pregnant, some return to rural origin villages to give birth, in part because of the expense of delivering a baby in an urban hospital and also availability of helping hands in origin communities to help with the post-delivery recovery period. Piotrowski (2009) further suggests that Mothers usually stay with their baby for three months, the maximum time Thai labour laws grant for maternity leave. Then, mothers return to work in the city afterwards, perhaps joining their husband, and children are reared by extended family members until they reach school age. However, some children are less lucky and separation from parents can be lengthy lasting the duration of their childhood.

A useful classification of children ages is that suggested by Click (1964) – pre-school, school, and post-school. The parent's θ coefficient may vary from child to child in the same family, depending on the age of the child, birth order and sibling status (Richter, 1996). It is also possible that the pre-school children are believed to be better off in the care of mother/father or other extended family members in the village, while the school child who succeeds to find a place in secondary school might stay with his migrant father/mother in the city.

The children's ages are also indicative of family life cycle stages, Miller (1976) observed "younger" families move more often than older, and according to Dribe (2000), young families, with a growing number of dependent children, may have sought a larger house or more land to accommodate the family and they may also have been forced to relocate because the consumption pressure forced the head to seek better employment in another place. In the context of Thailand, evidence also suggests that co-residence (matrilocal or

patrilocal) is typical only for a few years of a young couple's married life (Podhisita, 1984). As such, neolocality might become more common during the later family life cycle stages, making it more difficult to difficult or preferable to migrate with the whole family together.

Age of the head of the household

Chayovan (1995) pointed out that households with an elderly (aged 60 or over) household head are mainly extended families. To this extent, the size of the household does not always equate the composition, i.e. the smaller size does not automatically mean neolocal practice or a nuclear family. Furthermore, age of the migrant parent does not always equate the age of household head. Hypothetically speaking, an older household head will be less capable of rearing a child; on the other hand, a presence of a child might provide much needed help for an elderly household head. Hence, the effects of the age of the household head towards the cost of separation are somewhat ambiguous.

Ratio of children aged under 15 left behind over total number of children

In her study on child care strategy of urban mothers with children under 5 years of age in Thailand, Richter (1996) found that a substantial number of mothers said that the reason they had to live separately with their children was that they had too many children to care for. Children in this paper will be defined as those individuals aged below 15. Migrant parents might also have children who are aged over 15, and the cost of separation towards them might be less than to those who are under 15. Thus, the total number of children might not accurately capture the parents' true cost of separation. Thus, the higher ratio of under 15 to be left behind might increase the cost of separation.

Parent migrant's education

Apart from dictating the potential of earning differential, education also shapes parents' concepts of family and parenting. Banerjee (1984)'s paper on rural-to-urban migration in India found that educated migrants perhaps subscribe less to traditional orthodoxy of rural society and place greater weight on living with their nuclear units. Thus, for the educated migrant parent, it might be less likely for them to leave their children and spouse behind, suggesting that their cost of separation might be higher than that of less educated parents. While the effect of education on separation cost is positively correlated, education, as mentioned above, also directly affects potential of migrant parent's earning differential in such a way that education – through available employment opportunities at destinations for highly educated migrant parents – could lead to separation in family migration.

Summing up factors influencing hypothetical cost of separation in family migration - θ

Based on the literature reviewed, the factors that could – hypothetically speaking – affect the cost of separation in family migration are summarized in Table 1 below. Each factor could make the separation either less ($\theta\downarrow$) or more ($\theta\uparrow$) painful whereas the effects of other factors are ambiguous ($\theta\updownarrow$).

Table 1: Hypothetical effects of factors contributing to coefficient, θ, of parent's cost of separation

	θ ⇩	θ ⇧	θ ⇔
Household size	• Nicholson (2006) Aranda (2003)		
Family system (patrilocal, matrilocal, neolocal)			• Kok (2008) (Limanonda, 1995; Limanonda & Kowantanakul, 2002; Podhisita, 1984)
Parent migrant originally from this village	• Richter et al (1992) Miller (1976)		
Propensity to migrate (number of circular migrations in past 12 months)			• De Jong et al (1985) Lee (1985) Mincer (1978)
Children's ages/family life cycle stages			• Miller (1976) Dribe (2000) Richter (1996) Piotrowski (2009) Podhisita (1984)
Age of head of household			• Chayovan (1995)
Ratio of children aged under 15 left behind over total number of children		• Richter (1996) Piotrowski (2009)	
Parent migrant's education		• Banerjee (1984)	

3. Data and Empirical Framework

3.1. Data

The choice of data used in this analysis is driven by the Stark & Fan (2007)'s theoretical framework. The breadwinner is viewed as an agent who migrates on behalf of his/her family in order to maximise the wellbeing of the family. Through migration and remittances, family's consumption is increased. This suggests that employment opportunities or income-generating activities are limited in the area of origin and there is a need for families to send off some members as migrants. Such flows of migrants

looking for work could be from a rural area to an urban area, or even internationally to overseas employment[10]. Furthermore, the concern towards high living costs at the destination in relation to their decisions to migrate with the family also suggests that they are low- or mid-skilled labourers. To this extent, the data from Nang Rong Projects are very suitable to such settings.

Nang Rong district – Overview and Context

Nang Rong is a district in Thailand which occupies approximately 1300 km^2 in the Southern part of Korat Plateau in Buriram province in the Northeast of the country[11] - see Figure 2. The Northeast – where Nange Rong district is situated - hosts a relatively large number of population, comparing with other countries. Figure 3 shows the population and GDP per capita circle maps by province and it is evident that the Northeast provides a large pool of labour for the companies and industries which are located around Bangkok, Greater Bangkok, and the Central plain.

