The Role of Domestic Migration on the Latin American Fertility Transition

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Introduction

Due to its sheer size and the socioeconomic composition of the flows, internal migration is directly associated with demographic change in origin and destination areas (Portes 2010). In contrast to international migration, internal migration is a widespread phenomenon. In 2013, one of each six people worldwide was an internal migrant (United Nations 2013). Internal migration is less selective than international migration because, in general, distances are shorter, migration costs are lower, and constraints are lesser than for international migration. This means that internal migration flows are much more diverse than international migration flow in terms of the socioeconomic characteristics of the migrants. In addition, due to its tendency to be permanent, internal migration has been one of the major contributors to sustained processes of societal change including urbanization; first across high-income countries and later one among low- and middle-income ones (Davis and Casis 1946; Ebank 1993; Preston 1979)

Urbanization is one of the major transformations of modern societies and it is also strongly tied to demographic change in the realm of mortality and fertility, both as a cause and as consequence (Dyson 2011; Todaro 1980). Because one of the main drivers of urbanization is rural-to-urban migration, the study of fertility outcomes among rural migrants in urban settings has largely dominated scholarly research on the relationship between internal migration and family. Since the classic work of Goldberg (1959) on the 'Two-generations Urbanites,' and until the mid-1980s, the study of the relationship between domestic migration and fertility flourished across developed and less developed countries (Goldstein 1973; Goldstein and Goldstein 1981; Hervitz 1985; Macisco and Myers 1975; Martine 1975). After slightly less than two decades of stagnation, the period between the mids-1990

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and the 2000s witnessed a revival of scholarly interest on internal migration and fertility in low- and middle-income countries. These studies include the Philippines, Turkey, Guatemala, Brazil, Thailand, Cameroon, and other Sub-Saharan African nations (Brockerhoff and Yang 1994; Eryurt and KOÇ 2012; Jensen and Ahlburg 2004; Lee 1992; Lindstrom 2003; Lindstrom and Hernández 2006).

In these studies, migrant-non-migrant differences in fertility outcomes are explained in terms of four hypotheses, often presented as competing explanations: *selection*, *socialization*, *disruption* and *adaptation*. The first two explanations focus on conditions prior to migration, such as family norms and values learned during childhood (*socialization*) and the less family-oriented attitudes or anticipatory behavior of migrants (*selection*). The last two emphasize how changing circumstances caused by migration (e.g. mid- or long-term spousal separation) could lead to a *disruption* in migrants' family trajectories or how these circumstances lead them to *adapt* their behaviors to socioeconomic conditions at destination. For example, the higher cost of schooling in cities compared to rural areas can discourage fertility among rural migrants.

Based on mean levels of fertility indicators, researchers often favor one explanation over the others. The reconciliation of results is difficult due to differences across the data and methodologies (Zárate and Unger De Zárate 1975). More importantly, this concentration on mean fertility levels across groups of women with different migration status has downplayed the importance of heterogeneity, i.e. the multiple ways in which migration and family relate to one another across different dimensions. Important neglected dimensions among include migration flows other than rural-to-urban (e.g. urban-to-rural and rural-to-rural), age at migration, and the socioeconomic background of migrants, i.e. their social class. Moreover, the implications of changing place of residence are also likely to affect family dynamics other than fertility, e.g. marriage patterns, marital stability, etc. And yet, the role of domestic migration on partnership formation and dissolution remains understudied, which counterintuitively assumes fertility and partnerships are not related.

To directly account for the heterogeneity in fertility and partnership trajectories (family trajectories herein), this work builds a seven-category typology that groups women with similar timing, order and quantity of family formation and dissolution events (unions,

marriages, separations and childbirths). These family categories range from never married and childless women (low-intensity family trajectories), to women who transitioned to union formation at early ages, had multiple partners and high fertility (high intensity). Family categories also vary in the prevalence of marriage, cohabitation, divorce and separation, which allows for separating normative family paths (universal, unique and stable marriages) from less normative ones (dual regime of marriage and cohabitation, unstable unions and multiple partnerships). Using multinomial logistic models, conditional distributions of this family typology, termed *family profiles*, are estimated for non-migrant and migrant women by age at migration, educational attainment (as a proxy for social class), and place of residence during childhood (urban vs. rural).

The analysis distinguishes three destination areas: large cities, other urban areas and rural areas. Although imperfect, this distinction allows me to explore the role of the context of reception beyond the Urban/Rural categorization, which is in accord with the reality of Latin American nations. In Latin American countries, resources are concentrated and living standards are considerably higher in large cities compared to other urban and rural areas (Portes 1989). In addition, inequality and segregation levels in these large cities are the highest, compared to other urban locations and rural areas (Morley 2001; Williamson 2010).

Differences and patterns across *family profiles* by migration flow (origin-destination), age at migration and educational attainment, reflect the heterogeneous ways in which domestic migration, family, and social class are interconnected. These analyses allow me to assess the scope and limitations of the four classic explanations, their complementary nature, as well as to uncover undocumented patterns. In addition, comparing results by socioeconomic status uncover the reasons why explanations of family change based on the modernization theory fail to account for the experienced of women in the lower classes. Modernization did not occur homogeneously and their consequences were different across social classes; not accounting for this has erroneously led to either over- or underestimate the role of structural factors, for example, in fertility decline (Cutright, Hout, and Johnson 1976).

Data from several countries and birth cohorts are pooled to maximize the variation in patterns of fertility, partnership and migration, and development levels across countries. Due to the substantial heterogeneity of the sample, discrete and consistent patterns across these *family profiles* are conservative estimates of the connection between family and migration. Analyzing this patterned heterogeneity provides new insights to our understanding of societal change in Latin American and Caribbean countries (LAC) throughout the second half of the twentieth century.

Context

In LAC countries, the process of urbanization was paralleled by rapid family change after 1950 (Ducoff et al. 1965; Dufour and Piperata 2004; Elizaga, Lee, and Arias 1965; Rodríguez Vignoli and Busso 2009). Between 1950 and 1990, fertility declined substantially, and cohabitation and marital instability increased (Arriagada 2007; Brea 2003; Esteve and Lesthaeghe 2016). Only the mean ages of transition to first birth and first married remained relatively stable (Esteve and Florez-Paredes 2014; Pantelides 2004; Rodríguez Vignoli 2010). By the end of the century, only a handful of countries in the region had total fertility rates above 3.5 children per women, and the share of the population living in rural areas was for the most part below 40%. Figure 1 shows the temporal correspondence between fertility decline (left panel) and the decline in the proportion of people living in rural areas (right panel). Black lines correspond to countries included in this chapter and gray lines display the trend among other LAC nations.

FIGURE 1 ABOUT HERE

During this time period, most countries went from high (more than 6 children per woman) to low fertility levels, in one of the fastest fertility transitions observed across low- and middle-income countries (Bongaarts 2003; Castro Martin and Juarez 1995; Cosio 1992; Guzmán 1996). In spite of the persistence of marriage and relatively early ages of transitions to marriage, increasing cohabitation and family instability, and out-of-wedlock fertility are three salient changes within this social institution (Fussell and Palloni 2004; García and de Oliveira 2011). These transitions did not mimic processes observed in other places, in terms of the factors associated with them, and because differences across

socioeconomic status groups and geographical areas within countries enlarged. Within all LAC countries, differences in fertility, marriage, cohabitation, and union stability across socioeconomic status and between urban and rural areas are pervasive (Bongaarts, Mensch, and Blanc 2017; Carvalho, Paiva, and Sawyer 1981; Martine 1996; Schkolnik and Chackiel 2004).

