First and second births among immigrants and their descendants in Switzerland

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Contents

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Abstract

BACKGROUND
The fertility of immigrants and their descendants is a crucial determinant of population dynamics, particularly where migrants are numerous and ethnically diverse, as in Switzerland. This paper analyses the transition to the first and second births of immigrants and their descendants and compares them with each other and with the native population.

METHODS
Using survival analysis and drawing on data from the Family and Generation Survey (FGS-2013), we disaggregate the fertility indicators of intensity and timing by ethnic minority and by birth order, controlling for a variety of sociodemographic characteristics.

RESULTS
Our results show that while there is no substantive difference in the probability and timing of first births between immigrants, their descendants, and Swiss natives, first-generation immigrants become parents younger and more often. Quite unexpectedly, we found that for migrants a second child is less frequent and comes after a longer birth interval than for Swiss natives, independently of whether or not they are born in Switzerland.

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CONCLUSIONS AND CONTRIBUTIONS

This pattern of a delayed second birth for immigrants and their descendants differs from those observed in other European countries (Kulu et al. 2017). Our paper contributes to the literature by examining the heterogeneous fertility trajectories of different groups of migrants and their children. Our results by ethnic group and generation document fertility distribution in a highly diversified migration context, where new migrant groups are joining more established groups and where integration and family policies are weak, compared with the rest of Europe.

1. Introduction

The fertility of migrants in Europe has attracted much attention in the literature, for three main reasons. Firstly, on average and in most countries, migrants' fertility is higher than the fertility of natives (Kahn 1988; Kulu et al. 2017), thus contributing to the slowing of population ageing (Sobotka 2008). Secondly, given that migrants face worse employment and economic outcomes (Algan et al. 2010; Alba 1985; Kogan 2007; Portes 1994; Portes and Rumbaut 2005) and greater challenges in cultural adaptation (Canales and Zlolniski 2000; Kevisto 2001; Levitt 2004; Portes 1997, 1999; Vertovec 2003), migrants' higher fertility is seen as challenging social welfare and social cohesion (Crul and Vermeulen 2003; De Valk 2011; Höhn 2005; Kulu et al. 2017). Thirdly, in the literature on migrants' integration, differential fertility patterns between migrants and majority populations are used as indicators of the degree of migrants' sociocultural integration (Dubuc 2015).

In the past, the literature focusing on family dynamics among immigrants has looked at high-fertility immigrant groups migrating to low-fertility countries in Europe and North America and has found patterns of gradual adaptation of migrants' fertility (Andersson 2004; De Valk 2011; Ford 1990; Kulu 2005; Kulu and Milewski 2007). Many such studies report overall differences in fertility levels and show that age at immigration, duration of stay, reasons for migration, and labour force participation affect migrant fertility (Abbasi-Shavazi and McDonald 2000; Andersson and Scott 2005, 2007; Holland and De Valk 2013; Kulu and Milewski 2007; Toulemon 2004).

However, many studies do not address the large heterogeneity between different groups of migrants (Coleman 1994; Sobotka 2008). Given the general fertility decline in most sending countries, interest in that topic has increased. Kulu and colleagues (2015) show that immigrants from Pakistan and Bangladesh in the United Kingdom and immigrants from Turkey in France, Belgium, Germany, and Switzerland exhibit significantly higher first-birth rates than most other population subgroups. Second-

generation immigrants in these groups bear children sooner and more often than natives in their home countries (Kulu et al. 2015).

We know little about the first and second birth risks of different immigrant groups in Switzerland, particularly for new migrants from Portugal, Turkey, and the Balkan regions (Fibbi et al. 2015; Wanner 2012).[3] Such lack of knowledge is regrettable, given that Switzerland has one of the highest quotas of immigrants in Europe (Marks 2005). In 2015 about 36% of the Swiss population had immigrant origins (first- and second-generation immigrants) (FSO 2017). This high proportion is the combined result of a restrictive naturalisation policy, which keeps migrants in the status of foreigners, and generally higher fertility rates compared to the native population (Fibbi and Wanner 2009; Wanner 2012).

Not only is the migrant population high, but it is also highly diversified in terms of geographic origin, socioeconomic position, and migration trajectories (Afonso 2004; Bolzman 2001; Fibbi, Lerch, and Wanner 2010; Laganà, Chevillard, and Gauthier 2013; Lerch and Wanner 2010). Four-fifths of the immigrants come from various European countries but their migration history is heterogeneous. At the beginning of the 21st century the largest immigrant group in Switzerland came from Italy, followed by immigrants from Germany and Portugal (Federal Statistical Office 2014). Children of immigrants, commonly referred to as second-generation immigrants, have been educated and socialised in their parents' host country for decades and constitute a substantial subgroup (Crul 2013; Crul and Mollenkopf 2012). Laganà and colleagues (2013) estimate that the proportion of children born to migrant parents in Switzerland is about 10%, of which 4% have Italian or Spanish parents and 5.4% have parents from the groups that have arrived more recently from Portugal, former Yugoslavia, and Turkey. A major challenge facing such groups is integration into Switzerland's federal structure, which is based on 26 cantons with different official languages – 65% of Switzerland's resident population speak mainly German, 23% speak French, and 8% speak Italian (Federal Statistical Office 2014).

Until now, research on the fertility of immigrants in Switzerland has been based on nationality, without distinguishing between different immigrant groups or generations. Studies by Bolzman (2001, 2003, 2007) only take into account Spanish and Italian immigrant children; research on fertility by Fibbi et al. (2009), Haug, Compton, and Courbage (2003), and Wanner and Fei (2005) uses nationality to distinguish immigrant groups; Fibbi et al. (2015) study the second generation of immigrants from Turkey and former Yugoslavia in Zurich and Basel and do not present results on timing and quantum of fertility; and the Federal Statistical Office presents differences of fertility

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[3] By 'new second generation' in Switzerland we mean (principally) the children of immigrants from Turkey and former Yugoslavia in Switzerland (Zurich and Basel). See also Fibbi et al. (2015).

according to nationality. Our paper contributes to the literature by adding to knowledge about fertility trajectories of migrants and their children in a context of highly diversified ethnic migration origins. Specifically, we study differences between first- and second-birth patterns of native Swiss, immigrants, and children of immigrants, examining probabilities of birth and the timing of birth for women of reproductive age and taking into account their ethnic origin. Drawing on data from the Family and Generation Survey (FGS) collected in 2013, we disaggregate the fertility indicators of intensity and timing by ethnic minority and by birth order, controlling for a variety of demographic and socioeconomic characteristics. To our surprise, we find that the comparison of second-generation migrants' fertility with that of their native counterparts diverges from what it is observed in neighbouring countries: in Switzerland the children of migrants delay or forego second births more often than the native Swiss.

In the next section we review existing explanations of differences in childbearing trends between natives, immigrants, and their descendants. In Section 3 we give an overview of immigrants' and their children's fertility in Switzerland. Section 4 introduces the data and methods of our analysis. Sections 5 and 6 display the results and our interpretation of them.

2. Theoretical background

2.1 Immigrants' fertility: Theoretical explanations

Compared to specific research on the structural integration of migrants (e.g., in host societies' labour markets or educational systems), research on sociocultural integration has lagged behind (Hardin 2001). In particular, the question of why ethnic identities, habits, and behaviours tend to be associated with high levels of structural integration for some groups but not for others remains unanswered. Family patterns of immigrants and ethnic minorities have often been used in demography as indicators of migrants' degree of integration in host countries: the more similar the union and fertility dynamics of a migrant group are to those of the native population, the more the group is considered to be integrated in the host society (Coleman 2006; Kulu and Hannemann 2016; Milewski 2010; Tucci 2017). Yet given that the diversity of family forms has increased among immigrants and ethnic minorities just as it has among native populations, establishing a single, unidirectional relationship between immigrant family dynamics and integration is complicated (De Valk 2010). Despite such difficulties, it has been claimed that some theoretical mechanisms, which are not mutually exclusive, link fertility patterns and the

degree of migrants' integration. The most common mechanisms investigated in the literature are socialisation, adaptation, selection, and disruption (Milewski 2007, 2010).

