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Research Article

Family changes and residential mobility among immigrant and native-born populations: Evidence from Swiss administrative data

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Julie Lacroix¹ Alain Gagnon² Philippe Wanner³

Abstract

BACKGROUND

Much of the literature on immigrant relocation has focused on human and social capital and has often ignored the role of life-course events as triggers of internal migration and residential mobility. We know that family transitions are closely tied to residential relocation, but the extent to which they might explain differential mobility patterns among immigrant and native-born populations is still largely unknown.

OBJECTIVE/METHODS

Using Swiss administrative registers and a nationally representative survey, we apply discrete-time logistic models to assess whether residential mobility responses to family changes differ between immigrant and native-born populations. We highlight various patterns of housing adjustment at times of childbirth, marriage (among cohabiting and non-cohabiting partners), and divorce. We also investigate the factors accounting for the differences between foreign- and native-born groups.

RESULTS/CONTRIBUTIONS

The results suggest that residential mobility increases at times of childbirth, marriage, and divorce for both native- and foreign-born populations living in Switzerland. The results also suggest that the timing and intensity of residential changes in response to (or in anticipation of) family transitions differ across groups according to their birthplace. Compared to native-born residents, immigrants prove to be more residentially mobile at the time of marriage, owing to specific pre-marital cohabitation behaviours, but less residentially mobile at the time of childbirth, an event inherently linked to housing improvement. Household income was identified as an important mitigating factor within the joint processes of family changes and residential mobility.

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We argue that linking residential mobility to life-course events and statuses can serve as an alternative, dynamic marker of residential integration, preferences, and housing disadvantage among immigrant populations.

1. Introduction

Much of the literature on immigrant relocation has focused on human and social capital and has often ignored the role of family events, such as marriage or childbirth, as triggers of internal migration (De Jong and Graefe 2008). This is unfortunate given that changes in family composition account for a large part of (short-distance) residential mobility and that immigrants experience increased transition rates in the family domain following immigration (Lacroix and Zufferey 2019). By contrast, research on nativeborn populations has identified important regularities in the way various life-course trajectories unfold over time and influence one another. These studies repeatedly show that residential mobility increases in response to changes in the composition of the family and that housing careers are embedded in past and future family decisions (see, for instance, Kulu and Milewski 2007; Mulder 2013; Wagner and Mulder 2015; Clark 2013).

This paper addresses both how family formation (and dissolution) intersects with residential mobility in immigrant⁴ and native-born populations living in Switzerland and how individual and contextual factors shape these joint processes. It draws on recently linked administrative registers that contain exhaustive information on residential mobility and family transitions. More precisely, we track the timing of family events in relation to residential changes (within and between municipalities),⁵ taking into consideration how life-course trajectories are intertwined. To study these parallel processes, we use a measure of synchronicity (two events that occur within the same time interval are synchronous), acknowledging that individuals may relocate in response to, as well as in anticipation of, family transitions. The primary objective is to assess whether residential mobility responses to family changes differ between immigrant and native households. Thus, we highlight diverse patterns of housing adjustment at the time of childbirth, marriage, and divorce and investigate the factors accounting for the differences between foreign- and native-born groups.

⁴ The terms 'immigrant' and 'foreign-born' refer to individuals born outside of Switzerland. The terms 'native-born' and 'Swiss-born' refer to individuals born in Switzerland, regardless of nationality.

⁵ Note that we do not draw a distinction between moves within municipalities (characterized as residential mobility in the literature) and moves between municipalities (characterized as internal migration). Accordingly, we use the terms 'residential mobility' and 'internal migration' interchangeably.

Linking life-course events to mobility outcomes and housing careers while carefully tracking the timing of these events provides a dynamic basis to better understand the factors enabling or constraining choices and opportunities in the housing market (Özüekren and van Kempen 2002). This issue is critical and of special relevance in the Swiss context, where housing vacancies are particularly low and where therefore many segments of the population fail to translate plans to move into actual moves. According to Clark and Drever (2000), the inability to adjust one's housing situation in anticipation or response to family events might signal a housing-market disadvantage. Such difficulties in housing adjustment may be especially acute at the time of childbirth, when households often aim to improve their current dwelling conditions with respect to size, tenure, and localization. For instance, different mobility responses to family transitions have been found across ethnic groups, gender, and socioeconomic statuses (Finney 2011; Mulder and Wagner 1993; Geist and McManus 2008). To the authors' knowledge, this paper is the first attempt to study whether immigration status affects these joint processes. It is largely known that life-course transitions are closely tied to residential relocation, but the extent to which they might explain differential mobility patterns between immigrants and natives is still largely unknown.

2. The Swiss context

2.1 Migrants and immigration to Switzerland

With 29% of foreign-born residents, Switzerland ranks second among OECD countries for the largest share of immigrants in the population, after Luxembourg (OECD/EU 2018a). Although the Swiss economy continues to integrate low-skilled workers from the outside, most newcomers now have tertiary education, allowing many of them to enter the country's most prestigious and rewarding economic sectors. In 2002, Switzerland ratified a bilateral agreement with the European Union (EU thereafter) granting free movement and labour-market access to EU and EFTA (European Free Trade Association) nationals. Currently, approximately two-thirds of migratory flows are composed of citizens from EU and EFTA countries, with neighbouring countries (Germany, Italy, and France) being the primary contributors. Kosovo and Russia are the most represented groups among third-country nationals (National Center of Competence in Research [NCCR hereafter] – on the move, Migration-Mobility Indicators 2019b).

In terms of education, the foreign-born population is more represented at the bottom and top of the educational hierarchy: 29% (15% among the Swiss-born population) have completed only compulsory education, while 36% (34% among the

Swiss-born) have a tertiary degree (Swiss Federal Statistical Office [SFSO thereafter] 2017a). In a recent study of the impact of immigration on the Swiss labour market, Wanner, Zufferey, and Fioretta (2016) conclude that the impact of the migration balance is highest among managers and sales workers. By contrast, the Swiss-born population mostly fills mid-level positions in the services sector and public service (NCCR – on the move, Migration-Mobility Indicators 2017). Labour migration is the core motive for migration to Switzerland among EU immigrants (58%), followed by family reunion (30%) and education (30%).⁶ This picture contrasts with that of the non-EU population, whose requirements to enter and settle in the country are strongly regulated. Only 12% of them entered for employment-related (administrative) motives, while 42% entered for family reunification, 30% to pursue training, and 14% as asylum seekers (NCCR – on the move, Migration-Mobility Indicators 2019a).

