

Migration, Families, and Counterfactual Families

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Abstract

Migration changes how families form and dissolve, and how one should conceptualize the family. This has implications for thinking about how the migration decision is modelled when individuals are unable to picture the counterfactual families they may have. Differences in marital status can induce two otherwise identical individuals to make different migration decisions. It also has implications for attempts to causally estimate impacts of migration, when the family

composition changes with the migration decision itself. This paper shows empirically that changing marital status after migration is widespread, and that the traditional model of a fixed family sending off a migrant who remains part of that same family only describes a minority of migrants moving from developing countries to the U.S. The authors draw out lessons from thinking about counterfactual families for empirical research and for migration policy.

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Migration, families, and counterfactual families*

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1 Introduction

“Individual and family decisions often hinged on contacts and perceptions of what migration would signify not just for the individual, but also for a family, either the one in place at the moment, or the one a migrant hoped to someday form. For Masha, this could have gone in different directions. Either her parents could have impressed upon her the duty to remain in Russia and care for them in their old age, or (as in the true story) they could have encouraged her to migrate with relatives to the United States and have better opportunities for both work and marriage.” (Sinke, 1999, p. 17).

Economists have long recognized the importance of non-migrant individuals in migration decisions, and in turn have looked to see the impact of an individual migrating on other members of their family or household of origin. However, the standard approach in the literature is to consider “the family” as fixed or predetermined.¹ The thesis of this paper is that instead migration changes how families form, dissolve, and are conceptualized, with migration decisions involving not only different counterfactual outcomes for the migrant, but also potentially different counterfactual families associated with them. As the above quote from historian Suzanne Sinke indicates, the decision to migrate can have far-reaching impacts on decisions of whether and who to marry, and in addition can change fertility decisions. However, these counterfactual families are difficult to imagine and visualize, which has implications for migration decision-making, as well as for defining impacts of migration on family members.

We begin by describing of the migration and remittances decision which takes the family as pre-determined using a unitary model, and use this to illustrate the different channels through which the family can affect the decision to migrate. This is used to show how incorporating the role of the family can explain why two otherwise similar individuals with the same earning opportunities at home and abroad could make different migration decisions. This family selectivity has two important implications for policy discussions. The first is that concerns about migration of parents having negative impacts on children left behind that come from comparing children with and without migrant parents are subject to multiple potential sources of bias. Second, while policymakers often celebrate remittances, this framework makes clear that they in part represent a failure of migration policy, capturing what would be an intra-family transfer if the whole family could move together.

¹This assumption echoes the one introduced in development economics about household composition (Foster and Rosenzweig, 2002), with migration economics traditionally making no exception in this respect.

We then discuss different ways that migration and the prospect of migration can change the family. Individuals who plan on migrating may invest less in building relationships at home, or may accelerate marriages as they think longer term. Some migration occurs specifically for the purpose of getting married. Migration can affect the stability of existing marriages, and lead to migrants meeting a new pool of potential marriage partners, changing who they might marry.

Using the American Community Survey, we provide descriptive evidence about the extent to which migrants from developing countries change their marital status after moving to the United States. We first find that changing marital status after migration is the norm for most adult immigrants: only one-third of ever-married adult migrants are currently married to a spouse they wed before migration. The model of a fixed family sending off a migrant who remains part of that fixed family is thus empirically not the reality for the majority of migrants. The likelihood of such changes importantly depends on the initial marital status before migration: for initially unmarried migrants, getting married after migration is substantially more likely than the separation/divorce from one spouse for migrants initially married. When migrants get married after migration, they are significantly less likely to marry someone who is also born in the origin country, although the incidence of within-group marriage is substantial with 66 percent marrying someone from their country of origin (in many cases still only someone they have met after migrating). By tracking cohorts, we show that migrants who were married at the time of migrating are more likely to return migrate than those who were unmarried, but that accounting for this does not affect our main findings on family structure changing for the majority of individuals after migration. The data also reveal that instances of split migration for pre-existing married couples do not last long after migration, so what the literature calls “transnational households” (see, for instance, [Ashraf et al., 2015](#); [Clemens and Tiongson, 2017](#); [Abarcar et al., 2020](#)) appear to be fragile and temporary living arrangements, with the two spouses likely to resume co-residing again reasonably quickly (at origin or at destination), or otherwise to dissolve their marital union.

We then note that the anticipation of these potential changes in the migrants’ family can influence selection into whether migration occurs at all, and we provide arguments that suggest that non-migrant individuals might be more inclined to finance the migration of a married individual, even though the pre-existing marital union can clearly increase the

psychic costs of moving. Drawing on the data from the ENOE, a rotating panel survey conducted in Mexico, we show that migration to the United States is more likely for initially married than for unmarried individuals among the individuals who co-resided with their parents prior to migration.²

The final section of the paper then attempts to draw out the implications of this changing nature of the family for migration decisions, research, and policy. A first implication is that migration decisions may be dynamically and locationally inconsistent, since the family unit that is being considered in the decision at one location and point in time is different from what the same individual would consider if they move elsewhere. Second, it is difficult to visualize the spouse and children you are giving up by not moving somewhere different, and this inability to picture counterfactuals and the opportunity cost of not moving can result in a bias towards the status quo of not migrating. Third, to the extent that they anticipate the possibility of these changes, non-migrant family members might be reluctant to finance the migration of an unmarried individual. Fourth, extreme care needs to be taken when attempting to ask what is the impact of migration on the migrants' family, since in many cases this might be an ill-defined question, as the counterfactual of not migrating could also involve an entirely different family. We give examples of which treatment effects can and cannot be recovered as a result, and discuss what types of questions in the migration literature are more and less likely to be affected by counterfactual families.

Our paper contributes to two main literatures. The first is a methodological literature which focuses on how to identify migration impacts given selection into migration. The main focus of this literature has been on self-selection on the basis of individual and fixed family characteristics (e.g., [Borjas, 1987](#); [Gibson et al., 2013](#)). We show how the endogeneity with family structure affects migration decisions and impacts even when the main factors influencing individual self-selection are held constant. Second, we build on a small but growing strand of literature at the crossroads between migration and family economics. This includes three papers on international migration out of Mexico, with [Bertoli and Murard \(2020\)](#) and [Bertoli et al. \(2023\)](#), which document the extent of changes in co-residence choices after the occurrence of a migration episode, and [Bratti et al. \(2020\)](#), who analyze within-sibship selection into migration; and three papers focusing on internal migration in Indonesia,

²The Mexican Family Life Survey would allow tracing the evolution of the family composition after the occurrence of an international migration episode; however, the limited sample size implies that the number of migration episodes is much lower than those that we can observe in the ENOE.

with [Bargain et al. \(2020\)](#) analyzing the interplay between intra-household decision-making and the migration of the husband, and [Muñoz-Blanco \(2023\)](#) and [Champeaux et al. \(2023\)](#) studying the relationship between migration decisions and the marriage market. We draw out the implications of such changes for assessing migration impacts.

The rest of the paper is structured as follows: Section 2 describes how the decisions concerning migration and remittances, and the analyses of their effects, are shaped by the migrant's family. Section 3 discusses how the occurrence of a migration episode can, in turn, modify the family of those who move, notably via an influence on marital union and dissolution. Section 4 draws on the American Community Survey to present some stylized facts on the initial marital status of migrants from developing countries, and on the evolution over time of their marital status, accounting for the confounding effect of return migration. Section 5 discusses the influence of the frequent changes in marital status on the analysis of the impact of migration on the family members left behind, while Section 6 draws the main conclusions.

2 How the family affects the migration and remittances decision and their impacts

The vast majority of the literature has taken the family as fixed or predetermined, and then postulated different ways in which it can affect migration and remittance decisions. In the classic individual utility maximization model of [Sjaastad \(1962\)](#), reluctance to leave family is one of the “psychic costs” of migration, and then the optimal decision takes this “taste” for family presence as given. Much of the subsequent literature takes the decision-making unit as the family instead of the individual, with the decision to migrate then depending on the net gain in family income ([Mincer, 1978](#)), on how migration of one member enables risk diversification and insurance within households ([Stark and Lucas, 1988](#)), and on how it affects the family's informal insurance arrangements with others in their community ([Munshi and Rosenzweig, 2016](#); [Morten, 2019](#)). Internal transfers among family members then enable the total income of the family to be shared amongst the different members in accordance with their bargaining power. If some members migrate and others do not, then these internal family transfers take the form of remittances. These remittances can be state-dependent as in the case of remittances providing insurance, but they could also reflect within-family

repayment of migration loans (Poirine, 1997), payment for services rendered, such as taking care of children left behind, or just altruism towards other family members (Rapoport and Docquier, 2006). Borjas and Bronars (1991) note that the existence of these internal transfers enables each family member to effectively sell the property rights to their individual migration decisions to other family members, so that by Coase theorem, migration decisions will be mutually agreed to by all family members.

To fix ideas, let us consider a simple unitary model, in which choices are made with the objective of maximizing a “unitary” utility function, which weights the individual utility of all the members of the family F .³ Utility depends on consumption and on amenities, and we assume that the aggregation of individual utilities is additive, with θ_i representing the weight of the family member i , and with $\sum_{i \in F} \theta_i = 1$. Each member of the family can be altruistic towards other family members; notice that, in the setting of a unitary model, the altruism of individual i can be represented through a low bargaining weight θ_i .

Consider then a setting where it is not optimal (or perhaps not possible due to policy barriers) for the whole family to move together, and the family is then deciding, as in Chort and Senne (2015, 2018), whether to send just a single migrant i .⁴ Let $w_{i,t}^M$ denote the wage earned by individual i at time t if she migrates to destination M , and $w_{i,t}^H$ be the wage she would earn at home; $R_{i,t}$ denotes the net remittances in time t sent by individual i if she migrates to other family members (this could be negative in some states of the world if the remaining family also provide insurance to the migrant member against the risk of low income after moving); $T_{i,t}$ denote the internal transfers between i and the rest of the family if i does not migrate, so that (in the absence of migration) we always have that $\sum_{i \in F} T_{i,t} = 0$; and $A_{i,t}^M$ and $A_{i,t}^H$ denote the amenities individual i receives after migrating and at home respectively. Proximity to family members can be considered as part of the amenities of a particular location, that provides utility every period.⁵ Migrating entails a one-time utility cost of C

³This weighting of individual utility functions is fixed in a unitary model; this, in turn, implies that the demand functions of the family F are independent of the distribution of earnings within the family.

⁴See Gibson et al. (2013) for discussion of the additional selection issues that arise with whole household movement. Imbert et al. (2023) also note that the family can affect which destination among many migrants move to, and our arguments will also extend to the multi-destination setting.

⁵For simplicity, we assume the amenities of other family members are not directly changed when individual i migrates. This could also be seen as the migrant internalizing how much they will miss other family members, but not how much those family members will miss them.

that includes both the monetary⁶ and psychic costs of migration. In the unitary model, family members pool their incomes, and the utility-maximizing individual consumption for individual i can be simply written as the difference between individual earnings and the optimal level of transfers (or remittances) from individual i to other family members. We denote with $T_{i,t}^*$ and $R_{i,t}^*$ respectively the optimal levels of domestic or international net transfers for the potential migrant i , and $T_{j,t}^*$ and $R_{j,t}^*$ the optimal levels of net transfers for the non-migrant j in the no-migration case, or when individual i migrates.