Internal migration—voluntary and forced—boosted urbanization all over the region with different paces across countries (Bernard et al. 2017). Government-led initiatives towards industrialization strongly promoted rural-to-urban migration, especially during the 1950-1970 period (Arnaut 2010; Bethell 1998). Despite cross-national differences in the relative success of these initiatives, a common trend of decline in the proportion of people living in rural areas is observed among virtually all countries, especially among those included in this study. These marked declines do not mean that internal migration flows were unidirectional. Indeed, a considerable part of the population moved from urban to rural areas, between cities and between rural areas. These latter flows were especially prevalent after 1970, when national economies started to abandon the import substitutions models and structural reforms imposed important restrictions in social expenditures (Baer 1972; Bethell 1998; Gilbert 1993; Portes 1989). Rural areas were negatively affected by these reforms as incentives to invest in disperse and low-density areas have always been low (Babb 2005; Sassen-Koob 1984). These reforms fueled migration flows in multiple directions as some regions and economic sectors benefited more than others creating the need and opportunities for people to migrate in search of better economic prospects. Additionally, in countries like Peru, Mexico, El Salvador, Nicaragua, and Colombia, internal displaced populations moved across different places due to armed conflicts and generalized violence primarily concentrated in rural areas (Alvarado and Massey 2010).

This context of sustained heterogeneity in family and migration dynamics offer three advantages to extend our understanding of the relationship between internal migration and family dynamics in a broad demographical and sociological sense. First, birth cohorts that transitioned to adulthood during this period have already exited or are close to exit reproductive ages, which allows me to study almost-completed family trajectories. Second, taking family trajectories as objects of study contributes to qualify our accounts of

demographic change by extending previous research on single variables to interconnected family outcomes. This approach is in line with the plea for a relational approach to sociological research where the study of social reality through univariate categories (married, single, childless, etc.) is substituted by the study of processes (Abbot 1988; Emirbayer 1997). Third, the high level of cross-national variation in fertility and partnership regimes and urbanization trends strengthen the robustness of the results. Differences and patterns that emerge from a variegated sample of countries and cohorts reflect overarching mechanisms behind the interaction between the migration experience and family dynamics.

Demographic and Health Surveys (DHS)

Data selection for this analysis is guided by the idea that if patterns are found using data that combines countries of different size, diverse demographic regimes and different levels of development, their significance will be greater as they will reveal general mechanisms associated with the migration experience in a conservative fashion. This same argument has been posed by Portes and Smith (2008) in their study about institutions in LAC.

Therefore, I use data from 27 waves of the DHS covering 10 LAC countries. Waves are selected to maximize geographical and temporal coverage, and according to the availability of information regarding childhood place of residence and domestic migration. These DHS are nationally representative of women of reproductive ages (15 to 49) and were collected between 1986 and 2012. I focus on women age 39 and above, i.e. women whose family trajectories unfolded throughout the second half of the twentieth century. Countries are not equally represented in all birth cohorts due to differences in the survey years and number of waves. However, results were consistent across three different birth-cohort subsets: 1937-1959 (oldest cohorts), 1960-1974 (youngest cohorts) and 1945-1965 (birth cohorts with the most even representation of countries). This consistency suggests results are not driven by one country or by the specific composition of the analytical sample.

Table 1 displays the sample size by country and current place of residence. This latter variable is coded into three categories: rural, urban and large cities. Even though large cities are part of the urban area of a country, I separate them because they differ from other urban

areas in aspects that could affect family trajectories. These include the prevalence of a service economy, higher costs of living, better access to basic services, and less opportunities to reconcile childrearing and work. In each country, the capital city plus cities of more than 500 thousand inhabitants are coded as Large cities.

<center>TABLE 1 ABOUT HERE</center>

All the analyses are conducted accounting for the sample design. In addition, sample weights are standardized by the number of waves per country so that each country has the same relative weight in all analyses.

Cluster analysis and stratified multinomial models

Six variables are used to proxy women's family trajectories. These variables are: age at first marriage or union, age at first and last birth, number of children ever born, current marital status and whether the woman had multiple unions or marriages. Because these variables measure different dimensions of women's family trajectories in different scales, scale harmonization is needed before conducting a cluster analysis.

Scale harmonization across is done via Multiple Correspondence Analysis (MCA) on the six above-mentioned variables. This technique is advantageous as it produces numerical standardized variables that capture the main correlations across the different dimensions of women's family paths. In addition, these variables, named factorial coordinates are orthogonal to one another, which in turns favors the efficiency of clustering. See Kaufman and Rousseeuw (1990) and Lebart (1997) for the technical details and more indepth discussion about cluster analysis and MCA, respectively.

The first four factorial coordinates resulting from the MCA account for 78% of the total variance across the six original variables. These coordinates are used to cluster women following a two-step process. First, a pair-wise distance matrix is computed. The generic term of this matrix, d_{ij} measures the Euclidean distance between women i and j using the values of the four factorial coordinates. The greater this number the more dissimilar are women in terms of their family trajectories. Then, women are grouped using the Ward method followed by a consolidation phase that relies on the *k-means* algorithm. This

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strategy creates groups of women with similar features by minimizing the within-group dissimilarity, i.e. the sum of the d_{ij}. In other words, this strategy allows me to identify groups of women with similar timing and number of births, type and timing of partnership formation and the experience of multiple partners and separation/divorce (See Pardo and Del Campo (2007) for a detailed description of the combination of these two methods). I use the expressions family typology to refer to these clusters and family category to refer to each group.

For measuring migration and social class I create two categorical variables. Migration categories combine information on childhood place of residence, current place of residence and time since arrival to the latter. These three variables allow me to distinguish nine groups of women. First, non-migrant women are those who have lived their entire life in the place they were interviewed. Migrant women are separated according to their childhood place of residence as women of urban and rural origin and based on their age at migration in four categories: before age 18, 19 to 24, 25 to 30 and after age 30. These age groups reflect crucial stages in women's transition to adulthood and in their autonomy gaining trajectories. Age 18 is the legal age of majority in all these countries for which women in this groups could be thought as dependent migrants. At the other end of the age at migration categories (after age 30), migration occurs after most of the key transitions to adulthood had taken place, i.e. finishing school, leaving parental home, entering the job market, etc. These women migrate as autonomous adults. The intermediate age at migration groups are suited to study the connection between migration and family formation, and the potential disruptions that internal mobility entails.

To measure women's social class, I use educational attainment. I categorize the total years of schooling as lowest (0 to 4), low (5 to 8), medium (9 to 12) and high (13 and more). The first category comprises the very bottom-end of LAC social stratification systems. Women with less than five years of schooling are a very negatively selected group (especially among younger cohorts) that reflect the enduring unequal opportunity structure of LAC countries during the period of educational expansion. Likewise, women with 5 to 8 years of schooling are expected to have only basic literacy and numeracy skills. No training for the labor market is involved during these school years. Women in the 9 to 12 group have a

considerable advantage because they finished educational cycles that involve title granting: basic secondary education (typically after 9th grade) and high school (typically after 11th or 12th grade). At least formally, a secondary education diploma gives access to the formal labor market and, a high school diploma to the higher educational system. Despite cross-national differences in educational systems, the extent to which these formal expectations on educational degrees translate into formal jobs and tertiary education is generally doubtful due to large quality gaps between urban and rural schools, and between the public and private educational systems (Torche 2014).