2.2 Housing market and internal migration

Switzerland has the lowest homeownership rate among OECD countries: the share of homeowners in the country is 45% among Swiss national households and only 14% among non-Swiss national households (SFSO 2016; OECD/EU 2018b). Therefore, Swiss- and foreign-born residents strongly rely on the rental segment of the housing market, which is characterised by a low vacancy rate, particularly in large cities, where most immigrants settle. According to the Swiss Federal Statistical Office, in 2016 the dwelling vacancy rate was 1.3% for Switzerland, 0.45% for the municipality of Geneva, and 0.78% for Zurich. Although housing projects are numerous⁷ they fail to meet the increasing demand for housing (Fries et al. 2015) arising from the constant population growth in urban centres (Rérat 2006) and the trend towards smaller households. This leads to a gradual increase in housing prices and depletion of affordable dwellings in urban centres (Wanner 2017).

Therefore, an important question is whether the structure of the housing market affects the mobility outcomes and housing conditions of the population. Recent research conducted in the country found differential access to decent housing for the most precarious groups, meaning lower-income (Office fédéral du logement 2016) and immigrant households (Heye, Fuchs, and Blarer 2013). In a recent assessment of residential mobility in Switzerland, Wanner (2017) finds a relative immobility for

⁶ Administrative motives (i.e., the official reason for the granting of a permit) may differ from the individual's reason for migrating. According to the Migration-Mobility Survey (2016), administrative motives overestimate migration for educational purposes: less than 10% of immigrants migrate for educational reasons (D'Amato, Wanner, and Steiner 2019).

⁷ In 2015, 6 new housing units per 1000 inhabitants were built (SFSO 2018).

lower-income households, which he attributes to their exclusion from a (more expensive) segment of the housing market. Wanner notes that the significant increase in housing prices in recent years is beneficial to long-term stayers, who may benefit from lower rents. Conversely, housing changes often imply a significant increase in rent, which could hamper the mobility of households with limited financial resources.

Other measures of disadvantage and mechanisms of exclusion have been identified in the Swiss housing market, such as the level of overcrowding, which is consistently higher among the foreign-born (9%) than among the native-born population (2%) (OECD/EU 2018a). Moreover, according to Baranzini and colleagues (2008), immigrants, especially the least educated ones, pay on average slightly more than Swiss nationals for comparable dwellings. In a recent assessment of discrimination against ethnic minorities in the Swiss housing market, Auer and colleagues (2019) use a largescale field experiment to show that Swiss residents with foreign-sounding names seeking a new apartment, even those with a high-level occupation, are less likely to be invited for a visit. This means that for ethnic minorities, finding somewhere to live involves extra effort.

Nevertheless, internal migration and residential mobility remain important in the country: 41% of the population aged 20 to 45 changed residence at least once between 2010 and 2014 (SFSO – STATPOP). Immigrants born in one of the European member states are the most mobile group (42.8% moved at least once), followed by Swiss-born residents (41.3%) and immigrants born outside of the EU (38.6%). In fact, non-EU/EFTA citizens face some administrative restrictions when attempting to change canton of residence (e.g., if unemployed) and need the approval of the cantonal authority to settle in another region. This may impede mobility opportunities for this group, especially over long distances.

3. Background and hypotheses

Research in high-income countries has repeatedly shown how residential mobility and destination choices intersect with specific transitions in the life course (Clark 2013; Morris 2017; Kulu and Steele 2013; Michielin and Mulder 2008). Childbirth, marriage, and divorce have different effects on mobility. Typically, family formation is associated with short-term residential mobility and long-term residential stability (Warner and Sharp 2016); family dissolution, by contrast, marks the onset of a period of residential instability that may persist for several years (Courgeau and Lelièvre 2006; Kulu et al. 2020; Mikolai and Kulu 2018b). Nevertheless, life-course research has identified important variation in terms of mobility and transition to adulthood across social groups and contexts.

With rising concerns about the so-called 'de-standardization of the life course' and increased complexity in the transition to adulthood, increasing attention has been paid to understanding the plurality and shared experiences of population sub-groups. For instance, heterogeneous mobility responses to family transitions have been found across genders, family backgrounds, and ethnic groups. The likelihood and distance of a move at the time of separation (Thomas, Mulder, and Cooke 2017; Cooke, Mulder, and Thomas 2016; Mulder and Wagner 2010) and marriage (Mulder and Wagner 1993) have been shown to differ for men and women. A handful of recent studies also emphasize differences in family living arrangements among immigrants' children. Family background is a key source of differences, as it determines levels of cultural and economic resources, which in turn affect individual opportunities and preferences regarding family living arrangements (Ferrari and Pailhé 2017). Research has provided evidence of young adults delaying leaving home and having a higher risk of returning home among ethnic minorities (see, for instance, Lei and South 2016), with marriage being particularly tied to pathways out of the family home (De Valk and Billari 2007; Kleinepier and De Valk 2017). Kleinepier and De Valk (2016) also find more diverse family trajectories among second-generation individuals in migrant families than among the native-born of Dutch origin, a finding that the authors attribute to secondgeneration individuals' special position between two cultures.

Closer to the concerns of this study is the work of Finney (2011). Using census data from the UK, the author shows that family and partnership statuses (being married, cohabiting, having children) display different associations with internal migration across ethnic groups. However, the cross-sectional nature of the data does not allow for an assessment of family transitions in relation to residential mobility. The question remains whether family formation and dissolution are also intertwined with residential mobility in immigrant households.