As in McKenzie (2023), wages and amenities can be stochastic, and individuals form beliefs about their distributions given their information set Ω , and have a discount rate δ .⁷

A necessary condition for the family to choose to have individual i to migrate and remit R^* rather than stay at home and make internal transfers T^* is that the expected discounted utility from engaging in migration exceeds that of staying at home by more than the expected utility cost C of migration:

$$\sum_{t=1}^T \delta^t E \left\{ \left[\theta_i U_i(w_{i,t}^M - R_{i,t}^*, A_{i,t}^M) + \sum_{j \in F, j \neq i} \theta_j U_j(w_{j,t}^H - R_{j,t}^*, A_{j,t}^H) \right] + \right. \\ \left. - \left[\theta_i U_i(w_{i,t}^H - T_{i,t}^*, A_{i,t}^H) + \sum_{j \in F, j \neq i} \theta_j U_j(w_{j,t}^H - T_{j,t}^*, A_{j,t}^H) \right] \middle| \Omega \right\} > C \quad (1)$$

The necessary condition in Eq. (1) also becomes sufficient to have that member i migrates if the value of the left-hand side of Eq. (1) is not larger for any other family member $j \in F$.

2.1 Implications for migrant selection

This framework then highlights a variety of channels through which the family can affect the decision of whether to migrate and can lead two individuals who face the same wages

⁶We abstract from liquidity constraints from simplicity (see, for instance, Angelucci, 2015; Gazeaud et al., 2023), as this simple framework does not include saving decisions, but the shadow price of capital can be considered as part of this cost, so that a liquidity-constrained family that cannot afford to pay the monetary costs of migrating effectively faces a very large C such that they will choose not to migrate given their constraints.

⁷We assume that all individuals in the family F have the same information set, and discount the future at the same rate. To the extent that these differ within a family, this could lead to different preferences about the desirability of migration, requiring additional internal transfers to ensure everyone agrees on the migration decision.

as each other at home and abroad (shutting down the [Borjas \(1987\)](#) self-selection margin), who face the same monetary costs of migrating (including the same liquidity constraints⁸), and who have the same discount rates and risk preferences as each other, to make different migration decisions because of differences in their families F :

- $w_{j,t}^H$: Both the level and the riskiness of the income of other family members $j \in F$ can affect individual i 's migration decision. All else equal, with diminishing marginal utility of income, richer households will be less likely to trade-off the higher income to be earned from migration against the one-time psychic costs of moving and losing the ongoing amenity value of family member proximity. The riskiness of the income flows of other family members will determine how much of an insurance and risk-sharing motive there is for migration.
- θ_i : The bargaining weight will determine how much weight individual i 's own utility factors into the migration decision, and will also help determine the optimal transfers R^* and T^* that the family decides on. For example, someone who is more altruistic towards other family members, or who has low bargaining weight because of cultural norms, may be more likely to migrate to earn money that can provide for other family members, even if their own personal utility falls.
- U_j : The utility functions of other family members will matter. In particular, risk preferences of other family members will determine how much they value the insurance that can be provided through remittances.⁹ Families can also differ in how much they value additional income from remittances. For example, having a sick family member that requires additional health expenditures, or school-aged children that require education spending may increase the marginal utility of extra income.
- C : Differences in the one-time psychic costs of leaving family behind. This is essentially a measure of how painful saying goodbye is at the time of migration. Having a pre-existing network of friends and relatives abroad may result in a lower C .

⁸This shuts down the selection on family wealth channel that is mediated by networks, as in [McKenzie and Rapoport \(2007\)](#).

⁹[Dustmann et al. \(2023\)](#) also show that intra-household differences in risk preferences can determine which household member ends up migrating.

- $U_i(\cdot, A)$ and A : Differences in how much of an amenity there is from being close to other family members, and in how individuals value this proximity. [Koşar et al. \(2022\)](#) find that the median person in their sample would be willing to forego 30 percent of their income to stay close to family, with this varying from 17 to 50 percent depending on which subgroup they consider. For example, A might differ depending on whether the individual is married, has children, has surviving parents, etc. as well as depending on the characteristics of these family members and how well they treat the potential migrant. Note that A can also be stochastic, so could reflect the degree of stability in relationships with other family members. But even conditional on the same A , individuals with different personalities and leisure interests may differ in how much utility they directly derive each period from being close to these family members.
- Ω : Differences in the information sets and beliefs. Even if the potential migrants from families F and F' would earn the exact same wages at home and abroad, families may differ in the information and expectations they have about what these wages will be, and could be misinformed. For example, [McKenzie et al. \(2013\)](#) show potential migrants in Tonga are misinformed about the wages they can earn in New Zealand, with some of this appearing to stem from inaccurate information flows from extended family.

That is, even after setting aside a lot of the individual margins for self-selection, there are many mechanisms through which the family will influence the migration decision.

2.2 Implications for identifying migration impacts on other family members

A large literature has focused on attempting to estimate the impact of migration and remittances on family members left behind (see [Antman, 2015](#), for one review). Notice that, because of binding data constraints, the empirical analysis are typically conducted on household rather than family members left behind, thus restricting the focus on family members that used to co-reside with the migrant, and thus blurring the distinction between two related but different sets of individuals left behind.¹⁰ This literature has looked at impacts on the

¹⁰We follow here [Fafchamps and Quisumbing \(2008\)](#), who write that “the term “household” is used to designate a group of individuals living together. It is distinct from the term “family” which designates

labor supply and earnings of adult family members, the health and education of children, the consumption and poverty levels of the household, and fertility choices. However, the above illustrates some of the many ways that migration is itself determined by different aspects of the family that then may differ between otherwise identical individuals with different migration statuses. This complicates identifying the impacts of migration if these family characteristics that determine migration also are likely to affect the outcomes of interest.

Let us illustrate with an example that often captures considerable policy attention when discussing migration’s impacts on families: the impact on children left behind. [Save the Children in Sri Lanka \(2006\)](#) claims there is a “clear negative impact that migration of women has on the education of children” as well as an emotional and psychological impact. [UNICEF \(2022\)](#) argues that while “children who remain behind while their parents migrate may benefit from improved living conditions and access to education and other services due to remittances [...]. Migration also brings potential emotional harm as a result of separation from one or both parents”. Such policy statements typically are based on comparisons of children in migrant and non-migrant households. [Bilsborrow \(2016\)](#) also recalls that the World Bank started including a module with retrospective questions on the occurrence of migration episodes in the LSMS out of concern for the children left behind.¹¹

For example, consider a regression that attempts to examine the relationship between an outcome $Y_{j,h}$ for child j in household h , such as child education or emotional state, and household participation in migration M_h , after controlling for observed characteristics of the child and her household $\mathbf{X}_{j,h}$:

$$Y_{j,h} = a + bM_h + \mathbf{c}'\mathbf{X}_{j,h} + \epsilon_{j,h} \quad (2)$$

For this type of comparison to identify the causal impact of migration we require $E(M_h \times \epsilon_{j,h} | \mathbf{X}_{j,h}) = 0$. That is, after conditioning on observed characteristics in $\mathbf{X}_{j,h}$, the migration decision is uncorrelated with other determinants of the outcome that appear in Eq. (2).

a group of individuals related by marriage and consanguinity. [...] Families typically consist of multiple households forming a network of kith and kin, related by blood or marriage but not necessarily living together.” (pp. 3189–90).

¹¹“The LSMS survey of Ecuador in 2005-2006 [...] included a module on emigrants from the household, recording their current age, sex, relationship, education, and whether the emigrant left minor children under age 18 behind (there being special concern at the time, following the surge of emigrants to Spain in 1997–2003, about who was taking care of them following the emigration of a parent, often the mother).” ([Bilsborrow, 2016](#), p. 125)

Eq. (1) shows multiple ways in which this identifying assumption could be violated. For example, θ_i will determine how much weight the potential migrant puts on the well-being of other family members: a parent who cares a lot about the utility of her children may be more willing to migrate to earn more money for other household members, but would also make more internal transfers T^* to these family members if they did not migrate. This would bias the impact of migration on education in a positive direction. Conversely, a potential migrant who gains less utility from proximity to their child will be more likely to migrate, but could also spend less time with the child if they did not migrate, biasing the impact of migration on education in the negative direction.

2.3 Implications for the role of remittances

Note that in the model in Eq. (1), families are making migration decisions to maximize a weighted sum of utilities of its members, with remittances the way higher incomes earned abroad are shared with family members left behind. The family objective function is definitely not to maximize remittances! Indeed, the only reason for remittances to occur in this framework is because of family separation. All else equal, the family would prefer to earn a given amount, make internal transfers T^* , and not pay the costs of migrating or the disutility costs from not having family in proximity. If one reason for the whole household not migrating is that policy makes it too expensive or does not allow family members to accompany the migrant, then remittances can be a second-best solution to the whole family moving together and experiencing the higher income abroad without having to reside in different places. That is, a high level of remittances can be an indication of a failure of policy to allow families to be together, and not something to celebrate. This is in sharp contrast to how remittances are often viewed by policymakers, where there is somewhat of a remittances fetish, celebrating high levels of remittances and raising concerns about policy changes that might reduce them. For example, the United Nations General Assembly has adopted June 16 as the “International Day of Family Remittances” to recognize the contribution of migrants to improve the lives of family members back home.¹² Howes (2023) notes that one of the points of opposition from Dan Tehan, the Australian Shadow Minister for Immigration, to the proposal for a new permanent residency visa was that it “would reduce remittances because the migration would be permanent rather than temporary”. But the lives of families

¹²See <https://www.un.org/en/observances/remittances-day> (last accessed on November 5, 2023).

could be transformed even more if the family members did not have to remain behind, and millions of dollars of remittances were instead converted into internal transfers within intact families.

3 But migration (and the prospect of migration) can change the family

The model above follows much of the literature in taking the family unit as fixed when making migration decisions. But there are a variety of ways that migration can change how families form and dissolve, and how we conceptualize the family.

3.1 Migration and the prospect of migration can affect whether a marriage occurs in the home location

Individuals who are thinking about migrating may factor this into their decisions about whether to form romantic attachments to people in the home location. For individuals who are in relationships, when migration opportunities increase, this can cause a reevaluation of the relationship. [Carter and Wozniak \(2023\)](#) conduct an event-study analysis to examine the impact of exogenously determined long-distance relocations of U.S. Army soldiers on marriage rates, finding that an additional move over a five-year period increases the likelihood of marriage for them by 14 percent, with marriage rates increasing sharply around the time of the move. They suggest that this comes in part from migration lowering the cost of evaluating a potential marriage partner. Their story is that both involve making long-term decisions about what the future will look like, and migrating causes individuals to spend time thinking about the future.

3.2 People can migrate specifically to get married

Migration for the specific purpose of getting married can occur both with internal and international migration. [Rosenzweig and Stark \(1989\)](#) show how the marriage of daughters in India to kinship-related households in other villages can be seen as part of implicit inter-household risk-sharing agreement. They document that in the 1981 Indian Population Census, 80 percent of individuals residing in a place other than their place of birth were

women who gave marriage as the principal reason for their move. International migration for the purpose of marriage also takes place through various forms. [Briselli \(2022\)](#) shows how internal migration of women in Korea has led to an increase in international migration of foreign brides into the areas with high out-migration of local women. [Charsley et al. \(2012\)](#) provide a review of marriage-related migration to the U.K., and note that many settled British citizens of South Asian heritage marry from their parental or grandparental homeland, often through arranged or semi-arranged marriages. For example, they note the proportion of British Pakistanis married to Pakistani nationals is 48 percent of men and 57 percent of women. For some other nationalities, they note the presence of international introduction agencies, or so-called “mail-order brides”, with individuals marrying British men in order to be able to migrate. This is not a new phenomenon: [Sinke \(1999\)](#) writes that “in the late nineteenth century commentators on migration began to write of an ‘international marriage market’”, where the tendency of labor migration movements to be dominated by men led to skewed sex ratios and a rearrangement of traditional marriage patterns. [Dziadula and Zavodny \(2023\)](#) analyze, using data from the ACS between 2008 and 2019, the extent to which natives and foreign-born in the US tend to have a spouse who is a “marriage migrant”, i.e., someone who got married in the year in which he or she arrived in the US. The sample is restricted to individuals who were living in the US one year before the survey, and with at least one of the two spouses who is aged 20 to 65. Their analysis reveals that less than 1 percent of the natives but over 7 percent of the foreign-born who got married in the year before the survey opted for a “marriage migrant”, and men do so to a much larger extent than women.