The socialisation mechanism suggests that immigrants' family trajectories depend on the values, norms, and behavioural patterns that immigrants learn in childhood (Kulu and Milewski 2007; Kulu and González-Ferrer 2014). Since migrants come from contexts that differ in terms of family values and fertility practices, the socialisation hypothesis allows for variation in individuals' fertility preferences according to their origin. The implicit assumption is that preferences are relatively stable over time, and this remains the case despite the fact that the migration experience constitutes a major adjustment in the life course (Kulu and González-Ferrer 2014). Several empirical cases illustrate the pertinence of this hypothesis, showing that migrants' fertility is more similar to patterns found in their country of origin than to those in the host country, even after controlling for socioeconomic characteristics (Alders 2000 in the Netherlands; Andersson 2004 in Sweden; Milewski 2010 in Germany). The uncertainty associated with the migration experience and the perception that the new environment threatens such values may reinforce adhesion to them (Huschek, de Valk, and Liefbroer 2011).

The adaptation mechanism posits that the family behaviour of migrants will gradually converge with that of their host society (Andersson 2004; Andersson and Scott 2005; Kulu and González-Ferrer 2014). Immigrants create a new family life that is influenced not only by past cultural customs and earlier socialisation but also substantially by the lifestyle of the new country. The adaptation hypothesis is compatible with the socialisation hypothesis (Krapf and Wolf 2015). According to the adaptation mechanism the convergence of immigrants' and natives' behaviours does not occur immediately but takes more than one generation (Kulu and González-Ferrer 2014). Among current conditions that most influence the fertility preferences and behaviour of migrants are economic constraints and the resources available to them (Andersson and Scott 2005, 2007; Kulu 2006; Kulu and Milewski 2007), and sociocultural gender, fertility, and family norms in the host country (Kulu and González-Ferrer 2014). Consequently, despite coming from a context of early and high fertility, immigrants might adapt to the ideal smaller family size prevalent in the host country and enter into parenthood later.

The selection mechanism suggests that immigrants' fertility preferences and behaviour differ from those of the population in their country of origin, and that this difference influenced their initial decision to leave (Andersson 2004; Kulu and González-Ferrer 2014; Kulu and Milewski 2007). The selectivity hypothesis demands that attention be paid to controlling the compositional differences between migrants on the one hand and the sending and receiving populations on the other (Rahnu et al. 2015). The selectivity may occur on the basis of individual characteristics such as

education, occupation, social mobility, career ambitions, family proneness, or other characteristics that shape and reflect an individual's long-term plans (Hoem 1975; Macisco, Bouvier, and Waller 1970). Depending on what kind of selectivity principle is at stake, migrants' fertility may be more or less similar to that of the host country.

Finally, the disruption mechanism emphasises the importance of the timing of migration, differentiating between recently arrived migrants and longer-term migrants. Disruption assumes that fertility levels are particularly low immediately after migration due to the economic costs and psychological stress of migrating and the immediate and often dramatic changes resulting from it (Kulu and González-Ferrer 2014). After an adjustment phase, the length of which varies according to migration circumstances, fertility levels are expected to rise again (De Valk and Milewski 2011; Kulu and Milewski 2007; Kulu and González-Ferrer 2014).[4] Yet, as a counter-hypothesis compatible with the disruption frame, a pregnancy may follow closely after migration to fill the time during the adjustment period when employment is disrupted and social networks are broken (Brinbaum and Kieffer 2004; Foner 1997; Kulu and Milewski 2007; Santelli 2007).

2.2 The fertility of the children of immigrants

Based for the most part on the previous four theoretical mechanisms, studies of immigrants' fertility have analysed the descendants of immigrants as a distinct population subgroup that is expected to have behaviours in between those of their parents and those of their counterparts among the native population. Most studies have suggested "that the fertility of the descendants of migrants moving from high to low-fertility countries is lower than the one of their parents" (Andersson and Persson 2015: 6), while remaining higher than that of the majority population. If socialisation, adaptation, disruption, and selection mechanisms work well for newcomers, they have been found to apply only partially to children of immigrants and their fertility. Contrary to their parents, immigrants' children are socialised in the host country from a young age, meaning that they do not personally experience migration and its disruption potential. Adaptation is therefore strongly identified with socialisation. However, differences in the fertility patterns of the children of immigrants and native populations have mostly been interpreted as being due to modified socialisation and adaptation mechanisms.

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[4] For a summary of this topic, see Kulu and González-Ferrer (2014). They present an excellent state-of-the-art report of the hypotheses that explain the differences between immigrant populations and natives.

Socialisation allows for specific fertility norms and values to be transmitted from the first generation to their children. For some immigrant groups, values such as the ideal number of children and age norms concerning the transition to parenthood are transmitted between first- and second-generation immigrants (De Valk and Milewski 2011; Milewski 2011). Depending on the degree to which their ethnic group is open to other cultures and intermarriage, some children of migrants may grow up under the influence of an immigrant or minority subculture, which may also be reflected in their family and fertility ideals and behaviours (De Valk and Liefbroer 2007; Milewski 2010; Milewski and Kulu 2014). However, and cohering with the adaptation hypothesis, the children of immigrants might also experience cultural adaptation via social exposure to the majority population from an early age. In addition, they participate in the institutions and labour market conditions of the host countries to a greater extent than their parents (Huschek, de Valk, and Liefbroer 2011).

Empirical research on the fertility of descendants of immigrants focuses on the comparison between first-generation migrants, their descendants, and native populations, as well as between the descendants of migrants of different origin (i.e., different migrant groups). Such research is still relatively young in Europe (De Valk and Milewski 2011). On the one hand, second-generation immigrants have in many cases not yet reached the end of their reproductive age; on the other hand, given the difficulty of identifying second-generation immigrants in the European surveys, establishing groups for meaningful comparison is challenging (Andersson and Persson 2015; Lessard-Phillips et al. 2015; Kulu and Milewski 2007). However, studying the fertility behaviour of individuals in their late 20s or early 30s is, in many cases, indicative of completed fertility (Kreyenfeld and Andersson 2014).

2.3 The compositional effects

In addition to these theories, we can also explain the differences in fertility between immigrants, their descendants, and natives by studying the composition effect. Besides cultural factors such as religion, language, and family orientation, socioeconomic differences between first-generation immigrants, second-generation immigrants, and natives are pronounced and could play a role in fertility. One of these compositional effects is educational level: higher educational levels are related to higher opportunity costs and lead to lower fertility (Gustafsson 2001). Indeed, school enrolment may be incompatible with family foundation, for several reasons. Young parents need time for childcare and employment to support their new families, making it difficult to invest in schooling (Moore et al. 1998).

Parental education level plays an indirect role in fertility behaviour via children's educational orientation and preferences: parents with higher education will be able to provide help during the schooling of their children and "they also have experience with the more demanding educational pathways, and this strategic knowledge places them [their children] in an advantageous position at important educational transitions" (Kristen et al. 2011: 124) and during prolonged enrolment in the educational systems (van Hek, Kraaykamp, and Wolbers 2015). Children with highly educated parents may be socialised differently from children with less-well-educated parents. Indeed, prolonged enrolment in the educational system leads to the postponement of family formation (van Hek, Kraaykamp, and Wolbers 2015). Other important compositional effects are the motivation for immigration and age at immigration (these variables only apply to first-generation immigrants). Research has shown an elevated probability of childbearing when migration is for family reasons. If immigrants who are joining their partner in the receiving country have not previously had children, they often have a concentrated reproductive period in the years immediately following the migratory event (Mussino and Strozza 2012). On the other hand, immigrants who are motivated for employment reasons may postpone having children.

2.4 First- and second-generation immigrants' fertility in Switzerland

The large size of the migrant population in Switzerland reflects a rich immigration history. The massive inflow of 'temporary' migrants in response to labour force scarcity in the 1960s allowed for the settlement of large numbers of immigrants in most Western European countries (Coleman 2006; Mens 2006). In 1970, 65% of foreign nationals in Switzerland originated from Italy and Spain and 20% from France, Germany, and Austria. Between 1970 and 2000 the number of foreigners increased from 420,000 to 1.5 million, but Italians and Spaniards declined to 27% and foreigners from the other three neighbouring countries to 14% (Haug and Wanner 2005). Huge changes in the European labour market as well as rapid economic growth in Southern Europe led to major return flows to Italy and Spain. Switzerland began accepting migrant workers from Turkey, former Yugoslavia, and Portugal, while immigrants from Asia were accepted under asylum rules (much less so for immigrants from Africa and Latin America). During the 1990s the breakup of Yugoslavia and the wars in Bosnia-Herzegovina and Kosovo brought large groups of migrants and their families to Switzerland (Haug and Wanner 2005). This settlement was followed by family formation. People of Italian and Spanish origin still dominate among the descendants of immigrants, but the new immigrants are rapidly catching up as their children are born

and raised in Switzerland, with most of them remaining foreign nationals (Mey, Rorato, and Voll 2005).