The few studies that look at the specific experience of immigrants in this regard do not explicitly account for differences with native-born residents. They either focus on immigrant populations only or include immigration status as a control variable in models of internal migration (see, for instance, Vidal and Windzio 2012). One of these studies was conducted in the United States by De Jong and Graefe (2008) and finds a positive effect of childbirth, marriage, and divorce on the odds of interstate migration. For many studies on internal migration in immigrant households the outcome of interest is long-distance (interstate) relocation rather than local residential mobility. Most moves related to family events are therefore not measured in this study, since these moves are usually local. For recent immigrants to Switzerland, Lacroix and Zufferey (2019) find that the odds of migration within and between cantons increase within a one-year interval surrounding the event of marriage, but they fail to confirm the simultaneous processes of childbirth and relocation. In a book specifically dedicated to minority internal migration in Europe, de Valk and Willaert (2012) find the gain/loss of a partner and the birth of a first child generate a significant amount of spatial mobility in immigrant and native-born populations. Individuals experiencing an addition/deletion to the household structure within a five-year period are more likely to change their municipality of residence within the same time period. However, the use of separate models by origin does not allow the authors to test for differences between groups.

Following this literature, we expect residential mobility to increase at times of childbirth, marriage, and divorce for both immigrant and native populations (H1 – **Elevated mobility hypothesis**). If immigrants face differential barriers in the housing search process or have specific norms and ideas about the appropriate timing and sequencing of family-life transitions, then residential mobility responses to family changes will differ between immigrants and natives (H2 – **Immigrant status hypothesis**). In other words, specific patterns of mobility are expected for immigrants and natives at times of childbirth, marriage, and divorce. Therefore, we detail the specific hypothesis for each family transition in the following sections.

3.1 Childbirth

Research on fertility and residential mobility often acknowledges the 'adjustment' perspective whereby fertility affects the demand for housing and leads to residential mobility. In this context, residential mobility is an instrumental behaviour (i.e., an action performed to reach a goal) allowing for the improvement of housing conditions in terms of size, tenure, and location. Adjustment moves at the time of childbirth are known to occur over short distances or towards suburban or rural regions during pregnancy and shortly after childbirth (Kulu and Steele 2013; Kulu 2008; Clark 2013; Feijten and Mulder 2002; Rabe and Taylor 2010; Charton and Wanner 2001). In a study conducted in the United States, Clark and Withers (2009) find that migration propensity almost doubles in the six months prior to the birth of a child and decreases gradually thereafter.

Immigrants and ethnic minorities have been shown to be at a disadvantage in terms of both income and access to housing (Auer et al. 2019; Kleinepier, van Ham, and Nieuwenhuis 2018; Charles 2003). Although the bulk of immigrants to Switzerland, especially EU immigrants, are integrated into the upper-tier sectors of the economy, a disproportionate share of low-income families is of foreign origin (SFSO 2017b). What could be called the 'migrant or ethnic penalty' in the housing market may be particularly acute in the period surrounding a childbirth, when households tend to adapt and improve their housing conditions. This disadvantage may also be exacerbated in the context of intense competition for decent and affordable housing in urban centres, as is

the case in Switzerland. Housing adjustment at the time of childbirth is therefore expected to be more difficult for immigrant households. Hence, we expect a weaker relationship between childbirth and residential mobility among immigrant groups than among the native population (**H2a**).

3.2 Marriage

Marriage affects relocation propensities for both non-cohabiting and cohabiting couples. For the former, newlyweds either settle together in a new place or one partner moves in with the other (Speare and Goldscheider 1987). For the latter, marriage does not imply a shift in household composition but may bring new housing aspirations as the couple enters a new phase in the relationship, with a more serious commitment and possibly the intention of becoming parents (Feijten and Mulder 2002; Manting 1994). Studies have highlighted recurrent patterns in terms of timing and distance for marriage-related migration. Empirical analyses find a positive short-term effect of marriage on relocation (see, for instance, Jang, Casterline, and Snyder 2014; Coulter and Scott 2015; Morris 2017), with short-distance relocation being more common and women being more likely to move into the accommodation of their partner (Mulder and Wagner 1993; Wagner and Mulder 2015; Branden and Haandrikman 2019).

There is also evidence in the literature that ideas about the appropriate timing and sequencing of family-life transitions differ across immigrant groups (De Valk and Liefbroer 2007), which in turn might affect the timing of residential mobility and family transitions. Different studies have found that some immigrants are less prone to cohabitation (Pailhé 2015; Kulu and González-Ferrer 2014) than European-born residents, who often view cohabitation as a way of starting a family (Hiekel, Liefbroer, and Poortman 2014). Therefore, we expect a higher synchronization effect of marriage and residential mobility for immigrants compared to natives, especially for non-EU immigrants, mainly because of different premarital cohabitation habits (**H2b**). If this is the case, differences in mobility propensity at the time of marriage between immigrant groups and natives will be reduced once premarital cohabitation status is accounted for.

3.3 Divorce

Union disruptions have similar short-term effects on mobility, since they usually imply that at least one spouse or partner will have to relocate. Feijten and Van Ham (2007) notice a long-lasting effect on mobility from divorce, which puts divorced individuals on a long trajectory of residential instability. By distinguishing moves due to separation

from moves by separated people, Mikolai and Kulu (2018a) reaffirm this pattern: mobility increases sharply in the first four months following separation and remains above the mobility level of married individuals even three or more years after separation.

Divorced individuals are likely to be more flexible and to accept any alternatives or temporary accommodation, such as moving into parents' or friends' homes, even if this means accepting lower living standards (Mikolai and Kulu 2018a). Individuals who experience downgrades in housing and struggle to find an appropriate dwelling are expected to remain residentially mobile over a longer period. Again, we expect immigrants to face more difficulties in securing an appropriate dwelling, thus resulting in persistent mobility following a divorce. Hence, we expect residential mobility to remain higher among immigrants than among natives for a long period following a divorce (**H2c**). Compared to the other hypotheses, in which we look at transitions, this hypothesis instead explores the possibility of a differentiating status effect by origin, given that the event of divorce can occur at different points in time – even years – after a separation.⁸

3.4 Individual and contextual factors

Human capital and contexts also matter for these joint processes. The possibility of adjusting one's housing situation to a change in family size and moving up the housing ladder strongly depends on the financial resources of the household, and lower-income households are less likely to be able to afford such an adjustment. Financial constraints are even higher in housing markets where mortgages and apartment leases are especially expensive or where there is a housing shortage (Wagner and Mulder 2015). In a study conducted in the United Kingdom, Clark and Huang (2003) find an increased mobility rate at the time of childbirth at the national level but not in the city of London. Kulu and Steele (2013) also find some interesting contextual effects: in larger cities, residential changes occur more often during pregnancy and shortly after birth, whereas in smaller cities, couples often move first and then have children. According to these authors, the higher prices and tight housing market in larger cities make it more difficult to secure appropriate housing before starting a family, if the adjustment is possible at all. Given that immigrant and native-born groups differ with regard to human capital endowment, housing situation, and settlement municipality, we explore the mediating role of these attributes, albeit without developing further hypotheses.