3.3 Migration may affect the stability of marriages and lead to (or prevent) family dissolution

This is often raised as a policy concern with temporary migration programs that result in one spouse moving and another remaining behind. For example, a Samoan NGO notes that infidelity is an issue among some Samoan seasonal workers, resulting in family separations.¹³ Using migration event histories, [Davis and Jennings \(2018\)](#) document that Nicaraguan migration is associated with an increased rate of marriage dissolution. [Boyle et al. \(2008\)](#)

¹³See <https://www.rnz.co.nz/international/pacific-news/469161/infidelity-is-an-issue-among-samoan-rse-workers-says-ngo> (last accessed on November 5, 2023).

discuss several reasons why migration may lead to this dissolution, even when the couple moves together. Migration can be a stressful life event that puts strain on the family; it may benefit one individual more than others, leading to power imbalances; and it may free people from the social networks that discourage separation. They find that repeated internal migration in Austria is associated with a higher risk of union dissolution. Even the prospect of migration can change marital stability. For example, [Mincer \(1978\)](#) notes that when migration incentives differ for the partners in a marriage, this can amplify marital instability and become a self-fulfilling expectation whereby the growing risk of marital instability reduces incentives to compromise on where they agree to live.

Of course, this association between migration and marital dissolution may not reflect a causal relationship. Our model in Eq. (1) suggests that expectations about the future amenity value of closeness to other family members enter into the migration decision. An individual in a less stable marriage or who was thinking of separating anyway may therefore be more likely to migrate, all else equal. Moreover, in other cases, it is possible that migration prevents a divorce from happening. For example, financial instability and stress can place a strain on relationships, and the additional income earned through migration may alleviate this source of marital conflict, preserving some unions that would have otherwise dissolved in the absence of migration.

3.4 Migration can lead to new marriages being formed and change who individuals marry

In the above cases, the spouse is known at the time of making the migration decision. But migration to a new location changes the pool of potential partners, as well as potentially changing attitudes and what an individual values in a partner and, in case of return, the attractiveness of the migrant himself or herself as a partner on the marriage market at origin. In addition, there can be economic reasons for migrants to choose a partner from their destination. First, the immigration systems of many countries make it easier to obtain permanent residency through marriage than through many other visa categories, and so temporary migrants who marry natives will have an easier time converting their temporary status into permanent migration status ([Bohra-Mishra and Massey, 2015](#)). Second, [Meng and Gregory \(2005\)](#) note that marrying a native can help migrants acquire location-specific human capital (such as language skills) that are rewarded in the destination labor market

leading to higher wages, and [Furtado and Theodoropoulos \(2010\)](#) find that intermarriage in the U.S. increases the probability of immigrant employment which they attribute to better access to job networks. Marriage can also provide a faster pathway to naturalization, which can benefit migrants in terms of access to public sector jobs, signal commitment to stay in the host country, and reduce discrimination ([Govind, 2021](#)).

The result is that many immigrants marry natives from the country they move to, possibly after dissolving a marital union that predated migration. [Meng and Gregory \(2005\)](#) find that 32 percent of married immigrants in Australia in 1996 are intermarried, with this rising to 47 percent of those who arrived in Australia aged 19 or lower. [Haandrikman \(2014\)](#) notes that the partner market for Swedes has expanded considerably with EU expansion and increased diversity of the migrant population, so that the share of native Swedes in binational marriages doubled from 8 percent in 1991 to 16 percent in 2008. [Govind \(2021\)](#) states that marriage between a French person and a foreigner accounts for 13 percent of all marriages in France. [Lichter et al. \(2015\)](#) use the 2008-2012 American Community Survey to document that 37 percent of immigrant men who married in the U.S. in the past year got married to a U.S. native. This rate of intermarriage differs substantially across immigrant nationalities, with [Bohra-Mishra and Massey \(2015\)](#) finding it highest for immigrants from Europe and Central Asia.

3.5 Migration can also change other members of the family, such as children and other household members

In addition to changing the decision of whether, when, and who to marry, migration can also change decisions about having children. This can occur through multiple channels: through an income effect, a spousal absence effect, and through changes in fertility norms and contraceptive knowledge ([Hildebrandt and McKenzie, 2005](#)). This can change the number and timing of childbirths. Moreover, to the extent that migration changes who individuals form relationships with, it not only changes whether they have children, but who these children are—for example, rather than having a child with someone from their home community, they instead have a different child with someone from the destination community.

Changes in marriage will also change the formation of the extended family, in terms of the composition of in-laws. Moreover, migration of one individual can also change the partition of the non-migrant family members into distinct households. Drawing on data from a rotating

panel household survey, Bertoli and Murard (2020) find that Mexican migrant households have a 25 percent higher probability of receiving a new member within one year after the migration episode, and they also have a significantly higher probability of attrition, with the members of the household of origin of the migrant joining another household within Mexico. Bertoli et al. (2023) find that Mexican children left behind when their fathers migrate often experience a further change in their living arrangements by going to live with their grandparents, and a substantial share of them also experiences the dissolution of the marital union of their parents.

4 Evidence from the American Community Survey

We use the 2017-2021 5-year sample of the American Community Survey (ACS) (Ruggles et al., 2023) to provide an illustration of a few stylized facts related to how frequently the marital status of immigrants changes after migration decisions. We focus on individuals aged 18 to 60 who migrated from a developing country to the U.S., and moved when they were adults between 18 and 40. The ACS asks respondents about both their year of immigration, and the year of their last marriage (independently of their current marital status). Comparing these two variables enables one to see what percentage of married immigrants were married prior to migrating, in the same year as migration, and after migrating, and (to some extent) to reconstruct the marital status of the migrant at the time of migration.¹⁴

4.1 New empirical evidence on marital changes with migration

Table 1 reveals that 19.4 percent of the migrants aged 18 to 60 and who migrated to the U.S. when they were aged 18 to 40 were never married at the time of the survey, with this share being larger for males, and strongly declining with the age at migration. Panel A of Table 1 restricts the sample to ever-married migrants. Overall, only 38.5 percent of

¹⁴In particular, a migrant who never married, or who got married only once after the year of migration was certainly not married when moving to the U.S.; trivially, all currently married migrants whose last marriage predates migration were already married when they moved to the United States; the marital status at the time of migration cannot be inferred for the migrants who got married multiple times, and for the ever-married individuals who are not in a union at the time of the survey (separated, divorced, widowed) and whose last marriage predates migration, as the ACS does not report information on the year of separation or divorce from one's own spouse.

ever-married immigrants were married before migrating, 11.8 percent married in the year of migrating, and 49.8 percent were married after migrating. Conditional on getting married after migration, the median duration between migration and marriage is 6 years, suggesting that in most cases these marriages are likely to be from relationships formed after migration. Men are more likely to have married after migrating than before migrating compared to women (58.5 and 42.4 percent respectively). Individuals who migrate aged 18 to 25, the peak age for migration from developing countries, are especially likely to have married after migration: 83.1 percent of males aged 18 to 40 who migrated when aged 18 to 25 married after migrating.

Panel B of Table 1 then combines data on current marital status with the information on when the last marriage occurred compared to when immigration occurred. We see that only 33.2 percent of ever-married migrants are currently married to a spouse that they wed before migrating (most of them have their spouse living with them, rather than being absent as would be the case when they migrate and leave a spouse in their home country), with 4.6 percent having dissolved their union.¹⁵ These are the group that best approximate the standard economic model of a pre-determined and unchanging “family”. Even if we consider females who were 26 to 40 at the time of migration, only 50.4 percent of them fit this status, and only 9.1 percent of males who were aged 18 to 25 at the time of migrating fit this status. We also see that 13 percent of ever-married migrants married more than once. For those whose last marriage occurred after migration (10.3 percent), we have no data on whether their first marriage took place before or after migrating. If we were to assume that all first marriage occurred before migration, the share of migrants who married before migrated would increase from 38.5 to 49.6 percent. Yet, this would not change the share of those currently married to the same spouse they wed before moving, still standing at 33.2 percent. In sum, the majority of immigrants in the ACS are either still in the process of potentially forming a marriage, got married after migrating, or are separated or divorced, or married multiple times. That is, changing marital status is the norm with immigrants in the U.S., not the exception.

Panel C of Table 1 further restricts the sample to married migrants who co-reside with their spouse, as this restriction is necessary to have information about the identity (and notably the country of birth) of the spouse. For the migrants who got married before

¹⁵Notice that divorce or separation might have occurred before or after migration.

migrating, 85.1 percent of them are married to a spouse born in the same country of origin, and only 8.5 percent are married to a U.S. native,¹⁶ with no major differences by gender or age at migration. For those married after migration, the share of within-country marriage declines to 65.9 percent, while the share of marriages with a native increases to 20.2 percent (and the remaining 14 percent marry someone from a third country other than the origin or destination). The propensity to marry a native is larger for females (23.3 percent) than for males (17.6 percent).

Table 2 examines how the frequency of changes in marital status differs across four major origin countries (Mexico, India, China, the Philippines) and the Middle East and North Africa (MENA) region, which in total account for two third of all immigrants from developing countries. Differences in migration patterns are stark: while Mexican migrants tend to migrate young (median age standing at 23 for men) and are usually low-educated (less than 10 percent have a bachelor degree), the opposite is true for the other origin countries. For example, Indian migrate later in life and are particularly highly skilled (with 50 percent men holding at least a master degree). These demographic discrepancies translate into differences in the relative timing of migration and marriage decisions. While only 31 percent of Mexican men are married before migrating, this is the case for about 40 percent of Indian and Chinese men. Likewise, while 45 percent of Mexican women get married after migration, this is only the case for 22 percent for Indian women and 28.7 percent of women from Muslim countries in the Middle-East and North-Africa. Tables A.1 to A.5 in the Appendix reproduce the content of Table 1 separately for Mexico, India, China, Philippines, and the MENA region. Interestingly, we see that the likelihood of marrying a U.S. native after migration is substantially lower for Chinese (4.2 percent) and Indian (8.1 percent) compared to Mexican (22.5 percent) and Middle-Eastern and North-African (23.8 percent); the likelihood of intermarrying with a U.S. native is also particularly high for women from the Philippines (39.3 percent) compared to women from other countries (less than 20 percent).

The ACS data can be further used to provide descriptive evidence on the evolution of the probability of a change in marital status with the time since migration as a function of the

¹⁶Notice, as this might appear surprising, that the ACS provides information on the year in which an immigrant moved to the U.S. for the last time; multiple migration spells, which remain unobserved in the data, together with the possibility that the spouse is a second-generation immigrant from the same origin who also migrated in the past, might explain why some individuals appeared to have married a native before migration.

initial marital status. Figure 2 clearly shows that, conditional upon staying in the U.S., the probability of a change in marital status is substantially higher for initially unmarried than for initially married migrants, with the same pattern applying to both men and women. In other words, getting married after migration for initially unmarried migrants is substantially more likely than getting divorced/separated from one spouse for initially married migrants. This (admittedly intuitive) stylized fact is obtained under the assumption that initially married individuals who are separated or divorced at the time of the survey dissolved their marital union after migration, thus magnifying the probability of a change in their marital status.¹⁷ Figure A.1 in the Appendix also reveals that this stylized fact is independent of the assumption that we need to introduce on the (unobserved) relative timing of an earlier marriage with respect to migration for individuals married more than once (representing 13.0 percent of the sample, see Table 1).¹⁸

4.2 Transnational marriages are largely a temporary phenomenon

Panel B of Table 1 reveals that married migrants from developing countries mostly co-reside with their spouses; this finding, which also applies to migrants from Mexico, differs from the evidence provided in McKenzie and Rapoport (2010), who draw on earlier rounds of the ACS to show that two out of three married Mexican male immigrants have their spouse absent, while the same does not apply to married Mexican female migrants, consistently with the predominant sequential nature of the migration of married Mexican couples (Cerrutti and Massey, 2001). Crucially, McKenzie and Rapoport (2010) focus only on recently arrived migrants (no more than two years before the survey). Figure 1 reconciles these different findings, as it reveals that, among migrants married before migration, the share who do not co-reside with their spouse sharply declines with the time since migration, in particular for men. The share who are separated or divorced tends to increase, in particular for women. Figure A.2 in the Appendix focuses on Mexican male migrants (married before migrating)

¹⁷This assumption also explains why the probability of a change in marital status is (for up to 1 or 2 years since migration) larger for initially unmarried migrants.

