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Gendered outcomes of parental migration on Thai youth's transitions to adulthood: a longitudinal perspective

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ABSTRACT

The scale of migration has increased exponentially in recent decades in much of Southeast Asia. Emerging longitudinal evidence suggests lasting impacts of parental migration on their children's education and well-being. However, little is known about how parental migration during childhood shapes youth's transition to adulthood. This study thus used two waves of survey data collected in 2008–2010 and 2019 from households ($N = 872$) in Thailand to assess 1) the long-term impacts of parental migration on young adults' labour activities, marriage, and childbearing, and 2) how these impacts vary based on which parent(s) migrated and whether they are international or internal migrants. We found that maternal/biparental migration, compared with paternal migration, more significantly affected young people's labour activities and age at marriage. Moreover, these effects appear to be more pronounced for males than females. Additionally, parental migration's impacts on youths' transitional outcomes vary by internal or international migration of their parents. These results highlight the gender-specific and context-dependent nature of the long-term implications of parental migration. This study thus provides new empirical evidence to advance the understanding of the diverse patterns of transitions among Asian youth in the context of parental migration.

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Parental migration; left-behind children; youth transitions; Thailand; longitudinal data

Introduction

An extensive body of literature has explored the impacts of parental migration on children by investigating outcomes ranging from children's education to their nutrition, victimisation, and well-being (Binci and Giannelli 2016; Chen et al. 2020; Fellmeth et al. 2018; Fu et al. 2023; Vanore, Mazzucato, and Siegel 2015). The implications of parental migration for children's development vary by children's life course (Wassink and Viera 2021; Zhang, Bécares, and Chandola 2015), requiring a longitudinal perspective to

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examine the potential lasting impacts of children's experiences over children's different developmental stages. Recent literature has increasingly adopted longitudinal designs and findings suggest lasting impacts of parental migration on Mexican children's improved educational attainment (Wassink and Viera 2021) and mixed results on the nutrition of Chinese children (de Brauw and Mu 2011; Zhang, Bécares, and Chandola 2015). Parental migration negatively affects the long-term psychological well-being of Filipino children in specific conditions (Fu et al. 2023), but this may not generalise to children in Ghana, where kinship caregiving is commonly practiced (Cebotari, Mazzucato, and Appiah 2018). While increasing longitudinal studies have offered valuable insights into the lasting impacts of parental migration on children during their childhood or adolescence, there has been limited exploration of how parental migration may influence children's transition to young adulthood (Van Hook and Glick 2020). The scarcity of research in this area can be attributed, at least in part, to the challenges associated with obtaining longitudinal data that captures changes in parental migration status and simultaneously tracking individuals' developmental trajectories. This study capitalised on the advantages of using longitudinal data from Thailand to investigate the effects of parental labour migration during childhood on their children's transition to adulthood.

Understanding how parental migration shapes youth transition to adulthood is particularly important in Asia, as it hosts around 60% of the world's youth population (UN DESAP 2019). Young adults in Asia experience young adulthood differently from those in Western contexts due to certain family ideologies in the region (Park 2016). For example, coresidence with parents for unmarried youth is prevalent, cohabitation remains uncommon in most countries, and nonmarital childbearing is not socially desirable (Yeung and Alipio 2013; Yi 2015). In recent decades, the rapid urbanisation and economic growth witnessed in Asia have led to increasingly complex paths to adulthood, influenced by factors such as higher educational attainment, delayed marriage, and declining fertility rates (Yeung 2022). These critical decisions made during the transition to adulthood are context-specific, deeply embedded within family and social systems.

Migration is a crucial contextual component to consider in youth transitions in Asia. In 2020, almost 115 million Asians were international migrants not living in their country of origin, representing 41% of the total international migration stock (UN DESA 2020). Most migrants to and from Asia are temporary labour migrant workers (UN ESCAP 2020). Internal migration within national borders has also created a large floating population in Asia, with countries like China and several Southeast Asian nations experiencing this phenomenon prominently (Bell et al. 2020). These migration patterns have profound impacts on diverse aspects of the lives of migrant workers and their families who stay behind. Research has suggested that parental migration can have mixed impacts on children's education and psychosocial health, depending on factors such as the type of migration (internal or international migration), gender roles, and the resources available to sustain family functioning (Fellmeth et al. 2018; Vanore et al. 2021). The implications of parental migration for children's development also vary by children's life course and the timing of parental migration (Liang and Sun 2020; Zhang, Bécares, and Chandola 2015). The impacts of parental migration on individuals during the transition from adolescence to young adulthood are often overlooked, despite extensive research on its effects during childhood or adolescence.

This study contributes to the literature in three ways. First, it improves the evidence base by using longitudinal datasets for investigating the long-term implications of

parental migration on their children, exploring how parental absence in early childhood impacts transitions to young adulthood. Second, it provides a comparative analysis of internal and international migration, providing insights into how these different forms of parental migration influence children. Third, it investigates the influence of parental migration on both sons and daughters. This gender-specific understanding holds particular importance, recognising the significant role of gender norms in Asia. Empirically, this research has policy implications for supporting smooth transitions for youth in Southeast Asia, where migration is prevalent.

Literature review

Parental migration and the transition to adulthood

There has been increasing interest in the impact of parental migration on their children left behind, emphasising family's economic and emotional connections despite physical separation. However, the literature has overlooked potential variations in the impacts of parental migration across different developmental stages. The transition to adulthood is a critical period characterised by the pursuit of economic and psychological autonomy as well as significant decision-making processes that have long-term implications on future life trajectories (Arnett 2000). Therefore, this study examined how parental migration affects young adults' critical institutionalised transitions, including employment, marriage, and parenthood (Axxe, Hayford, and Eggum 2022).