⁸ Information on separation is not available in the administrative data.

4. Data and methods

4.1 Databases

The analyses are carried out using individual-level information from Swiss administrative registers and a nationally representative survey. In 2010, Switzerland underwent an important reorganization of its data collection system (Steiner and Wanner 2015). The country switched from traditional census data collection to a harmonized system of surveys and administrative registers. Thanks to a personal identification number that allows for the tracking of individuals across different data sources, we were able to build a dataset that serves our purposes.

First, we pooled four years of cross-sectional data from the Structural Survey (SFSO – RS 2010–2013) as a base sample for this study. This nationally representative survey, which replaced the census in 2010, is conducted on a yearly basis with a random sample of at least 200,000 residents⁹ aged 15 or over and gathers information on the socioeconomic and sociocultural structure of the population. After restricting inclusion to respondents between 20 and 45 years old, we obtained a sample of 241,809 Swiss-born residents, 61,673 residents born in one of the EU/EFTA member states, and 56,543 individuals born in non-EU member states. In all the following models and descriptive statistics we used the sample weight of the structural survey to account for the inclusion probability of the respondents.

Second, we combined the Structural Survey with the population and household register (SFSO - STATPOP 2011-2014) to complement the data with residential and family trajectories. The population register includes a wealth of information on migration to, from, and within the country. In the case of international or internal migration (change of housing), the inhabitant is invited to inform the register. Even if it has never been scientifically assessed, the reliability of the declaration is considered relatively good, as both occupants and real estate agencies are required to notify communal authorities of departures and arrivals. Moreover, communal authorities may be informed of the move by other means (for instance, through electricity services or the tax administration) and may request notification if it is not submitted. However, Swiss residents may not always immediately declare a change of residence, which may affect the temporal accuracy of the information. Contrary to most studies on internal migration that only capture migration across administrative borders (municipal borders at best), geocodes, introduced as part of the housing register, allow for the identification of all changes of residence at the building level. Since most housing-related migration occurs over short distances, this level of geographic precision is a clear advantage.

⁹ The permanent resident population comprises all individuals holding a residence permit of at least one year's duration as well as temporary residents who have been present in Switzerland for more than one year.

We further extracted information on family transitions (childbirth, marriage, divorce) from this register. One drawback of using administrative data is that we can only observe legal records (i.e., divorce but not separation and marriage but not couple formation). However, although we cannot assess the timing of couple formation and dissolution, we can at least identify the links between household members and therefore unmarried cohabiting partners.¹⁰

Furthermore, we merged information on professional income using data provided by the Central Compensation Office (CCO – CI 2011–2014). This office is in charge of the social security system and collects information on all wages paid in Swiss territory. We summed annual incomes for all household members and converted it to the equivalent of a one-person household.¹¹ Finally, municipal-level information was retrieved from the Swiss Federal Statistical Office website.

4.2 Analytical strategy

Event-history techniques were applied to study the timing and occurrence of residential mobility at the time of family life transitions and by partnership status. Since most family-related relocations occur within short distances, we considered all changes of housing (within and between municipalities) to fall under our definition of mobility, our dependent variable. Based on these specifications, we ran discrete-time logistic models. The temporal unit is a year-to-year transition, given that geocode references, which allow for identifying residential changes within cities, are available only once a year.

Thus, the data file was rearranged into a person-year format covering the 2011–2014 period. Individuals start being 'at risk' of changing residence from the moment of their participation in the Structural Survey (in December 2010, 2011, 2012, or 2013) and remain so until their first change of residence, emigration to another country,¹² or the end of 2014. The beginning of the individual's time in the risk set varies, as it

¹⁰ Links between family members were retrieved from the Structural Survey, which means that this information is only available at one point in time (i.e., at the beginning of the observation). Thus, we cannot identify changes in cohabitation status or tell whether marriage took place to the person previously identified as the premarital cohabiting partner. However, sensitivity analyses where the sample is restricted to the first year of observation provide the same results.

¹¹ We use the equivalence scale proposed by the Swiss Federal Statistical Office. Each individual is assigned a weight based on the size and age of household members: 1 for the first adult, 0.5 for members aged 14 and older, and 0.3 for younger household members. We then divide the total income by this value.

¹² Emigration is treated as an instance of right-censoring rather than as an event. If it is true that some individuals relocate to another country when having children or getting married, say in one of the neighbouring countries while continuing to commute and work in Switzerland, we would be wrong to conclude that anticipation moves, meaning migration to another country that occur right before experiencing these events, are not family-related. Nevertheless, this could be an issue if one group is systematically more likely than other groups to move to another country at the time of family transitions.

depends on when the individual was surveyed. This is necessary to properly order the variables contained in the Structural Survey (only available once) with respect to residential changes. This is especially obvious for the housing characteristics, which reflect conditions before the move rather than the outcome of the move. For the same reason, it was not possible to analyse repeated migration with the data at hand. Therefore, the maximum number of years that an individual can appear in the risk set is four: this is the case for, e.g., those who were surveyed in December 2010 and who were right-censored in 2014 or moved during that year. The minimum number of years in the risk set is one: this is the case, for instance, of individuals who participated in the Structural Survey in December 2011 and who moved within Switzerland before December 2012.