¹⁸Figure 2 is obtained by excluding migrants married more than once and who married after migration, as we cannot determine the relative timing of an earlier marriage with respect to migration. In Figure A.1, we instead examine the probability of changes in marital status under two alternative assumptions about migrants married multiple times: either that their first marriage occurred after migration or that their first marriage occurred before migration.

and shows that the share not living their spouse falls from 60 to less than 20 percent within five years after migration. This, in turn, suggests that “transnational households” appear to be a fragile and temporary living arrangement, with the two spouses resuming their co-residence—either at origin or in the United States, or possibly dissolving their marital union in the case of a prolonged physical separation.

4.3 Robustness to return migration

We have so far examined the probability of a change in marital status conditional upon staying in the U.S.. Yet, migrants can also return to their home country, and this decision may depend on their marital status. For migrants who were unmarried before migrating, three outcomes are possible at a time of t years after migration: (*i*) they got married to someone in the U.S., (*ii*) they remained unmarried in the U.S., or (*iii*) they returned to the origin. Even though return migrants may have different marriage prospects upon return and thus could marry in the home country a different person from who they would have married had they never migrated, we can obtain a lower bound on the fraction who have changed marital status after migration by assuming no further change in marital status occurs after return. Likewise, for initially married migrants, we can obtain a lower bound on their likelihood of changing marital status by assuming they do not divorce or remarry after return. A lower bound on the *unconditional* probability of a change in marital status t years after migration can then be written as the product of the probability of a change in status in the U.S. conditional on staying (which we have shown above), times the probability of not returning to the home country after t years. To examine sensitivity of our results to return migration, we therefore need estimates of the rate of return migration by initial marital status.

To estimate the rates of return migration separately for migrants married and migrants unmarried before migration, we use yearly rounds of the ACS between 2008 and 2021 (no information on the year of marriage is available in the ACS before 2008).¹⁹ We measure

¹⁹Origin country census data on the relative timing of migration, marriage and return is scarce. IPUMS International reveals that, out of 156 dataset in 93 countries (either in 2000/01 or 2010/11), only three dataset contains data on the year of marriage for important origin countries (China, Indonesia and the Philippines). Yet, data on the year of emigration is never available for return migrants, which makes it impossible to know whether the latter were married or unmarried when they first migrated to the U.S.

immigrants' returns as the difference between the initial inflow of a cohort arrived in year t and the stock remaining at a later date $t + k$. Following [OECD \(2008\)](#), we identify a cohort size entering at year t on the basis of respondents present in the ACS data in year $t + 1$ and reporting to have arrived in the preceding year. We then use the ACS in year $t + k$ to identify migrants who entered in year t and are still present in $t + k$. To reduce statistical noise due to the small sample size of the ACS (1 percent of the population), we group together cohorts arriving between 2007 and 2012 and examine their return migration up to 9 years after migration (e.g., until 2021 for the 2012 cohort and until 2016 for the 2007 cohort). As with the analysis in [section 4.1](#), we focus on individuals who migrated from a developing country and moved when they were adults between 18 and 40.

[Figure 3](#) shows that migrants married before migration are more likely to return to their home country compared to migrants unmarried before migration: 24 percent of initially married migrants have returned after 9 years, compared to 14 percent for those who migrated unmarried. This is true both among men and women, with the former being more likely to return than the latter (34.9 percent of initially married men have returned after 9 years compared to 14.2 percent of initially married women).²⁰ Note that this form of selection into return migration by initial marital status makes only a marginal difference to our [Table 1](#) finding that a majority (55.9 percent) of migrants are unmarried before migrating. In fact, for migrants who report to have arrived in the U.S. within one year (and hence are unlikely to have already returned home), this share stands at 52.9 percent, and it is relatively stable over the years since migration (58.3 percent after nine years or more).²¹

[Figure 4](#) then examines how sensitive our [Figure 2](#) results on the likelihood of a change in marital status after migration are to accounting for return migration. It displays both the probabilities of changes conditional on staying in the U.S., and our lower bounds on the unconditional changes, assuming no change in marital status after return migration. For migrant men who were unmarried before migration, the probability to get married nine

²⁰Due to sampling noise, we obtain a slightly negative rate of return migration for some years. When we examine immigrants from all origin countries, we obtain an overall rate of return migration of 23 percent nine years after migration, consistent with previous studies' estimates ([OECD, 2008](#); [Borjas and Bratsberg, 1996](#)).

²¹These figures are obtained using the 2017-2021 ACS data (as in [Table 1](#)). Using the 2008-2021 ACS data and focusing on the 2007-2012 cohort, we obtain a share of unmarried migrants of 57.8 percent for migrants arrived one year ago or less and of 60.6 percent for migrants arrived since nine years.

years after migration is 54 percent conditional on staying in the U.S. and would at most fall to 43.1 percent after accounting for return migration. For migrant men married before migration, the probability to get divorced/separated nine years after migration is 12.1 percent conditional on staying, while the unconditional probability is 7.8 percent. The results for female migrants are even less affected by accounting for return migration, since they have a lower probability of return.

Summing up, taking return migration into account does not significantly alter our main findings. We still see that more than half of adult prime-age migrants to the U.S. are not married at the time of migration; that getting married after migration is then very common for these migrants; and that it is less common for initially married migrants to separate or divorce after migration than for initially unmarried migrants to marry.

5 How do Counterfactual Families Change Migration Decisions and Impacts

The assumption of a pre-defined, fixed family unit that does not change with migration may be a suitable representation for very short-term seasonal migration (as in [Lagakos et al., 2023](#)), but, as the evidence in [Section 4](#) illustrates, it is unlikely to be true of many types of migration. Instead, when we consider a migration counterfactual to staying in the same location, this will also involve a counterfactual family. Moreover, the choice of where and when to migrate to could each come with its own, different, counterfactual family. We acknowledge that there can be complex philosophical issues involved in considering counterfactual families, and the field of population ethics has grappled with how to value these alternatives ([Economist, 2022](#)). We focus on how considering such counterfactuals has several practical and econometric implications for how we model migration choices, for understanding why more people do not migrate, and for efforts to measure the impacts of migration on “the family”.

5.1 Migration decisions can be dynamically and locationally inconsistent

Dynamic inconsistency occurs when the optimal decision made at one point in time is no longer optimal at a later point in time. This is sometimes motivated in terms of thinking of there being many “different selves” within a decision-maker, where each self represents the decision-maker at a different point in time, and them making choices inconsistent with one another. If migration is a family decision as in Eq. (1), then we have argued that there is indeed a different family in the future after migration (or non-migration) than at the time the decision is being made, and potentially a different family at the same point in time depending on where the individual ends up living.

This has two implications for the decision in Eq. (1). First, the potential migrant puts weight on the utility of family members in a defined family F : for example, they think about the happiness of their spouse and children. But F itself may change with migration, and the future or counterfactual family may lead to a different migration and remittance decisions being made than is the case when taking into account the current concept of the family. For example, an individual may be motivated to migrate to provide by the low income of their parents and/or the person they are thinking of marrying, and plan on sending back remittances to them. But after migrating they meet someone abroad, end up marrying them, and they now instead put much more weight on the utility of this new spouse, and do not remit as much as initially planned. If F itself changes with migration, then it can be difficult to see the family as acting as a single decision-making unit that bargains to achieve the efficient migration decision—since what is optimal will itself change with F .

Second, the amenity value A of being close to particular individuals may change with the migration decision. [Lagakos et al. \(2023\)](#) model the disutility of leaving as being less with past migration experience. [Sarvimäki et al. \(2022\)](#) model preference for location as a type of habit, where utility increases with time spent there. Likewise, the amenity value of being physically close to particular people in the family may change over time and space like a habit. For example, consider a potential migrant, José, living in Mexico, and the amenity value he gets from being close to his girlfriend María, who he may end up marrying if he stays in Mexico, and from being close to Jessica, who he will meet and marry if he moves to California. At the time of making the decision in Eq. (1), he places a high amenity value on being close to María, and zero amenity value on being close to Jessica who he does not

know. But if he migrates, he will value these differently. One way to think about resolving this is not to derive utility from any particular person, but rather their function—so modeling this as utility from being close to the spouse, whoever this may be.

5.2 The inability to picture these counterfactual families can result in a bias towards not-migrating

McKenzie (2023) argues that one reason more people do not migrate is that they are unable to picture what their lives will be like if they do, and so do not take into account the opportunity cost of what they are giving up by not migrating. It is notable that the model in Eq. (1) has a psychic cost of leaving, which could be the tears from moving away from the existing family. But failure to move might mean the individual never meets a potential spouse and does not have the children they might have had. But most individuals don't internalize that they are giving this up by not moving, and perhaps do not feel any psychic cost from this unrealized alternative future. This can reflect loss aversion and ambiguity aversion: people may weigh the potential losses from giving up family connections at home more heavily than the potential gains from establishing a new family abroad, especially when the current family setting is less ambiguous than that which may occur with migration. So even if we move away from modeling the family as a specific defined set of individuals, and rather as an amorphous entity that the individual cares for and derives utility from, the amenity value of this family will be more known and certain without migration than with migration. Similarly, for non-migrant family members, it would be easier to visualize the benefits, stemming from incoming remittances, for the children that the migrant already has, then the benefits related to migration for the migrant's future children that would be born in the destination country.

While, in general, this will result in a bias towards not migrating, an inability to picture some of the family costs of separation may also bias decisions towards more migration than what seems initially optimal.

5.3 Anticipated changes in marital status and migration decisions

Consider again the family F that appears in Eq. (1); how does the decision to invest in the migration of the family member i depend on his or her initial marital status, and on the

anticipation that this might change in case of migration? To fix ideas, let us consider two distinct families, F and F' , both including two parents and a son i ; in the family F the son is not married, while in the family F' the son is married, so that F' also includes his wife (and potentially their children). Other than this difference, the two families are identical, and they both consider investing into the migration of the son i .

An unmarried individual faces a lower psychic cost of migrating, and also experiences a smaller reduction in amenity associated with migration. This, in turn, also suggests that an unmarried individual is likely to opt for a longer migration duration, and hence non-migrant family members could benefit from remittances over a longer time horizon. The parents, who are altruistic towards the son i , might also value the fact that migration could increase the chances that their unmarried son gets married.

However, the anticipation of future changes in the marital status of an unmarried individual might reduce the incentives of the family F' to invest into migration. The initially unmarried son i is likely to get married with a wife he has met at destination, and this could reduce his propensity to send back remittances to non-migrant family members.²² In particular, Table 1 revealed that he is more likely to get married to a U.S. native woman, who might be less attached to the country of origin of her husband, and less inclined to send remittances back to her in-laws. Even if the spouse is born in the same country of origin, the fact that the marriage intervened after the migration of the son $i \in F'$ suggests that the migration costs of the two spouses have been financed by their respective families, so that the couple would be expected to send remittances back to both families. This, in turn, could imply a lower remittance income accruing to the family of the initially unmarried son (F) compared to the one of the married son (F'), who should be the only recipient of potential transfers.²³

In contrast, an initially married individual is likely to retain stronger connections to his family, for a number of distinct and not mutually exclusive reasons: (*i*) because his spouse

²²Clearly, the initially married migrant might dissolve the marital union with his left behind spouse, and lower the amount of remittances sent back to his family; but, as shown in Section 4, the probability of a post-migration change in marital status is substantially higher for $i \in F'$ than for $i \in F$, i.e., the risk of marital dissolution for an initially married migrant is much lower than the probability of getting married for an initially unmarried migrant.