The integration of the immigrant population in Switzerland has led to numerous studies in different fields (Bader and Fibbi 2012) regarding family formation (Bolzman, Fibbi, and Vial 2003; Fibbi, Lerch, and Wanner 2007; Wanner and Fibbi 2002), access to education (Bauer and Riphahn 2007; Fibbi, Lerch, and Wanner 2010; Laganà, Chevillard, and Gauthier 2013; Mahnig and Piguet 2003), demographic behaviour (Wanner 2001), economic status (Flückiger and Ramirez 2003), and access to the labour market (Fibbi 2010).

Total fertility rates in Switzerland, like in other European countries, declined between the mid-1960s and 2001 and then gradually increased again to reach 1.52 children per woman in 2013 (FSO 2014). Women's average age at first birth increased from 28 to around 30 between the 1960s and the 1990s (Wanner 2004a; Wanner 2004b; Wanner and Fei 2005). In 2013 the average age was 32. Using census data, researchers (Guarin, Bernardi, and Burkimsher 2016; Burkimsher and Zeman 2017) have shown that childlessness is fairly common for Swiss natives (over 20%), though there is also variation between the country's different linguistic areas. The Italian-speaking part of Switzerland has the highest frequency of childlessness (23% of women who have recently completed their reproductive life), followed by the Swiss-German region (22%), with the French-speaking areas having the lowest levels (19%), at least for the postwar generations (Burkimsher and Zeman 2017).

The total fertility rate (TFR) of the immigrant residents in Switzerland has only partially followed these trends. Foreign women had more children than the Swiss (Federal Statistical Office 2014) between 1970 and mid-1980s. From the mid-1980s to 1990, Swiss and immigrant women had a similar TFR. Throughout the 1990s fertility among immigrants rose sharply, but remained stable during the 2000s (1.8 for migrant women on average) (Figure 1). In 2013 the immigrant total fertility rate was about 1.8 and the TFR of the native Swiss was 1.56. When we decompose by migrant group, immigrant TFR appears driven by specific subgroups. While Southern European, German, and French women have 1.6 and 1.7 children on average, this is below the level of Swiss natives (1.81), while the TFRs for Turkish, ex-Yugoslav, and African women range between 2.01 and 2.3 (Wanner 2012).

Figure 1: **Average number of children per women for 'natives' and immigrants in Switzerland (FSO 2014)**
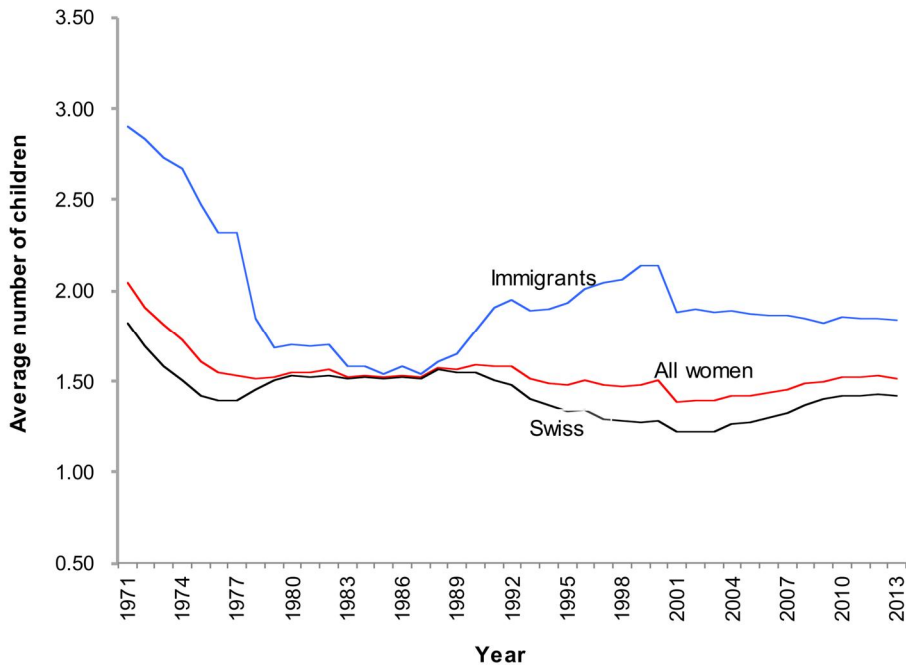
The study conducted by Bolzman, Fibbi, and Vial (2003) on children of Spanish and Italian migrants in Switzerland seems to point in the same direction. In the working and lower middle classes there are very few differences between the fertility patterns of young Spanish and Italian immigrants and the Swiss-born (Bolzman 2007). Kohler (2012) found evidence that second-generation women from the Middle East, the Maghreb, and Turkey still display the highest fertility but have also experienced the largest drop compared to Swiss natives. A new second generation has become of reproductive age in Switzerland, identified as the children of recently arrived migrants from the Balkans, Turkey, and Portugal. Little is known about the fertility or the timing of childbearing in these populations. This is particularly interesting because the global context of fertility has changed in the 21st century. Low fertility and increasing age at first childbirth characterise most of the countries of origin of the new second

generation, and norms regarding family size and age at first childbirth are changing accordingly.

3. Hypotheses

Against this long and heterogeneous migration background, we examine the fertility trajectories of immigrants and their descendants. We ask if we can identify different degrees of integration in the differing fertility patterns of Swiss women, immigrant women from different migration groups, and their daughters. We specifically focus on the occurrence and timing of first and second births.

Pursuant to theoretical explanations that show that a larger gap in fertility patterns between first and second generations could be a sign of gradual adaptation to prevailing behaviours and norms in Switzerland, we expect that

> *The fertility patterns of children of immigrants are more similar to those of natives than to those of their parents* (H1a).

This is because second generation immigrants have been socialised within the host country from an early age, attended its educational institutions, and experienced economic integration in young adulthood. However, because the socialisation and adaptation of children of immigrants is potentially caught between multiple contexts,

> *The fertility behaviour of children of immigrants may still undergo some adaptation and differ subtly from that of natives (*H1b).

We also expect that, because parental background is an important factor in explaining fertility patterns (Huschek, de Valk, and Liefbroer 2011; Kulu et al. 2017),

> *First-generation immigrants and their descendants from traditionally higher-fertility groups (Turks and Balkans) are more likely to have a child and to have a child faster than natives* (H2).

This would be in line with recent comparative studies on the fertility of migrants in Germany and Austria, which have immigrant groups that are comparable to those in Switzerland (Kulu et al. 2015).

Last, we test a variant of the adaptation hypothesis, by assuming that

> *The fertility patterns of ethnic groups with a longer presence in the country or who are culturally 'closer' to the Swiss, like Southern European migrants, migrants from bordering countries like Germany and France and Northern European countries, are more similar to the fertility pattern of natives than is the case for the recently arrived and more culturally distant groups from the Balkans and Turkey* (H3).

All of the hypotheses are tested controlling for other individual characteristics like educational level and age.