Studies have suggested that parental migration, even if parents have returned, affects the labour activities of family members left behind in the community of origin (Halpern-Manners 2011; Viera 2020). This influence on the labour force participation of young adults is manifested through multiple mechanisms. First, migrant parents can substantially shape their children's educational trajectories and occupational mobility through financial and human capital transfers (Viera 2020). For example, studies in Latin America found that remittances sent by migrant parents could promote youth educational attainment and possibly delay their entry into the workforce (Amuedo-Dorantes and Pozo 2010; Wassink and Viera 2021). However, the positive association between parental migration and children's educational opportunities is not universal across all communities of origin. Parental migration was associated with reduced spending on children's education among economically deprived households in Cambodia (Chea and Wongboonsin 2020) as well as lower school retention in other heavy migrant-sending communities (HalpernManners 2011). Studies from China found that parental migration experienced during childhood had long-lasting detrimental effects on the employment stability and wages of young adults (Liu et al. 2020; Wang et al. 2021). Second, parental migration changes the labour supply among family members left behind. Left-behind adolescents may be required to participate more actively in income-generating activities due to labour shortage in the household (Skoufias and Parker 2006). Furthermore, in areas with high out-migration rates, second-generation migrants often anticipate chain migration to provide continuous economic support for their families as their parents do (Durand and Massey 2010). Third, variations in youth's views and experiences of parental migration influence how they assess its benefits and costs during their own migration decisions. Some young people embrace

labour migration as a means to provide reciprocal care through remittance in the same manner as their migrant parents (Coe 2012; Fan and Chen 2014), while others resist following their migrant parents' steps due to the emotional cost of parent–child separation while growing up (Somaiah and Yeoh 2021). Consequently, it is challenging to generalise the impacts of parental migration given the diverse benefits and costs experienced by migrant families across different contexts.

Another major marker of the transition to adulthood is marriage. Marriage behaviours have profound implications for young people's well-being (Yeung and Mu 2020). Studies suggest a correlation between parental and individual migration experiences with respect to marital choices and timing among young individuals (Jampaklay 2006a; Mu and Yeung 2020; Utomo et al. 2013). The existing literature concludes the crucial role of family socioeconomic status on individuals' transition to marriage. Parental migration may have gendered impacts on their children's marital timing, depending on the socioeconomic resources they can provide and the local community norms regarding marriage preparations. Chae, Hayford, and Agadjanian (2016) found that father migration reduced their daughters' chances of early marriage in rural Mozambique, as remittances could substitute for bride wealth. Alternatively, parents' potential higher socioeconomic status following migration may facilitate the economic resources required for their children's marriage. For example, Chinese youth, particularly sons, will be more attractive in the marriage market if their parents support their earlier household establishment (Tian 2013). Together with money, migrants also export social remittances, in the form of norms and practices to their communities of origin (Levitt and Lamba-Nieves 2011). Migrant parents' social remittance can transform youngsters' values and decisions regarding marriage, potentially challenging traditional gender roles. A study conducted in Africa revealed that migrant girls exerted influences on marital traditions and expectations for non-migrant girls in their hometowns (Engebretsen et al. 2020). Furthermore, studies have revealed that long-term separation from migrant parents posed risks to children's secure attachment and specific aspects of their personalities (Suárez-Orozco, Bang, and Kim 2010; Zheng et al. 2022). Attachment styles and personality have been recognised as influential factors in shaping individuals' marital beliefs, including the expected timing of marriage (Shahi et al. 2023). Whether and how parental migration interplays with other socioeconomic factors to shape young adults' marital timing remains unclear.

Most studies of childbearing in the context of migration have examined the link between youth migration and fertility outcomes. For example, youth migration in Kenya has been linked to increased sexual activities and higher premarital pregnancy risk (Luke et al. 2012). Family instability experienced by migrant families may increase young people's likelihood of early sexual activity, consequently accelerating early childbearing risks (Goldberg, Tienda, and Adserá 2017). Notably, while childbearing is not an isolated life event, it is strongly interrelated with other transition-related decisions. For example, parental migration may delay a young person's age at having children by supporting their pursuit of higher education.

Gendered implications of parental migration on their children

Studies conducted across different regions, employing various methodologies, have yielded inconsistent evidence on the impacts of parental migration on their children.

Child gender, however, consistently explains these variations. Previous research from South Asian countries has found that the favourable impact of parental migration on children's educational expenditures was more pronounced for boys than for girls (Vogel and Korinek 2012). However, Antman's (2011) study in Mexico found that boys, more than girls, decreased study hours and increased work hours in response to financial hardships following their father's migration. Similarly, studies in China and Sri Lanka revealed that boys were more vulnerable to the negative effects of parental migration on their psychological well-being compared to girls (Lu, Zhang, and Du 2021; Wickramage et al. 2015). This discrepancy can be partially attributed to the observation that daughters often show more positive attitudes towards parental migration and are better able to express their emotions regarding their parents' absence than sons (Cebotari, Mazzucato, and Siegel 2017; Nazridod, Pereira, and Guerreiro 2021).

The effects of parental migration vary for boys and girls, influenced by cultural expectations and gender norms within local contexts. In Southeast Asia, daughters are typically expected to undertake household chores and caregiving responsibilities, while sons are encouraged to acquire breadwinning skills when parents migrate (Lam and Yeoh 2019). In contexts like China, where males are the primary labour force in rural regions, the migration of fathers often resulted in increased local labour participation among their sons, especially in cases where remittance was unstable (Xu 2017). These gendered norms also influence the migration decisions within households. In Thailand, it was common for sons to be chosen for labour migration, while daughters participated in agricultural production locally (Chow et al. 2023). Taking a gender perspective is crucial for understanding the context-specific impacts of parental migration on their children.

Migration and transitions to adulthood in the context of Thailand

Thailand is a middle-income economy in Southeast Asia with a high level of both internal and international migration (Bell et al. 2020). Thailand has experienced a sharp increase in its number of international migrants, from approximately 530,000 in 2000 to 1.09 million in 2020 (UN DESA 2020). Compared with international migration, internal migration is less selective of relatively wealthy and skilled individuals and is therefore widely practiced among Thai families in rural areas (Bell et al. 2020). More than 9% of Thais have migrated internally according to 2010 census data (UNESCO 2018). These movements, including permanent and temporary migration, are often from the north-eastern and northern regions to Bangkok and the central region (Jampaklay 2020). Thailand has the largest share of female international migrants (61%) among Southeast Asian countries and nearly 48% of female internal migrants (IOM 2021; UNESCO 2018). Despite the substantial number of female migrants in Thailand, fathers working abroad remain the prevalent form of international migrant households (UN Women 2013).