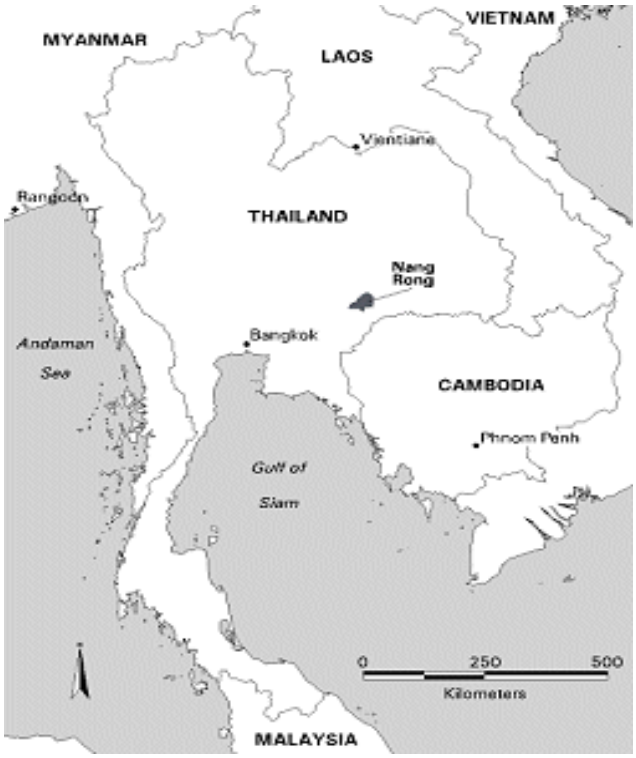
People in Nang Rong rely mostly on paddy rice farming for their livelihood. Rice growing is rain-fed and relies on an annual monsoon which is accompanied by uncertainty in the amount, timing, variation from year to year. Risk associated with rice

[10] In the case of international migration, entry visa and employment contract restrictions could be viewed as P_G going towards ∞, i.e. it is not possible to take the children with them when they migrate, regardless of their θ coefficient. Hence, the destination – as far as the visa and employment contract restrictions are concerned – will be a key determinant in parents' decision whether to leave their children behind. Nonetheless, there are a number of undocumented parent migrants that migrate with their children. Bryant (2005) in his study of international migrants' children learns that Indonesian migrants to Malaysia are more likely to take their families with them than are migrants to the Middle East or to other destinations

[11] The distance from Nang Rong to the Thai-Cambodian border is approximately 100km, and while informal cross-border trade has always taken place, subregional integration in formal trade and migration flows along this border line is still minimal. This is mostly due to the relatively poor infrastructure and road networks along the border area, which do not facilitate movements of goods and people. The limited flows and interaction of people is clearly illustrated by the language households speak with the family: 82% use Thai, 14% use Lao, and 4% use Khmer (Cambodian) (Rindfuss et al., 2006).

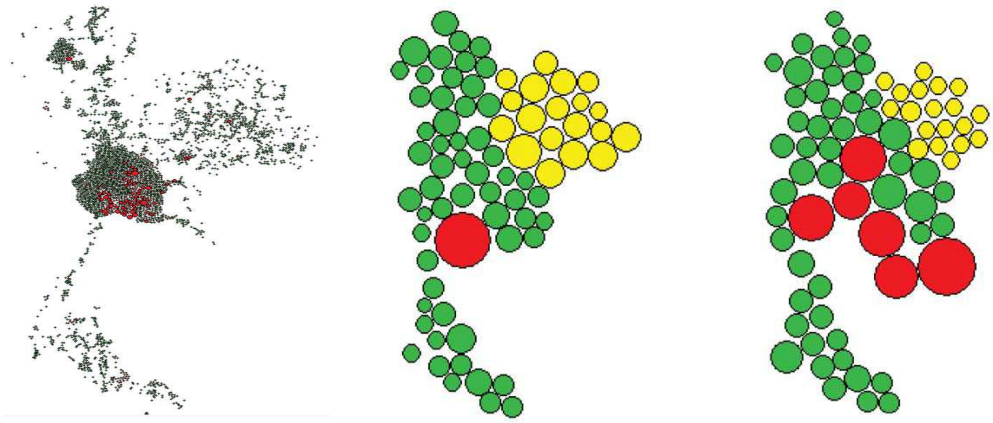
farming is a fact of life, as floods and droughts can have a substantial impact on crop yield (Entwisle & Tong, 2005). The agricultural cycle has a pronounced seasonality, characterized by a dry season of inactivity. Villagers often migrate to look for work due to a combination of the long dry season, the risks involved in agriculture and crop failure, and the limited wage employment opportunities. It is, therefore, not surprising that Nang Rong district has seen a number of families and their members migrating to the other parts of the country and/or even overseas in search of employment and for the well-being of their families as a whole.

Figure 2: Map of Thailand and neighbouring countries and location of Nang Rong district



Source: Nang Rong Projects www.cpc.unc.edu/projects/nangrong/aboutus/study_area, retrieved July 2009

Figure 3: Spatial distribution of manufacturing employment, 1996-7 and 2000-1 (left); Population circle map (centre); and GPD per capita circle map (right)



Source: World Bank and NESDB (2005)

Nang Rong Projects – the data

The Nang Rong Projects were a collaborative effort of the Institute for Population and Social Research, Mahidol University, Thailand, and Carolina Population Center, University of Nort Carolina at Chapel Hill. The baseline data were collected in 1984, and data on various aspects of social and demographic processes in the district were collected over two successive waves in 1994 and 2000. A full census of all households was collected in a sample of 51 villages in 1984, which was repeated again in subsequent data panels in 1994 and 2000. All households in the original sample villages were enumerated, as were any new households that came into being between data panels[12]. Information was obtained on household and village characteristics, and details of all household members, migrant follow-ups, and migration processes. Changes in household affiliation within

[12] The numbers of people and households that were enumerated are as follows: in 1984, 34,035 people living in 5,860 households; in 1994, 31,216 people living in 7,331 households; in 2000, 34,381 individuals lived in 8,638 households. Of these, 30,661 were interviewed in all waves including follow-up of migrants, presenting approximately an attrition rate of 10%.

villages, household composition, household assets, debt, land ownership, and social networks were also recorded. In addition, life history data were collected for anyone aged 18-35 who was located in the village in 1994 and 2000, as well as life history of migrants who have been successfully followed up. The life history data include information on individual migration histories since age 13 and their past residences and records of women's child birth in respective years.

