



Homeownership Across Immigrant Groups and Generations in Sweden: Assimilation or Segmentation?

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Stockholm University and St. Andrews University

Abstract

Homeownership is an important indicator of immigrant integration. Using large administrative individual-level longitudinal data from Sweden, we investigate entry into homeownership across immigrant groups and generations. We differentiate between immigrants arriving as adults (1G) and children (1.5G) and between descendants of immigrants with two (2G) and one (2.5G) foreign-born parent(s). We consider immigrants from both high and low- to middle-income countries. We include all immigrants who arrived in Sweden during 1997-2016 and Swedish-born individuals who became 18 between 1997 and 2016. Results were obtained using survival analysis. Immigrants from sub-Saharan Africa have the lowest propensity to move into homeownership, whereas immigrants from Nordic countries, Western Europe and North America have the highest. A very large proportion of immigrants, especially those from Nordic and Western Europe moved to first-time homeownership already in their first year in Sweden. In general, we observe a clear gradient across immigrant generations: the 2.5G has homeownership levels closer to native Swedes than the other generations. However, the 2G, especially from low-income countries show slightly lower entry levels into homeownership than the 1.5G. Overall, our results support gradual housing assimilation and integration across migrant generations, but also highlights the special circumstances during migrants' first year in Sweden as well as demonstrate the importance of financial resources, the reason for immigration and the socio-cultural background for housing careers.

Keywords: Homeownership; Housing; Immigrants; Integration; Sweden

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1. Introduction

Over the last decades Sweden has experienced an increase in its immigrant population with a quarter of the Swedish population having a foreign background by the end of 2020 (i.e., either born outside Sweden or born in Sweden with two foreign-born parents) (SCB, 2021). With the increase in immigrant population, it becomes essential to understand the trends and different drivers of immigrant integration. Understanding patterns related to housing tenure and type is of particular interest. Housing tenure (e.g., homeownership) and/or housing type (e.g., single-family housing) can be viewed as a sign of wealth accumulation and quality of life (Rohe et al., 2002). In Sweden, the welfare system aims at equal rights to good-quality housing (McCrone & Stephens, 1995) which to some extent should reduce social inequalities (Andersen et al., 2013). However, despite the welfare system, homeownership has always been viewed as the top of the housing tenure hierarchy and social differences in homeownership still prevail (Bråmås, 2008; Engerstam et al., 2022; Ström, 2010; Turner & Hedman, 2014).

According to Sinning (2010), homeownership is a good indicator of the economic integration of immigrants that even supersedes indicators of labour market participation and income because moving to homeownership requires more long-term economic advancement. Thus, when immigrants acquire access to homeownership and single-family housing at a similar rate as that of the native population, this could be viewed as an important sign of successful integration.

In this study, we apply a life-course approach to investigate entry into first-time homeownership among immigrants and their descendants in Sweden. Our study contributes to the current literature in several ways. We differentiate between the generations of immigrants by distinguishing those who arrived as adults (1G) from those who arrived as children (1.5 G). It is important to assess whether childhood time spent in the host country makes immigrants who arrived as children more similar in their behaviour to the Swedish-born population than immigrants arriving as adults. Additionally, we separate the descendants of immigrants with two (2G) or one foreign-born parent(s) (2.5G) from the rest of the Swedish-born population. It is important to assess whether homeownership patterns of the descendants of immigrants resemble that of the native-born Swedes or whether they are more similar to the housing trajectories of their immigrant parents. Thus, our study design serves to provide evidence of integration patterns as well as those of intergenerational transmission of housing careers.

Second, we differentiate between the generations of immigrants from high-income and middle-to low-income countries. This allows for a better investigation of the extent of immigrants' integration in the Swedish context based on the economic and socio-cultural characteristics of their countries of origin and their reasons of migration. This has the capacity to assess whether the resources and pre-acquired wealth by immigrating from a high-income country is an important factor toward progressing into homeownership, especially into single-family homeownership. For example, immigrants and their descendants from countries characterised with strong economies and higher levels of education (e.g., countries in Nordic and Western Europe, North America) may be expected to have similar housing patterns as the native Swedes with a tendency of moving into homeownership and single-family housing at an earlier age than other migrants (Turner & Hedman, 2014). In contrast, immigrants and their descendants from countries with weaker economies and lower levels of education such as Latin America, Africa, and the Middle East are expected to show a deviating pattern in their housing careers with a tendency of staying in rental housing for a more prolonged period of time and a delayed entry into homeownership and single-family housing (Magnusson & Özüekren, 2002; Turner & Hedman, 2014).