Young people (aged 15 to 24) comprise 13%, or 9.18 million, of the total population in Thailand (UNESCO 2020). Youth in developing countries, compared with those in wealthy countries, often experience relatively early transitions to adulthood and show more diverse patterns in assuming adult roles (Axxe, Hayford, and Eggum 2022). In the Thai context, compulsory education ends at the age of 14, after which adolescents confront life choices regarding education, entry into the labour market, and migration. Given the economic development over the last two decades, most Thai adolescents

continue their education, and the percentage of the school-age population having completed secondary education has increased to 37% (National Statistical Office [NSO] Thailand 2020). Nonetheless, parental migration, poverty, and early marriage/pregnancy among women are major reasons for Thai students dropping out of school (UNICEF 2016). The mean age at marriage in Thailand has steadily increased for both genders, with women marrying at around 24 years old and men marrying at approximately 2 years older than women (Yeung 2022). Thai women delay entering marriage, a trend influenced by both the expansion of higher education and societal expectations that daughters should serve as the primary economic providers for their families of origin (Dommaraju and Wong 2023). Although delayed marriage has become more common, giving birth at a younger age still occurs at high levels. Thailand has the second highest rate of adolescent pregnancy in the region, with a higher percentage among those from poor households or with lower education levels (UNICEF 2016).

Under traditional gender ideologies in Thailand, sons are expected to become monks as a sign of adulthood, while daughters are expected to marry, give birth, and care for their parents (Limanonda 1995). Socioeconomic changes have contributed to transforming gender roles in Asian contexts, including Thailand, with a particular focus on increasing gender equality in education and employment (Nahar, Xenos, and Abalos 2013). Despite the positive effects of remittances on enhancing girls' access to secondary education in rural north-eastern Thailand, boys still maintain advantages in continuing their secondary schooling (Curran et al. 2003).

The current study

We examined the association between parental migration in middle childhood and key transitional events experienced in young adulthood. As migration often shifts family structure and causes family instability, it can affect family members over many years (Lu, Zhang, and Du 2021). The literature has demonstrated the long-term impacts of family structure changes during childhood on young adults' mental health and educational outcomes (Fomby and Bosick 2013; Wickrama, Lee, and O'Neal 2013). However, most studies of parental migration and children's developmental outcomes have failed to examine the effects of parental migration throughout life due to the limitations of cross-sectional data. Among the few studies that have attempted to overcome these limitations, parental migration during childhood has been associated with higher educational attainment among Mexican youth (Wassink and Viera 2021) and lower resilience and reduced upward mobility among Chinese youth (Feng and He 2022; He, Zhang, and Zhu 2022). In line with these studies, we used longitudinal data to explore the effect of parental migration beyond one static time point.

Studies have highlighted the important role of a migrant parent's gender in explaining variations in children's adaptation to parental migration. Gender norms assign different parenting roles to fathers and mothers even when they work elsewhere, which affects the care arrangements and family resources available to left-behind children. Taking Thailand as an example, maternal migration, compared with paternal migration, is more likely to have adverse effects on left-behind children's schooling and early development (Jampaklay 2006b; Jampaklay et al. 2018; Korinek and Punpuing 2012). Migration of fathers, often leaving the mother responsible for childrearing, was associated with

worse psychological wellbeing among Thai children (Penboon et al. 2019). Therefore, this study differentiated father and mother migration to understand the gendered patterns of impact on youth transitions in a context with a high level of female migrants.

We also distinguished between internal and international migration, given their different spatial and socioeconomic consequences. Remittances from international migrant workers are usually higher than internal remittances, thereby potentially benefiting children's material well-being. Studies conducted in Ghana and Cambodia found that parents' international migration, compared to internal migration, had a greater likelihood of improving the living conditions and nutrition of left-behind children (Cebotari and Dito 2021; Chea and Wongboonsin 2019). Despite possibly fewer socioeconomic resources, internal migration, usually temporary and circular, allows migrant parents to remain involved in engaged parenting.

This study addressed the following research questions: 1) Is parental migration in middle childhood/early adolescence associated with children's labour activities, marriage, and childbearing in young adulthood? 2) How do these impacts vary based on migrant gender and whether migration is international or internal? 3) Is there any gender difference in the impact of parental migration on key transitional markers?

Data

The data used for this study were drawn from two projects: Child Health and Migrant Parents in South-East Asia (CHAMPSEA) and Children Living Apart from Parents due to Internal Migration (CLAIM). The baseline study of CHAMPSEA collected survey data in 2008 from approximately 1,000 households in four Southeast Asian countries, including Thailand. It adopted a three-stage flexible quota sampling strategy (see methodological details in Jordan and Graham 2012) to recruit eligible households with a child in one of two target age groups (3 to 5 years old or 9 to 11 years old). In 2010, CLAIM followed a similar study design and recruited 1,456 households with a child aged 8 to 15 (Jampaklay et al. 2012). The inclusion criterion for migrant households in CHAMPSEA was having at least one parent who had been an international migrant for at least 6 months prior to the survey, while CLAIM included households with at least one parent migrating internally for the same duration. In both projects, the comparison group comprised children from households without migrant parents in the last 6 months, living in the same communities. The households initially recruited at baseline (Wave 1) were reinvited to participate in the follow-up study in 2019 (Wave 2). Given the focus of this study on transitions to young adulthood, the sample from both datasets was restricted to children born between 1996 and 1999, up to age 23 at Wave 2, to examine comparable birth cohorts experiencing international and internal migration in Thailand. The study obtained ethical approval from the Research Ethical Committee of The University of Hong Kong and Mahidol University before the data collection.

The questionnaire included two modules: a household questionnaire and a questionnaire for the sampled child. The responsible adult, who knew most about the family background, answered the household questionnaire. Questions in this module included household demographic characteristics and the migration history of the father or/and mother. The sampled child answered questions about their education, employment, and intimate relationships. Young people who were not living in their parental household

were interviewed by telephone or video call to answer an additional module on their 1) migration history if they had been a labour migrant, 2) current education or employment status, and 3) information about their new family if they were married.