3.2. Empirical framework

Based on the literature reviewed in Section 2, factors at both origin and destination influence migrant parents' decisions whether to migrate with or without spouse and/or children. An ideal empirical strategy would be to have information of migrating families at the origin prior to their departure and information at the destination once migrated, and then analyse it. However, such information is not available due to some unsuccessful migrant follow-ups. Thus, this research will provide two sets of analyses i) analysis of information of families at the origin where migrant parents or families have already emigrated, and ii) analysis of conditions at the destination to which migrant parents or families have migrated. Although the two sets of analyses are not performed on the same set of families, the combination of these results will provide better understanding of factors influencing families' decisions to "choose" a particular type of family migration.

Furthermore, as guided by the literature review in Section 2, the factors at the destination appear to evolve around concern on child care responsibility/expenses as well as on type of accommodation, etc. which could make the cost of living at destination less or more expensive or as to whether it is appropriate only for target-earner migrant parents or for

the whole family. In this context, while the first set of analysis (using information at the origin) will look at four different types of family migration – FMC, F, M and FM - the second set of analysis will examine factors influencing family migration types FM and FMC only, leaving out F and M.

Although migration – internal and international – was a widespread practice for many rural Thais during 1990s, it is a well-established fact that married individuals move less than unmarried ones (Mincer, 1978; Sandell, 1977; Troyer, 2002). As such, family separation as a result of family migration might be much less in magnitude if compared with the rate of migration in general. An educated guess was made that, in 2000, around 500,000 children (or 2-3 percent of total number of children aged 0-14 in Thailand) of regular and irregular international migrants have been left behind in Thailand (Bryant, 2005), and if taking into account left behind children of internal migrants, then the number could be higher.

Despite being an educated guess, the sizes of analytical samples for this research (N=360 for the first analysis and N=412 for the second analysis) does conform to Bryant (2005)'s crude estimate when applied to Nang Rong data[13].

[13] In the Nang Rong census, children aged 0-14 account for approximately 22% or 11,000 of the total Nang Rong district population. If, say, 10 percent or around 1,100 of Nang Rong children were left behind (Bryant suggested 3 percent, but only of children aged 0-14 in Thailand left behind by *international* migrants, and the 10 percent suggested here is to account for left behind children by internal migrants as well), then 315 families in the first analysis (excluding 45 families of FMC) and 212 FM families in the second analysis appear to be reasonable.

Data Manipulation for Empirical Analyses

Two waves – one in 1994 and the other one in 2000, pooled – of the Nang Rong databases are used in the analyses of this study.

First analysis – families at the origin

Parents and children in the databases are matched. The parents are considered migrants if they were listed in 1984 households but reported as "moved out of the village for more than 2 months" in 1994, and by the same token, if they were listed in 1994 households, but reported as "moved out of the village for more than 2 months" in 2000. In addition, new members since 1984, but had moved out of village prior to 1994 as well as new members in 1994 but had moved out of the village prior to 2000 are also considered migrants. Children are considered "left behind" if they remain in the same household, but without either one or both of their parents – F, M, or FM. Furthermore, if 1994 non-migrant families/households with children under 15 became "moved households" in 2000, then they are considered to be FMC, i.e. father, mother and children migrate together.

Second analysis – families at the destination

Data manipulation was done to match parents and children in the databases, and identify whether the parents are migrants and at the destination with or without their children. However, not all migrants were followed up to their destinations. A migrant was followed up if he/she formerly lived in one of the 22 sample migrant villages and was reported to have moved to one of the following target destinations: Bangkok, Eastern Seaboard, Buriram provincial capital or Korat provincial capital (Rindfuss et al., 2006). These followed-up migrants were then contacted and interviewed to collect information

regarding details of their accommodation at the destination, information of other householders, their employment characteristics, migration experiences, residences of other family members, and so on. The parent migrants/families who reported to have their children living with them at the destination are considered as FMC, whereas parent migrants/families whose children are reported or recorded as living at the origin are considered as FM.

Descriptive Statistics

In this sub-section, descriptive statistics below show variation in the four outcomes of family migration types at the origin and in the two outcomes of family migration types at the destination pertaining to a selected number of factors.

Table 2: Descriptive statistics for a selected number of factors using information at the origin of families "choosing" different types of family migration

Family Migration Type					
	FMC	**F**	**M**	**FM**	**Total**
N	**45**	**253**	**21**	**41**	**360**
Family wealth					
1=poor	30	177	17	28	252
%	8.33	49.17	4.72	7.78	70
2=non poor	15	76	4	13	108
%	4.17	21.11	1.11	3.61	30
Total	45	253	21	41	360
%	12.5	70.28	5.83	11.39	100
Family System					
1=patrilocal	1	19	1	6	27
%	0.28	5.28	0.28	1.67	7.5
2=matrilocal	3	51	4	12	70
%	0.83	14.17	1.11	3.33	19.44
3=neolocal	41	183	16	23	263
%	11.39	50.83	4.44	6.39	73.06
Total	45	253	21	41	360
%	12.5	70.28	5.83	11.39	100

Family Migration Type					
	FMC	**F**	**M**	**FM**	**Total**
N	**45**	**253**	**21**	**41**	**360**
High-living-cost Destination					
0=No	23	96	6	13	138
%	6.39	26.67	1.67	3.61	38.33
1=Yes	22	157	15	28	222
%	6.11	43.61	4.17	7.78	61.67
Total	45	253	21	41	360
%	12.5	70.28	5.83	11.39	100
Father originally from this village					
0=No	22	120	8	24	174
%	6.11	33.33	2.22	6.67	48.33
1=Yes	23	133	13	17	186
%	6.39	36.94	3.61	4.72	51.67
Total	45	253	21	41	360
%	12.5	70.28	5.83	11.39	100
Mother originally from this village					
0=No	24	69	8	12	113
%	6.67	19.17	2.22	3.33	31.39
1=Yes	21	184	13	29	247
%	5.83	51.11	3.61	8.06	68.61
Total	45	253	21	41	360
%	12.5	70.28	5.83	11.39	100
Father's occupation					
1=agricultural	34	209	20	33	296
%	9.44	58.06	5.56	9.17	82.22
2=non-agri	11	44	1	8	64
%	3.06	12.22	0.28	2.22	17.78
Total	45	253	21	41	360
%	12.5	70.28	5.83	11.39	100
Mother's occupation					
1=agricultural	37	233	17	35	322
%	10.28	64.72	4.72	9.72	89.44
2=non-agri	8	20	4	6	38
%	2.22	5.56	1.11	1.67	10.56
Total	45	253	21	41	360
%	12.5	70.28	5.83	11.39	100
Children's ages					
1=(0-3 yrs)	6	70	4	5	85
%	1.67	19.44	1.11	1.39	23.61
2=(4-7 yrs)	16	68	5	15	104