Finally, women with 13 years or more are the most privileged ones for two reasons. First, they grew up in families and contexts that allowed them to be students (partially dependent) for a very long time. Second, they have the best socioeconomic prospects when entering the labor market given the raising returns to education that changes in LAC economies entailed. This interpretation of educational attainment categories in terms of social class is consistent with research on the role of educational systems in LAC societies. According to this research, LAC educational systems have largely failed in promoting social mobility as opportunities and quality are highly unequal (Hoffman and Centeno 2003; Torche 2014).

Combined, age at migration and educational attainment define 9 x 4 = 36 groups, observed across three different areas of residence (Large cities, urban areas and rural areas) for a total of 108 groups. The conditional distribution of the family typology in each of these groups is termed *family profile*. The size and direction of the deviations between non-migrant's and migrant's *family profiles* reflect the association between family and migration. If *family profiles* of migrants and non-migrants do not differ, we will conclude that family trajectories and internal migration are independent. On the contrary, if migration and family trajectories are not independent, migrant women should be overrepresented (positive association) or underrepresented (negative association) in certain categories of the family typology. Moreover, disaggregating by age at migration and educational attainment allows me to explore heterogeneous patterns in these associations.

Prevalence of migration and migrant's socioeconomic characteristics

Table 2 presents women's distribution by age at migration and childhood place of residence along with the educational and wealth profile for each of these groups.

TABLE 2 ABOUT HERE

Women's distribution by age at migration shows the relevance of domestic moves, the higher mobility of urban women compared to rural, and the age pattern of these moves. At least 44% of women in the three areas of residence are domestic migrants, this proportion surpasses 50% in urban contexts meaning that more than half of the women had domestic migration experience in both urban areas and large cities. Migrant women of urban origin are the most mobile representing 39, 32 and 14% of women in large cities, urban and rural areas, respectively. Women of rural origin are less mobile, except in rural-to-rural migration. They represent 16, 22 and 27% of the women across the three areas of residence. In terms of age patterns, the lowest migration prevalence tends to be for ages 25 to 30, except for rural-to-rural moves.

Differences across areas of residence in educational attainment and wealth reveal structural disparities in access to formal education and basic services. Institutions granting medium and high-level degrees are strongly concentrated in cities, and the provision of basic services is very precarious in rural areas. For example, the proportion of women with more than 13 years of schooling (Higher) is 25% in large cities, 18% in urban areas and only 1% in rural. In terms of wealth, the percent of women in the 5th quintile is 52, 33 and 3% among women living in these three places, respectively.

Educational and wealth profiles of migrants vary substantially across origin, destination and age at migration. These variations reflect the complexity of this phenomena as processes of selection, adaptation and equalizing socioeconomic conditions appear to be associated with migration. Migration flows to urban areas and large cities are positively selected. The reverse is true for migration flows to rural areas. Despite the positive selection of rural-to-urban and rural-to-large-cities migrants, their educational and wealth profiles are worse than those of non-migrant women at destination. This association displays a clear pattern by age at migration: migration is more beneficial when it occurs at early ages. Take the educational profile of rural migrants in large cities as an example. Among those who moved after age 30, the proportion of uneducated women (Lowest) is

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62.5%, whereas among those who move before age 18 this figure is 46.2%. In both cases, these women are better off than non-migrant women in rural areas among which the prevalence of Lowest education is 76.8%. Wealth profiles of women of rural origin are also better among migrant than non-migrant. These differences are larger than those observed in educational profiles because of the way wealth is measured by the DHS (Smits and Steendijk 2015). In urban contexts, accessing the basic services included in the DHS-wealth index (water supply, electricity, etc.) is easier than accessing formal education.

Migrant women of urban origin are slightly disadvantage in terms of educational attainment and wealth when they move to large cities compared to women at destination, but better off than those who did not migrate. This means that the urban-large cities migration flow is also positively selected. For example, in large cities, the proportion of women in the highest educational level among migrants of urban origin ranges from 17 to 19%, which is close to the 24% among non-migrant at destination. This relation reverses when considering urban areas as destination. In these areas, migrant women or urban origin have better educational and wealth profiles than non-migrants. Finally, in rural areas women of urban origin have better educational and wealth profiles than non-migrant women at destination, but worse than women at origin meaning this migration flow is negatively selected. Similarly, migrant women of rural origin have slightly worse educational and wealth profiles than their non-migrant counterparts.

This heterogeneity across destination, origin and age at migration is likely to play a role in the way migration relates to family trajectories. Since family formation is a resource-consuming process, it is more likely that vulnerable groups, socioeconomically speaking, experience the largest disruption in their family trajectories, or that family related resources, such as a stable formal marriage, become an important source to cope with the challenges of being disadvantaged with respect to the population at destination. This hypothesis is more likely to be valid for women who migrate during young-adult ages (19 to 24) due the confluence of key life-course transitions including finishing school, entering the job market, starting a family, gaining financial independence, etc.

A family typology for women in Latin American and Caribbean countries

Figure 2 presents the individual family trajectories sorted by age at first marriage/union within the seven-group family typology. Categories of the family typology are sorted by average complete fertility. Only overarching patterns should be interpreted in Figure 2 as it suffers from over plotting issues (Fasang and Liao 2014). Individual trajectories start at the age 15 and are colored after the age at first marriage/union according to woman's current and previous marital statuses. Lines of married women and women in consensual unions, who declared having only one partner are colored with a green (Married) and yellow (In union) respectively. Because the timing of high-order marriages and unions cannot be identified in the DHS, women who reported more than one marriage or union are colored in red regardless of their current marital status. Similarly, women who were separated, divorced or widow at the time of the survey are colored in grey (Unknown) because it is not possible to located when did the separation, divorce or death of the partner occurred. Purple dots of varying shade represent the first, second, third, and last births.

FIGURE 2 ABOUT HERE

These groups reflect the heterogeneous ways family lives can take and the importance of accounting for this heterogeneity. Mean levels of key indicators including age at marriage/union, first birth, last birth and prevalence of divorce/separation, can hardly be used to describe the experience of women in these groups. To emphasize their distinctiveness, I label them according to their most salient characteristic. The Normative-late *(Norm-late)* category is the most prevalent in large cities and urban areas, whereas the Normative-early *(Norm-early)* is the largest among women who live in rural areas. Both are label as normative categories because their main characteristics are the high prevalence of marriage (71% in the *Norm-late* and 85% in *Norm-early*) and the high proportion of women who declared having only one partner (93% in *Norm-late* and 92% in *Norm-early*). These figures mean these two groups comprise mainly intact marriages.

From bottom to top, the first three categories of the family typology are groups of low intensity, delayed transitions and compressed family schedules, meaning that women in these groups form unions (through marriage or consensually) at late ages and have their (few) children in a very short period of their lives. The first family category comprises mainly women who did not have a child and/or did not get married (*Never married*).

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Among the few women who marry and gave birth in this group, the mean ages at first birth and marriage are largely above the overall mean. The second category has the highest ages of transition to childbearing, marriage and union formation (*Latest*). This is the only group where, on average, first births and first union occur simultaneously, at about age 33. Complete fertility in this group is relatively low with only 2.2 children per woman. Women in the third group (*Delayed*) experience transition to union formation and first birth relatively late, at about ages 27 and 28, respectively. Women in this group have, on average, 2.7 children. These three groups are minoritarian and non-traditional with respect to the others, due the very low prevalence and delayed transition to partnership and fertility.