4. Data and method

We draw on data from the 2013 Survey on Families and Generations (FGS),[5] which was conducted by the Federal Statistical Office (FSO) as part of a new census of the Swiss population. Its sample includes approximately 10,000 permanent residents in Switzerland aged 15 to 79 years (the reference date being January 1, 2013). The FGS aims to provide data on the current state and evolution of families and more generally on the relationship between generations. Among other things, the survey collected information on ethnic origin, migratory status, and retrospective information on partners with whom the respondent had cohabited (married or not) in the past. The data was collected through computer-assisted telephone interviews (CATIs), followed by additional online or paper questionnaires (CAWI/ PAPI). The interviews were held in three languages, German, French, and Italian. To conduct the FGS, the Federal Statistical Office started with a randomly drawn sample of 34,818 people in the sampling frame for surveys of individuals and households. A total of 17,288 persons (50%) participated in the survey (53% women and 47% men). Eighty-two per cent of these persons have Swiss nationality and 18% are foreign nationals. The data has been weighted and calibrated to take into account the sampling plan and missing responses.[6]

While the FGS represents the population in Switzerland and its major linguistic regions, it does not specifically target immigrants. It does not provide researchers with an easy 'list' with which to contact second-generation immigrants for survey or interview (Heckathorn 2002). Furthermore, national registers provide no variables to

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[5] https://www.bfs.admin.ch/bfs/en/home/statistics/population.gnpdetail.2014-0364.html#publication.
[6] The data was weighted to correct for nonresponse, taking into account marital status (married or not), nationality (Swiss or not), sex, age group, and (groups of) cantons. They were further calibrated to correspond to the permanent resident population of Switzerland aged 15–79 in 2013. Four sets of weights were produced: for CATI and CAWI interviews, and for each respondent level and household level.

identify second-generation immigrants, such as parents' country of birth or age at arrival in host country. This is why studies of second-generation immigrants tend to homogenise situations that could be distinct. Recent literature has tended to construct typologies of individuals with immigrant parentage (Heath, Rothon, and Kilpi 2008; Lessard-Phillips et al. 2015). Such typologies help to understand immigrant integration within the population (Lessard-Phillips et al. 2015; Rumbaut 2005). Our dependent variables were those that identify first and second births and timing of births. We generated a variable that indicates whether a woman has had a first or second childbirth. For the transition to the first birth, the process time was the respondents' age at first birth. This is based on the difference between the mother's birth year and the birth year of her first child. For second births we calculated the duration since the first birth using yearly time information results in an overestimate of the Kaplan–Meier survival estimates. To reduce this overestimation we imputed random birth months to distribute births across the year.

Our major interest is detecting differences in fertility patterns (first and second births) between natives and first- and second-generation immigrant groups. We defined immigrant origins as follows.[7] We constructed the variable 'origin' to identify individuals with an immigrant background that combined the dummy variable 'born in Switzerland' (yes/no), having moved to Switzerland before the age of 15,[8] and country of birth. We chose the age of 15 as the limit, because compulsory education in Switzerland is from age 4 to age 15, so an immigrant who enters the country after age 15 does not have to participate (and be socialised) in institutions related to the educational system.

We could then use the variable 'origin' to divide the population into native Swiss, immigrants (the first generation), and their descendants (the second generation). Natives are individuals who are Swiss nationals and whose parents are Swiss nationals. If at least one of their parents was not a Swiss national, the individual was considered to be a descendant of immigrants. If a descendant of immigrants had parents of different origins, priority was given to the father's country of birth. Since we were interested in fertility by generation and immigrant group we disaggregated the variable 'origin' according to geographic origin of the respondent, regrouping as follows: 1) Southern European countries that have a tradition of migration to Switzerland (Greece, Italy, Portugal,[9] and Spain); 2) countries that share a border with Switzerland, putting them in

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[7] Ethnic minorities have systematically higher dropout rates in panel surveys (see Feskens et al. 2006; 2007). The FGS population weights constructed by the FSO allow us to reduce the bias due to dropouts.

[8] Analyses were also made for children of immigrants who arrived before the ages of 10 or 6. Their results are virtually identical.

[9] We did analyses separately for Portuguese immigrants. The results indicated similar behaviour to the Italians and Spanish.

or near Western Europe (Austria, France, Germany, Liechtenstein, and Luxembourg); 3) Eastern European countries, for which migration to Switzerland is more recent (ex-communist states including former Yugoslavia, plus Turkey); 4) north-western European countries, which include Western European countries that are not included in the preceding categories such as the United Kingdom and the Scandinavian countries; and 5) others, mainly Russia, the United States and its territories, India, Lebanon, and Sri Lanka (see Appendix A). We proceeded in two steps. First, we provided descriptive analyses of TFR by origin, mean age at first and second birth by origin, and Kaplan–Meier survival estimates of the chance of having a first and second birth by origin. We used the period TFR rather than completed fertility, both because we wanted to compare first and second generations and because for the latter (particularly for groups coming from Balkans and Turkey) we do not yet have information about lifetime fertility.

We applied event-history analyses (Cox models) to identify some influential determinants (age cohort, educational level of the respondents and their parents) of the transition to first and second birth by origin. The common starting age for being at risk of giving birth is 15.[10] Cases were right-censored either at the last known interview date or at age 45. We included only women. The data was in person–month format, with each person potentially contributing one entry per month.

For each transition we estimated a series of main effect models and monitored the change in the effects of the independent variable with the introduction of controls (age cohort, age at birth, and achieved education level).[11] For the first birth, model M1 included the independent variable 'origin' (immigrant status/generation); in M2 we added the birth cohort (1949 and before, 1950–1959, 1960–1969, 1970–1979, 1980 and after), 1949 and before being the reference. In M3 we added controls for the educational attainment (low, medium, high)[12] of respondents using a stepwise procedure and taking the medium category as the reference. In M4 we added the educational levels of the father and mother.

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[10] We decided to start the risk age at 15 years because few women give birth before 15 (4 cases only).
[11] Following the composition hypothesis, the educational differences would account for differences in fertility patterns of immigrants and non-immigrants. We expected to find lower fertility for first-generation immigrants with higher educational levels and higher parental educational levels. On the other hand, we expected to find that differences in birth risks between second-generation immigrants and natives do not exist after accounting for the effect of educational level and parental educational level.
[12] Low educational level: incomplete compulsory school, specialized school for handicapped, pre-obligatory schooling, domestic science course, or one year school of commerce. Medium educational level: general training school, apprenticeship (federal certificate of competence), full-time vocational school, or bachelor/maturity. High educational level: vocational high school with master certificate, federal certificate, technical or vocational school, vocational high school, university, academic high school, university of teacher education, professional educational training, university of applied sciences and arts western Switzerland.

For the second birth we used the same M1, M2, and M3 models. In the M4 model we added as a control variable the age of the mother at first birth (15–20, 21–25, 26–30, 31 and older) and took 26–30 as the reference category. In M5 we interacted the level of education with the migrant status to test whether education has a different effect on the fertility patterns of Swiss natives and first-and second-generation immigrants. The category 'medium' is the reference category for educational level and the category 'natives' is the reference for origin. Finally, in M6 we added a control for parents' educational level (both father and mother), with low education as the reference category.

5. Results

We have three sets of results which contrast the fertility of migrants with that of Swiss natives: the TFRs by immigrant group; the average age of the mother at first and second birth; the survival curves for first and second birth by origin, and the parametric Cox models of first and second birth risks.

5.1 Total fertility rate (TFR) by immigrant group

The immigrant groups under examination display very different TFRs in Switzerland.

We present TFR by origin in 2013, calculated as an average for the period 1940 to 1998, to give an overview of the fertility behaviour of ethnic minorities and natives in Switzerland. TFR "is defined as the number of children a woman would have if she were to live throughout her reproductive years (typically ages 15–44) and give birth according to the prevailing age-specific fertility rates (ASFRs)" (Parrado 2011: 1061). Figure 2 shows the TFRs calculated by migrant status. The analysis by migrant status shows that first-generation immigrants had more children on average than Swiss natives, especially those from Eastern Europe (2.11). Fertility levels were also relatively high for first-generation immigrants from the category 'others' (1.94). The descendants of immigrants had lower TFRs than immigrants, as expected. Only second-generation immigrants of Eastern European origin had higher TFRs than Swiss natives (1.63).