Family Migration Type					
	FMC	**F**	**M**	**FM**	**Total**
N	**45**	**253**	**21**	**41**	**360**
%	4.44	18.89	1.39	4.17	28.89
3=(8-11 yrs)	11	78	8	12	109
%	3.06	21.67	2.22	3.33	30.28
4=(12-14 yrs)	12	37	4	9	62
%	3.33	10.28	1.11	2.5	17.22
Total	45	253	21	41	360
%	12.5	70.28	5.83	11.39	100

Variations across family types are evident in the majority of the variables presented here, and construction of some of these variables deserves mentioning. First of all, classification whether the destination to which migrants move are low- or high-living cost of destinations is based on official daily minimum wage levels by provinces in 1997-2000[14]. These minimum wage rates are intended to reflect the costs of living in respective provinces. Secondly, since no data on family income was collected, family wealth is measured using family assets, i.e. whether families have fridges, televisions, motorbikes, or walking tractors. Thirdly, children's ages are a categorical variable. If the family has more than one child, it is not the specific ages of all children that are of interest, but the age group in which each child is. This variable also captures the stage of family life cycle. Lastly, one would consider distance to be among the factors affecting the θ cost of separation, however, the geographic reason has made this option untenable. The distance from Nang Rong district to 3 major industrial hubs in Thailand are approximately of equal length, and does not generate much variation as a variable to be included.

[14] Three daily minimum wage rates (162, 140, and 130 Baht per day – 48 Baht: 1 Euro) were established in 1997-2000 for 3 groups of provinces (Thailand's Ministry of Labour and Social Welfare, 1997). If the destination of migrants is among one of the provinces in the group with the highest daily minimum wage rates, then the destination is considered as a high-living-cost destination.

Table 3: Descriptive statistics for a selected number of factors using information at the destination of families "choosing" family migration types FM or FMC

Family Migration Type			
	FM	**FMC**	**Total**
N	**212**	**200**	**412**
Relative at destination			
0=No	179	158	337
%	43.45	38.35	81.8
1=Yes	33	42	75
%	8.01	10.19	18.2
Total	212	200	412
%	51.46	48.54	100
Wife employment			
0=Umemployed	16	71	87
%	3.88	17.23	21.12
1=Factory/const'n workers	101	49	150
%	24.51	11.89	36.41
2=Others	95	80	175
%	23.06	19.42	42.48
Total	212	200	412
%	51.46	48.54	100
Husband employment			
1=Factory/const'n workers	94	61	155
%	22.82	14.81	37.62
2=Others	118	139	257
%	28.64	33.74	62.38
Total	212	200	412
%	51.46	48.54	100
Residence type at destination			
2=Construction site	28	20	48
%	6.8	4.85	11.65
3=Rented room	114	74	188
%	27.67	17.96	45.63
4=Workplace	10	13	23
%	2.43	3.16	5.58
5=House or apartment	60	93	153
%	14.56	22.57	37.14
Total	212	200	412
%	51.46	48.54	100
Number of children			
1	121	147	268

Family Migration Type			
	FM	FMC	Total
%	29.37	35.68	65.05
2	64	46	110
%	15.53	11.17	26.7
3	21	7	28
%	5.1	1.7	6.8
4	6	0	6
%	1.46	0	1.46
Total	212	200	412
%	51.46	48.54	100
"Testwater"			
0=No	153	148	301
%	37.14	35.92	73.06
1=Yes	59	52	111
%	14.32	12.62	26.94
Total	212	200	412
%	51.46	48.54	100
High-living-cost destination			
0=No	77	97	174
%	18.69	23.54	42.23
1=Yes	135	103	238
%	32.77	25	57.77
Total	212	200	412
%	51.46	48.54	100

The factors under consideration are drawn directly from the literature review in Section 2, including i) whether migrant families live with their relatives at the destination, ii) employment of the mother/wife – unemployed, worked in construction industry or a factory, or others, iii) employment of the father/husband - worked in construction industry or a factory, or others, iv) types of residence at destination, v) number of children, vi) “testwater” or not, and vii) whether destination has high costs of living. Other variables which are not displayed in the descriptive statistics but will be included in the regression are husband’s and wife’s educational levels, their ages, and age of the youngest child to indicate the stage of family life cycle in which the family is.

4. Methodology

The choice of family migration types to be analysed both at the origin and destination can be motivated by a random utility model.

Four alternatives – modelling at the origin

A random utility model for four different alternatives to be analysed at the origin can be written as:

$$U_{ij} = \mathbf{X}_i'\beta_j + \epsilon_{ij},\ where\ j = 0,\ 1,\ 2,\ 3$$

and X_i is a vector of parents' and family's characteristics, capturing the interplay of earning potential ($R_G - R_P$) and t, and influencing θ coefficient cost of separation, as well as whether the migrant parents migrate to a high-living-cost destination; β_j is a vector of coefficients of the respective variables, contributing to j alternative; and ε_{ij} represents the disturbance terms. The choice set in this model comprises four following alternatives FMC, F, M, and FM:

The family *i* chooses alternative *j* if and only if $U_{ij} > U_{ik}$ for all $j \neq k$. Hence, the statistical model is driven by the probability that choice *j* is made, that is

$$Prob(U_{ij} > U_{ik}),\ for\ all\ other\ j \neq k$$

However, expected utility is not observed. Rather, it is the realization of the decision that is observed. Consequently, the model is made operational by a particular choice of distribution for the disturbances. In this study, with the choice set of more than 2

alternatives Multinomial Logit is used to perform the analysis. Let Y_i be a random variable that indicates the choice made, then the probability of choice j being made is:

$$\text{Prob}(Y_i = j|X_i) = \frac{exp(X_i'\beta_j)}{\sum_{j=0}^{3} exp(X_i'\beta_k)}$$

In order to remove an indeterminacy in the model[15], a normalisation, i.e. setting β_0=0, is required (Greene, 2003). Thus,

$$\text{Prob}(Y_i = j|X_i) = P_{ij} = \frac{exp(X_i'\beta_j)}{1+\sum_{k=1}^{3} exp(X_i'\beta_k)} \; where \; j = 0,\ 1,\ 2,\ 3 \;\; and \; \beta_0 = 0$$

The model can now be estimated using maximum likelihood:

$$ln\ L = \sum_{i=1}^{n} \sum_{j=0}^{3} d_{ij}\ ln\ Prob(Y_i = j|X_i)$$

where d_{ij} =1 if family i chooses an alternative j, and log-odds ratios can also be computed. It is important to note that multinomial logit requires the independence of irrelevant alternatives (IIA) assumption to hold, and since this paper had made it explicit that it only considers a subset of all alternatives in family migration types and not amongst all possible alternatives[16], the IIA assumption in this case is, thus, valid (Train, 2003)[17].