In the second wave, 876 households with a child in the target birth cohorts (CHAMPSEA: 411, CLAIM: 465) were reinterviewed. The attrition rate was 22% (21% for CHAMPSEA, 22% for CLAIM). We excluded two young participants who had died and another two with missing values for key variables. The sample size in the final analysis was thus 872. To address potential attrition bias, we examined differences in parental migration status, child age and gender, and household-level variables between the participating and nonparticipating households. Only parental migration status was significantly correlated with sample attrition, as households with migrants from Wave 1 were more likely to drop out.

Variables

Dependent variables

We constructed five variables to examine three key transitional events: labour activities, marriage, and childbearing. Two dummy variables related to labour activities were generated: labour participation referred to whether youth had entered the labour force (having a full-time job) at the time of the interview. The reference group of this variable consisted of youth who were either studying or in a waiting period before further education or entering the labour market. Based on their migration history and main reasons for migration, we used a dummy variable to differentiate two conditions among youth who participated in the labour force: 0 (*worked in the community of origin*) and 1 (*migrated for work*). The marital status of the young participants was coded 0 (*never married*) or 1 (*married*).¹ For the married cases, we used a continuous variable measuring their age at first marriage. Childbearing status referred to whether the female participants had given birth to a child before Wave 2.²

Independent variables

We used variables referring to parental migration status at Wave 1 as key predictors. To examine the gender-based influences of parental migration, we used a three-category variable based on whether the father/mother or both parents had migrated to work (0 = *non-migrant*, 1 = *father migration*, 2 = *mother migration or biparental migration*). We classified mother migration and biparental migration as one group because the percentage of mother-only migration was very low (< 4% in both waves). Regarding the destinations of migrant parents, internal migration referred to work destinations within Thailand, while international migration referred to households having at least one migrant parent working overseas (0 = *no migration*, 1 = *internal migration*, 2 = *international migration*).

Individual and household characteristics

Research has suggested that family resources and structure can affect young people's entry into the labour force and family formation when they transition from adolescence

to adulthood (Fomby and Bosick 2013; Pardede and Mulder 2022). We therefore controlled for other individual- and household-level variables that may influence the outcome variables: 1) youth's age and gender, and 2) key transitional events as they have been shown to be closely interrelated and simultaneously shape the pathway to adulthood (Jampaklay 2006a). We added marital status/labour participation as covariates in all models except for the model using it as the outcome. We also controlled for 3) a set of variables reflecting household socioeconomic status, including parents' education level (1 = *primary or below*, 2 = *lower secondary*, 3 = *upper secondary or above*) and household wealth, using the Wealth index to represent the long-term socioeconomic status of households (Briones 2017). Last, we controlled for 4) a set of variables related to changes in family structure between. We used a three-category variable referring to family disruption: one parent deceased, parents divorced, and parents still married as the reference group. As sibling movements can also substantially shape youth mobility (Mulder, Lundholm, and Malmberg 2020), we also accounted for the change in the number of siblings living in the household.

Analytical strategy

We used logit regression models to predict young people's likelihood of 1) entering the labour market versus not entering the labour market, 2) being employed in their community of origin or as a labour migrant, 3) marrying or not, and 4) having children or not. Ordinary least squares (OLS) regression models were used to assess the effect of parental migration on youth's marriage age.

We estimated separate models for the male and female participants to examine the potential gender-specific effects of parental migration on youth transitional outcomes for two reasons. First, the transition to adulthood is gendered (Heckert et al. 2021; Yi 2015), particularly as Thailand retains a relatively high level of gender inequality, with limited labour market opportunities for young women compared with for young men (Levtov 2014). Underlying gender norms shape transitional pathways depending on the different resources and constraints faced by women and men. Second, as discussed earlier, gender is critical in explaining variations in the impacts of parental migration. Therefore, we assumed a gendered pattern of impacts of parental migration on youth transitions. The results of the full models can be found in Tables A1 and A2 in the appendix.

Results

Table 1 presents the migrant status of the sampled households during Waves 1 and 2. Compared with Wave 1, Wave 2 had a smaller proportion of migrant households (36.7% vs. 56.9%). Within households, the migrant parents displayed divergent patterns in the two waves. In Wave 1, the percentage of father-migrant households was similar to that of mother-migrant/biparental-migrant households, whereas in Wave 2, the percentage of mother-migrant/biparental-migrant households increased from 50% to 60%. Regarding migrant destinations, nearly 60% of the migrant parents were internal migrants in Wave 1, which increased to 74% in Wave 2.

Table 2 presents the key transitional markers for young adults. The prevalence of entering the labour market among the sampled young people was 54%, and this was

Table 1. Migrant status of sampled households at both waves.

	Wave 1		Wave 2	
	n	%	n	%
Total	1118		872	
Non-migrant household	482	43.11	552	63.3
Migrant household	636	56.89	320	36.7
Who had migrated				
Father migration	320	50.31	128	40
Mother/biparental migration	316	49.69	192	60
Migration destination				
Internal migration	371	58.33	238	74.38
International migration	265	41.67	82	25.63
Changes in migration status				
Remaining migration			280	32.11
Return migration			193	22.13
New migration			40	4.59

Table 2. Means and percentages of variables, by household migrant status and youth gender.