Third, we provide a more comprehensive picture of homeownership transitions than in previous studies (Abramsson et al., 2002; Smits & Mulder, 2008; Turner & Hedman, 2014) by analysing moves to different types of homeownership. Distinguishing housing tenure (e.g., homeownership versus renting) and housing type (e.g., apartments versus single-family housing) provides a more detailed examination on the integration of immigrants in the housing sector and their resource levels. Finally, we utilise comprehensive Swedish individual-level register data, which covers the whole population of Sweden over a period of twenty years to assess whether first-time entry into homeownership is related to various time-varying factors such as socioeconomic status (e.g., income, employment status, and educational attainment), family-dynamics (e.g., marital status and parity), legal status (e.g., acquiring Swedish citizenship) and region of residence in Sweden (e.g., living in big cities versus towns and more rural areas).

2. Theoretical background on immigration and housing trajectories

Differences in housing trajectories have been shown for immigrants from different origins and between the immigrants, their descendants, and the native population (Abramsson et al., 2002;

Gobillon & Solignac, 2020; Nygaard, 2011). These differences can stem from (1) cultural factors (i.e., housing preferences, attachment to the country of origin versus the host country), (2) social factors (i.e., discrimination, ethnic segregation and place stratification versus spatial assimilation and integration), (3) financial factors (i.e., resources and wealth), and (4) political-institutional factors (i.e., housing policies and the structure of housing markets).

2.1. Cultural factors

A house is not only a shelter, but also a place that offers an enjoyable and safe living environment, provides privacy and territory, accommodates social contact, and mirrors the individual's preferences (Coolen & Jansen, 2012). When choosing where to live, whether to rent or own a house, and whether to live in an apartment or single-family house, cultural preferences play a role. Individuals in general prefer to live next to people with whom they share common characteristics and values. In this context, immigrants may have a preference to settle in neighbourhoods dominated by co-ethnics, which provides cultural and social support as well as better connections for future housing opportunities and employment (Andersson et al., 2021; Bevelander et al., 2019). This is especially true for newly arrived immigrants, who are still new to the host country and require the support from co-ethnics, relatives, and friends (Bevelander et al., 2019; Skifter Andersen et al., 2016). In addition, immigrants tend to settle first in rental housing, which is more abundant and affordable in neighbourhoods which serve as “ports of entry” for newly arrived immigrants (Bevelander et al., 2019; Skifter Andersen et al., 2016).

However, such preferences contribute ethnic residential segregation, which happens when minorities from a certain origin live next to each in ethnic enclaves (Bråmås, 2008). This in turn separates them from the mainstream population and hinders their integration into the host society. Although the support provided by co-ethnics is beneficial for newly arrived immigrants, staying in ethnically segregated neighbourhoods for long time may be detrimental as it hinders the process of integration in terms of socioeconomic development and traps them in an environment of relative socioeconomic disadvantage.

Immigration policies have been introduced to reduce ethnic residential segregation. For example, in Sweden, asylum seekers have previously been offered two choices of housing. They can either find their own house which is referred to as EBO (*eget boende*), or they can accept housing from the municipality or state which is labelled as ABO (*anläggningsboende*) (Bevelander et al., 2019). The ABO system ensures the distribution of asylum seekers across

regions and neighbourhoods, which counteracts the tendencies for subsequent ethnic residential segregation and promotes integration (Bevelander et al., 2019).

The decision of moving into homeownership or rental residence is also related to an individual's culture as manifested in the level of attachment to his or her region of residence. This is because for many people, a house forms the primary anchor to the surrounding environment (Coolen & Jansen, 2012). Immigrants who have weaker ties with their countries of origin may invest more into homeownership in the host country, which provides better stability and a sense of settlement and attachment. In contrast, immigrants with strong ties to their countries of origin will tend to minimise their housing expenditure in the host country by choosing rental over homeownership residence with the intention of going back to their countries of origin and buying a house there (Owusu, 1998; Robinson, 1981).

Finally, cultural differences between immigrants and natives with respect to housing preferences can be viewed from the perspective of socialisation, in which the immigrants' behaviour is shaped by the cultural preferences that prevailed in their childhood (Kunz, 1968). Housing choices of immigrants arriving as children and descendants of immigrants might be influenced by the beliefs and behaviour of their immigrant parents, with whom they spent most of their childhood time. For example, in France, descendants of immigrants with non-European origins experience significant differences in their housing tenure than the rest of the population (Acolin, 2019). In the Netherlands, Turkish and Moroccan youth leave the parental home at a significantly younger age than Dutch youth. However, this early movement is mostly due to marriage, which is not the case for Dutch youth (Zorlu & Mulder, 2011), which shows the significance of cultural socialisation in young adult life-course transitions.