[15] It is not possible to estimate all of the constants and betas, because adding any algebraic value to each of the constants or to each of the parameters does not cause any change in the probabilities of any of the alternatives. This phenomenon is common to all utility-based choice models. The solution to this problem is to set the preference related parameters for one alternative, called the base or reference alternative, to zero and to re-interpret the remaining parameters to represent preference differences relative to the base alternative.

[16] Other possible alternatives include cases where i) children move to a new household to stay with other extended family members when their parents migrate, ii) children of the same parents are split up and one or more might migrate with either or both parents while others get left behind.

[17] Hausman tests for IIA assumption were also performed. However, the results were inconclusive. This is not unexpected since Cheng & Long (2005) as well as Long & Freese (2006) pointed out that such tests have poor size properties and not useful for assessing violations of IIA property.

Two alternatives – modelling at the origin

A random utility model for two different alternatives to be analysed at the destination can be written as:

$$U^{FMC} = X'\beta_{FMC} + \epsilon_{FMC} \text{ and } U^{FM} = X'\beta_{FM} + \epsilon_{FM}$$

Let Y=1 denote families making the choice FMC, and because it is not feasible to identify both parameters (β_{FMC},β_{FM}), an implicit transformation is necessary.

$$\text{Prob}(\text{Y}=1)=\text{Prob}[\text{U}^{FMC} > U^{FM}]$$

$$\text{Prob}(Y = 1) = \text{Prob}[X'\beta_{FMC} + \epsilon_{FMC} - X'\beta_{FM} - \epsilon_{FM} > 0|X]$$

$$\text{Prob}(Y = 1) = \text{Prob}[X'(\beta_{FMC} - \beta_{FM}) + \epsilon_{FMC} - \epsilon_{FM} > 0|X]$$

$$\text{Prob}(Y = 1) = \text{Prob}[X'\beta^{*} + \epsilon^{*} > 0|X],$$

where β^{*}= $\beta_{FMC} - \beta_{FM}$ and ϵ^{*}= $\epsilon_{FMC} - \epsilon_{FM}$ or unobservable disturbances, and *X'* is a vector of parents' and family's characteristics. The model is then made operational by a particular choice of distribution for the disturbances. In this case, the choice is made for the logistic distribution to be used, giving rise to the logit model[18]. Thus,

$$\text{Prob}(Y = 1) = \text{Prob}[X'\beta^{*} + \epsilon^{*} > 0|X] = \Lambda(X'\beta^{*}).$$

Λ(.) represents the cumulative logistic distribution. The model is then estimated by the method of maximum likelihood.

[18] Many applications and analyses also make use of the normal distribution which gives rise to the probit model. The choice of logistic distribution is simply for a reason of mathematical convenience(Greene, 2003).

5. Results and findings

Regression results – first analysis; at origin

The Nang Rong data of the second (1994) and third (2000) waves were pooled to perform a Multinomial Logit regression, with clusters of families/households. The variables include factors capturing the interplay of earning potential ($R_G - R_P$) and t – i.e. migrants' occupations, education and family wealth, and factors influencing θ coefficient cost of separation, as well as a dummy variable to capture whether the migrant parents have migrated to a high-living-cost destination, along with two interaction terms for parents' education and occupation as well as a year dummy.

The regression results below show the raw coefficients and odds ratios with family migration type F as a base category. However, since there are multiple equations and multiple comparisons in a multinomial regression, presenting the results in this fashion does not necessarily provide a useful way of interpreting them.

Table 4: Pooled Multinomial Logit regression results for family migration types (F omitted)

Variables	FMC		M		FM	
	Raw coeficients	Odds raito	Raw coeficients	Odds raito	Raw coeficients	Odds raito
Household size	-0.301**	0.740**	0.151	1.163	-0.192*	0.825*
Family wealth: non-poor	0.141	1.151	-0.107	0.898	-0.0736	0.929
Family system: Matrilocal	0.123	1.13	1.351	3.862	-0.785	0.456
Family system: Neolocal	-2.031	0.131	0.593	1.81	-1.11	0.33
High-living-cost destination	-0.192	0.826	-0.0652	0.937	-0.167	0.847
Father from this village	-0.645*	0.525*	-0.22	0.803	-0.905	0.405
Mother from this village	-1.333****	0.264****	-0.789	0.454	-0.188	0.829
Father's # of circular migration past 12 mnts	-0.0937	0.911	-1.012**	0.364**	-0.363	0.696
Mother's # of circular migration past 12 mnts	0.376*	1.456*	1.195****	3.302****	1.278****	3.590****
Father's occupation: non-agri	0.349	1.418	-2.032	0.131	-1.663	0.189
Mother's occupation: non-agri	-0.811	0.444	1.518	4.563	2.423*	11.28*
Children ages: 3-7 yrs	1.018	2.769	-0.255	0.775	1.216*	3.374*
Children ages: 8-11 yrs	0.429*	1.536*	-0.308	0.735	0.819	2.267
Children ages: 12-14 yrs	1.658**	5.246**	-0.696	0.499	1.367*	3.923*
Age of HH Head	-0.0731*	0.93*	-0.0381*	0.963*	0.0594***	1.061***
Ratio of children under 15 over total # of children	-0.438	0.645	-0.432	0.649	-1.588	0.204
Father's yrs of education	0.0674	1.07	0.486	1.625	-0.589**	0.555**
Mother's yrs of education	-0.476	0.621	-0.193	0.825	0.0524	1.054
Father*Mother yrs of education	-0.00951	0.991	-0.031	0.969	0.0736*	1.076*
Year 1994	6.109*	450.1*	-1.237**	0.290**	-0.844	0.43
Mother's edducation*occupation	0.327	1.387	0.498	1.645	-0.201	0.818
Father's edducation*occupation	-0.0997	0.905	-0.650**	0.522**	0.161	1.175
N	360					
Percent correctly predicted	73.46					
Pseudo R-sq	0.51					
Wald chi-square statistics	382.28					
Log-likelihood value	-241.67					