	All (n = 874)	Male (n = 441)	Female (n = 433)	Non-migrant (n = 399)	Migrant (n = 475)
Demographic variables					
Child age at Wave 1 (mean, SD)	11.09 (1.32) ^a	11.12 (1.33)	11.05 (1.31)	11.01 (1.29)	11.15 (1.35)
Child age at Wave 2 (mean, SD)	21.14 (0.91) ^b	21.15 (0.91)	21.13 (0.91)	21.19 (0.91)	21.1 (0.91)
YA transition variables					
Labour participation ^c					
Not entry into the labour market	381 (45.81)	155 (38.09)	226 (52.19)	165 (42.31)	216 (48)
Employed in the hometown	97 (11.55)	69 (16.95)	28 (6.47)	57 (14.62)	40 (8.89)
Labour migration	362 (43.1)	183 (44.96)	179 (41.34)	168 (43.08)	194 (43.11)
Married (n, %)	215 (24.63)	90 (20.45)	125 (28.87)	101 (25.31)	114 (24.05)
Age at marriage	18.88 (2.08)	19.36 (1.58)	18.52 (2.32)	19.06 (1.99)	18.71 (2.16)
Childbearing (n, %) (females only)			67 (15.47)	37 (18.69)	30 (12.77)
Father education (n, %)					
Primary or below	616 (70.48)	317 (71.88)	299(69.05)	342(70.95)	446(70.13)
Lower secondary	140 (16.02)	66 (14.97)	74(17.09)	67(13.90)	111(17.45)
Upper secondary or above	118 (13.05)	58 (13.15)	60(13.86)	73(15.15)	79(12.42)
Mother education (n, %)					
Primary or below	627(71.74)	319(72.34)	308(71.13)	373(77.39)	437(68.71)
Lower secondary	128(14.65)	66(14.97)	62(14.32)	57(11.83)	108(16.98)
Upper secondary or above	119(13.62)	56(12.70)	63(14.55)	52(10.79)	91(14.31)
Household wealth (mean, SD)	0.68 (0.13)	0.68 (0.12)	.68(0.13)	.67(0.13)	.68(0.12)
Family structure changes between two waves (n, %)					
Intact family	746 (85.35)	382 (86.62)	364 (84.06)	433 (90.02)	555 (87.40)
Parent(s) pass away	54 (6.18)	31 (7.03)	23 (5.31)	27 (5.61)	27 (4.25)
Divorced	74 (8.47)	28 (6.35)	46 (10.62)	21 (4.37)	53 (8.35)
Changes in the number of older siblings in the household (mean, SD)	-.40 (.67)	-.42 (.72)	-.39 (.62)	-.45 (.69)	-.36 (.66)
Changes in the number of younger siblings in the household (mean, SD)	-.04 (.39)	-.05 (.39)	-.03 (.40)	-.01 (.35)	-.07 (.42)

^aThe average age of sampled children at Wave 1 was 9.98 and 12.06 for CHAMPSEA and CLAIM, respectively.

^bThe average age of sampled youth at Wave 2 was 21.31 and 20.99 for CHAMPSEA and CLAIM, respectively.

^c34 youth who served in the military or in the prison were not included for the analysis related to labour participation.

significantly higher among the male participants than among the female participants ($\chi^2 = 17.96, p < .001$). When comparing the locations of their labour activities, the prevalence of working locally among the male participants was significantly higher than that of the

female participants ($\chi^2 = 13.09$, $p < .001$). The overall marriage rate among the young participants was 25%, with a significantly higher prevalence among females than males ($\chi^2 = 8.32$, $p < .01$). The average age of marriage among the male participants was significantly later than that for the female participants ($t = 2.95$, $p < .01$). Around one quarter of the female participants had given birth, with the percentage slightly higher for women from non-migrant households than for those from migrant households.

We examined the effects of parental migration on youth's local labour participation across gender groups, as shown in Panels A and B of Table 3. Both male and female participants whose mothers had migrated alone or with their fathers were less likely to enter the labour market in young adulthood than those who had not experienced parental migration at earlier stages in life. Internal parental migration in Wave 1 was associated with a lower likelihood of entering the labour market for sons than for daughters. We further examined the effects of parental migration on young people's likelihood of being labour migrants among those who had entered the labour force, as shown in Panels C and D of Table 3. Among the male participants engaged in labour activities, maternal/biparental migration and internal parental migration were associated with a higher likelihood of migrating for work than entering the local labour market.

Notably, among youth who had not entered the labour market, one quarter did not remain in school, which is consistent with the aforementioned concerns regarding youth unemployment in Thailand. These young people may experience a waiting period before continuing higher education, seeking job opportunities, or becoming stuck in temporary employment. We additionally used only the group that remained in school to estimate the effects of parental migration on young people's school-to-work transition (Appendix Tables 3 and 4), which produced results similar to the findings above.

Panels A and C in Table 4 report the effects of parental migration by parent type on youth marriage, while Panels B and D show the results by parental destination. Having migrant parents, regardless of which parent migrated or their destination, had no significant effect on the prevalence of marriage among youth in emerging adulthood but influenced their age at marriage. Those who experienced maternal/biparental migration or internal parental migration during their middle childhood/early adolescence were more likely to marry earlier than their counterparts with no parental migration experiences.

Table 5 reports the results of the logit models, revealing the associations between parental migration and childbearing among the female participants. Paternal migration or international parental migration in Wave 1 was significantly associated with a lower likelihood of having children as daughters transition to young adulthood. We visualised the logit regression coefficients and their significant values as reported above (Figure 1).

Among individual-level characteristics, the likelihood of entering the labour force increased with age for both genders, while marrying increased with age only among the male participants. Entering the labour force and marrying were significantly inter-related. Married youth were more likely to participate in the labour market for both genders, but marriage was only associated with the labour migration of male youth. In terms of household socioeconomic covariables, the higher education level of fathers reduced their children's probability of entering the labour market in young adulthood. Changes in household structure also influenced young people's labour participation.

Table 3. Logistic regression models of parental migration status on youth's labour activities, by youth gender.