2.2. Social factors

When it comes to social factors regarding housing differences between immigrants and natives, we may consider theories on spatial assimilation, place stratification, and discrimination-influenced preferences. Newly arrived immigrants are more affected by housing and employment shocks than natives. Yet, with time, immigrants adapt to the culture, social and economic situation in the host country and acquire better knowledge that enables them to become closer in their housing patterns to the natives. This is reflected in spatial assimilation, which is essential for the integration of immigrants in the housing domain (Malmberg et al., 2018; Vinke et al., 2020). Thus, in the context of spatial assimilation, immigrants who arrived

in the host country as children and the descendants of immigrants are expected to show higher levels of assimilation in their housing careers than immigrants who arrived as adults.

Despite that many immigrants will eventually own a house and move out of any ethnic enclaves or ports of entry, other groups of immigrants will remain in those enclaves. This will create place stratification by segregating those groups of immigrants from the mainstream population (Bråmås, 2006; Malmberg et al., 2018; Turner & Hedman, 2014). This is especially true for immigrants from the global South (Tammaru et al., 2014). Two explanations are suggested as to why some groups of immigrants remain in their port of entry and do not follow the spatial assimilation pattern. The first explanation is related to discrimination mechanisms. Previous studies have shown that in the US and Europe, natives may move out from residential areas characterised with an increasing proportion of immigrants. This avoidance behaviour is called the “White flight” (Bråmås, 2006; Skifter Andersen et al., 2016). The second explanation is related to the immigrants’ own preference of moving into areas dominated by co-ethnics, especially during the early years of migration experience (Andersson et al., 2021; Bevelander et al., 2019). The end result is that natives fly away from immigrant- concentrated neighbourhoods, while newly arrived immigrants move in their place. With time, some groups of immigrants find themselves trapped in those neighbourhoods as they are not welcomed in the natives’ neighbourhoods. This creates a vicious cycle of place stratification and widens the gap in housing trajectories between natives and immigrants, which opposes the opportunities for integration.

The restrictions and discrimination in the housing market that face immigrants may be extended to their descendants, mainly because the immigrant parents and their children live in the same neighbourhood and might share similar socioeconomic conditions and cultural behaviour (Kunz, 1968; Ryabov, 2020; Smits & Mulder, 2008). In the UK, children of immigrants are more likely than their immigrant parents to perceive inequalities and discrimination because they expect to be treated equally to the UK-born population with no migration background (Fernández-Reino, 2020). In England and Wales, immigrants and their descendants were less likely to own a house and more likely to live in deprived housing than the white British (Wallace et al., 2022).

2.3. Financial factors

Financial resources play a crucial role in housing transitions for immigrants and natives alike. Moving to homeownership, especially single-family homeownership which is at the top of the

housing ladder requires long-term economic progress and accumulation of wealth and financial resources (Boehm & Schlottmann, 2008; Sinning, 2010). In this regard, immigrants may be expected to have a delayed entry into first-time homeownership. This is because newly arrived immigrants require time to assimilate to the new context, build connections, and gain occupational stability that enhances their financial resources and mortgage opportunities in the destination country (Andersen, 2016; Ballarino & Panichella, 2015). Thus, immigrants may start in the rental housing sector and with time acquire access to resources and homeownership at a rate that is closer to the native population (Gobillon & Solignac, 2020). However, immigrants' expectations about their future employment and income stability in the host country may also affect their homeownership rates negatively. For example, Andersen (2016) has shown that in Denmark, immigrants who have positive expectations about future employment and increased income are more inclined to invest in homeownership. In contrast, immigrants whose employment and financial future is uncertain would be reluctant to stay in Denmark and would prefer rental housing over homeownership (Andersen, 2016).

The degree of resources and homeownership assimilation is not the same across immigrant groups. Different groups exhibit different rates and timing of entry into homeownership. These differences may be related to the reasons behind migration (e.g., economic versus asylum-seeking immigration), and to individual factors (e.g., age of immigration, educational qualifications, and socioeconomic status). For example, economic migrants who come from high-income countries (e.g., North America and Western Europe) are positively selected in terms of earnings potentials (Andersen, 2016; Borjas et al., 2019; Carillo et al., 2023; Gobillon & Solignac, 2020; van de Werfhorst & Heath, 2019).