*p<0.10, ** p<0.05, *** p<0.01, **** p<0.001

In this regard, Long & Freese (2006) has programmed a very useful command – *listcoef* – for Stata use, and it compares coefficients, odds ratios, and p-values of different pairs of outcomes. Table 5 lists all the pairs of outcomes which are statistically significant at 10% level. For example, using the variable *hhsize*, the results for *hhsize* show that, *ceteris paribus*, a large household size makes a family more likely to choose F over FMC,

implicating that the cost of separation for the father is small when the mother and children are left behind with a large household size with other extended family members helping the mother to look after the children and helping with other tasks while the father is away.

Table 5: List different pairs of outcomes using *listcoef* command

Odds comparing different pairs of outcomes	b	z	P>z	e^b	e^bStdX
Household size					
F over FMC	0.30082	2.161	0.031	1.351	2.178
Matrilocal					
M over FM	2.13632	1.769	0.077	8.4682	2.3361
F over FM	0.78501	1.697	0.090	2.1924	1.3659
Neolocal					
M over FM	1.70343	2.062	0.039	5.4928	2.1343
F over FM	1.10996	2.162	0.031	3.0342	1.6389
Father from this village					
F over FMC	0.64488	1.746	0.081	1.9058	1.3809
F over FM	0.90466	2.582	0.010	2.4711	1.5726
Mother from this village					
FM over FMC	1.14572	2.219	0.026	3.1447	1.7045
F over FMC	1.33328	3.553	0.000	3.7935	1.8599
F over M	0.78869	1.735	0.083	2.2005	1.4435
Children ages: 3-7 yrs					
FMC over F	1.01849	1.734	0.083	2.769	1.5889
Children ages: 8-11 yrs					
FM over F	0.81858	37.506	0.000	2.2673	1.4568
Children ages: 12-14 yrs					
FMC over M	2.35315	3.42	0.001	10.5186	2.4393
FMC over F	1.65751	2.413	0.016	5.2462	1.874
FM over M	2.0625	1.894	0.058	7.8656	2.1849
F over M	0.69564	30.538	0.000	2.005	1.3016
Father's occupation: non-agri					
F over FM	1.66346	2.276	0.023	5.2775	1.8932
Mother's occupation: non-agri					
M over F	1.51802	2.03	0.042	4.5632	1.5972
FM over FMC	3.23386	1.9	0.057	25.3773	2.7115
FM over F	2.4227	3.075	0.002	11.2762	2.1113
Father's # of circular migration past 12 mnts					

FMC over M	0.91791	2.544	0.011	2.5041	5.5008
F over M	1.01164	2.938	0.003	2.7501	6.5467
Mother's # of circular migration past 12 mnts					
FMC over F	0.37574	1.771	0.077	1.4561	1.4463
Father's yrs of education					
F over FM	0.58921	13.972	0.000	1.8026	3.0915
Mother's yrs of education					
F over M	0.1926	2.596	0.009	1.2124	1.3345
Age of HH Head					
F over FMC	0.07309	1.935	0.053	1.0758	2.7094
Ratio of children under 15 over total # of children					
M over FM	1.15635	1.808	0.071	3.1783	1.1975
F over FM	1.58849	3.397	0.001	4.8964	1.2809
Year 1994					
FMC over M	7.34609	2.265	0.023	1550.124	15.3213
FMC over FM	6.95385	2.183	0.029	1047.179	13.2437
FMC over F	6.10938	1.928	0.054	450.0595	9.6772
F over M	1.23671	2.31	0.021	3.4443	1.5832
F over FM	0.84448	3.745	0.000	2.3268	1.3685

Main findings - first analysis; at origin

By viewing the regression results in such fashion, interesting findings in relation to determinants of family migration types are revealed.

Household size

A large household size makes a family more likely to choose F over FMC. As opposed to migrating with the entire family (FMC), the husband can rely more readily on other extended family members to help the wife taking care of children and with other tasks while the migrant husband is away earning family income.

Family system

Family system matters. Compared with patrilocal families, matrilocal families are more likely to choose M over FM or F over FM. The fact that matrilocal families are more

likely to have only one of the spouses migrating might be due to the logic of land inheritance in the Northeast of Thailand which favours daughters as opposed to sons(Yoddumnern-Attig, 1992). This could instigate the need for one of the spouses to look after or work on the land while the other one is migrating for work in urban areas. In addition, when compared with patrilocal families, neolocal families are more likely to choose F over FM or M over FM, indicating that option FM is simply not a choice for them as there would be no-one to look after children. In other words, the cost of separation would be too high for neolocal families to choose FM.

Parent migrant originally from this village

Social ties at the origin help ease the pain of separation. If the father is originally from the village where the children get left behind, the family is more likely to choose F over FMC and F over FM. This is also in line with Miller (1976)'s suggestion that the proximity of relatives outside the household discourages out-migration of the entire families, possibly because the father's ties with the community could help reassure him that his spouse and children would get help from friends and relatives while he is away. In addition, if the mother is originally from the village, the family is more likely to choose i) FM over FMC or ii) F over FMC or iii) F over M. Again, Miller (1976)'s suggestion is evident here. In addition, the likelihood of families to choose F over M if the wife is originally from this village could also explained by wife's attachment to social ties to the origin, which could make her less willing to migrate(Quinlan, 2005; Root & De Jong, 1991).

Children's ages and family life cycle stages

Children's ages also play an important role in determining different family migration types. Compared with families with children aged 0-3, families with children aged 3-7 are more likely to choose FMC over F. This could be due to the common practice of living apart during early stages of marriage in the Northeast of Thailand and preference to have children cared for in rural villages before reaching the school age (Chamratrithirong et al., 1988; Piotrowski, 2009; Richter, 1996).