	Labour participation\$(ref.: not entry into the labour force)				Labour migration\$(ref.: employed in the hometown)			
	Panel A		Panel B		Panel C		Panel D	
	Male OR (S.E.)	Female OR (S.E.)	Male OR (S.E.)	Female OR (S.E.)	Male OR (S.E.)	Female OR (S.E.)	Male OR (S.E.)	Female OR (S.E.)
Wave 1 Parental migration types (ref.: non-migrant household)								
Father migration	0.64 (0.18)	1.20 (0.31)			0.97 (0.36)	0.63 (0.32)		
Mother/biparental migration	0.54* (0.17)	0.57* (0.16)			13.30*** (8.75)	1.84 (1.19)		
Wave 1 Parents' migration destination (ref.: non-migrant household)								
Internal migration			0.46* (0.14)	0.71 (0.19)			4.40** (2.05)	1.45 (0.81)
International migration			0.77 (0.24)	1.06 (0.30)			1.33 (0.56)	0.57 (0.33)
Age	1.38** (0.14)	1.44*** (0.13)	1.47*** (0.17)	1.41** (0.14)	1.01 (0.14)	0.81 (0.14)	1.08† (0.16)	0.77 (0.15)
Marital status of youth (ref. never married)	6.00*** (2.36)	2.78*** (0.66)	5.88*** (2.31)	2.74*** (0.64)	2.23* (0.87)	0.80 (0.36)	1.97 (0.75)	0.79 (0.36)
Father education (ref. Primary or below)								
Lower secondary	0.89 (0.29)	1.14 (0.33)	0.88 (0.29)	1.14 (0.33)	0.56 (0.25)	1.17 (0.77)	0.61 (0.27)	1.19 (0.79)
Upper secondary or above	0.29 (0.11)	0.68 (0.23)	0.30** (0.11)	0.76 (0.25)	0.89 (0.54)	1.09 (0.75)	0.89 (0.53)	1.05 (0.73)
Mother education (ref. Primary or below)								
Lower secondary	0.71 (0.24)	0.86 (0.27)	0.72 (0.24)	0.85(0.26)	1.12 (0.56)	0.92 (0.60)	1.34 (0.64)	0.92 (0.60)
Upper secondary or above	0.59 (0.23)	0.63 (0.21)	0.60 (0.23)	0.65(0.21)	0.63 (0.44)	0.63 (0.44)	0.70 (0.40)	0.59 (0.40)
Household wealth	0.18 (0.18)	0.92 (0.75)	1.00 (0.81)	1.00 (0.81)	0.10 (0.15)	0.10 (0.21)	0.92 (0.13)	0.76 (0.15)

Family structure changes (ref. intact family)								
Parent(s) pass away	0.63 (0.28)	0.95 (0.44)	0.63 (0.28)	0.97 (0.45)	1.47 (1.04)	1(0)	1.40 (0.97)	1(0)
Divorced	3.87* (2.40)	2.03* (0.71)	4.28* (2.70)	1.94 (0.67)	0.44 (0.59)	0.94 (0.62)	0.40 (0.23)	0.95 (0.62)
Changes in the number of older siblings	1.20 (0.22)	1.19 (0.20)	1.19 (0.21)	1.17 (0.20)	0.85 (0.22)	0.53 (0.23)	0.88 (0.22)	0.06 (0.2)
Changes in the number of younger siblings	0.45* (0.14)	0.61 (0.17)	0.44* (0.14)	0.64† (0.17)	0.70 (0.36)	0.35* (0.18)	0.80 (0.35)	0.33* (0.17)
Constant	0.22 (0.29)	0.15*** (0.02)	1.08 (0.16)	0.02** (0.02)	6.65 (12.75)	304.63* (762.26)	3.53 (6.99)	6.59* (2.8)
Log likelihood	-224.03	-270.62	-223.34	-272.8	-124.63	-73.08	-132.08	-73.48
Pseudo R2	0.17	0.10	0.17	0.09	0.15	0.09	0.10	0.08
Observations	406	433	406	433	251	195	251	195

Note. *** $p < .001$; ** $p < .01$; * $p < .05$; † $p < .1$

Table 4. Estimations of parental migration types on youth marital status and age at marriage, by youth gender.

	Logistic regression models predicting marriage (ref.: never married)				OLS regression models predicting age at marriage			
	Panel A		Panel B		Panel C		Panel D	
	Male	Female	Male	Female	Male	Female	Male	Female
	OR (S.E.)	OR (S.E.)	OR (S.E.)	OR (S.E.)	Coef. (S.E.)	Coef. (S.E.)	Coef. (S.E.)	Coef. (S.E.)
Wave 1 Parental migration types (ref.: non-migrant household)								
Father migration	1.70 (0.60)	0.62 (0.18)			−0.06 (0.43)	−0.13 (0.57)		
Mother/biparental migration	1.03 (0.36)	0.87 (0.25)			−0.9* (0.43)	−1.54** (0.56)		
Wave 1 Parents' migration destination (ref.: non-migrant household)								
-Internal migration			1.15 (0.39)	0.84 (0.24)			−1* (0.41)	−1.7** (0.53)
-International migration			1.64 (0.67)	0.61 (0.20)			0.4 (0.51)	0.47 (0.63)
Age	1.32* (0.16)	1.12 (0.11)	1.32* (0.18)	1.10 (0.12)	0.22 (0.15)	0.44* (0.18)	0.38* (0.18)	0.56** (0.18)
YA labour participation (ref. not working)	6.28*** (2.50)	2.78 (0.66)	6.16*** (2.45)	2.73*** (0.64)	0.53 (0.54)	−0.43 (0.47)	0.5 (0.53)	−0.26 (0.46)
Father education								
Lower secondary	0.99 (0.40)	0.58 (0.20)	0.97 (0.39)	0.58 (0.20)	0.71 (0.5)	1.06 (0.78)	0.72 (0.49)	0.84 (0.77)
Upper secondary or above	1.39 (0.69)	0.61 (0.25)	1.41 (0.70)	0.59 (0.24)	0.58 (0.61)	−0.04 (0.86)	0.53 (0.6)	−0.21 (0.85)
Mother education								
Lower secondary	1.71 (0.67)	0.84 (0.29)	1.66 (0.65)	0.85 (0.29)	0.47 (0.49)	0.48 (0.69)	0.42 (0.48)	0.54 (0.68)
Upper secondary or above	0.84 (0.43)	0.44 (0.20)	0.87 (0.44)	0.43 (0.20)	−0.28 (0.65)	0.54 (1.09)	−0.5 (0.65)	0.89 (1.08)
Household	1.65 (1.90)	0.47 (0.41)	1.81 (2.07)	0.46 (0.88)	0.14 (1.41)	−0.28 (1.64)	0.32 (1.38)	−0.21 (1.6)