²³In fact, even when the married son and his spouse resume their co-residence at destination, the (simultaneous or sequential) migration of the spouse is more likely to have been financed by the family F itself, thus with weaker obligations to send remittances back to another family.

initially remains in the home country (possibly still in the household of his parent) while the migrant is temporarily gone; *(ii)* because they have left children behind in the home country to be looked after by grandparents, possibly after the spouse has joined the migrant at destination;²⁴ *(iii)* because he and his spouse are from the same home country and thus retain stronger ties to it than if the migrant marries a foreigner; *(iv)* because they can make more of a complete contract with the migrant and his spouse that involves funding migration and getting insurance/remittances in return—whereas if it is with an unmarried migrant, there is a party that then joins the family that is not part of the initial contracting arrangement and could lead to renegotiation. Finally, as argued in section 5.2, it is probably easier for the married migrant to visualize who will also benefit from migration (spouse and children left behind) and than for the unmarried migrant to picture the potential wife and children he might have at destination.

These factors put together could dominate the lower psychic costs of the unmarried son’s migration and the higher probability to intermarry with a U.S. native that translates into higher earnings at destination (and for a longer duration) compared to the married migrant $i \in F$. Table 1 reveals that this applies to only one out of five male migrants who get married after migration.

5.3.1 Descriptive evidence from the ENOE

We draw on data from the 2005Q1 to the 2018Q4 rounds of the ENOE, a rotating panel survey conducted by the INEGI in Mexico, to examine the probability of migrating to the U.S. for married and unmarried men aged 18 to 40 who co-reside with both parents at baseline. The ENOE, which interviews households for five consecutive quarters, allows observing the occurrence of a migration episode from variations in the household roster across interviews, coupled with questions to remaining household members about the destination of the individual who has left the household. The restriction to individuals who co-reside with both parents is necessary to minimize the risk that the migration episode remains unrecorded because of the dissolution of the household of origin of the migrant (Bertoli and Murard, 2020), and the ensuing household attrition, but it clearly reduces the external validity of our

²⁴Bertoli et al. (2023) provide evidence, drawing on the Biannual June Supplement of the CPS, that a substantial share of married couples of Mexican migrants in the U.S. have left one or more of their children behind; this data source does not provide information on the timing of the marriage, but these instances are most likely to relate to couples that got married before migrating.

analysis, as just 7.2 percent of married men aged 18 to 40 co-reside with both parents.²⁵

Our estimation sample includes 236,476 individuals, and the dependent variable in our cross-sectional estimation is a dummy signaling whether the individual moved to the United States over the four quarters following the initial interview. Table 3 presents the results from the OLS regression. The incidence of migration among unmarried individuals stands at 1.2 percent. Married individuals have a 0.239-0.386 percentage points higher probability of migrating than unmarried individuals, with the estimated coefficient being always significant at the 1 percent confidence level, and robust to the inclusion of a progressively larger set of fixed effects, including for age and for the level of education (10 categories). The last two data columns in Table 3 reveal that the effect is mostly driven by rural areas, where married individuals are $0.613/2.909 = 21.0$ percent more likely to move to the U.S. than unmarried individuals. This heterogeneity between rural and urban areas may be due to the greater importance of securing remittance income relative to non-monetary considerations (psychic costs and amenities). The evidence presented here is consistent with the arguments presented in Section 5.3, but could be of course driven by other factors or unobserved characteristics of married individuals (e.g., marital status conveying to other family members information on the trustworthiness of the potential migrant).

5.4 Estimating the impact of migration on other family members may be ill-defined

If the children, spouse, and family are all endogenous to migration, then asking what the impact of migration and remittances is on these individuals may not be a well-defined question, and additional care is needed in defining who the group of interest is.

For example, consider the literature which aims to measure the impact of migration and remittances on the labor supply of the migrants' spouse. This typically involves running a regression like:

$$Y_j = \alpha + \beta M_j + \boldsymbol{\gamma}' \mathbf{X}_j + \epsilon_j \quad (3)$$

Where, for example, Y_j is labor supply of the wife of the individual j , and M_j is an indicator for whether individual j has migrated or not. Eq. (1) indicates that the decision to migrate

²⁵The share of men in informal union who live with both parents stands at 10.9 percent, while this is the case for 58.5 percent of single men, and 35.1 percent of separated or divorced men.

will be determined in part by expectations of the income that the spouse can earn, and so researchers aim to identify some source of random variation that determines migration. For example, this could be a migration lottery program (as in [Mobarak et al., 2023](#)) or shocks in migration destination markets. However, while such variation may not affect how much a particular individual earns in the home market, if migration changes whether an individual is married and who they are married to, then using a lottery or instrumental variable for migration will still not solve the identification problem. The problem is that the spouses we observe of migrants could be different people from whom the spouses would have been had these individuals not migrated. For example, while [Mobarak et al. \(2023\)](#) find no impact of migration of Bangladeshis to Malaysia on labor supply of remaining household members, they do find that individuals selected for migration delay marriage and are less likely to be married. Thus, simply comparing outcomes for the spouses of migrants to spouses of non-migrants will still be problematic even with a lottery determining migration.

A solution to this issue is to be very careful in defining precisely the outcome of interest and being clear what can be identified. For example, while defining Y_j as the labor supply of the current spouse of the migrant runs into the problem of looking at the outcome for an individual whose very existence may change with migration, we could instead specify the outcome of interest differently. A first option is to take only the subset of individuals who were married at a given point in time, before the migration decision takes place, and then define Y_j as the labor supply of whoever was the spouse at the time, even if they no longer remain the spouse. This then gives a well-defined set of individuals to look at impacts on, and the impact we measure will include the overall impact of having their spouse migrate, which could include divorce and separation along with absence, remittances, and other channels. A second alternative would be to define the outcome of interest as total spousal labor supply, where this outcome is defined as 0 for those migrants who are not married. This impact would then include the overall combined impact of migration on whether the migrant is married, on who they are married to, as well as on how much this spouse works.

The same ideas apply to efforts to examine impacts on children's schooling if migration changes how many children migrants have, when they have them, and who they have them with. Likewise, looking at the impacts on the poverty of other household members will not enable counterfactual comparisons if the composition of the household itself changes with migration. We could again instead define alternative outcomes such as the impact on children

that individuals had at a point in time before the migration decision, or on the poverty of the members of the pre-migration household, or look at overall total combined impacts that incorporate both impacts on the composition of the household, and on how those members are affected.

5.5 Which parts of migration research are most and least affected by these issues?

While our focus is on the counterfactual families that can arise with migration, many of the same issues will be present when examining impacts of other development interventions such as conditional cash transfers or girls' schooling programs. These other programs can also affect when and who individuals marry, fertility, and hence family formation. However, the differences are that these programs still involve less of a change in marriage market and life options than international migration, and that it is more common for studies of those programs to focus on impacts on an existing pre-defined family, than on outcomes for the future spouses and children of beneficiaries.

What types of migration research need to be most concerned about the issues raised in this paper, and which analysis can ignore it? First, in most cases the issues raised here will not affect studies in which the family is not being considered as either a determinant of migration, nor the unit on which to examine impacts. For example, studies of the impacts of migration on the well-being of the migrants themselves, or of how migration affects trade flows or wages of other community members will typically not need to content with the issues raised here. Second, the identity of some family members such as parents and siblings will not change with migration, so studies which look at the impacts of migration on these migrants' relatives can work with pre-determined family relationships (whereas impacts on parents-in-law or siblings-in-law will be affected). Third, the issues will be less severe in contexts where migration is short-term, temporary, and offers less time and fewer possibilities for family changes to occur. Seasonal migration programs and contract labor may fall into this category. However, it can be common for individuals to engage repeatedly in such programs and over longer periods family changes will become more prevalent.

The issue of counterfactual families is likely to be most severe when migration is anticipated or planned in advance, occurs for younger people who are still in the process of forming families, and is for longer-term duration migration movements. But this describes many mi-

gration movements. For example, McKenzie (2008) shows that the peak age of migration for developing country migrants is 24 in many destination countries, and that the majority of these young migrants are not married at the time of migrating. Our analysis of the ACS documents that the majority of adult working age immigrants in the U.S. do change their marital status after migration. A large literature documents how the prospect of migrating in the future determines investments in human capital, showing that many individuals are thinking ahead to the possibility that they might migrate. So, even the possibility of migration may help shape family formation and stability. The result is that most studies that aim to look at the impacts of family on migration decisions, and of the impacts of migration on spousal and child well-being, will need to carefully consider the issues raised here.

6 Conclusions

Migration changes whether and how families form and dissolve, how individuals value proximity to others, and whose utility ends up factoring into an individual's decision-making process. While the literature has long recognized the importance of the family in determining migration decisions, it has paid much less attention to the role of the counterfactual family. Recognizing that different migration choices will result in different families can mean that migration decisions are dynamically and locally inconsistent. The inability to visualize what one is giving up in terms of potential family when choosing not to migrate may create a bias towards non-migration. In addition to changing how we model and theorize about migration decisions, this also has implications for efforts to measure impacts of migration on family members, and for data collection, as standard surveys provide little to no information about the migrants' family, or about when it has formed or changed.²⁶

Taking into account the counterfactual families associated with migration suggests several directions and implications for policy efforts. First, many of the details of migration policies will have impacts on decisions of families to form and stay together or dissolve, and if policies take the family as fixed, there may be unintended consequences. The most obvious is spousal or family reunification visa categories, which are typically much easier to migrate through than obtaining work visas into many countries. They have the good intention of wanting

²⁶To give just two telling examples, the Mexican census does not provide information on the marital status of current migrants, and the ACS does not provide information on children that do not co-reside with their parents, or on the timing of marriage dissolution.

to help couples live together, but these policies can also incentivize marriage to take place, and disincentivize existing marriages from breaking up. Moreover, they can lead individuals wanting to migrate to prefer marrying someone who can sponsor them for such a visa than other marriage prospects who do not have this visa status. A much wider variety of migration policies will also jointly influence migration and family structure. For example, policies on how frequently temporary workers have to return to their home communities, on whether family members can accompany migrants, on whether and how quickly family members accompanying a principal migrant can work, on whether children of migrants have access to public daycare and schools, and on whether migrants have to learn the native language (and hence be able to communicate well with the native population) can all have impacts.

Second, to the extent that the inability to picture these counterfactual families leads to a bias towards not-migrating and potential migrants making suboptimal migration decisions, one may wish to consider policy responses to help overcome this bias. This could include a visualization treatment, which gets participants to visualize alternative versions of the future depending on different actions they could take. [John and Orkin \(2022\)](#) show such an approach can be used to get people to undertake more preventative health care, and it would be interesting to test such an approach when applied to visualizing the different family lives one might have living in different locations.

Third, this notion of counterfactual families has implications for policy discussions about the overall impacts of migration and remittances on human well-being. Viewing remittances as a substitute to intra-household transfers makes clear that maximizing remittances should not be a policy goal: a migrant may be better off having their whole family move with them and making no remittances, or forming a different family after migration than the one they would form not migrating. Efforts to look at the impacts of migration and remittances on children remaining in the home country miss the welfare gains to the counterfactual children born to migrants abroad. An individual who cares about the well-being of their future children may well prefer to migrate, marry someone in another (richer) country, and have a child with them, than to stay in their home country and have a child with someone else.