The main explanatory variables, family transitions and statuses, are time varying. We used two measurements of family changes and distinguished between (1) family transitions (i.e., childbirth,¹³ marriage, and divorce) that are synchronized with residential mobility and (2) family statuses (having children, being single, married, or divorce) that are linked with residential mobility. The measurements for synchronized childbirth, marriage, and divorce were coded 1 in the year interval in which they occurred and 0 otherwise. When a family transition occurred in the same year as a residential move, the two events were considered to be synchronized. Variables measuring status effects were coded 0 for all years preceding the event and 1 for all years following the event, provided that the person remained in the corresponding status. These variables were also coded 0 in the year in which an event occurred to avoid overlaps between the two measurements.

Of primary concern in all models is the person's country of birth. We distinguished between individuals born in Switzerland, those born in one of the European member states (including EFTA citizens), and those born outside of the EU. Since Switzerland joined the Schengen area in 2008, entry rules for EU and non-EU citizens have differed markedly. As a result, the two groups of immigrants differ markedly in terms of their education, labour, and reasons for migration (NCCR – on the move, Migration-Mobility Indicators 2019b).

We further controlled for a set of demographic, socioeconomic, and housing characteristics that are known to influence residential relocation. Variables taken from the Swiss Structural Survey are fixed and measured when individuals enter the study. They include age, sex, cohabitation status, presence of parents in the household, partner's origin, level of education, employment status, years since arrival in

¹³ Family records retrieved from STATPOP were linked to our dataset using the household ID. This means that we could identify the household of residence of newborns but not links between household members that would allow for identification of the parents in that household. Therefore, we attributed newborn children to all household members rather than to the parents only. This variable should be interpreted as indicating the presence of a newborn child in the household.

Switzerland, homeownership status, and whether the dwelling is overcrowded.¹⁴ The household income extracted from the Central Compensation Office is available on a yearly basis and is therefore time-varying. In addition, we included a set of municipality characteristics (i.e., the share of vacant dwellings, population size, and the share of foreign nationals) that may impede residential mobility differently for immigrant groups, who tend to live in specific regions, especially larger cities, where housing opportunities are less favourable.¹⁵

5. Sample characteristics

Table 1 provides descriptive information on individual, housing, and municipality characteristics separately for Swiss-born residents, European immigrants, and non-EU immigrants. These characteristics are not evenly distributed across birthplaces, which could account for the differences between the three groups in the propensity to migrate. In particular, the Swiss-born population is more represented than the other two populations in the youngest age group (20 to 24 years old), when migration propensity peaks. Age also correlates with life-course stages and transitions that trigger residential mobility.

Household structures also differ across groups: immigrants are less likely to live in their parents' house and, conversely, they are more likely to have at least one child in the household. Regarding nuptiality, while the proportion of married individuals is higher among immigrants and especially non-EU immigrants (75%), the share of single individuals is higher in the Swiss-born population (48%). Unmarried cohabitation occurs more often among native-born and EU-immigrant residents than among non-EU immigrants, who are rarely found in this household configuration. As one might expect, despite having the highest share of singles, Swiss-born individuals are more likely to have a Swiss-born partner. Nevertheless, 23% of the EU group and 35% of the non-EU group have a Swiss partner.

¹⁴ This variable captures whether the addition of a household member leads to housing disequilibrium (or room stress) based on the SFSO's definition of space needs: two rooms for the first two adults, one additional room for each additional adult, and one additional room for each two additional children.

¹⁵ As an alternative, we ran multilevel models with individuals nested within municipalities, but this modelling strategy did not alter the conclusions.

	Swiss-born	EU/EFTA	Non-EU
	67.2	17.1	15.7
Age (20-24)	17.9	8.3	12.8
25–29	18.0	17.5	19.0
30–34	18.3	23.8	22.7
35–39	20.9	23.6	23.2
40-44	24.9	26.9	22.2
<i>l</i> an	50.2	49.8	55.2
Marital status (Single)	48.3	37.9	17.8
Married	46.2	55.7	75.3
Divorced	5.4	6.4	6.9
Cohabiter	17.3	16.6	5.4
Swiss partner	51.3	23.4	35.2
Parent in household	13.3	3.5	6.0
children in household (no)	57.3	52.1	37.6
1 child	15.4	22.3	24.7
2 or more children	27.4	25.6	37.8
Childbirth	11.1	16.5	17.3
larriage	5.0	3.9	3.5
Divorce	0.8	0.6	1.4
ducation (Secondary I)	5.9	23.0	40.1
Secondary II	58.4	33.1	35.0
Tertiary	35.7	43.8	24.9
Employed	86.9	85.7	72.8
ncome (mean)	74, 685	79, 545	55, 922
fear since immigration (>7 years)	100.0	44.6	65.5
3 to 7 years	0.0	20.9	14.8
< 3 years	0.0	34.5	19.7
lomeowner	34.9	19.3	15.5
Room stress	14.9	29.8	47.2
lousing vacancy rate in municipality (mean in %)	1.1	0.9	1.0
oreign-born in municipality (mean in %)	21.9	27.9	28.7
Population in municipality (mean)	38, 352	61, 300	65, 399
N (not weighted)	241 331	61 538	56 225

Sample characteristics (weighted) for Swiss-born residents and Table 1: EU/EFTA and non-EU immigrants (aged 20 to 45)

Note: All variables are measured at the beginning of the observation with the exception of the transitions under study (childbirth, marriage, and divorce), for which we present the share of individuals when experienced the transition at least once during the observation period (over a maximum of four years). Source: SFSO – STATPOP/CCO – CI/SFSO – RS/SFFO – Regional portraits.

Fertility is also higher among immigrants (17% of whom experience childbirth during the observation period, compared to 11% among the native-born), whereas marriage occurs slightly more often in the Swiss group during the observation period (5% compared to less than 4% for the two immigrant groups). Divorce is the least frequent transition (affecting approximately 1% of the overall sample), with the non-EU immigrant group being the most likely to experience this transition.