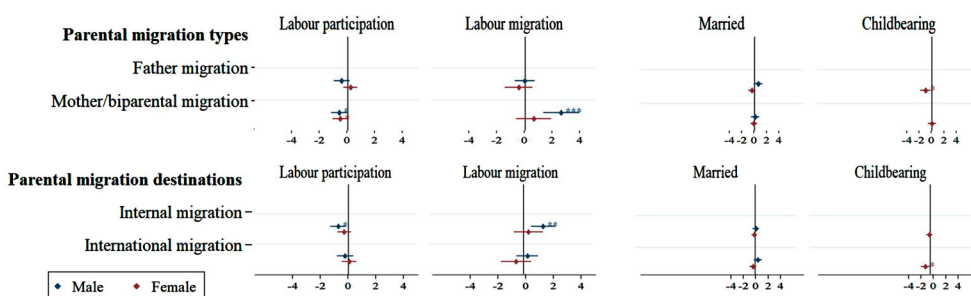
Family structure changes (ref. intact family)								
Parent(s) pass away	1.44 (0.74)	2.37† (1.10)	1.43 (0.74)	2.33† (1.09)	1.01 (0.63)	0.28 (0.76)	0.91 (0.62)	0.5 (0.75)
Divorced	1.74 (0.85)	1.43 (0.51)	1.80 (0.89)	1.44 (0.51)	−0.47 (0.59)	0.1 (0.67)	−0.48 (0.58)	0.13 (0.66)
Changes in the number of older siblings	0.64* (0.13)	0.96 (0.18)	0.63* (0.13)	0.97 (0.18)	0.21 (0.29)	0.21 (0.35)	0.21 (0.28)	0.15 (0.34)
Changes in the number of younger siblings	1.43 (0.53)	1.01 (0.30)	1.40 (0.51)	1.00 (0.29)	0.13 (0.45)	−0.47 (0.69)	−0.08 (0.45)	−0.48 (0.67)
Constant	0.00*** (0.00)	0.16 (0.20)	0.00*** (0.02)	0.18 (0.24)	16.48*** (2.15)	14.32*** (2.32)	14.56*** (2.38)	12.78*** (2.39)
Log likelihood/F	−173.33	−233.01	−173.80	−233.11	0.92	1.11	1.12	1.46
Pseudo R2	0.12	0.10	0.12	0.10	0.16	0.12	0.19	0.15
Observations	406	433	406	433	76	120	76	120

Note. *** $p < .001$; ** $p < .01$; * $p < .05$; † $p < .1$

Table 5. Logistic regression models of parental migration on youth's childbearing (females only).

	Model 1 OR (S.E.)	Model 2 OR (S.E.)
Wave 1 Parental migration types (ref.: non-migrant household)		
Father migration	0.34* (0.145)	
Mother/biparental migration	0.99 (0.33)	
Wave 1 Parents' migration destination (ref.: non-migrant household)		
-Internal migration		0.85(0.28)
-International migration		0.38*(0.17)
Age	1.12(1.31)	1.12(0.14)
Youth labour participation (ref. not working)	1.58(0.25)	1.50(0.43)
Marital status of youth (ref. never married)		
Father education		
Lower secondary	0.77(0.32)	0.77(0.31)
Upper secondary or above	0.71(0.38)	0.64(0.34)
Mother education		
Lower secondary	0.98(0.39)	1.00(0.40)
Upper secondary or above	0.22(0.17)	0.21(0.16)
Household	1.67(1.79)	1.55(1.65)
Family structure changes (ref. intact family)		
Parent(s) pass away	1.06(0.62)	1.01(0.59)
Divorced	1.13(0.49)	1.18(0.50)
Changes in the number of older siblings	1.08(0.24)	1.10(0.25)
Changes in the number of younger siblings	1.38(0.48)	1.31(0.46)
Constant	0.45** (0.70)	0.51**(0.08)
Log likelihood	-172.52	-173.90
Pseudo R2	0.08	0.07
N	433	433

Note. *** $p < .001$; ** $p < .01$; * $p < .05$; † $p < .1$

**Figure 1.** A summary of logit regression coefficients of parental migration types/destinations predicting major markers of the transition to adulthood.

Those who experienced parental divorce were more likely to enter the labour force than their counterparts. In addition, having more younger siblings living in the household was significantly associated with a higher likelihood of labour participation among the male participants and a lower likelihood of being labour migrants versus having a job in their community of origin among the female participants. Having more older siblings decreased the likelihood of marriage among the male participants but not among the female participants.

In order to ensure the robustness of our findings, we performed an additional analysis by excluding the sample of mother-only migration and compared the results reported earlier. The results were consistent. Furthermore, we addressed the concern of potential collinearity issues by conducting an analysis to detect collinearity issues. The results of

the variance inflation factor values indicated that there was no significant collinearity among the variables in our models.

Discussion

This study investigated how parental migration during middle childhood/early adolescence impacts the transition to young adulthood. The findings revealed that experiencing parental migration during earlier stages of life influenced important transitional outcomes for individuals. The probability of labour participation among young people by age 23 decreased if their mothers or both parents had previously migrated, which is consistent with previous research showing that family member migration can delay Mexican children's entry into the workforce (HalpernManners 2011). The results suggested that maternal/biparental migration had more pronounced impacts on youth's labour activities than paternal migration. This finding aligns with previous studies among migrant households in other Asian countries, demonstrating more substantial effects of mother-involved migration on parenting practices and child well-being (Jordan and Graham 2012; Xu et al. 2019). The migration of both parents is often associated with more remittances, which provide youth with more opportunities during the school-to-work transition. In Thailand, traditional gender norms influence remittance practices: Female migrants, compared to male migrants, are expected to remit higher amounts of money (Porst and Sakdapolrak 2020). Consequently, when the mother migrates alone or with the father, youth may be more likely to benefit from the economic resources accumulated through remittances. Over longer timescales, mother-involved migration may result in more changes in family dynamics and resource allocation, which reshape young people's transitions.