Furthermore, families with children aged 8-11, compared with 0-3, are more likely to choose FM over F, suggesting that the couple might want to maximise their earning potential by both migrating to work and leave the children who are relatively more grown up behind in order to maximize their working hours and earnings.

In addition, families with children aged 12-14 (as compared with 0-3), which is at a later stage of family life cycle, are more likely to choose i) FMC over M or ii) FMC over F or iii) FM over M or iv) F over M.

In relation to choices i) and ii), families with children aged 12-14 are considered to be at a later stage of family life cycle and as such the parents might have accumulated sufficient savings which have enabled them to afford living costs of the whole family at the destination. Another explanation as to why children aged 12-14 are more likely to be with the parents might be related to availability of secondary schools in urban areas. Comparing the number of students in the official secondary level age group between 12-17 years old and the number of secondary classrooms available by province, it becomes

evident that more classrooms are needed (World Bank, 2008). To this extent, greater availability of primary schools (as compared with secondary schools) in rural ares might also help explain why children aged 8-11 are more likely to be left behind by their parents in rural villages.

Also, for families with children aged 12-14 (as compared with 0-3), they are also more likely to choose FM over M or F over M, i.e. choices iii) and iv) mentioned above. Such family migration patterns at this later stage of family life cycle could reflect i) teenage children discontinuing secondary schooling and providing extra labour allowing the choice of FM over M, and ii) need for elderly care arrangements with "skipped-generation" households where aging grandparents are looked after either by married children or by grandchildren, leading to either choice of FM over M (with grandchildren looking after grandparents) or F over M (with both married children and grandchildren looking after the elderly)[19].

Father's and mother's education

Furthermore, father's and mother's occupations (agricultural or non-agricultural sector) which act as proxies in capturing the earning differentials (R_G - R_P), gender division of labour, and *ex ante* perceived duration of migration also show significant impact on families choosing family migration types. For families with fathers working in non-agricultural sector, they are more likely to choose F over FM. Such a choice is an

[19] In the former, evidence showed that Thailand in the 1980s and 1990s, Thailand's labor market participation rates of children aged 10-14 years were high (14 percent) compared with other Asian countries, and also rural-urban grade completion gap in Thailand was about 25 percent (World Bank, 2008), making it conceivable that FM over M could have been chosen because of this extra labour of teenage children. In the latter, evidence also showed that it is relatively common in Thailand to see co-residence of elderly parents with married children and skipped-generation household where the elderly lived with grandchildren (Hashimoto, 1991).

illustration of human capital, gender division of labour, household diversification concepts in family migration. However, what is more revealing is that for families with mothers working in non-agricultural sector, *ceteris paribus*, they are more likely to choose i) M over F, ii) FM over FMC or iii) FM over F. For the choice of M over F, this again illustrates human capital, gender division of labour, household diversification concepts in family migration, but this time with the changing gender roles as dictated by the feminisation of labour market. In the case of choosing FM over FMC or FM over F, the availability of employment opportunities for women and the need/drive for higher income/consumption for the family might induce many families to take on a two-earner family model. However, as cited in Section 2, lack of quality, affordable child care facilities at the destination could also explain why the children tend to get left behind when both the father and mother decide to migrate.

Propensity to Migrate

The choice over family migration type is also dictated by the parents' propensity to migrate. Measured as a number of circular migration in the past 12 months prior to their actual migratory trips, families with fathers' high number of circular migrations are more likely to choose F over M or FMC over M. The former (F over M) seems to suggest that propensity to migrate plays a role in reducing father's cost of separation in relation to that of mother's. It could also be that fathers' cost of separation is high, but his high propensity to migrate could reflect his difficulty to find jobs in the origin communities, making it necessary for him to migrate. In the latter case (FMC over M), the husband's high propensity to migrate and the need to migrate could result in the spouse and children becoming tied movers as suggested by Mincer (1978). As for families with mother's high

propensity to migrate, similar reasoning also applies and they are more likely to choose FMC over F.

Father/husband's and mother/wife's education

With regard to levels of education, relatively high education of the husband dictates the patterns of family migration while high education of the wife does not seem to have any impact. Families with high husband's education are more likely to choose F over FM, suggesting that with his education and earning capacity, families might want to maximize his earnings and accumulate savings by leaving the wife and children behind (F over FM). However, families with high wife's education are still more likely to choose F over M, demonstrating strong social norms in gender division of labour, or possibly illustrative of Thai marriage market that women tend not to marry down (Guest & Tan, 1994) and the division of labour as such dictates the family migration pattern with husband commands higher skills and qualifications to earn higher income in the market.

Age of household head

Moreover, the evidence suggests that an ageing society can have determining effects in family migration choice also. Families/households with an older head of household are more likely to choose F over FMC. As discussed above, in Thailand households with an elderly (aged 60 or over) household head are mainly extended families (Chayovan, 1995). While the presence of extended family members can help facilitate child care arrangement when parents migrate, the presence of elderly, extended family members, in this case, leads the family to leave the wife and children behind to look after elderly family members (Hashimoto, 1991).

Ratio of children aged under 15 left behind over total number of children

In addition, a larger number of children to be left behind increases the cost of separation. For families with more children to be left behind, they are more likely to choose M over FM or F over FM, indicating the need for child care at the origin and the need to avoid high costs of living at the destination if migrating with the whole family.

Year 1994

There also seems to be a structural change in the economy or labour market which influenced the patterns of family migration in 1994 and 2000. Although, this crude suggestion might be rather far-fetched given the analysis at hand, it is evident that families in 1994 were more likely to choose FMC over F, M or FM. Furthermore, they are also more likely to choose F over M or F over FM. While Bangkok-based enterprises and financial institutions were most affected by the 1997 financial crisis, the Northeast – with its stock and movement of labour - was the region hardest hit by the crisis in terms of employment (World Bank and NESDB, 2005). More importantly, the construction industry and service industry experienced a total collapse and did not recover fully until years after 2000 (World Bank and NESDB, 2005). Thus, such fundamental change might have explained much of the adjustment mechanism reflected in the family migration patterns in 1994 and 2000 whereby jobs were more available and possibly with free housing (e.g. in construction industry), inducing preference of F (where construction work might have been coupled with low seasons in farming) or FMC over other types of family migration.