Education facilitates migration by bringing resources and opportunities, and EU immigrants have the highest share of individuals holding a university degree, followed by the Swiss-born and non-EU immigrant groups. Unlike immigrants, Swiss-born residents are only marginally represented in the basic education category. Regarding employment status, the Swiss-born and EU-immigrant groups have a higher share of employed individuals (86%) than that of non-EU immigrants (73%). Moreover, there is significant variation in income across birthplaces, with EU immigrants displaying the highest income levels, followed by those of the Swiss-born and non-EU groups. The duration of stay in Switzerland also varies between the two immigrant groups: Table 1 shows a larger share of recently arrived immigrants.

Housing and municipality characteristics play important roles in the migration process. Homeownership inhibits migration and the Swiss-born population is overrepresented in this tenure type (35% compared to 19% among the EU group and 16% among the non-EU group). Living in a crowded dwelling accentuates the need for migration, and immigrants face this situation more often. Last, immigrants tend to live in larger cities than those in which the Swiss-born population tends to reside, and thus they face low housing vacancy rates and fewer housing opportunities.

6. Family-level determinants of residential mobility

We present the results as a series of nested logistic models (Table A-1 in the Appendix). Model 1 predicts the likelihood of residential mobility by origin, controlling solely for age. Model 2 includes interaction terms between the person's origin and family events (and the corresponding statuses), with the aim of testing whether residential mobility responses to family formation and dissolution differ between immigrant and native-born residents. Model 3 accounts for specific mobility responses when cohabiting and noncohabiting partners marry. Next, Models 4 to 7 assess the mitigating effect of demographic (Model 4), socioeconomic (Model 5), housing (Model 6), and contextual (Model 7) characteristics on these joint processes among immigrant and native-born residents. Additionally, because these models include multiple interactions between the person's country of birth and family changes, we synthesize the main effects and interaction effects in the form of (absolute changes in) predicted probabilities (Figures 1-5). By so doing we gauge the change in the probability of residential relocation by origin at times of childbirth, marriage, and divorce (see note to Figure 2).

Starting with the baseline probability of residential mobility in Figure 1 (on the left-hand side), we can already see some differences across birthplaces. The yearly probability of residential mobility is approximately 11% for the Swiss-born population, which is 1% lower than that of the EU group (12%) and 1% higher than that of the non-EU group (10%).

However, following the inclusion of a set of covariates (in particular, the inclusion of the time since immigration in Model 4), the EU group appears to be less residentially mobile (on the right-hand side). Indeed, a large share of EU immigrants consists of recent arrivals to Swiss territory; such a situation often necessitates housing adjustment. Thus, all other things being equal, the most residentially mobile group is the Swiss-born group, followed by the EU and non-EU groups, although the differences are relatively small.

Figure 1: Predicted probabilities of residential mobility by region of birth, with (right) and without (left) controls for individual and contextual characteristics



Note: The predicted probabilities are computed at the mean values of other covariates, meaning that the probabilities are only generalizable to individuals having those attributes. The predicted probabilities on the left-hand side come from Model 1 of Table A-1 in the Appendix, which only includes age and birthplace as covariates. The predicted probabilities on the right-hand side account for demographic, socioeconomic, housing, and contextual attributes (Model 7 from Table A-1 in the Appendix).

In line with the elevated mobility hypothesis (**H1**), the models confirm a higher mobility propensity for the Swiss-born population at the time of childbirth: the yearly probability is positive and almost stable across logistic models, with and without controls for other predictors of residential mobility (Models 2 to 7 in Table A-1). The transition to parenthood, regardless of birth parity, comes with a 3% increase in the probability of relocation among the Swiss-born population (Figure 2). As expected, the results show evidence of an immigrant status effect (**H2a**): the one-year probability of residential mobility at the time of childbirth increases by only 1% among non-EU immigrants and even decreases by 1% among EU immigrants.

Distinguishing by parity leads to a similar conclusion (Table A-2 in the Appendix); that is, a lower mobility propensity is observed among immigrant groups regardless of the previous number of children in the household, with the exception of the non-EU group, which shows a similar mobility propensity to that of the native-born group at the time of the first birth.



Figure 2: Change in the probability of residential mobility at the time of childbirth by region of birth

Note: We used the contrast postestimation command from Stata 14 to jointly test for the effect of childbirth across birthplaces following Model 7. Note: The difference in the probability of changing residence between a Swiss-born person who has a newborn child (13%) and a Swiss-born person who does not (10%) is 3%. This effect differs (there are no overlaps between the confidence intervals) from that for the non-EU group, whose change in probability between individuals who have a child (9%) and those who do not (8%) is only 1%. In relative risks, this means that residential mobility increases by approximately 30% at the time of childbirth among the Swiss-born population (0.13/0.10 = 1.30).

The persistence of differences in the synchronicity of childbirth and residential relocation after controlling for important predictors of residential mobility calls for a closer look at multiplicative (interaction) effects. In doing so, we find specific mobility patterns for the immigrant and native-born groups at different levels of income – an important determinant of housing opportunities. Figure 3 presents the change in the

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probabilities of residential mobility – by birthplace and income level – between individuals having a newborn child and individuals who did not experience this transition.



Figure 3: Change in the probability of residential mobility at the time of childbirth by region of birth and household income

Unsurprisingly, housing adjustment at the time of childbirth is more likely when household economic resources are greater. Although this is true for all groups, the effect is more pronounced for the two immigrant groups (positive interaction effect, model available upon request). For the native-born group, the mobility propensity upon childbirth remains stable for the low-income category and increases by 4% and 6%, respectively, for the medium- and high-income categories. For immigrants, the gap between income categories is greater, especially for EU immigrants. In fact, the immigrant status effect only holds for the low-income category: the medium- and high-income groups are very similar in their mobility behaviours. Conversely, all low-income groups (immigrant and native-born) have the lowest mobility at the time of childbirth, albeit with a clear distinction for the EU group, whose propensity for residential mobility is reduced by 7%.

The results also confirm simultaneity in the processes of marriage and residential mobility (Figure 4). When we look at all marriages (without consideration of premarital cohabitation status), migration propensity rises in the year interval in which a transition from unmarried to married takes place (**H1**). As expected, this effect is stronger among non-EU immigrants, whose probability of residential mobility increases by 15% during

intervals of marriage (left-hand side of Figure 4). By comparison, the probability only increases by approximately 5% for native-born residents and EU immigrants, supporting the immigration status hypothesis for marriage (**H2b**).