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Table 1: Immigrants from developing countries

Gender	All	Male	Male	Male	Female	Female	Female
Age at migration	18-40	18-40	18-25	26-40	18-40	18-25	26-40
Never married	19.4	23.0	29.1	16.2	16.2	21.2	11.3
<u>Panel A: When did ever-married migrants last marry?</u>							
Married before migrating	38.5	33.8	10.6	55.6	42.4	23.0	59.6
Married same year as migrating	11.8	7.7	6.3	9.0	15.1	16.4	14.0
Married after migrating	49.8	58.5	83.1	35.3	42.4	60.5	26.4
<u>Panel B: Current marital status of ever-married migrants</u>							
<u>Married before moving:</u>							
Spouse present	31.1	27.5	8.1	45.7	34.2	18.7	48.0
Spouse absent	2.1	2.5	1.0	4.0	1.7	0.8	2.4
Separated or Divorced	4.6	3.5	1.5	5.5	5.5	3.0	7.7
<u>Married same year as migrating:</u>							
Spouse present	10.1	6.5	5.2	7.7	13.1	14.2	12.0
Spouse absent	0.5	0.5	0.4	0.6	0.4	0.4	0.4
Separated or Divorced	1.1	0.6	0.6	0.7	1.4	1.5	1.3
<u>Married after migrating:</u>							
Spouse present	39.5	47.8	68.5	28.3	32.6	47.0	19.8
Spouse absent	3.0	3.9	5.3	2.6	2.1	3.0	1.4
Separated or Divorced	6.6	6.4	8.7	4.2	6.8	9.5	4.5
Widowed	1.3	0.6	0.6	0.6	1.8	1.7	2.0
Married multiple times	13.0	13.2	13.1	13.3	12.9	11.7	13.9
<u>Panel C: Married migrants with co-residing spouse</u>							
<u>Married before moving:</u>							
Spouse born in the same country	85.1	86.0	83.1	86.5	84.5	84.9	84.4
Spouse born in the U.S.	8.5	8.0	12.7	7.3	8.7	9.4	8.5
<u>Married same year as migrating:</u>							
Spouse born in the same country	69.3	74.8	76.4	73.8	67.0	76.1	57.4
Spouse born in the U.S.	23.4	18.6	19.1	18.4	25.3	17.9	33.1
<u>Married after migrating:</u>							
Spouse born in the same country	65.9	69.3	69.0	69.9	61.8	64.4	56.3
Spouse born in the U.S.	20.2	17.6	18.3	16.0	23.3	21.3	27.6
Observations	651,798	310,609	163,590	147,019	341,189	170,363	170,826

Notes Sample: individuals aged 18 to 60 at the time of the survey, born in a developing country (defined as low or middle-income country according to [the World Bank classification](#)) and who migrated to the U.S. when they were between 18 and 40.

Data source: ACS 2017-2021 ([Ruggles et al., 2023](#)).

Table 2: Immigrants from selected developing countries

Origin countries	Mexico	India	China	Philippines	MENA
Panel A: Male migrants					
<u>Demographics</u>					
Age of migration: median	23	26	25	27	27
Highest education: master or more	2.4	50.7	44.9	10.2	27.6
Highest education: bachelor or more	7.6	80.7	62.3	53.3	53.9
Never married	22.2	16.7	29.0	20.4	21.2
<u>When did ever-married migrants last marry</u>					
Married before migrating	31.3	40.8	39.5	34.1	36.4
Married same year as migrating	8.1	7.0	10.3	8.3	7.7
Married after migrating	60.6	52.2	50.2	57.6	55.9
N	86,975	46,050	22,679	13,215	14,802
Panel B: Female migrants					
<u>Demographics</u>					
Age of migration: median	24	26	26	27	27
Highest education: master or more	2.6	41.8	37.9	9.7	21.1
Highest education: bachelor or more	9.7	76.0	59.7	58.9	50.2
Never married	15.8	8.2	20.6	12.8	11.8
<u>When did ever-married migrants last marry</u>					
Married before migrating	40.0	56.3	45.4	34.6	55.3
Married same year as migrating	14.1	21.6	13.3	21.0	16.1
Married after migrating	45.9	22.1	41.3	44.4	28.7
Observations	83,988	43,353	29,208	24,166	13,343

Notes Sample: individuals aged 18 to 60 at the time of the survey, born in a developing country (defined as low or middle-income country according to [the World Bank classification](#)) and who migrated to the U.S. when they were between 18 and 40.

Data source: ACS 2017-2021 ([Ruggles et al., 2023](#)).

Table 3: Marital status and selection into migration: evidence from Mexico

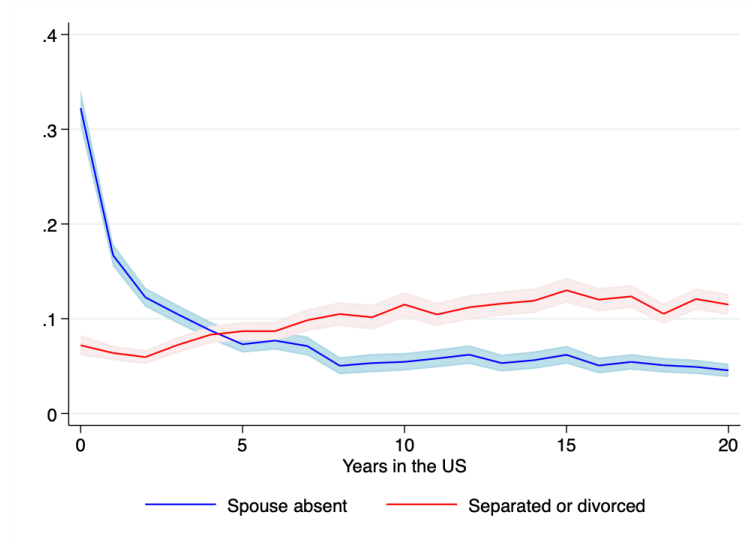
Dependent var.:	Migration to the U.S. in the next 4 quarter					
					Rural	Urban
Married	0.348*** (0.087)	0.342*** (0.087)	0.386*** (0.089)	0.239*** (0.089)	0.613** (0.301)	0.132 (0.086)
Informal union	0.287*** (0.102)	0.346*** (0.102)	0.336*** (0.102)	0.088 (0.103)	0.418 (0.312)	0.028 (0.103)
Adjusted- R^2	0.008	0.012	0.012	0.013	0.028	0.006
Observations	236,476	236,476	236,476	236,476	38,574	197,902
Average outcome among unmarried	1.217	1.217	1.217	1.217	2.909	0.912
Dummies						
Rural, quarter FE	Yes	Yes	Yes	Yes	Yes	Yes
State FE		Yes	Yes	Yes	Yes	Yes
Age			Yes	Yes	Yes	Yes
Education level				Yes	Yes	Yes

Notes The Table presents OLS estimates of regressions in which the dependent variable is a dummy indicating whether the individual moved to the United States over the four quarters following the first interview. Marital status is measured at the first interview. The sample includes men aged between 18 and 40 who co-reside with both parents in the same household. Regression controls include a set of dummies for the quarter in which the household entered the ENOE sample, rural areas, state of residence, age, and educational level. Standard errors are in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

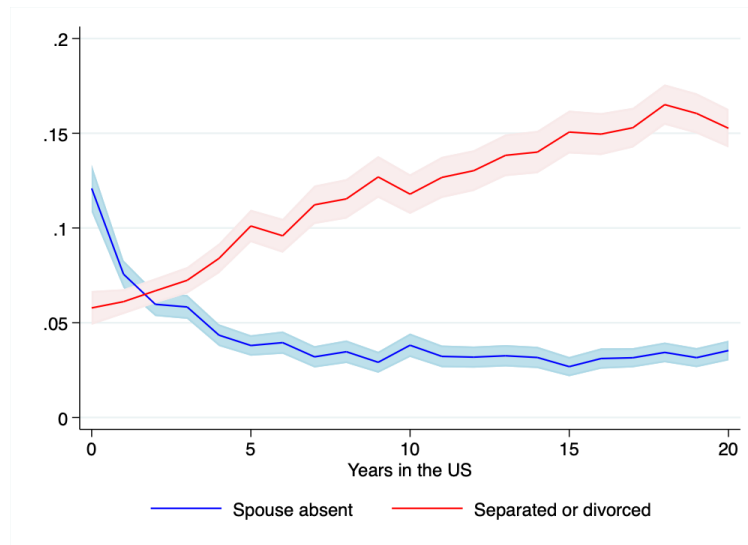
Source: Authors' elaboration on ENOE 2005Q1–2018Q4.

Figure 1: Migrants married before migration: co-residence with spouse and separation

(a) Men



(b) Women

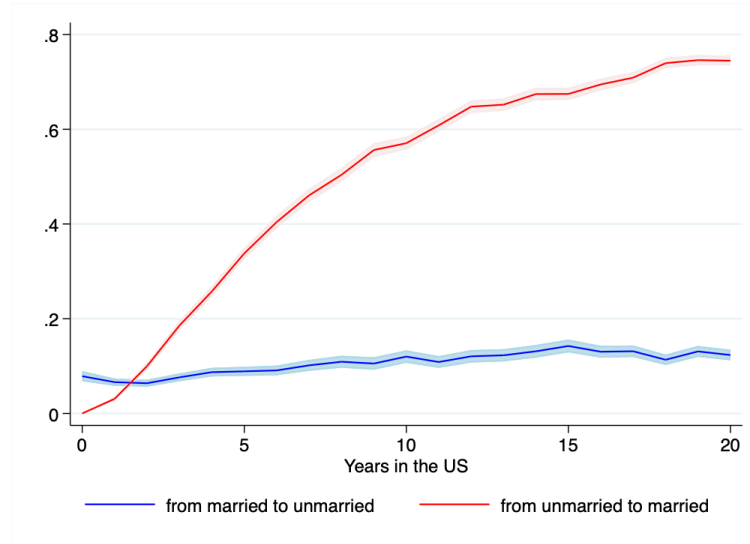


Notes. This figure shows the average share of migrants married before migration who are (i) not currently co-residing with their spouse; (ii) separated or divorced. We exclude individuals who married more than once and whose last marriage occurred after or the same year as migration. Migrants reporting to be currently separated/divorced are assumed to have separated after migration.

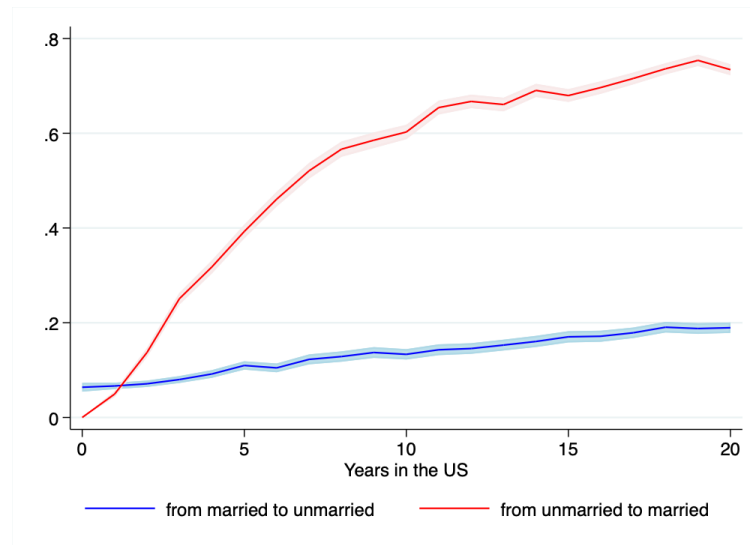
Data source: ACS 2017-2021 (Ruggles et al., 2023).