The remaining four groups comprise two categories of early transition to family formation, high-intensity and unstable marriages and unions, and two categories of normative family paths, i.e. stable formal marriages. The *Unstable* group is characterized by early transitions to union formation and childbearing. This group has the largest percent of divorced and separated women (38.9%), as well as the largest proportion of women who had been in more than one marriage or union (54.9%), meaning that 38.9+54.9=93.8% of these women experienced couple dissolution at some point in their lives. Average fertility is 3.3 with the lowest mean age at last birth (27.1 years), potentially associated with couple separation. The fifth group includes mostly stable unions that start around age 20 (*Norm-late*). The average complete fertility of this group is 3.9 children. Women in the sixth group have the youngest ages of transition to marriage, union formation and childbearing (*Earliest*), and a high average complete fertility (7.7 children). Marriages and unions in this group are also highly unstable with about 54% of women experiencing couple dissolution at least once. Finally, the last trajectory (*Norm-early*) is characterized by an early transition to marriage and childbearing and the highest complete fertility (8.1 children). These marriages are stable with only 9.4% of women experiencing couple dissolution.

There is some heterogeneity that is not accounted for by this family typology. Measured as the ratio of the within-clusters variance over the total variance (sum of squared distances among individual observations), this proportion is 0.25, which is analogous to an R^2 in a regression framework of 75%. This is a high level of explained variance given that it comes from individual-level information on six demographic variables. Beyond this technical

criterion, the seven groups do describe quite distinct fertility and partnership trajectories and their distribution across areas of residence and over time, is consistent with the literature on family dynamics in LAC countries presented in the previous section.

Family profiles and migration-related disruptions

The marginal distribution of the family typology for a group of women, e.g. women living in large cities, is termed *family profile*. Table 3 displays the *family profiles* of non-migrant women in the three areas of residence, and, for illustrative purposes, the *family profile* of rural migrants in large cities. There are clear differences in the prevalence of the first- and last-two family categories across areas of residence. Whereas the prevalence of the three intermediate categories is high, at similar levels, in large cities and urban areas. One can think of distance across *family profiles* in terms of their similarity (or dissimilarity). For example, the *family profile* of women in large cities is close to (like) that of women in urban areas, and it is distant from (different from) the *family profile* of rural women.

<center>TABLE 3 ABOUT HERE</center>

Letting aside, for a while, differences in the educational composition, the *family profile* of rural migrants in large cities suggests that both *socialization* and *adaptation* mechanisms are at play. First, the proportion of women in the *Never married* category is equal for non-migrants in rural areas and rural migrants in large cities, meaning that the higher propensity to form families in rural areas is carried on by rural migrants when they move to a large city. Meanwhile, the *family profile* of rural migrants displays strong adaptation to the family regime in large cities. Compared to non-migrants in rural areas, rural migrants in large cities are more likely to be in the *Latest*, *Delayed*, *Unstable* and *Norm-late* categories. Indeed, the proportion of women in these last two categories is very similar to the one observed among non-migrant women at destination. In other words, the adaptation of rural migrants to the family regime in large cities, implies relatively delayed transition to family formation and higher marital/union instability. In terms of distances, the *family profile* of rural migrants in large cities approaches (gets closer) to the *family profile* of non-migrant women at destination. This approximation does not mean that the *family profiles* become

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identical, as some features of the family in rural areas remain, e.g. higher prevalence of *Earliest* and *Norm-early* categories.

Comparing *family profiles* across the 108 groups defined above allows me to maintain the focus on heterogeneity because they include all possible family forms and not just the 'average' one. Because *family profiles* vary across countries and birth cohorts, I included these two variables as controls when predicting the family typology via multinomial models. Hence, predicted *family profiles* reflect differential propensities to be in family categories across age at migration and social classes, net of cross-country and cross-cohort variation. Results from models without control variables are very similar to those presented here.

Figure 2, 3 and 4 present a factorial representation of the *family profiles* in large cities, urban areas and rural areas, respectively. The left panel includes migrants of urban origin and the right panel migrants of rural origin. Family categories (x-markers of grey color) and groups of women by age at migration and educational attainment (○, Δ, ■, and ● markers) are jointly displayed. Proximity between two (or more) family categories implies that across the 108 groups, the proportion of women in those categories are simultaneously high. Proximity between two groups of women signal that the *family profiles* of the two groups are similar. Finally, proximity between a family category and a group implies positive association, i.e. higher prevalence of the family category with respect to the mean. The center of the plot corresponds to the mean *family profile*, i.e. the unweighted average across the 108 groups.

FIGURE 2 ABOUT HERE

The horizontal and vertical axes organize family categories in terms of intensity and the prevalence of the *Norm-late* category, respectively. From left to right, family categories are organized from high to low intensity. The two most intense family categories are *Earliest* and *Norm-early*, whereas the least are *Latest*, *Never married* and *Delayed*. The vertical axis separates the *Norm-late* category from the rest, i.e. from bottom to top, this axis splits normative trajectories from less normative one (top) passing by the *Unstable* category.

Women's distribution across these axes reflect disparities among *family profiles*. There are clear differences by educational attainment where the proportion of women in less intense family categories is higher among highly educated women than low educated. Among non-migrant women in large cities the proportion in the *Never married* category goes from 20.5% in the highest educational level to 8% among the lowest one. Likewise, the proportion of women in the *Latest* and *Delayed* categories decrease from 11.7 (highest) to 3.3% (lowest), and from 28.3 (highest) to 7.5% (lowest), respectively. Therefore, the points representing each of these groups appear separated from one another. On the contrary, points representing women in the last two educational attainment levels (lowest and low) appear close to each other, meaning that the *family profiles* of these two groups are similar.

As for migrants, the left panel shows that *family profiles* of migrant women of urban origin replicate the educational disparities observed among non-migrant. This means that urban-to-large cities migration is not associated with disruptions in *family profiles*. The only slight exception are women of low and medium educational attainment who migrated between ages 19 and 24. Among these two groups of women the proportions in the *Norm-late* category are 46 and 44%, respectively. These figures are high compared to the 30% of women in the *Norm-late* category in large cities.

The right panel displays stronger disruptions in the *family profiles* of migrant women, signaling the adaptation of rural *family profiles* to large cities' context. This is especially the case of women in the lowest and low educational levels (most of rural migrants, refer to Table 2). Women in these two groups who migrated from rural areas to large cities are less likely to be in the *Earliest* and *Norm-early* categories compared to those who stayed in rural areas. Therefore, migrant women of rural origin are more likely to be in the *Unstable* and *Norm-late* categories than non-migrant, meaning that rural-to-large cities migration is associated with lower fertility, higher marriage/union instability and delayed transition to family formation with respect to the origin area. Notably, educational differences remain across all age at migration groups, meaning that domestic migration does not erase the role of educational attainment in differentiating women's *family profiles* or for that matter the socially stratified nature of family paths in LAC. Women who migrated between ages 25 and 30 and achieved the highest educational level display an

unexpected pattern as they appear slightly separated from the least-intense family categories. While intriguing, this pattern is demographically unimportant as these women represent only 4% of the total women who migrated within these age range.