Figure 2: **Total fertility rate for women, by origin, between 1940 and 1998 (FGS 2013)**
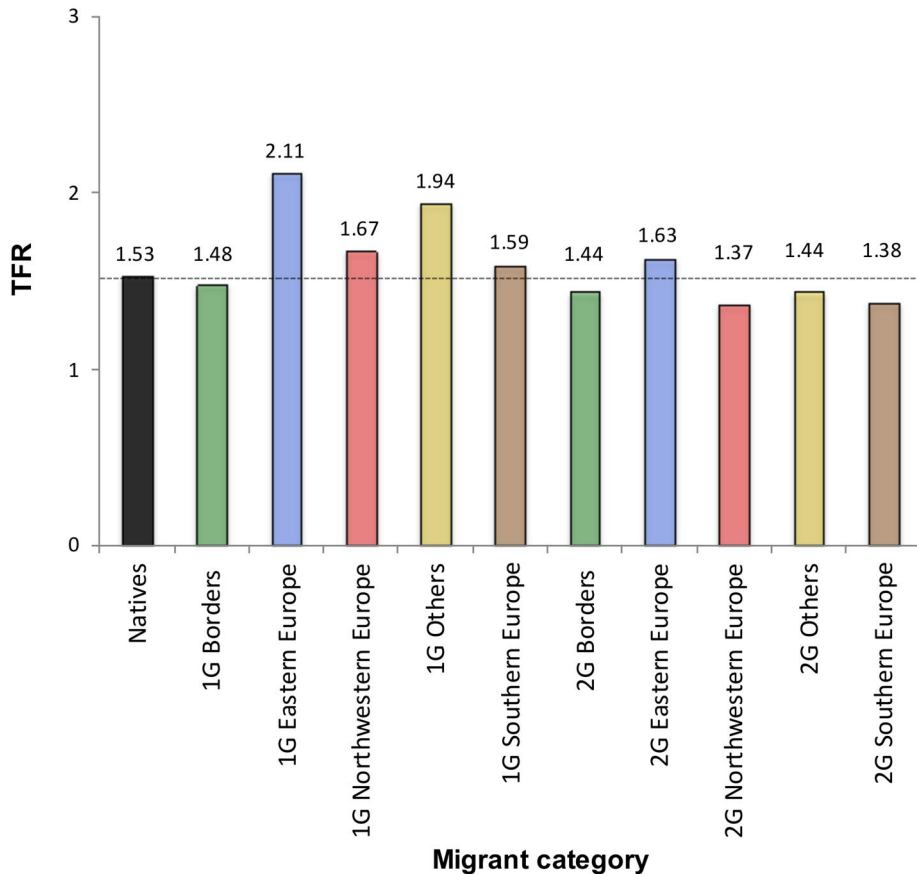
Note: 1G means first-generation immigrants and 2G means second-generation immigrants.
- - - Level of native TFR across all other ethnic groups.

However, due to the age of our sample, and particularly the age of second-generation immigrants of Eastern European origin, we must be careful when using TFR as a measure of fertility. Indeed, we could miss a substantial part of their fertility in our TFR indicator. When we use TFR we suppose that women in these hypothetical age groups will survive till the end of their reproductive period. This is why we decided to investigate the fertility, by origin, of the older cohorts who had completed their

reproductive life (i.e., who were over 49 years of age at the time of the survey). Our results show that none of the groups is very different from the natives. From the census returns we know that migrants from former Yugoslavia have larger families (2.3 children per woman on average in 2000) than those originating from other areas of Eastern Europe (with just 1.3), while the second generation tends toward the Swiss average when looking at completed fertility (Guarin, Bernardi, and Burkimsher 2016).[13]

5.2 Mother's age at first and second birth

The average age of the mother at first birth has been increasing steadily over the past 40 years and has now reached above 30 years, though this age varies considerably based on the immigrant group's country of origin. In Eastern Europe the modal age for having a first child when these countries were under a communist regime was as low as 19–20. Since the fall of communism in 1989 the age of entering motherhood has risen, often precipitously (Guarin, Bernardi, and Burkimsher 2016). The mean ages at first and second birth for women born between 1940 and 1998 appear in Figure 3; natives are represented by a white square, first-generation immigrants by a black square, and second-generation immigrants by a circle. The results show that the mean ages at first birth and second birth for first generation immigrants and their descendants tend to be similar to that of natives (27.5 for first birth and 29.6 for second birth). However, if we analyse the results by origin we observe that first- and second-generation immigrants of Eastern European origin and first-generation immigrants of Southern European origin have a lower mean age at first and second birth than natives, while the reverse is true for first- and second-generation immigrants with Northwestern European origins. Second-generation immigrants with Southern European origins tend to have first and second births later than first-generation immigrants of Southern European origin.

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[13] Immigrant groups in Switzerland are also heterogeneously composed according to their distribution across cohorts, educational levels, and parents' education. As we have discussed in the theoretical section, each of these variables may affect the transitions to first and second birth.

Figure 3*:* **Mean age at first, second, and third birth per women, by origin, in Switzerland (FGS 2013)**
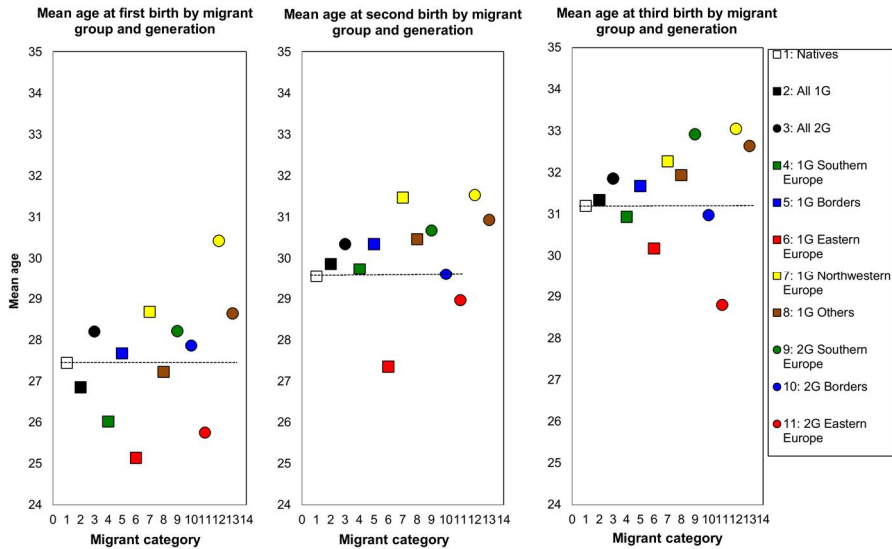
Note: 1G means first-generation immigrants and 2G means second-generation immigrants.
- - - Level of mean age at first, second, or third birth for native women compared with all other ethnic groups.

5.3 Timing of first birth and multivariate analyses by origin

Figure 4 describes the patterns of the transition to first birth by origin. More precisely, these figures show the estimated Kaplan–Meier survival curves for first birth, with the origin both aggregated (left) and disaggregated (right). In these figures, Swiss natives and second-generation immigrants remain childless more often than first-generation immigrants.

Figure 4: **Kaplan–Meier survival estimates of entering into first birth, by origin (aggregated–disaggregated), for women (FGS)**

Age at first birth

Migrant category

Natives ──	1G Eastern Europe ──	2G Eastern Europe ──
All 1G ──	1G Northwestern Europe ──	2G Northwestern Europe ──
All 2G - - -	1G Others ──	2G Others ──
1G Southern Europe ──	2G Southern Europe ──	
1G Borders ──	2G Borders ──	
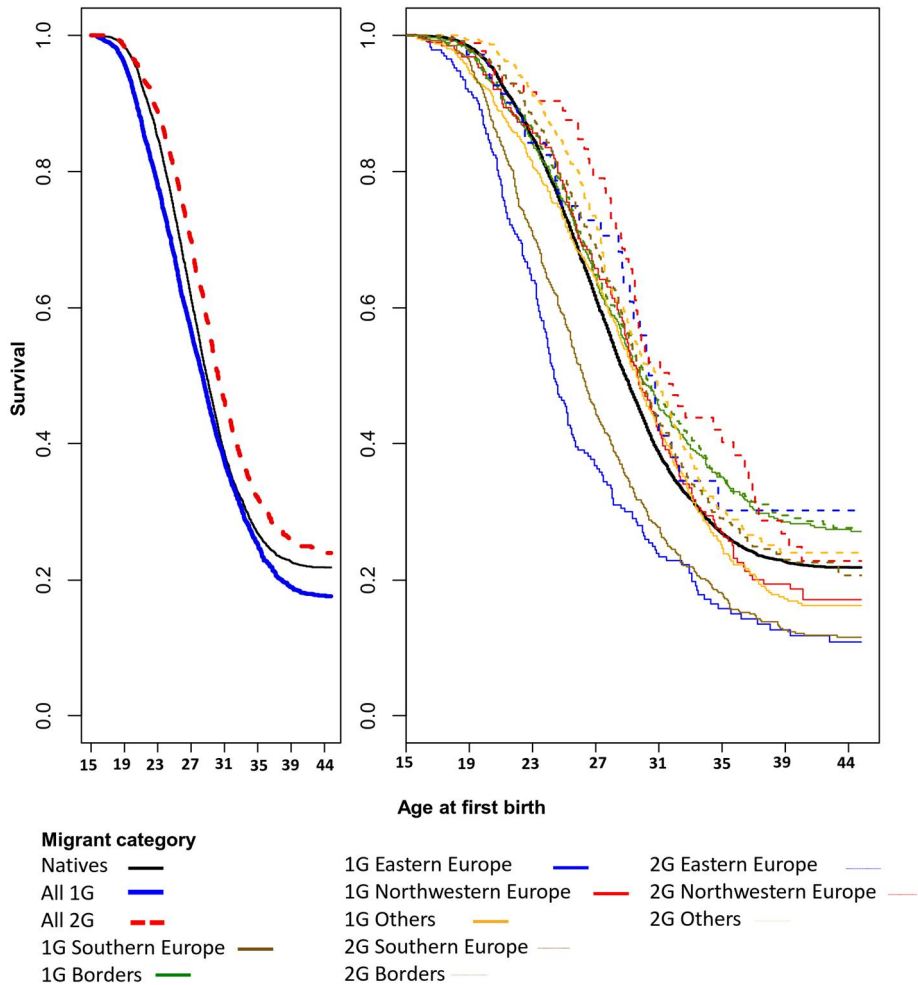
Note: 1G means first-generation immigrants and 2G means second-generation immigrants.