Figure 2: Change in marital status since years of migration

(a) Men



(b) Women

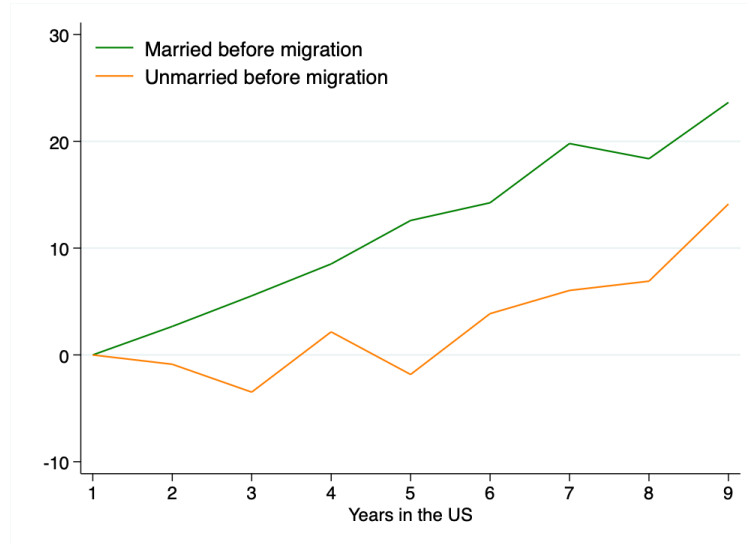


Notes. This figure shows the average probability of (i) getting married for immigrants who were unmarried before migrating; (ii) getting unmarried for immigrants who were married before migrating. These probabilities of change in marital status are conditional on staying in the U.S. We exclude individuals who married more than once and whose last marriage occurred after or the same year as migration. Migrants reporting to be currently separated/divorced are assumed to have separated after migration.

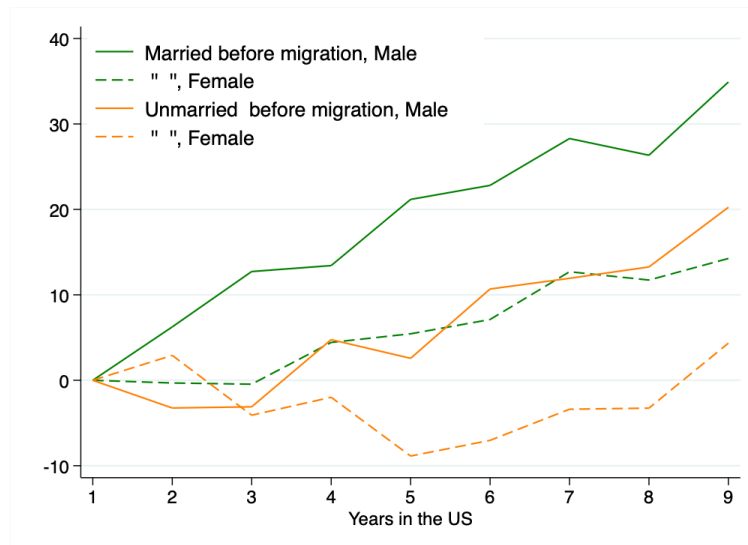
Data source: ACS 2017-2021 (Ruggles et al., 2023).

Figure 3: Return migration since years of entry in the U.S.

(a) Overall



(b) By gender

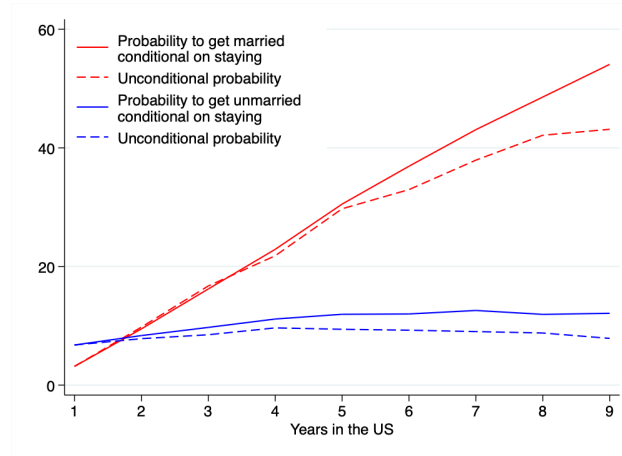


Notes. This figure shows the estimated rate of return migration for (i) immigrants who were unmarried before migrating; (ii) immigrants who were married before migrating. We focus on immigrant cohorts arrived between 2007 and 2012. We exclude individuals who married more than once and whose last marriage occurred after or the same year as migration. Migrants reporting to be currently separated/divorced are assumed to have separated after migration.

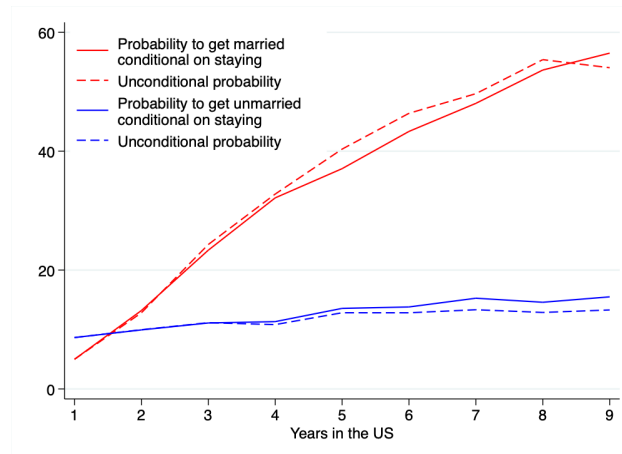
Data source: ACS 2008-2021 (Ruggles et al., 2023).

Figure 4: Change in marital status adjusted for return migration

(a) Men



(b) Women



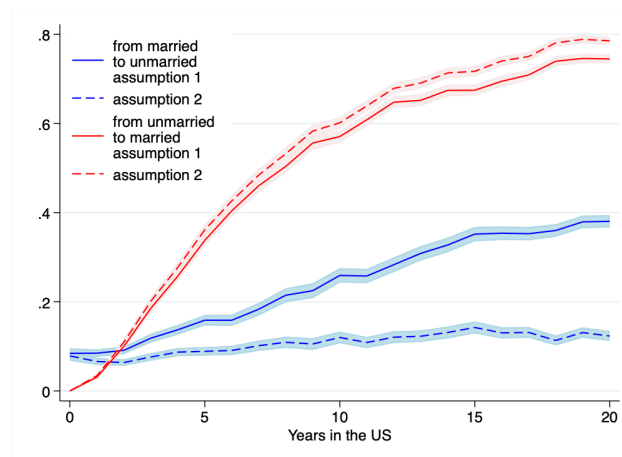
Notes. Conditional probabilities of initially unmarried migrants getting married, and initially married migrants separating or divorcing are conditional on staying in the U.S. We form a lower bound on the unconditional probability of a change in marital status by assuming no changes occur after return migration, and then multiplying the conditional probability by the probability of not having returned after t years, estimated by tracking cohorts in the ACS. Sample includes immigrants arrived between 2007 and 2012; we exclude individuals who married more than once and whose last marriage occurred after or the same year as migration; migrants currently separated/divorced are assumed to have separated after migration.

Data source: ACS 2008-2021 (Ruggles et al., 2023).

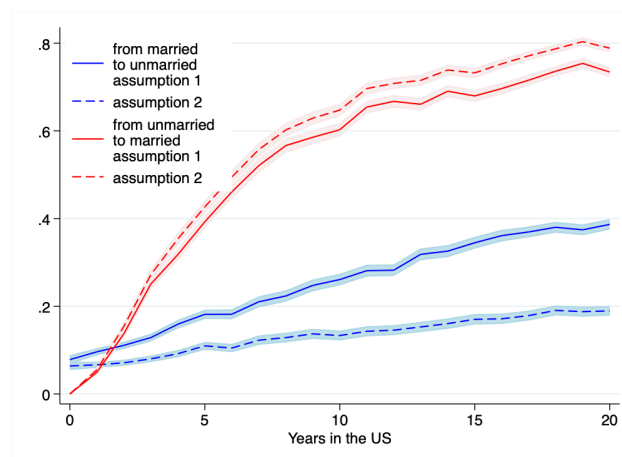
A Appendix

Figure A.1: Robustness: Change in marital status since years of migration

(a) Men



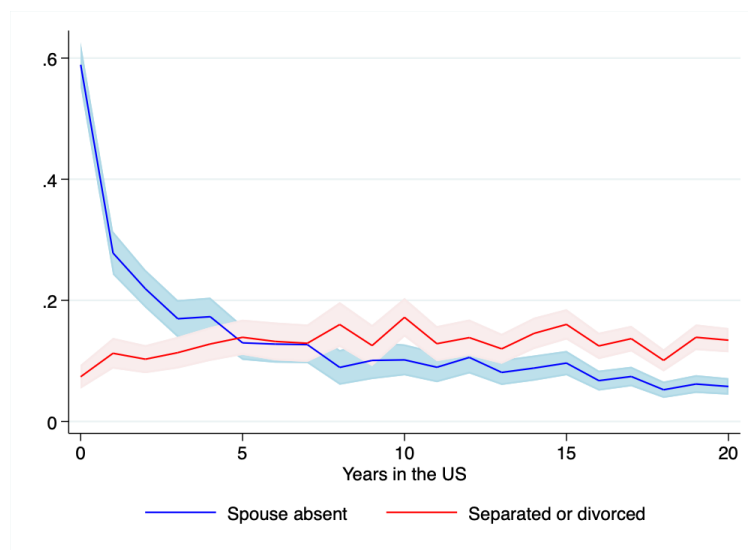
(b) Women



Notes. This figure shows the average probability of (i) getting married for immigrants who were unmarried before migrating; (ii) getting unmarried for immigrants who were married before migrating. Assumption 1: migrants who married twice (or more) had their first marriage before migration; Assumption 2: first marriage was after migration. Migrants reporting to be currently separated/divorced are assumed to have separated after migration.

Data source: ACS 2017-2021 (Ruggles et al., 2023).

Figure A.2: Mexican male migrants married before migration



Notes. This figure shows the average share of male Mexican migrants married before migration who are (i) not currently co-residing with their spouse, and (ii) separated or divorced. We exclude individuals who married more than once and whose last marriage occurred after or the same year as migration. Migrants reporting to be currently separated/divorced are assumed to have separated after migration.

Data source: ACS 2017-2021 (Ruggles et al., 2023).

Table A.1: Immigrants from Mexico

Gender	All	Male	Male	Male	Female	Female	Female
Age at migration	18-40	18-40	18-25	26-40	18-40	18-25	26-40
Never married	19.0	22.2	23.3	20.3	15.8	17.5	13.1
Panel A: When did ever-married migrants last marry?							
Married before migrating	35.7	31.3	14.8	59.5	40.0	26.0	60.0
Married same year as migrating	11.2	8.1	8.0	8.2	14.1	15.9	11.5
Married after migrating	53.1	60.6	77.2	32.3	45.9	58.1	28.5
Panel B: Current marital status of ever-married migrants							
<u>Married before moving:</u>							
Spouse present	27.4	23.6	11.5	44.2	31.0	20.6	45.9
Spouse absent	2.5	3.3	1.3	6.8	1.6	1.0	2.5
Separated or Divorced	5.1	4.0	1.8	7.8	6.1	3.8	9.5
<u>Married same year as migrating:</u>							
Spouse present	9.5	6.8	6.9	6.8	12.1	13.7	9.7
Spouse absent	0.4	0.5	0.5	0.5	0.3	0.4	0.3
Separated or Divorced	1.0	0.7	0.6	0.8	1.4	1.6	1.2
<u>Married after migrating:</u>							
Spouse present	42.3	49.3	63.5	25.1	35.7	45.2	22.2
Spouse absent	2.9	4.0	4.9	2.5	1.9	2.5	1.1
Separated or Divorced	7.0	6.7	8.1	4.3	7.2	9.1	4.4
Widowed	1.6	0.9	0.8	1.0	2.4	2.1	2.8
Married multiple times	11.0	11.1	10.6	11.8	11.0	10.0	12.4
Panel C: Married migrants with co-residing spouse							
<u>Married before moving:</u>							
Spouse born in the same country	86.4	84.7	85.0	84.5	87.6	88.7	86.9
Spouse born in the U.S	11.6	13.4	13.9	13.2	10.2	9.7	10.5
<u>Married same year as migrating:</u>							
Spouse born in the same country	75.5	76.9	80.1	71.4	74.8	81.1	62.1
Spouse born in the U.S	21.8	21.4	18.9	25.6	22.0	16.7	32.8
<u>Married after migrating:</u>							
Spouse born in the same country	72.7	71.3	71.7	69.5	74.7	76.5	69.1
Spouse born in the U.S	20.6	22.5	22.6	21.9	18.1	16.8	21.8
Observations	170,963	86,975	55,518	31,457	83,988	50,596	33,392

Notes Sample: individuals aged 18 to 60 at the time of the survey, born in Mexico, and who migrated to the U.S. when they were between 18 and 40.