FIGURE 3 ABOUT HERE

In the left panel of Figure 3, *family profiles'* distribution of urban-to-urban migrant women overlap with the *family profile* of non-migrant, meaning that this type of migration is not associated with any disruption in the distribution of the family typology. Non-migrant and migrant women (with urban residential background) in urban areas have very similar *family profiles* at all educational attainment levels. As in large cities, the only exception are women who migrated as young adults (19 to 24). Women in this group are more likely to be in the *Norm-late* category, especially those with medium and high educational attainment. Among these two groups, the proportion in the *Norm-late* category is 50 and 45%, respectively, which confirms the higher propensity of young-adult urban migrants to follow family trajectories of intermediate fertility levels, intermediate timing of transition to union formation and childbearing, and unique and stable marriages.

For women of rural origin, migration to urban areas, is associated with a higher proportion in the *Norm-late* and *Unstable* categories. This adaptation to more urban-like *family profiles* is weaker than the one observed in Figure 2 for large cities, except among young adult migrants (19 to 24) for whom *family profiles* move significantly towards the bottom area of the plot. Educational differences in *family profiles* remain as all the lines representing migrant women are U-shaped having low-educated and highly-educated women in the two extremes. Together, these patterns mean that migration from rural to urban areas is associated with more normative family pathways, while weakly attached to the degree of intensity of family trajectories. This latter aspect (intensity) maps on more closely to women's educational attainment.

Finally, in Figure 4, migration to rural areas displays two main patterns related to early and late migration. For women who migrated before age 18 and between ages 19 and 24, the distance between the group of women at the two extremes of the educational ladder is the largest. And it is not U-shaped, meaning that early migration to rural areas and high educational attainment are not associated with the family categories of delayed transitions

to family formation and low fertility. Instead, these group of women are more likely to be in the *Norm-late* category. This result should not be overestimated because it refers to a very small proportion of women. Instead, at the other end of the educational ladder, migrant women with the lowest and low educational attainment are more likely to follow high-intensity family trajectories, compared to their non-migrant counterparts both in urban and rural areas.

FIGURE 4 ABOUT HERE

As for late migration, i.e. after age 25, groups' distribution replicates the educational discrepancies of rural non-migrants (right panel) meaning that women who migrated from urban to rural areas have similar *family profiles* compared to rural non-migrants. This pattern is consistent with the idea that late migration between similar context should be associated with less family disruption. In other words, when migration takes place later in life and across similar contexts (rural to rural), family paths are not expected to be disturbed.

Conclusions and discussion

This paper analyzes the various ways in which internal migration and family trajectories relate to one another. A data-driven seven-category typology describes the distinct family paths of women born between 1935 and 1970 in 10 LAC countries. Two hierarchically-related constructs separate the seven family categories of this typology. First, family categories go from low-intensity and delayed trajectories to high-intensity and early-transition family paths. Second, marriage stability and prevalence distinguish normative and non-normative trajectories. Women's socioeconomic status is strongly correlated with the first construct, whereas the second one relates more to women's age at migration in ways that vary according to their age at migration, origin, and destination.

I study these associations through *family profiles*, i.e. the distribution of women across the seven family categories by age at migration and educational attainment. The patterned distribution of *family profiles* across these variables reflects the structural and socially stratified nature of family paths, i.e. the differential opportunity structure that shape the

likelihood of people to follow certain family trajectories in large cities, other urban areas and rural areas. These opportunity structures include the unequal access to formal education, employment, and economic prospects for individuals across areas. More importantly, these results underline the fact that it is among vulnerable individuals that *family profiles* differ more from the *family profile* of non-migrants. Vulnerability is understood here in terms of low socioeconomic status and ages at migration that coincide with ages of transition to union formation and childbearing. To the extent that both acts require resources (time, money, social support, etc.), their temporal coincidence may be more demanding for low-SES individuals than high-SES. Indeed, high socioeconomic status and late migration are both associated with very little disruption in *family profiles*.

Differences in the above-described opportunity structures among large cities, urban areas, and rural areas, allow me to speculate about the potential mechanisms driving the heterogeneity in *family profiles*. Because living in large cities imposes material restrictions to family expansion and stability, similarity in family outcomes between migrant and non-migrant groups can be interpreted as a structural adaptation, i.e. as related to material constraints such as higher childbearing and childrearing costs, and the predominance of a monetary economy; this latter aspect likely undermines the economic prospects of the low-educated who come into cities from rural areas. Hence, limiting fertility, being part of a stable formal marriage, or having multiple partners over the life course, become features of the family paths among migrants in large cities. That this association is stronger among more vulnerable groups, i.e. low-educated women of rural origin who migrated as young adults, makes the constraint-oriented interpretation plausible (Castro 2017). Research in Guatemala, Colombia and Peru has previously shown how migrant women of rural background are more likely to face obstacles to access contraceptive methods and reproductive health services at destination (Lindstrom and Hernández 2006; Miller 2009; Subaiya 2007)

Other urban areas represent an intermediate context between the economic and financial demands of large cities and the more flexible conditions, economically speaking, that characterize rural settings. For that reason, only women who migrated to urban areas between ages 19 to 24 display disruptions in their *family profiles*, compared to those who

did not migrate. For women of urban origin, migrating to other urban area is associated with a lower propensity to avoid early family formation among the low educated, and family formation, in general, among the highly educated. In other words, even though the association between migration and family means relatively delayed-unstable family paths for lower educated women, and relatively stable-normative family trajectories for the highly educated, migration and family are closely linked in both cases. Among women of rural origin, the displacement of *family profiles* towards the *Unstable* and *Normative* family categories is very clear and it is stronger for those who migrated before age 24.

In rural areas, two main patterns confirm the close connection between family and migration. First, it is among women who migrated before and during crucial ages for family formation that *family profiles* depict the largest deviations with respect to *family profiles* of women at origin. The fact that these deviations are larger among the highly educated than less educated highlights the importance of the context of reception for family trajectories. Despite the fact of being highly educated, young-adult-migrant women in rural areas are underrepresented in low-intensity, delayed transition and no-transition family categories. On the contrary, for women who migrated after age 25 and 30, migration-related disruptions in *family profile* are smaller and *family profiles* tend to replicate the educational differences of women at destination. This result could be interpreted in terms of selection, i.e. women who move to rural areas at later ages in life have similar family preferences, and hence, similar family trajectories, compared to non-migrant women at destination.

Internal migration in LAC countries involves the mobility of many women with diverse educational and wealth profiles across very distinct contexts and, possibly, for a very diverse set of reasons from more voluntary to forced displacement. This diversity produces heterogeneous patterns in the relationship between family and migration that have not been jointly studied before. Hypothesis-based approaches are incapable of accounting for this heterogeneity as most of these patterns become invisible when the focus is to measure the degree of *selection*, *assimilation*, *adaptation* or *socialization*, separately; without accounting for the socially stratified nature of family dynamics. For all these patterns exist

within concrete stratification systems, the interpretation of these separate explanations as complementary is doubtful.

Results in this chapter shows that the migration and family formation processes are embedded in the social structure in several ways. First, because migration requires material resources, migrants are hardly non-selected. Second, only when socioeconomic opportunities at origin and destination are similar for a given group of migrants, migration is non-disruptive for family trajectories. Third, both *socialization* and *assimilation/adaptation* mechanisms seem to be at play; the former are especially notable among low-SES which makes this group of women a major contributor to family change during this time period. These inequalities in socioeconomic conditions are unlikely to disappear soon as they are rooted in the class structure of LAC societies and the political system that underlies them (Babb 2005; Huber, Pribble, and Stephens 2006; Williamson 2010). Likewise, family change will continue with fertility reaching replacement levels, rising cohabitation and out-of-wedlock fertility, and the emergence of a bimodal pattern in the age of transition to first births (Laplante et al. 2016; Laplante, Castro-Martín, and Cortina 2018; Lima et al. 2018). Futures studies of demographic trends will need to continue using the inequality framework to understand demographics in this region, and perhaps in any other low- and middle-income region where family dynamics are also stratified (Juarez and Gayet 2014; Sacco and Borges 2018).