However, there are differences according to the migrants' country of origin. The probability of becoming a parent is higher for first generations of Eastern European and Southern European origin more often than for the Swiss natives. All groups of

descendants of immigrants have the same probability of becoming parents as Swiss natives.

We present the results of the Cox models for first birth in Table 1. Model 1 (M1) includes the effect of migrant status without controlling for other characteristics and shows that immigrants are more likely to have children than Swiss natives. However, for all second-generation immigrants this probability is lower than for Swiss natives. Controlling for birth cohort (M2) leaves the effects unchanged.

**Table 1:** **Transition to first birth for women, by origin**

	Model 1		Model 2		Model 3		Model 4	
Origin								
Swiss	1		1		1		1	
1G Borders	0.85	**	0.87	**	0.91		0.87	*
1G Eastern Europe	1.76	***	2.1	***	1.89	***	1.78	***
1G Northwestern Europe	1		1.13		1.21	*	1.21	*
1G Others	1.04		1.13	**	1.21	***	1.15	*
1G Southern Europe	1.49	***	1.32	***	1.35	***	1.29	***
2G Borders	0.82	**	0.92	*	0.87	*	0.89	
2G Eastern Europe	0.81		0.89		1.13		0.99	
2G Northwestern Europe	0.75	*	0.92		0.94		0.91	
2G Others	0.81	**	0.94		0.93		0.93	
2G Southern Europe	0.91		0.99		1.1		1.01	
Cohort								
Before 1949			1		1		1	
1950–1959			0.83	***	0.92	***	0.93	*
1960–1969			0.69	***	0.79	***	0.8	***
1970–1979			0.61	***	0.75	***	0.78	***
1980 and +			0.44	***	0.53	***	0.67	***
Educational level								
Low					1.33	***	1.36	***
Middle					1		1	
High					0.64	***	0.65	***
Educational level father								
Low							1	
Middle							0.92	*
High							0.88	*
Educational level mother								
Low							1	
Middle							0.96	
High							0.93	
AIC	96,173.91		95,917.65		95,226.54		80,273.53	
R^2	0.02		0.04		0.08		0.09	
Max. R^2	1		1		1		1	
Num. events	5,761		5,761		5,761		4,946	
Num. obs.	9,002		9,002		8,976		6,760	

Note: ***p < 0.001, **p < 0.01, *p < 0.05. 1G means first-generation immigrants and 2G means second-generation immigrants.
Source: Family and Generation Survey 2013.

        In order to better grasp the effect of education, in Figure 5 we present the coefficients of M3. Once the level of education is controlled for, the first-generation immigrants show higher first birth risks than the Swiss natives. This is particularly the case for first generation immigrants of Eastern European and Southern European origin (89% and 35% higher chance of having a first birth respectively). For second-generation immigrants the first birth risks are generally lower than for the Swiss natives, with the exception of the second-generation immigrants of Eastern European and Southern European origin (13% and 10% higher risks respectively, but coefficients are not statistically significant)

Figure 5:   Relative risk of having a first birth for women aged 15–45, by immigrant group (controlled for cohort and education)
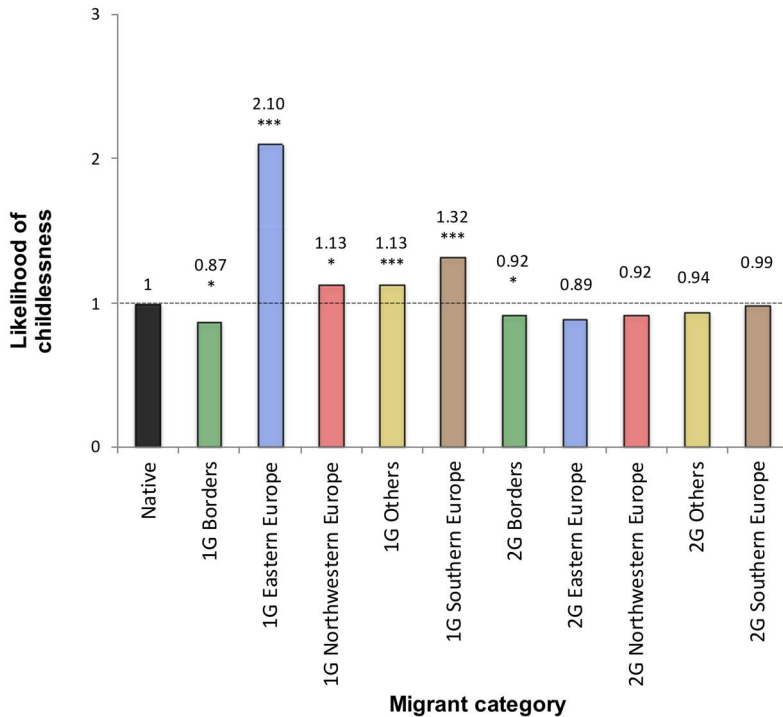
Note: ***p < 0.001, **p < 0.01, *p < 0.05.
1G means first-generation immigrants and 2G means second-generation immigrants.
The likelihood of remaining childless is the inverse of the likelihood of having a first child, so a value of <1 indicates a higher likelihood of childlessness.
Source: Family and Generation Survey 2013.

The comparison by cohort shows that women belonging to the older cohorts have a higher probability of first birth than those belonging to younger cohorts; yet this may be simply due to the fact that younger women have not yet reached their reproductive age limit and may be more likely to delay the transition to motherhood to their late thirties.
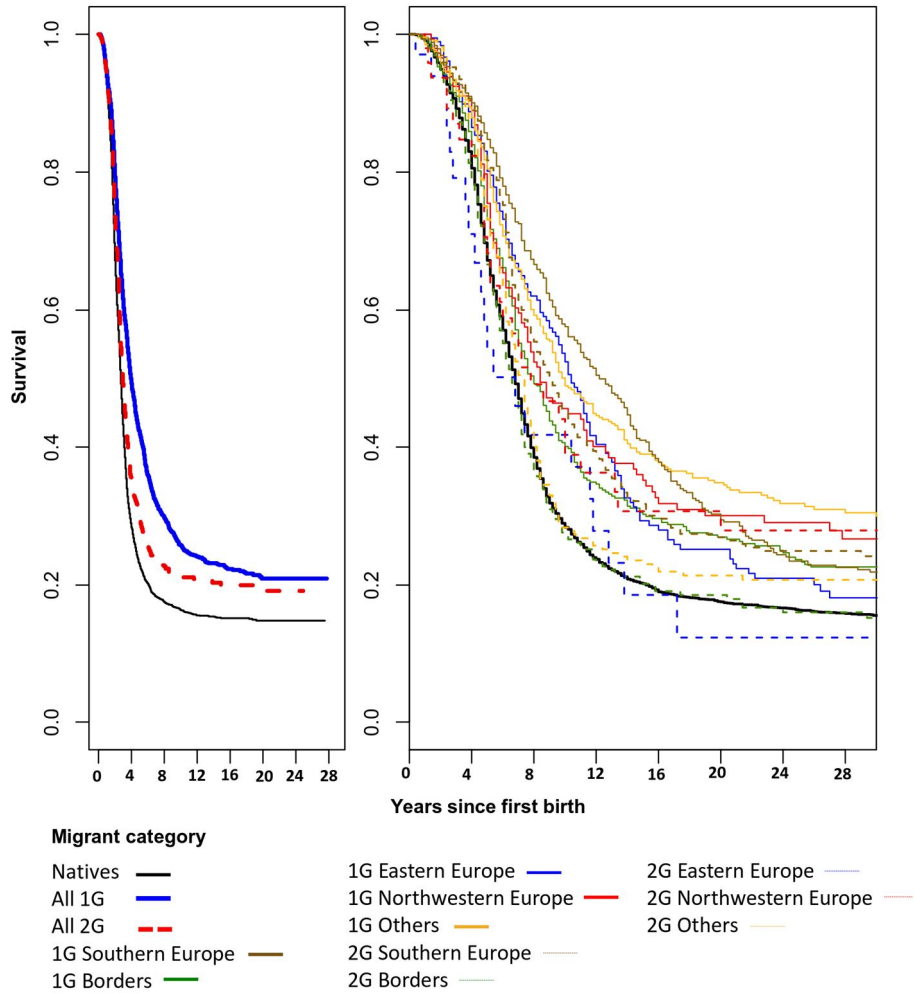
The introduction of the parents' educational level (both father and mother) in M4 allows us to test whether the social origin of the individual plays a role in the choice of having a first child. The results show that the likelihood of having a first child is lower for women whose fathers have a medium or high education level than it is for women whose fathers have a low education level.