However, moves related to marriage events have different implications depending on whether couples were already cohabiting before marrying. Following the inclusion of cohabitation status in Model 3, we account for specific mobility patterns by origin (interaction between birthplace and marriage) and by cohabitation status (interaction between cohabitation status and marriage). Unsurprisingly, newlyweds are more mobile if they did not cohabit before getting married (middle panel of Figure 4), regardless of their origin. In this situation, couples have a 20% increase in the probability of changing residence in the given year.

By contrast, for cohabiting partners (right-hand side of Figure 4) we find no evidence of housing adjustment: changes in the probability are close to zero among all origin groups. In sum, the results confirm that the higher mobility for the non-EU group is due to a difference in premarital cohabitation behaviours: EU immigrants are less likely to be living with an unmarried partner at the time of marriage, and residential relocation is more likely among noncohabiting partners. Additionally, unlike for childbirth events, no conclusions can be drawn from the interaction with household income (not shown): relatively higher-income households are more likely to relocate at the time of marriage, regardless of immigration status.



Figure 4: Change in the probability of residential mobility at the time of marriage by cohabitation status and region of birth

As mentioned above, the impact of divorce on mobility is not as direct as that of other family transitions and may involve sizeable delays. Nevertheless, the effect size of this variable is fairly large: the occurrence of divorce increases the probability of relocation by approximately 17% for all groups (not shown) (H1). As expected, the long-term implications of divorced status for mobility are important, as residential mobility remains elevated for a long period of time after the occurrence of a divorce in all three groups and slightly more so among EU immigrants (H2c) (Figure 5). Compared to their single counterparts, divorced Swiss-born residents and non-EU immigrants are approximately 3% more likely to change residence each year, whereas EU immigrants show a 4.5% change in the probability of relocation.

Figure 5: Change in the probability of residential mobility by region of birth and marital status (Ref: singles)



To test whether this situation is associated with some form of housing disadvantage, as suggested earlier, we looked at the specific mobility patterns of low-, medium-, and high-income households (Table A-3 in the Appendix). The positive interaction effect between household income and divorced status suggests that among divorcees, wealthier individuals are more mobile, regardless of immigration status. We can therefore rule out the assumption that the high mobility associated with divorced status stems from economic disadvantage.

7. Discussion

This study on the heterogeneous mobility responses to or anticipation of family transitions among subgroups with different national origins enhances our understanding of why and when immigrant households relocate. Using rich longitudinal administrative data from Switzerland, we followed native and immigrant populations over a four-year period and analysed the simultaneous construction of two parallel trajectories: family and residential pathways.

De Valk and her colleagues (2011) recently pointed out that although international migration constitutes a turning point in the life course that has profound consequences, a fuller reflection of the life-course approach to the study of immigrants' incorporation is still missing. This paper complements previous research by including family transitions in models of residential mobility. Following the life-course approach, we explicitly took into account the mitigating role of individual and contextual factors within these dynamics. By considering all residential changes, including moves within cities, we believe that we have provided a rich life-course account of what differentiates immigrant and native-born populations in their opportunities and preferences for relocation in the wake of family transitions.

The main model confirms the 'elevated mobility' hypothesis, meaning there is a higher probability of changing residence within the year interval when people have a child, marry, or divorce. This finding is in line with recent research on the residential mobility of the native-born populations of different countries (e.g., Kulu et al. 2020; Morris 2017; Clark 2013). Housing adjustment patterns also prove to differ between immigrant and native-born groups, which supports the 'immigration status' hypothesis. However, some exceptions and specific mobility behaviours are worth mentioning and require further discussion.

One notable exception to the elevated mobility hypothesis is the mobility behaviour of the EU population, whose risk of relocation decreases when they have a newborn child. EU immigrants are a very heterogeneous group in terms of human capital, with many located at either the bottom or the top of the occupational hierarchy. Looking at the simultaneous processes of childbirth and residential mobility more closely, we found that while low-income EU immigrants are very unlikely to move at the time of childbirth, they show similar housing adjustment patterns to those of the native-born population when they have at least a medium level of income. Thus, the elevated mobility hypothesis at the time of childbirth is confirmed, but only for middleand high-income households, regardless of an individual's origin. Nevertheless, EU immigrants seem to be more penalized than native-born residents by a disadvantageous income situation, which points to multiplicative disadvantages. Following previous research, we found that marriage often triggers residential relocation. In fact, we evidenced a clear difference in mobility between non-cohabiting and cohabiting partners. As one might expect, moves to another residence are very likely in situations in which couples do not cohabit before marrying. By contrast, we found no evidence of housing adjustment among cohabiting partners in any of the origin groups. Although a marriage does not prompt a residential change among those in this living arrangement, it is often believed to be associated with the search for a more comfortable and lasting home. Nevertheless, we do not find support for such a hypothesis. One may argue that couples often cohabit over a long period before marrying; this provides them with sufficient time to adjust their place of residence before or after marriage. Indeed, dealing with two stressful events simultaneously can be avoided if the two transitions can be anticipated. However, we lack data on the dates of couple formation or the duration of cohabitation, which would help us understand this adjustment process.

Additionally, and according to our expectation, we found the over-mobility among immigrants at the time of marriage to be explained by different premarital cohabitation statuses. Indeed, non-EU immigrants are less prone to cohabit before marriage: at the time of marriage, only 38% of the non-EU group were already cohabiting, compared to 77% in the Swiss-born and 69% in the EU immigrant groups. The synchronicity of marriage and residential relocation for non-EU immigrants is in line with the socialization hypothesis, which states that union formation patterns in the destination country reflect practices in the origin country (Pailhé 2015). Indeed, this group of immigrants displays a more traditional path to adulthood, with less cohabitation and a closer timing in the events of marriage and residential relocation.

Another plausible explanation for the differentiated mobility behaviours between immigrants and native-born residents – regarding all triggering events – is the emigration process. As mentioned in the methods section, we treated out-migration as an instance of right-censoring. This is justified by the fact that the two events, residential mobility and emigration, imply completely distinct mobility logics and migration strategies. However, these questions are beyond the scope of this study, which aims to understand residential mobility as it pertains to housing adjustment. Nevertheless, the processes by which life-course events might be tied to emigration justify further investigation.