Focusing on one mechanism at a time prevent us from having an overarching understanding of how migration and family dynamic relate in a broad sociological and demographical sense. What seems to be at a higher level of generality is that all these mechanisms contributed to fertility and family change in the region while always remaining subordinated to the socially stratified nature of the family and the unequal opportunities to migrate.

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Figure 4.1: Fertility decline and urbanization in Latin America and the Caribbean from 1950 to 2000

• • • The Caribbean   — —South America   ——Central America
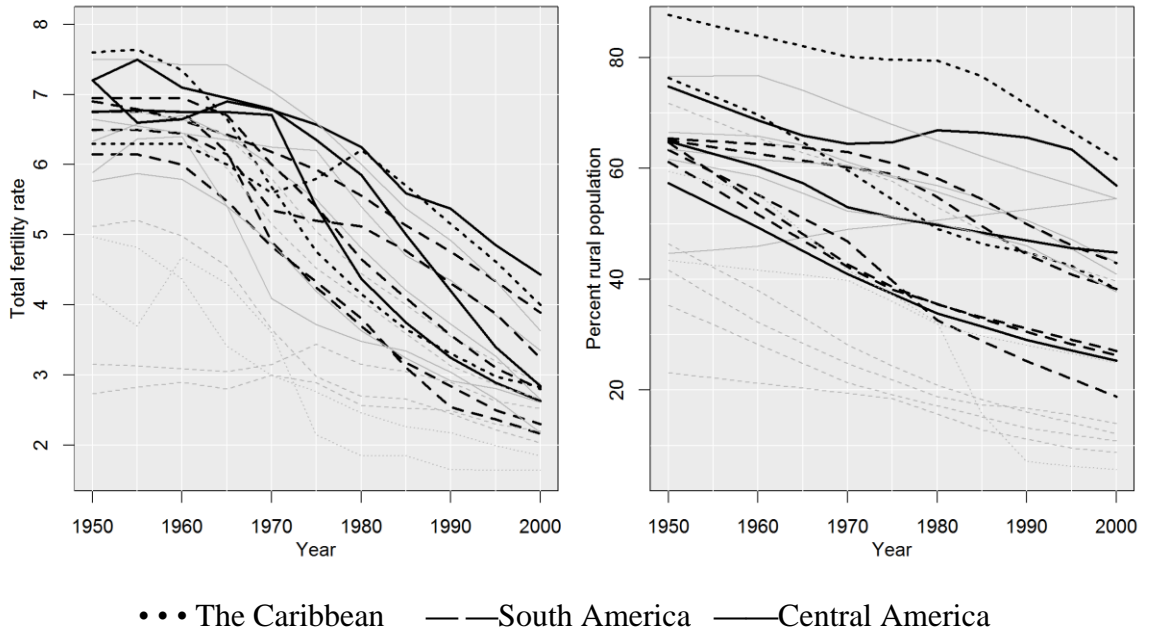
Note: data comes from the Economic Commission for Latin America and the Caribbean and the Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat. Accessed: https://www.cepal.org/en/datos-y-estadisticas.

Table 4.1: Analytical sample by country and current place of residence, and number of waves per country

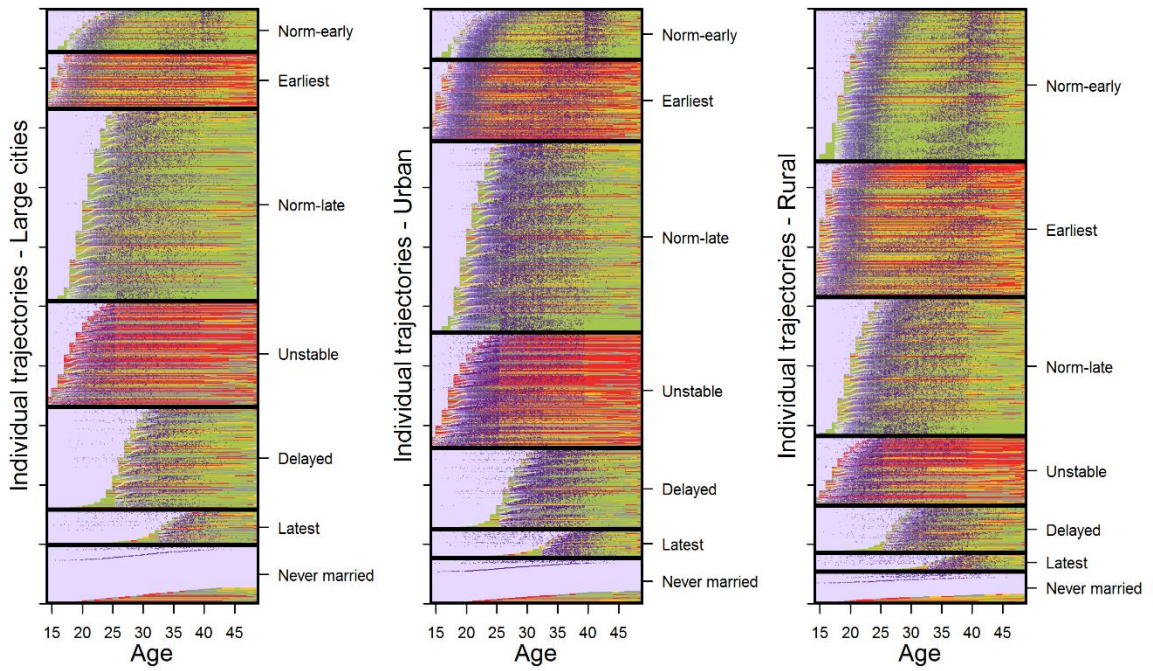| Country	Place of residence			Total	Number of waves
	L. Cities	Urban	Rural		
Bolivia	2,622	2,885	3,562	9,069	3
Brazil	2,910	913	1,179	5,002	3
Colombia	4,040	7,062	1,210	12,312	4
Dominican Republic	1,368	4,416	3,796	9,580	4
Guatemala	103	132	392	627	1
Haiti	454	641	1,998	3,093	2
Mexico	441	611	643	1,695	1
Nicaragua	638	2,288	2,077	5,003	2
Paraguay	293	262	593	1,148	1
Peru	7,179	25,305	18,032	50,516	6
Total	20,048	44,515	33,482	98,045	27

Note: the analytical sample includes women age 39 and above who were interviewed by the Demographic and Health Surveys from 1986 to 2012.