Cost of living at destination

Lastly, it is interesting to note that migrating to high-living-cost destinations is not a significant determinant (at 10% level) when migrant parents making decisions on family migration types. However, before making such conclusion, it is worth noting that the analysis so far has used only information of migrating families at the *origin*, and not information at the destination. Could it be that job opportunities are mostly concentrated in big cities where costs of living are relatively high, and parent migrants had little choice but to take up these jobs located in the cities? Thus, one could speculate that parent migrants might take certain steps/measures or make some arrangements to reduce costs of living at the destination, enabling them to migrate for jobs in those cities with high costs of living. Whether this is the case is the subject of the following section.

Regression results – second analysis; at destination

The pooled two waves (1994 and 2000) of Nang Rong Projects were used and logit regression was performed on the second analysis. Since the factors at the destination which seem to enter parents' decisions making a family migration choice appear to evolve around concern on child care responsibility/expenses as well as on type of accommodation, etc. which could make the cost of living at destination less or more expes\nsive, the dependent variable in this second analysis will, thus, take the form of a binary variable, looking specifically at factors influencing families to choose between FM and FMC. This second analysis should shed light on living arrangements of these two types of family migration at destinations and help provide evidence as to whether certain measures were taken or were significant factors enabling some families to migrate with

their children and spouse when the destinations have high costs of living, and ultimately help provide better understanding on different types of family migration.

To capture the year effects, a pooled logit regression is run with a year dummy. In addition, interaction terms between the year dummy and "relative" and "residence" variables are included in this pooled regression as a strategy to eliminate the confounding effects caused by circumstances in a particular year on these variables. Given the difference of 6 years between 1994 to 2000, and that the Asian financial crisis actually took place in 1997, there is a strong case to believe that something structural happened during 1994 and 2000. Table 6 below shows the pooled regression results (raw coefficients and odds ratios) with the year dummy and the interaction terms

Table 6: Pooled logit regression results for family migration types FMC and FM

FM Vs FMC	Raw coefficients	Odds ratio
Living with relatives	1.078**	2.940**
Wife employment		
factory/construction workers	-2.201***	0.111***
others	-1.634***	0.195***
Husband employment		
others (i.e. not factory or construction workers)	-0.052	0.949
Residence types		
rented room	-0.141	0.869
live in workplace	1.696	5.455
house or spartment	0.101	1.106
Number of children	-0.962***	0.382***
Testwater	-0.119	0.888
Age of youngest child	-0.0497	0.952
Husband's age	0.0358	1.036
Wife's age	0.00623	1.006
Husband's education	0.0254	1.026
Wife education	0.0499	1.051
High-living-cost destination	-0.619	0.539
Year 1994	0.314	1.369

Living with relatives* year 1994	-2.039**	0.130**
Rented room*year 1994	-0.303	0.738
Live in workplace*year 1994	-1.654	0.191
House or apartment*year1994	1.454	4.282
High-living-cost destination*year 1994	0.554	1.74
N		412
Percent correctly predicted		73.06
Log-likelihood value		-223.70
Pseudo R-Squared		0.22

* p<0.05, ** p<0.01, *** p<0.001

Main findings - second analysis; at destination

The regression results show living with relatives, wife employment, and number of children as significant factors (at 5% level) determining migrant parents' decisions whether to migrate with (FMC) or without (FM) children. More specifically, migrant parents living with relatives at destinations are more likely to migrate with children. Also, *ceteris paribus*, bringing children to destinations comes at an expense of wife's employment – that is, relative to being a housewife, families with wives working at destinations are less likely to migrate with children, and the effect is intensified if wives work as factory or construction workers where inflexible working hours and unfavourable working conditions for mothers were reported (Chamratrithirong et al., 1995; Richter, 1996). In addition, the number of children is also a significant factor for parents deciding whether to migrate with or without children. This also resonates with a number of responses cited in Richter (1996) where she examined reasons for parents and children living separately as a childcare strategy. More importantly, it is evident that a high-living-cost destination is not a statistically significant determinant in families' decisions to choose between FMC and FM. As hypothesised, this is because job opportunities are mostly concentrated in big cities where costs of living are higher than the rural area of the origin, and parent migrants had little choice but to take up those jobs

located in those cities. Instead of turning down jobs and opt for non-migration, families wanting to be together (FMC) at destinations are more likely to have to internalise the high living costs through arrangements such as living with relatives or sacrificing wife's employment.

6. Conclusions

This study makes a distinction among four types of family migration: i) father, mother and children migrate together (FMC), ii) father migrates alone (F), iii) mother migrates alone (M), and iv) both father and mother migrate, but leave their children behind (FM), and assumes that parents are altruistic and separation is painful. Conjugal separation and parent-child separation in family migration can be unimaginable to some people/parents in developed countries, especially when both parents migrate and leave their children behind. Framed in a context of rural Thailand where wage employment opportunities are limited, this study has gained some insights into the determinants of family migration types and the cost of separation in family migration, and shown that different characteristics of parents, children, and household/family's structure all play a part in enabling or inhibiting a family to choose a certain type of family migration. Put it more concretely, family migration types reflect the family's occupational status and availability of social ties/support at the origin, and are integral with family life cycle stages.

The "strategy" to select a particular type of family migration also involves a trade-off between the drive for higher income and consumption from migration and resulting separation that follows. Stark & Fan (2007) has shown that such trade-off centres on weighing up the cost of living at the destination of the whole family and the cost of

separation if leaving family members behind. This the study has found that factors which influence parents' cost of separation is more of a driving force in determining the type of family migration than the cost of living at the destination. Based on the empirical evidence, it is not to say that living costs at destinations do not affect families' family migration strategy, but more significantly families wanting to be together (FMC) at destinations are more likely to have to internalise the high living costs through arrangements such as living with relatives or sacrificing wife's employment.

The insights from this research provide strong policy implications on i) regional inequalities which lead to concentration of jobs in a few cities or industrial hubs, ii) housing policy/subsidies in urban areas, iii) quality, affordable child care facilities, and iv) impact of female labour force participation on overall economic development.

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