5.4 Timing of second birth and multivariate analyses by origin

In Figure 6 we present estimated Kaplan–Meier survival curves for second birth (origin aggregated on the left and disaggregated on the right). Here, Swiss natives have a greater chance of having a second child than immigrants and their descendants. The curves that are most distant from Swiss natives are first-generation immigrants of Southern European origin and those from 'Other' countries. These results show that Swiss natives are more likely to have a second child than immigrants and their descendants, and more likely to have it quickly.

Table 2 is devoted to determinants influencing the transition to second birth. In these models the process time is the duration since the first birth. The results show that second birth likelihood is highest two to four years after first birth for all women. After that, second birth risks decline for immigrants of all origins more than for Swiss natives. In M4 (Table 2), where we control by cohort, educational level, and age of mother at first birth, we observe (Figure 7) that first-generation immigrants from border countries have a 25% lower chance of having a second birth than Swiss natives, first-generation immigrants of Eastern European origin have a 34% lower chance, first-generation immigrants of Northwestern European origin have a 33% lower chance, first-generation immigrants from 'Other' countries have a 41% lower chance, and first-generation immigrants of Southern European origin have a 40% lower chance. For second-generation immigrants, coefficients are in the same direction, except for second-generation immigrants from border countries, for whom the risk is 0.4% higher than for natives.

Figure 6: **Kaplan–Meier survival estimates of entering into second birth, by origin (aggregated–disaggregated), for women**

Migrant category

Natives ▬	1G Eastern Europe ▬	2G Eastern Europe ⋯⋯
All 1G ▬	1G Northwestern Europe ▬	2G Northwestern Europe ▬
All 2G ▬ ▬	1G Others ▬	2G Others ▬
1G Southern Europe ▬	2G Southern Europe ▬	
1G Borders ▬	2G Borders ▬	

Source: Family and Generation Survey 2013.
Note: 1G means first-generation immigrants and 2G means second-generation immigrants.

## Table 2: Transition to second birth for women, by origin

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
Origin												
Swiss	1		1		1		1		1		1	
1G Borders	0.75	***	0.75	***	0.75	***	0.75	***	0.71	***	0.75	***
1G Eastern Europe	0.85	***	0.84	***	0.84	***	0.81	***	0.81	***	0.8	***
1G Northwestern Europe	0.68	***	0.67	***	0.66	***	0.67	***	0.69	*	0.72	***
1G Others	0.61	***	0.62	***	0.6	***	0.6	***	0.66	**	0.64	***
1G Southern Europe	0.61	***	0.61	***	0.61	***	0.6	***	0.64	***	0.61	***
2G Borders	0.99		0.99		0.98		1.03		0.98		0.9	*
2G Eastern Europe	1.05		0.99		0.97		0.96		1.10		0.89	
2G Northwestern Europe	0.71	*	0.7	*	0.69	*	0.68	*	0.79		0.66	*
2G Others	0.88	*	0.85	*	0.84	*	0.85	*	0.95		0.84	*
2G Southern Europe	0.69	***	0.67	***	0.67	***	0.68	***	0.71	***	0.72	***
Cohort												
Before 1949			1		1		1		1		1	
1950–1959			0.95		0.95		0.97		0.98		0.96	
1960–1969			1.01		1		1.06		1.07		1.06	
1970–1979			1.11	*	1.11	*	1.15	**	1.15	**	1.15	**
1980 and +			1.03		1.05		1		1.01		0.98	
Educational level												
Low					0.97		0.95		0.99		0.92	*
Middle					1		1		1		1	
High					1.04		1.11	**	1.09	*	1.08	*
Age mother at first birth												
15–20							0.86	**	0.86	**	0.9	*
21–25							1.02		1.02		1.04	
26–30							1		1		1	
31 and +							0.68	***	0.68	***	0.69	***
Origin * Educational level												
Swiss (Middle)									1			
1G Borders (Low)									0.90			
1G Eastern Europe (Low)									1.46	*		
1G Northwestern Europe (Low)									0.79			
1G Others (Low)									0.56	**		
1G Southern Europe (Low)									0.89			
2G Borders (Low)									1.04			
2G Eastern Europe (Low)									0.38	*		
2G Northwestern Europe (Low)									1.11			
2G Others (Low)									0.70			
2G Southern Europe (Low)									1.07			
1G Borders (High)									1.25			
1G Eastern Europe (High)									0.60	*		
1G Northwestern Europe (High)									1.03			
1G Others (High)									0.87			
1G Southern Europe (High)									1.01			
2G Borders (High)									1.27			
2G Eastern Europe (High)									0.76			
2G Northwestern Europe (High)									0.77			
2G Others (High)									0.89			
2G Southern Europe (High)									1.03			

Table 2:   (Continued)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Educational level father						
Low						1
Middle						0.93
High						1.02
Educational level mother						
Low						1
Middle						0.99
High						0.98
AIC	69,996.99	69,992.92	69,747.38	69,646.05	69,648.75	59,148.76
R^2	0.03	0.03	0.03	0.05	0.05	0.05
Max. R^2	1	1	1	1	1	1
Num. events	4,394	4,394	4,394	4,394	4,394	3,795
Num. obs.	5,761	5,761	5,761	5,761	5,761	4,946

Notes: ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$. 1G means first-generation immigrants and 2G means second-generation immigrants.
Source: Family and Generation Survey 2013.

Figure 7:   Relative risk of having a second birth for women aged 15–45, by immigrant group (controlled for cohort, education, parents' education)
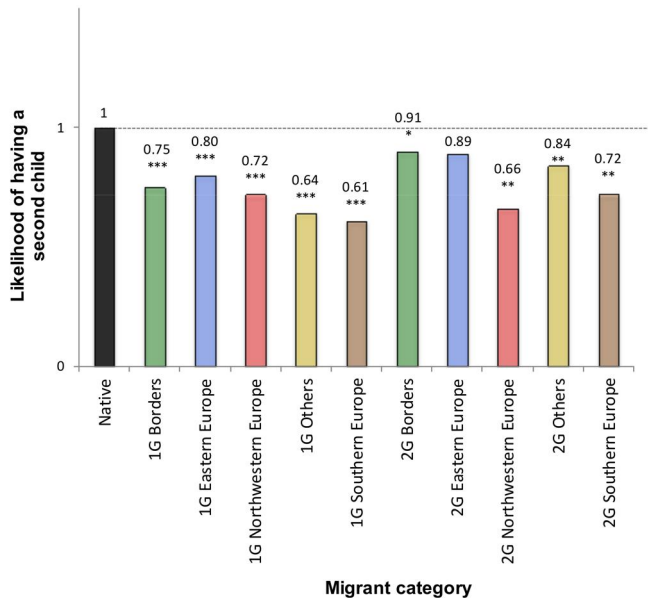
Source: Family and Generation Survey 2013.
Note: ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$. 1G means first-generation immigrants and 2G means second-generation immigrants.