Table 4.2: Migration prevalence, educational profiles, and wealth profiles by area of residence, residence during childhood, and age at migration

Childh. place of residence	Age at migration	Percent	Educational attainment				Wealth quintile				
			Lowest	Low	Med.	High	1st	2nd	3rd	4th	5th
Large cities	Non migrant	**42.2**	**19.3**	**25.2**	**31.1**	**24.5**	**1.7**	**6.3**	**13.4**	**26.4**	**52.2**
		(2.1)	(4.1)	(4.0)	(2.6)	(4.9)	(0.6)	(1.6)	(1.3)	(1.1)	(2.9)
Urban	<18	13.6	26.8	28.8	27.0	17.4	1.3	6.9	16.2	26.4	49.3
		(0.9)	(3.8)	(2.5)	(2.5)	(3.0)	(0.4)	(1.3)	(1.8)	(1.6)	(1.9)
	19-24	8.7	24.9	27.9	28.9	18.3	1.7	6.3	16.2	28.3	47.5
		(0.4)	(3.6)	(2.5)	(2.6)	(2.6)	(0.4)	(1.1)	(1.6)	(1.2)	(2.1)
	25-30	6.7	26.5	28.5	25.9	19.1	1.2	9.6	18.1	32.9	38.2
		(0.4)	(4.3)	(3.4)	(2.2)	(3.3)	(0.6)	(1.8)	(1.0)	(1.9)	(2.8)
	>30	11.9	30.1	26.8	24.2	18.9	2.9	10.3	18.0	24.8	44.0
		(1.0)	(4.0)	(2.5)	(1.7)	(2.8)	(0.6)	(2.1)	(1.3)	(1.3)	(3.3)
Rural	<18	4.8	46.2	28.8	18.2	6.8	2.4	10.8	21.2	33.2	32.4
		(0.6)	(5.4)	(2.4)	(3.3)	(1.8)	(1.0)	(2.0)	(1.8)	(2.3)	(3.2)
	19-24	4.2	51.3	26.7	15.7	6.3	3.0	10.5	24.5	31.2	30.8
		(0.5)	(5.9)	(1.7)	(3.8)	(1.6)	(0.6)	(1.8)	(3.4)	(3.6)	(3.3)
	25-30	2.8	62.5	24.1	9.4	4.1	5.4	17.3	23.7	32.7	20.8
		(0.4)	(6.1)	(3.7)	(2.3)	(1.9)	(1.9)	(3.2)	(3.2)	(2.1)	(3.1)
	>30	5.2	62.5	21.1	12.0	4.4	9.0	22.6	23.7	26.7	18.0
		(0.8)	(5.1)	(2.6)	(2.2)	(0.9)	(2.0)	(3.1)	(2.1)	(3.4)	(3.0)
Urban areas	Non migrant	**42.7**	**26.7**	**27.4**	**27.5**	**18.4**	**4.3**	**11.9**	**20.7**	**30.0**	**33.1**
		(1.8)	(4.6)	(2.2)	(2.6)	(3.6)	(0.8)	(1.2)	(0.8)	(0.9)	(1.3)
Urban origin	<18	9.4	24.3	28.6	28.2	18.9	2.7	10.0	20.6	29.0	37.6
		(0.8)	(3.1)	(2.0)	(1.9)	(2.9)	(0.6)	(1.3)	(0.9)	(1.6)	(2.2)
	19-24	7.1	24.6	27.2	27.1	21.1	2.2	8.6	21.4	28.3	39.5
		(0.6)	(3.1)	(2.0)	(2.2)	(2.3)	(0.6)	(1.1)	(1.1)	(1.2)	(1.7)
	25-30	6.2	21.7	27.9	25.9	24.5	2.9	10.9	20.2	28.6	37.3
		(0.4)	(2.8)	(2.6)	(1.7)	(3.9)	(0.7)	(1.3)	(1.3)	(1.2)	(1.5)
	>30	11.3	25.1	27.8	26.8	20.3	4.2	14.7	21.2	27.6	32.2
		(0.6)	(2.9)	(2.2)	(1.4)	(3.2)	(0.6)	(1.1)	(1.7)	(1.0)	(1.7)
Rural origin	<18	5.5	46.0	30.0	16.3	7.6	4.7	15.0	26.0	30.0	24.3
		(0.4)	(5.5)	(2.1)	(3.2)	(1.3)	(1.1)	(1.2)	(1.2)	(1.8)	(2.5)
	19-24	4.9	52.0	27.6	13.8	6.6	5.3	18.3	27.3	29.4	19.7
		(0.4)	(5.4)	(2.0)	(2.8)	(1.1)	(1.0)	(1.2)	(1.4)	(1.7)	(2.3)
	25-30	4.3	50.9	28.9	14.5	5.8	6.3	22.4	27.6	25.6	18.2
		(0.4)	(4.3)	(1.3)	(2.5)	(1.2)	(0.9)	(1.6)	(2.5)	(1.8)	(2.4)
	>30	8.5	59.4	26.0	9.4	5.2	11.8	26.9	27.2	21.2	12.9
		(0.6)	(5.6)	(2.8)	(2.0)	(1.0)	(1.1)	(1.6)	(2.4)	(1.2)	(1.9)
Rural areas	Non migrant	**56.8**	**76.8**	**17.3**	**4.5**	**1.3**	**44.9**	**32.7**	**14.2**	**5.5**	**2.7**
		(2.3)	(4.0)	(2.7)	(1.1)	(0.3)	(3.7)	(2.3)	(1.1)	(1.0)	(0.9)
Urban origin	<18	2.7	64.2	24.2	8.6	3.0	28.4	35.7	18.4	9.3	8.2
		(0.3)	(5.4)	(2.5)	(2.7)	(1.0)	(2.7)	(3.1)	(2.5)	(1.1)	(2.7)
	19-24	3.5	54.6	27.8	13.7	3.8	28.1	32.0	23.9	9.9	6.2
		(0.3)	(5.1)	(2.6)	(2.8)	(1.1)	(2.9)	(3.1)	(2.0)	(2.0)	(2.0)
	25-30	2.8	55.8	26.8	11.1	6.4	31.7	30.6	18.7	11.7	7.3
		(0.2)	(4.9)	(2.6)	(2.3)	(2.0)	(4.2)	(2.2)	(2.5)	(1.8)	(3.3)
	>30	5.4	57.2	21.9	11.3	9.6	34.4	29.7	17.6	10.2	8.0
		(0.4)	(4.9)	(1.5)	(2.0)	(2.2)	(2.7)	(2.3)	(1.3)	(1.1)	(3.5)
Rural origin	<18	5.3	80.2	16.2	2.9	0.7	44.8	31.7	14.3	6.2	3.0
		(0.5)	(3.6)	(2.6)	(0.9)	(0.3)	(3.3)	(2.5)	(1.1)	(0.8)	(1.7)
	19-24	7.1	78.2	17.0	3.8	1.0	47.4	31.6	13.8	4.7	2.5
		(0.6)	(4.8)	(3.4)	(1.1)	(0.4)	(3.7)	(2.4)	(1.2)	(0.9)	(1.0)
	25-30	5.7	77.2	17.5	3.9	1.4	47.2	30.0	14.3	7.0	1.6
		(0.4)	(4.5)	(3.1)	(1.0)	(0.5)	(4.0)	(2.3)	(1.1)	(1.9)	(0.6)
	>30	10.7	79.0	15.8	4.0	1.3	46.7	30.6	14.4	5.7	2.7
		(0.6)	(3.5)	(2.2)	(1.1)	(0.4)	(2.8)	(2.2)	(1.2)	(1.1)	(1.3)

Note: standard errors, in parentheses, are clustered at the primary sample unit level.

Figure 4.2: Individual family trajectories and family typology by area of residence

Note: Data is unweighted. Individual trajectories are sorted by age at first marriage, children ever born and age at first birth within each family category. Interpretations should be cautious due to over plotting.