Our findings showed that male youth whose parents had previously migrated had a higher likelihood of labour migration than their counterparts. Migrant network theory may explain how parental migration increases youth mobility. Individuals' migration is embedded in their social networks, whereby prior migrants provide social capital to facilitate new migrants' migration (Boyd 1989; Massey and Zenteno 1999). Garip (2008) found that Thai youth with greater migrant social capital, including information resources and direct assistance from prior migrants through their social ties, were more likely to migrate than those with less migrant social capital. When both parents migrate, households may accumulate higher levels of migrant capital, which subsequently facilitates the movement of young people out of rural areas by reducing migration costs and facilitating successful integration into the urban labour market.

This study also highlighted important variations in the different influences of internal or international parental migration on their children. It further reinforces the notion that internal and international migration are distinctive regarding the economic benefits and psychosocial costs, consequently influencing children through different mechanisms (King and Skeldon 2010). The findings revealed that internal parental migration strongly influenced young people's work decisions and marital timing, while international migration only affected daughters' probability of childbearing. Although some scholars have argued that social networks have a weaker association with internal than international migration, many studies have also affirmed that support from family networks of internal migrants facilitates youth mobility (Garip 2008; Mulder, Lundholm,

and Malmberg 2020). Geographic proximity to internal migrant parents may provide more accessible migrant social capital for youth. Alternatively, young people whose parents are internal migrants may also be required to anticipate the migration chain to maximise income, given the lower remittances from internal migrants than from international migrants. These findings demonstrate the need for future research comparing the influences of internal and international migration in Thailand and other Asian countries, which have large numbers of both types of migrants.

This study expands the literature by investigating the family formation and childbearing patterns of youth in migrant-sending communities. Jampaklay (2006a) found that Thai youths who had migration experiences had a higher likelihood of getting married by age of 25. We found no significant effect of parental migration on the odds of marriage, but it negatively affected youth marital timing. The average age at marriage among the young participants was lower than that reported by national data (Yeung 2022). The primary reason is that the participants had recently entered their early twenties at the time of the follow-up survey. Additionally, this reflects the reality that adolescent marriage continues to be common in North Thailand, particularly among low-income families in rural areas (UNICEF 2016). Thai women are expected to financially support their natal families, which may delay or discourage marriage if they are required to stay with their natal families as primary providers (Dommaraju and Wong 2023). Migration can potentially decrease such demand for daughters, which may give them greater negotiating power regarding their marriage arrangements. Although early marriage often leads to early parenthood, this study did not find that young women experiencing parental migration tended to give birth earlier. Future qualitative studies could provide insights into how parental migration may influence young people's family formation and childbearing through various forms of social remittances.

Among the examined transitional outcomes, parental migration had a gender-specific influence on labour migration, only exerting a significant positive effect on men. Despite considerable progress in narrowing the gender gap in education in Thailand, such improvement does not yield higher wages for women. Rather, a larger wage gap is observed, particularly between men and women with higher levels of education (Jithitikulchai 2018). Such wage inequality may discourage young women from migrating to central Thailand, as they are unable to obtain significant economic returns similar to boys. Furthermore, following traditional gender norms in Thailand, sons are often selected for labour migration, while young daughters are expected to remain in or stay closely to the parental household to fulfil their filial obligations (Chow et al. 2023; Dommaraju and Wong 2023). This could explain why parental migration was found to be specifically associated with male labour migration in this study. These findings may have implications for other countries in the Mekong sub-region that share similar gender norms (Jampaklay et al. 2022). Understanding gender-specific influences of parental migration is crucial across different contexts.

Limitation and conclusion

This study also has some limitations. First, as shown above, transitional markers in young adulthood are closely related. However, we have a limited understanding of the sequence of these decisions. The diverse transition patterns among young Asians do not

necessarily follow the traditional sequence of completing school and subsequently entering the labour market (Basnet, Timmerman, and van der Linden 2020). Migration adds complexity to youth transitions, resulting in more diverse patterns. Future research should thus consider a life history approach that collects retrospective information to better know the order of life events during the transition to adulthood. Second, although our results show the effects of parental migration on children's labour activities, we cannot assume that becoming labour migrants denotes upward mobility for the second generation. Future research should therefore incorporate the occupational status of migrants and their children to better understand how intergenerational mobility operates in migrant families. Third, the underlying mechanism through which parental migration affects youth transitions remains poorly understood. Beyond the changes to household socioeconomic status and family structure included in our models, social remittances and local gender norms should also be considered. Further studies could, therefore, measure migrant parents' social remittances jointly with in-depth interviews with family members across generations to examine how they influence individuals' transitions.

There were also some limitations due to sampling and attrition. Given the dearth of nationally representative data on migration in Thailand, this study takes initial steps towards understanding the long-term effects of parental migration. However, the data used in this study were only representative at the community level despite the adoption of a rigorous probability sampling strategy. Additionally, the young adults sampled at Wave 2 were between 19 to 23 years old. The outcomes examined here, especially marriage and childbearing, only capture transitions during early stages of young adulthood. It is important to recognise that these outcomes may change as individuals experience additional life events and progress into stable adulthood roles. Moreover, nonresponse bias should be considered when interpreting the results. Migrant households in Wave 1 were more likely to drop out, which may have biased the estimate of youth labour migration downward, as some nonparticipating families may have already migrated.

Despite these limitations, this study illustrates the longer-term implications of parental migration in young people's earlier life stages on their future transitions to young adulthood. By following individuals from their middle childhood to young adulthood, this study is particularly valuable for understanding developing countries in Asia where longitudinal data are limited. The findings highlight variations in the transitions to young adulthood depending on the type and destination of parental migration and show the need to consider the heterogeneity of migrant households to maximise the socioeconomic benefits of migration while offsetting the costs of family separation. Policymakers and youth-serving institutions need to better understand and address the challenges and constraints faced by young people who grow up with parental migration in Thailand and other Asian countries.

Notes

1. Cases who had divorced ($n = 24$) were coded as married for the analysis. We retained these cases as the inclusion of these divorced would not significantly affect the results.
2. As only 11 male participants reported having a child, the analysis on childbearing was only applied to the female participants.

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