The introduction of control variables shows that the 1960–1969 and 1970–1979 cohorts have a greater chance of having a second birth than Swiss natives. In reference to maternal age at first birth, we found a lower second birth probability for women who have their first child before 25 and after 30 than for those who have the first child between 25 and 30, which is in line with other studies (Kreyenfeld and Anderson 2014). Concerning education level, to identify whether this pattern is different for respondents of immigrant origin, we specified an interaction effect (M5 in Table 2). In M5 all first-generation immigrants of Eastern European origin with a low educational level have a higher chance (46%) of having a second birth than Swiss natives with a medium educational level. All other first-generation immigrants with a low educational level have a lower likelihood of a second birth than Swiss natives with a medium educational level. First-generation immigrants with a high educational level have a lower probability of a second birth than Swiss natives with a medium educational level. For descendants of immigrants, all second-generation immigrants with a low educational level except those of Northwestern European origin have a lower likelihood of having a second child, and second-generation immigrants with a high educational level have a lower chance of having a second child. In M6 (Table 2) we introduced fathers' educational level, but this variable provided no meaningful information.

Results also show that first-generation immigrants of Eastern and Southern Europeans origin, a population that commonly has a first child, are less likely to have a second child than Swiss natives, and the delay before having a second child is much longer (a mean interval of just over three years for native Swiss women compared to over six years for some first-generation immigrants of Southern and Eastern European origin). By contrast, second-generation immigrants of Eastern and Southern European origin show the reverse pattern and are similar to the Swiss natives. Indeed, the pattern for second-generation immigrants shows indications of integration: despite first-generation immigrants being less likely to have a second child, for second-generation immigrants the likelihood approaches the Swiss norm.

6. Discussion and conclusion

This paper draws a portrait of first and second births in Switzerland, differentiating quantum and tempo of first births among Swiss natives and Swiss residents of immigrant origin. In particular, we investigate the relative probability of a first and second birth for first- and second-generation immigrants compared to Swiss natives, and we distinguish immigrant populations by their geographical origin.

In summary, the overall picture of the transition to parenthood is somewhat expected, except regarding second-birth risks and timing. First-generation immigrants

from Eastern and Southern Europe have a higher probability of transiting to parenthood (first birth) than second-generation immigrants and natives, and do so earlier (H1 and H3). This is comparable to what has been observed in other European countries (Kulu et al. 2017) and can be explained by a number of combined factors: younger age at immigration (for first-generation immigrants), higher average fertility levels in the country of origin (Milewski 2011), labour market performance (Scott and Stanfors 2011), aspirations, and norms concerning family formation. Second-generation immigrants have a lower likelihood of first birth than their parents and Swiss natives, with the exception of second-generation immigrants of Eastern and Southern European origin, whose chances of having a first birth lie between these two groups. Much has been written on the possible 'normative duality' of children of migrants, who seem to have a hard time reconciling the behavioural norms and aspirations conveyed by their parents within the family with those of the host society to which they are exposed through their participation in local institutions and networks (school, work, friends, sports, hobbies; Krapf and Wolf 2015) (H2 and H3).

Women with a low educational level are more likely to have a first birth. Women with a high educational level do so less often, and if they do, they do so later. Interactions in our models between educational level and origin show that, for all poorly educated women with a migrant background (both first- and second-generation immigrants), the probability of first birth is higher than for Swiss natives with a medium educational level. On the contrary, women of immigrant origin (both first- and second-generation immigrants) and a high educational level have a lower chance of first birth than Swiss natives with a medium educational level. Further analysis by education, where we study the interaction between educational level and origin, shows that educational level is negatively correlated with the probability of a first birth. These results confirm other studies where fertility declines as woman's educational level increases (Mayer and Riphahn 2000; Mileweski 2010). Indeed, higher educational attainment leads to greater autonomy in life course choices. In the case of immigrants' descendants, a higher education level also leads to deviation from parental views and a stronger preference for autonomy (De Valk and Liefbroer 2007; Pailhé 2015). As the decision to have a child is usually seen as incompatible with educational enrolment, educational attainment also increases the costs of having a child and has a strong delaying effect on fertility decisions (De Valk and Milewski 2011; Pailhé 2015). Second birth patterns are somewhat different. The chance of having a second birth is lower for immigrants and their descendants than for Swiss natives. These trends are not found in other European countries, whether or not they have histories of immigration that are comparable to Switzerland's. Throughout Europe, migrant groups (e.g., South Asians in the United Kingdom, Turks in Germany, and Moroccans in Spain) have higher second-birth risks than natives (e.g., Kulu et al. 2017).

This work has some limitations. We rely on the most recent dataset available, the Swiss FGS of 2013, whose large sample size allows studying recent immigrant groups and disaggregating fertility by migrant origin and generation. However, a finer distinction by country of origin, particularly for those countries whose population is ethnically, socially, and culturally very heterogeneous, could reveal important within-group differences. Similarly, our data did not allow us to distinguish natives who have a family history of naturalisation (acquisition of Swiss nationality). Last, given the young age of the second-generation migrants in recently arrived groups, we had to limit our analyses to first and second birth even though major differences in TFR depend on the transition to third birth. Our sample sizes for the analysis of third birth became too small when broken up by migrant group. Other factors such as ambition for social mobility, type of immigration, and individual family orientation could also play an important role in the fertility patterns of immigrant populations. Unfortunately, our data does not include socioeconomic information or individuals' characteristics before migration. In particular, we do not have information on age at immigration or reason for immigration, so we could not test the influence of these variables in our analyses. This limited our results, because we could not build hypotheses based on the immigration strategies that play a key role in the decision to have a child. Ribe and Schultz (1980) argue that migrants have a clear 'unobserved' preference for family size and that their propensity for fertility is one of the factors that determine the destination country.

Despite these limitations, the results of this study raise important questions for future research. Examining the FGS, we found that migrants have a second child less often than natives and have longer intervals between births. This pattern has not been observed in other European countries, where migrants generally have faster and more frequent transitions to a second birth (Kulu et al. 2015). What makes migrants' fertility different in Switzerland than in neighbouring countries? In what ways might this be related to the Swiss context, and does it have wider implications regarding social inequalities in fertility in such a context?

First, the arrival of a child is linked to additional costs. The relatively poor public support for parents and the high costs of childrearing in Switzerland may discriminate against migrants, who generally have lower economic and relational resources than the native population. Migrants from countries where welfare support for families and work-family reconciliation is more generous may possibly have higher expectations concerning public support for families. Working migrant parents from contexts where care needs are dealt with within the extended family face further constraints, because migrants generally have smaller social networks and thus less support is available to parents (Moret and Dahinden 2009).

Secondly, it is well known that immigrants, particularly when they migrate for social mobility reasons, have educational aspirations for their children (Brinbaum and

Kieffer 2004; Fuligni and Fuligni 2007; Fuligni and Yoshikawa 2004). Therefore immigrants may want, more than natives, to invest their resources in one of their children to ensure their higher education.

Thirdly, differences in fertility behaviour may also be rooted in demographic changes in the migrants' countries of origin. The theory of cultural continuity assumes that immigrants' fertility behaviour will reflect that in their country of origin. This assumption would explain both the high levels of childlessness among Northwestern European immigrants and their high propensity to move on to a second birth once they are parents. It could also explain the rare childlessness but many one-child families among immigrants from Southern Europe and the Balkans.

These three interpretations of our results are not mutually exclusive, but they have different consequences depending on the explanatory mechanism. In the case of the explanation regarding lower levels of informal social support for immigrants, the issue is partially socialisation and adaptation to local preferences and norms concerning family support, and partially structural constraints (geographical distance from extended family). The second explanation, where higher educational preferences lead to higher investment, may indicate that if there is relatively easy adaptation and higher flexibility in terms of family and fertility preferences, adaptation in terms of educational investment is slower. This suggests important avenues for future research on behavioural indicators of integration: rather than considering indicators coming from separate life domains (e.g., fertility and family behaviour and educational outcomes), they need to be studied jointly in order to explore whether behavioural convergences in one domain explain divergent preferences in another. In the case of the third explanation, if the fertility behaviour of the migrant groups reflects the recent decline of second birth risks and rising age at first birth in the country of origin, then neither adaptation nor early socialisation mechanisms are at stake, but rather more complex cultural identity processes that link second-generation immigrants to their counterparts in their country of origin. All of these aspects are promising fields for future research.

7. Acknowledgements

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Appendix

Table A-1:   Sample and number of first and second birth events for women, by origin and control variable

Please download the Excel file here.