A notable limitation of this study is the discrete nature of the dependent variable: residential mobility in response to or in anticipation of family transitions is considered related only when the two events (e.g., childbirth and housing change) occur within the same year. Therefore, the magnitude of these effects is likely to be underestimated.

Another contribution of this paper is analysing the mitigating role of demographic, socioeconomic, housing, and contextual factors within the joint processes of family

changes and residential mobility. As a general rule, household income was found to be an important mitigating factor in these processes, with relatively higher-income households being more likely to move at the time of family changes.

In sum, although differences in moves related to marriage between immigrant and native-born populations can be explained by a difference in cohabitation behaviours, immigrants appear to be less residentially mobile at the time of childbirth, an event inherently linked to improved housing. Thus, we argue that linking life-course events to residential mobility can serve as an alternative, dynamic marker of residential integration, preferences, and housing disadvantage. The differences, albeit slim, in the mobility propensity between immigrant and native-born groups illustrate different motivations for mobility in relation to family changes.

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Appendix

	M1	M2	M3	M4	M5	M6	M7
Age (20–25)							
25–30	0.875	0.919	0.847	0.846	0.815	0.793	0.793
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
30–35	0.579	0.648	0.601	0.605	0.576	0.594	0.597
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
35–40	0.357	0.415	0.389	0.395	0.376	0.429	0.432
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
40–45	0.243	0.284	0.262	0.270	0.258	0.320	0.322
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Birthplace (Switzerland)							
EU countries	1.113	1.092	1.065	0.900	0.899	0.863	0.893
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Non-EU countries	0.875	0.828	0.854	0.793	0.838	0.742	0.768
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Married		0.667	0.730	0.782	0.773	0.894	0.890
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Married * EU		1.205	1.226	1.228	1.250	1.090	1.078
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
Married * Non-EU		1.287	1.243	1.183	1.234	1.065	1.054
		(0.000)	(0.000)	(0.000)	(0.000)	(0.024)	(0.060)
Divorced		1.307	1.350	1.334	1.371	1.350	1.344
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Divorced * EU		1.052	1.070	1.152	1.168	1.142	1.132
		(0.267)	(0.136)	(0.002)	(0.001)	(0.004)	(0.007)
Divorced * Non-EU		0.995	0.959	0.987	1.017	1.047	1.055
		(0.921)	(0.404)	(0.789)	(0.736)	(0.364)	(0.287)
Childbirth		1.357	1.212	1.229	1.288	1.276	1.276
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Childbirth * EU		0.608	0.612	0.580	0.588	0.641	0.643
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Childbirth * Non-EU		0.808	0.774	0.740	0.749	0.833	0.836
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Table A-1:Odds of residential mobility (weighted) for immigrants and natives
(aged 20 to 45 years), 2010–2014, Switzerland

	M1	M2	M3	M4	M5	M6	M7
Marriage		1.522	3.791	3.803	3.736	3.789	3.793
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Marriage * EU		1.021	0.907	0.912	0.925	0.917	0.911
		(0.738)	(0.140)	(0.163)	(0.234)	(0.193)	(0.160)
Marriage * Non-EU		1.913	1.123	1.133	1.154	1.172	1.169
		(0.000)	(0.092)	(0.069)	(0.036)	(0.023)	(0.026)
Divorce		4.206	3.935	3.725	3.860	3.447	3.446
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Divorce * EU		0.885	0.893	0.973	0.966	1.096	1.095
		(0.384)	(0.431)	(0.850)	(0.810)	(0.543)	(0.550)
Divorce * Non-EU		0.769	0.759	0.790	0.791	0.899	0.918
		(0.017)	(0.013)	(0.034)	(0.034)	(0.346)	(0.448)
Cohabiter			0.953	1.031	1.004	0.914	0.904
			(0.000)	(0.049)	(0.803)	(0.000)	(0.000)
Cohabiter * Marriage			0.245	0.247	0.245	0.247	0.246
-			(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Children in household			0.783	0.795	0.849	0.943	0.940
			(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Years since arrival to Sw	itzerland (mor	e than 7 years)					
3 to 7 years				1.179	1.184	1.155	1.154
				(0.000)	(0.000)	(0.000)	(0.000)
Less than 3 years				1.286	1.280	1.226	1.224
				(0.000)	(0.000)	(0.000)	(0.000)
Man				0.979	1.000	1.023	1.026
				(0.008)	(0.975)	(0.004)	(0.001)
Swiss partner				0.900	0.878	1.022	1.007
				(0.000)	(0.000)	(0.078)	(0.584)
Educational level (basic)							
Secondary					1.097	1.191	1.181
					(0.000)	(0.000)	(0.000)
Higher					1.201	1.317	1.337
					(0.000)	(0.000)	(0.000)
Employed					1.211	1.178	1.166
					(0.000)	(0.000)	(0.000)

Table A-1: (Continued)

	M1	M2	M3	M4	M5	M6	M7
Income (low)							
Med					1.122	1.194	1.190
					(0.000)	(0.000)	(0.000)
High					1.198	1.358	1.365
					(0.000)	(0.000)	(0.000)
Homeowner						0.326	0.317
						(0.000)	(0.000)
Room stress						1.256	1.288
						(0.000)	(0.000)
Housing vacancy rate (<0.45%)							
≥ 0,45%							1.121
							(0.000)
Share of foreign-born in th	ne municipality						0.994
							(0.000)
Town size (<10,000)							
10,000–30,000							1.019
							(0.079)
>30,000							1.002
							(0.857)
N	795,574	795,574	795,574	795,574	795,574	795,574	795,574

Table A-1: (Continued)

Source: SFSO – STATPOP/CCO – CI/SFSO – RS/SFFO – Regional portraits. p-values in parentheses.



Figure A-2: Change in the probability of residential mobility at the time of childbirth by birth order and region of birth



Figure A-3: Predicted probability of residential mobility for the divorced by region of birth and household income

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