Data source: ACS 2017-2021 (Ruggles et al., 2023).

Table A.2: Immigrants from India

Gender	All	Male	Male	Male	Female	Female	Female
Age at migration	18-40	18-40	18-25	26-40	18-40	18-25	26-40
Never married	12.6	16.7	27.0	8.3	8.2	12.9	4.1
Panel A: When did ever-married migrants last marry?							
Married before migrating	48.7	40.8	6.3	63.0	56.3	32.2	75.6
Married same year as migrating	14.4	7.0	3.9	9.0	21.6	30.6	14.4
Married after migrating	36.9	52.2	89.8	28.0	22.1	37.2	10.0
Panel B: Current marital status of ever-married migrants							
<u>Married before moving:</u>							
Spouse present	45.4	37.8	5.6	58.6	52.7	30.3	70.8
Spouse absent	1.6	1.9	0.4	2.9	1.2	0.6	1.7
Separated or Divorced	1.3	1.0	0.3	1.4	1.7	1.0	2.2
<u>Married same year as migrating:</u>							
Spouse present	13.6	6.4	3.5	8.3	20.6	29.4	13.6
Spouse absent	0.4	0.4	0.3	0.5	0.3	0.4	0.3
Separated or Divorced	0.4	0.2	0.1	0.2	0.6	0.7	0.4
<u>Married after migrating:</u>							
Spouse present	33.4	47.7	82.4	25.4	19.6	33.4	8.6
Spouse absent	1.7	2.4	3.9	1.4	1.1	1.7	0.5
Separated or Divorced	1.6	2.0	3.3	1.1	1.2	1.8	0.8
Widowed	0.5	0.2	0.2	0.2	0.9	0.7	1.0
Married multiple times	5.3	5.7	6.9	4.9	4.8	4.4	5.2
Panel C: Married migrants with co-residing spouse							
<u>Married before moving:</u>							
Spouse born in the same country	93.7	93.3	87.1	93.7	94.0	92.9	94.3
Spouse born in the U.S	2.3	2.8	7.2	2.5	2.1	2.8	1.8
<u>Married same year as migrating:</u>							
Spouse born in the same country	92.8	89.2	88.8	89.3	93.8	94.6	92.4
Spouse born in the U.S	3.8	6.2	7.2	5.9	3.1	2.6	4.1
<u>Married after migrating:</u>							
Spouse born in the same country	82.8	83.7	82.9	85.2	80.8	82.4	75.6
Spouse born in the U.S	8.7	8.1	8.9	6.4	10.3	9.2	13.5
Observations	89,403	46,050	20,579	25,471	43,353	20,367	22,986

Notes Sample: individuals aged 18 to 60 at the time of the survey, born in India, and who migrated to the U.S. when they were between 18 and 40.

Data source: ACS 2017-2021 ([Ruggles et al., 2023](#)).

Table A.3: Immigrants from China

Gender	All	Male	Male	Male	Female	Female	Female
Age at migration	18-40	18-40	18-25	26-40	18-40	18-25	26-40
Never married	24.3	29.0	45.1	10.7	20.6	34.2	7.6
Panel A: When did ever-married migrants last marry?							
Married before migrating	43.0	39.5	6.4	62.8	45.4	17.1	64.6
Married same year as migrating	12.1	10.3	9.3	11.0	13.3	14.3	12.7
Married after migrating	44.9	50.2	84.3	26.2	41.3	68.6	22.7
Panel B: Current marital status of ever-married migrants							
<u>Married before moving:</u>							
Spouse present	36.2	34.5	5.0	55.3	37.4	14.1	53.2
Spouse absent	2.8	2.8	1.0	4.0	2.8	0.9	4.1
Separated or Divorced	3.5	2.0	0.4	3.1	4.6	1.9	6.4
<u>Married same year as migrating:</u>							
Spouse present	10.5	9.0	8.0	9.7	11.5	12.3	10.9
Spouse absent	0.7	0.7	0.6	0.8	0.6	0.7	0.6
Separated or Divorced	0.8	0.5	0.6	0.4	1.0	1.1	0.9
<u>Married after migrating:</u>							
Spouse present	37.8	43.0	72.7	22.2	34.3	58.0	18.1
Spouse absent	3.1	3.9	6.8	1.9	2.6	4.3	1.4
Separated or Divorced	3.6	3.1	4.6	2.1	4.0	5.5	2.9
Widowed	0.9	0.4	0.3	0.5	1.2	1.1	1.3
Married multiple times	10.3	8.7	7.4	9.6	11.4	8.2	13.6
Panel C: Married migrants with co-residing spouse							
<u>Married before moving:</u>							
Spouse born in the same country	89.6	95.2	95.5	95.2	86.1	83.5	86.5
Spouse born in the U.S	4.3	1.5	2.7	1.5	6.0	6.0	6.0
<u>Married same year as migrating:</u>							
Spouse born in the same country	78.3	93.8	94.4	93.5	69.8	81.3	61.0
Spouse born in the U.S	13.2	3.0	3.2	2.8	18.7	10.3	25.2
<u>Married after migrating:</u>							
Spouse born in the same country	73.9	87.2	87.2	87.3	62.2	66.9	52.0
Spouse born in the U.S	13.9	4.2	4.2	4.3	22.4	18.5	30.9
Observations	51,887	22,679	12,093	10,586	29,208	14,271	14,937

Notes Sample: individuals aged 18 to 60 at the time of the survey, born in China, and who migrated to the U.S. when they were between 18 and 40.

Data source: ACS 2017-2021 (Ruggles et al., 2023).

Table A.4: Immigrants from the Philippines

Gender	All	Male	Male	Male	Female	Female	Female
Age at migration	18-40	18-40	18-25	26-40	18-40	18-25	26-40
Never married	15.5	20.4	29.5	13.5	12.8	17.5	9.4
Panel A: When did ever-married migrants last marry?							
Married before migrating	34.4	34.1	6.3	51.1	34.6	15.5	47.0
Married same year as migrating	16.8	8.3	5.2	10.3	21.0	17.8	23.1
Married after migrating	48.8	57.6	88.5	38.7	44.4	66.7	30.0
Panel B: Current marital status of ever-married migrants							
<u>Married before moving:</u>							
Spouse present	28.7	29.4	4.8	44.5	28.3	12.0	38.9
Spouse absent	1.6	1.8	0.7	2.6	1.5	0.7	2.1
Separated or Divorced	3.2	2.5	0.7	3.6	3.5	2.1	4.4
<u>Married same year as migrating:</u>							
Spouse present	14.6	7.4	4.5	9.2	18.2	14.7	20.4
Spouse absent	0.4	0.3	0.2	0.3	0.5	0.5	0.5
Separated or Divorced	1.3	0.6	0.5	0.7	1.6	1.9	1.4
<u>Married after migrating:</u>							
Spouse present	39.5	46.9	73.2	30.7	35.8	53.8	24.1
Spouse absent	3.0	4.8	6.5	3.8	2.1	3.0	1.6
Separated or Divorced	5.5	5.6	8.2	3.9	5.5	8.6	3.5
Widowed	1.9	0.7	0.7	0.6	2.6	2.3	2.8
Married multiple times	13.3	11.8	12.8	11.2	14.0	15.6	13.0
Panel C: Married migrants with co-residing spouse							
<u>Married before moving:</u>							
Spouse born in the same country	74.8	91.0	80.8	91.7	66.5	47.5	70.3
Spouse born in the U.S	20.2	5.8	16.1	5.1	27.6	46.6	23.8
<u>Married same year as migrating:</u>							
Spouse born in the same country	39.8	83.4	82.0	83.8	30.9	31.4	30.7
Spouse born in the U.S	55.2	13.0	13.5	12.9	63.8	63.1	64.1
<u>Married after migrating:</u>							
Spouse born in the same country	63.4	81.2	78.8	84.7	51.8	53.8	49.0
Spouse born in the U.S	28.7	12.5	14.2	10.1	39.3	37.3	42.1
Observations	37,381	13,215	5,671	7,544	24,166	10,059	14,107

Notes Sample: individuals aged 18 to 60 at the time of the survey, born in China, and who migrated to the U.S. when they were between 18 and 40.

Data source: ACS 2017-2021 (Ruggles et al., 2023).

Table A.5: Immigrants from the MENA region

Gender	All	Male	Male	Male	Female	Female	Female
Age at migration	18-40	18-40	18-25	26-40	18-40	18-25	26-40
Never married	16.7	21.2	29.4	15.4	11.8	16.7	8.2
Panel A: When did ever-married migrants last marry?							
Married before migrating	45.9	36.4	7.5	53.8	55.3	33.6	69.3
Married same year as migrating	11.9	7.7	5.7	8.9	16.1	20.9	12.9
Married after migrating	42.2	55.9	86.8	37.3	28.7	45.5	17.8
Panel B: Current marital status of ever-married migrants							
<u>Married before moving:</u>							
Spouse present	40.2	31.7	6.3	47.0	48.6	30.4	60.4
Spouse absent	1.7	1.9	0.4	2.8	1.5	0.6	2.0
Separated or Divorced	3.5	2.6	0.8	3.8	4.3	2.2	5.6
<u>Married same year as migrating:</u>							
Spouse present	10.3	6.4	4.6	7.5	14.1	18.5	11.2
Spouse absent	0.4	0.5	0.3	0.6	0.4	0.4	0.4
Separated or Divorced	1.0	0.7	0.7	0.7	1.4	1.6	1.2
<u>Married after migrating:</u>							
Spouse present	34.5	46.1	71.0	31.2	23.0	37.2	13.8
Spouse absent	2.5	3.6	5.3	2.6	1.4	2.0	1.0
Separated or Divorced	4.8	5.9	10.1	3.3	3.8	5.6	2.6
Widowed	0.9	0.4	0.4	0.4	1.5	1.3	1.5
Married multiple times	12.7	15.8	20.9	12.7	9.7	9.3	10.0
Panel C: Married migrants with co-residing spouse							
<u>Married before moving:</u>							
Spouse born in the same country	84.7	80.4	72.7	81.0	87.5	87.6	87.5
Spouse born in the U.S	7.7	10.9	21.8	10.0	5.7	6.5	5.4
<u>Married same year as migrating:</u>							
Spouse born in the same country	70.9	57.0	61.5	55.4	77.1	77.8	76.4
Spouse born in the U.S	17.1	28.4	27.5	28.8	11.9	11.1	12.9
<u>Married after migrating:</u>							
Spouse born in the same country	58.6	57.7	55.2	61.2	60.3	60.9	59.2
Spouse born in the U.S	23.7	23.8	26.0	20.7	23.4	23.2	23.9
Observations	28,145	14,802	6,194	8,608	13,343	5,557	7,786

Notes Sample individuals aged 18 to 60 at the time of the survey, born in the MENA region, and who migrated to the U.S. when they were between 18 and 40.

Data source: ACS 2017-2021 (Ruggles et al., 2023).