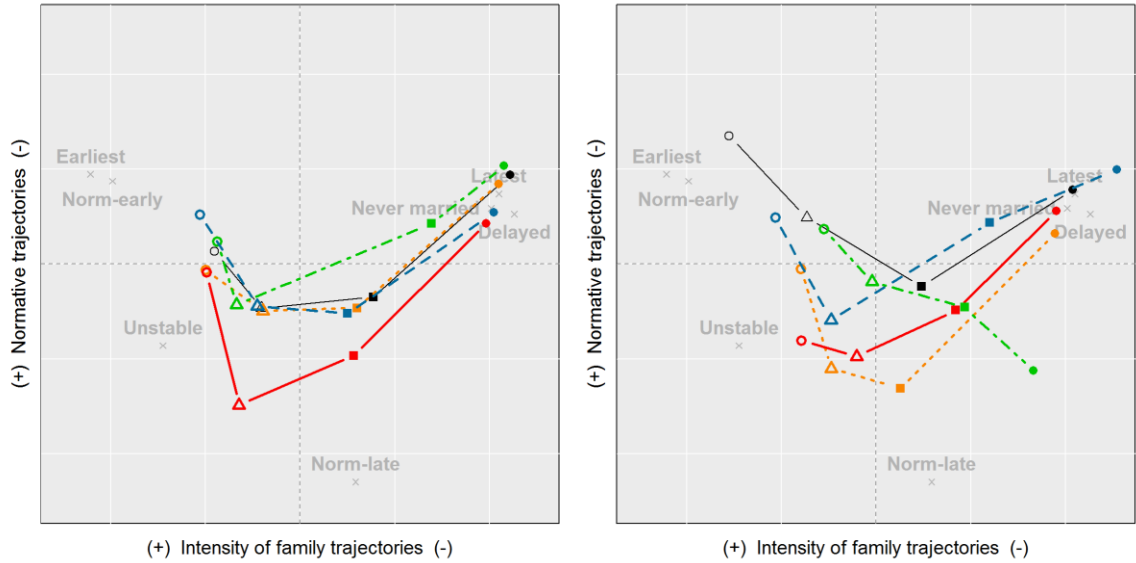**Table 4.3:** *Family profiles* for non-migrants and rural migrants in Large cities

Group	Never married	Latest	Delayed	Unstable	Norm-L	Earliest	Norm-E	Total
	Family typology							
Large cities	12.2	5.9	17.8	18.7	30.2	9.3	5.9	100
	(1.2)	(0.9)	(1.5)	(2.0)	(1.0)	(1.4)	(1.1)	
Urban areas	10.4	5.3	14.1	18.2	31.4	12.5	8.1	100
	(1.1)	(0.5)	(1.0)	(1.8)	(1.0)	(1.7)	(1.3)	
Rural areas	6.7	3.2	8.0	10.5	20.8	21.4	29.5	100
	(0.5)	(0.3)	(0.5)	(1.4)	(1.6)	(1.7)	(2.4)	
Rural migrants in large cities	6.6	4.5	13.6	19.8	32.5	12.2	10.7	100
	(1.2)	(0.5)	(1.0)	(2.6)	(1.9)	(1.1)	(2.0)	

Note: standard errors, in parentheses, are clustered at the primary sample unit level.

Figure 4.2: Disruption in *family profiles* by origin, age at migration and educational attainment in Large cities

Notes: the mean profile in Large cities is *Never married* (8.7), *Latest* (6.5), *Delayed* (19.1), *Unstable* (18.1), *Norm-late* (32.6) and *Norm-early* (8.7) and *Earliest* (6.5).
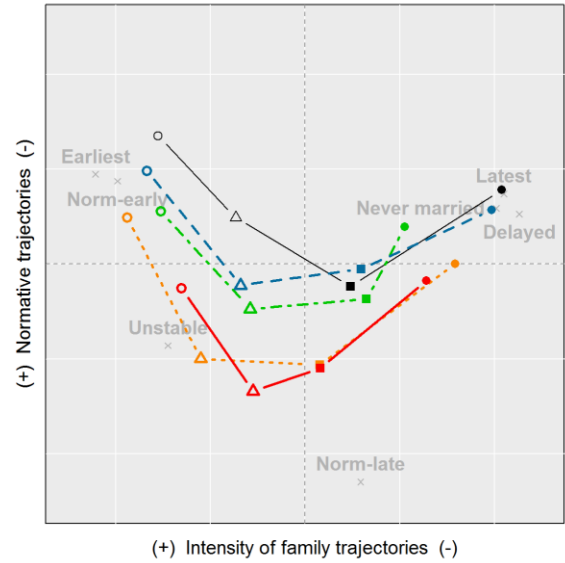
Figure 4.3: Disruption in *family profiles* by origin, age at migration, and educational attainment in Urban areas

Urban origin
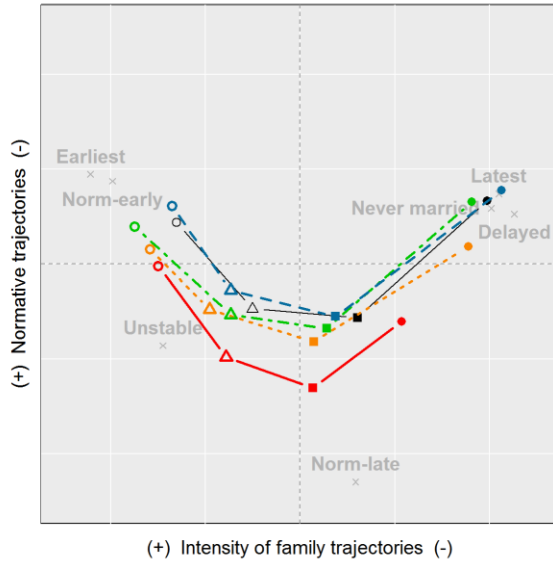
Rural origin

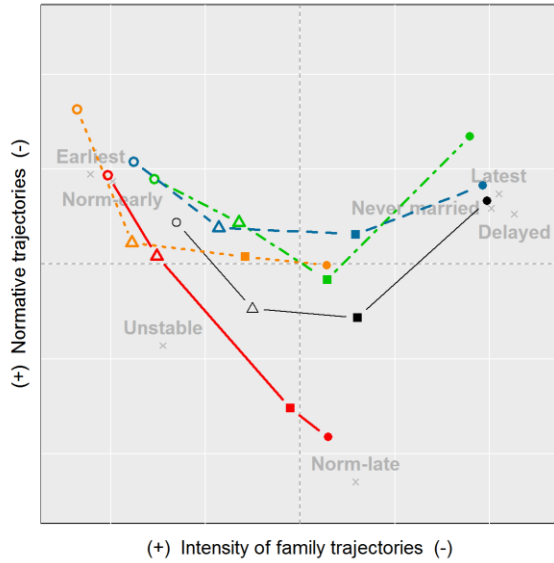**Educational attainment:** ○ Lowest   Δ Low   ■ Med.   ● High
Age at migration: ——Non-migrant   • • • • Before age 18
——19 to 24   — · —25 to 30   — —After age 30

Notes: the mean profile in Large cities is *Never married* (7.4), *Latest* (4.9), *Delayed* (16.1), *Unstable* (17.3), *Norm-late* (33.8) and *Norm-early* (12.0) and *Earliest* (8.5).

Figure 4.4: Disruption in *family profiles* by origin, age at migration, and educational attainment in Rural areas

Notes: the mean profile in Large cities is *Never married* (6.3), *Latest* (4.8), *Delayed* (14.8), *Unstable* (13.1), *Norm-late* (32.3) and *Norm-early* (13.1) and *Earliest* (15.6).