Both the pre- and post-migration financial resources matter for the likelihood and timing of first-time homeownership for migrants. The availability or not of financial resources and wealth can also be passed on to their descendants, in terms of an intergenerational transmission of housing circumstances (Smits & Mulder, 2008). This is because wealthy parents can contribute financially to their children's housing careers, enabling them to move faster and at a higher rate into homeownership (Helderman & Mulder, 2007). Immigrants from low and middle income countries are usually less financially secured than natives (Bertocchi et al., 2022), which is reflected in a higher rate of intergenerational transmission of housing disadvantage as compared to the natives. Additionally, natives could have accumulated wealth through property inheritance, which positively boosts their housing advantage (Halliday, 2018).

2.4. Political and institutional factors

In addition, political and institutional factors can contribute to make the housing gap between natives and immigrants and their descendants wider or smaller. For example, in England and Wales, housing inequalities between the descendants of Caribbean immigrants and the British majority population have been ascribed to a “Right to Buy” policy, which may have worsened the formers’ access to homeownership (Wallace et al., 2022). Similarly, in Sweden, the transformation of public rental housing in major cities (e.g., Stockholm) in the 1990s into tenant-owner cooperatives have increased the housing inequalities between immigrants and natives and furthered the ethnic and socioeconomic segregation. This is because households in non-converted public housing in the suburbs have become relatively poorer compared to those in converted housing in more attractive areas of those cities (Andersson & Turner, 2014).

Policies related to the access to resources such as employment, mortgages, and housing loans also play a role in the likelihood and timing of homeownership across groups and generations of immigrants. The fact that Sweden joined the European Union (EU) in 1995 gives EU nationals an advantage over other groups of immigrants. Immigrants from the EU can move, live, and work freely in Sweden without visa and sponsorship restrictions (Brady, 2008). The free movement between EU countries often brings better access to mortgages and housing loans (Lersch & Dewilde, 2015), which facilitates the process of owning a house. By contrast, immigrants from outside the EU may face restrictions related to their visa type and risk the exclusion from opportunities that would otherwise help their entry into first-time homeownership (Kahanec et al., 2013).

Finally, local-institutional factors related to housing markets in specific regions matter for homeownership. For example, city size, zoning policies, and geographic constraints have been shown to shape the housing supply and price elasticity of housing in Finland (Oikarinen et al., 2015), which in turn affects the access to homeownership and single-family housing. In highly populated urban areas where space is limited, renting is a more abundant type of housing tenure and access to homeownership is mostly available through apartment ownership. In contrast, access to single-family housing is more available outside the most densely populated regions and in the outermost ring of urban areas (Haandrikman et al., 2021). Given that enclaves where many newly arrived immigrants reside are more often found in big cities than in small towns or rural areas (Demireva & Zwysen, 2021), rental housing will be a more dominant type of housing tenure for those groups. Additionally, in big cities, housing markets are often

constrained and the easy access to rental housing may also be restricted. Therefore, many new immigrants may have to search for sub-letting opportunities or move in with relatives or friends.

3. The Swedish context

3.1. Housing type and tenure in Sweden

Sweden has three major categories of housing tenure (Granath Hansson et al., 2021; Musterd & Andersson, 2005):

(1) Rental housing which can either be public rental housing governed by companies owned by the municipality or private rental housing managed by independent landlords or bigger companies. Access to public (rental) housing is allocated based on waiting lists, which might concur with long waiting times in areas with high housing demand.

(2) Tenant-owner cooperative housing is a form of tenure where residents belong to a specific tenure association. This is a market-based product mostly in the form of multi-family housing units whereby each individual resident buys and sells his/her own apartment.

(3) Homeownership in single-family houses is the largest tenure category, corresponding to about 46% of all housing units.

3.2. The immigration and housing context of Sweden

Sweden has for several decades been characterised by relatively liberal immigration policies and an orientation towards multiculturalism. It encouraged immigration into Sweden after War World II. Sweden then received many labour immigrants, mostly from Finland, to support its expanding industry sector in the 1950s and 1960s. In addition to economic immigration, it has been a destination for refugees escaping different conflict zones. For example, refugees arrived to Sweden from Eastern Europe in the 1950s and 1960s, from Latin America in the 1970s, Iran in the 1980s, Ex-Yugoslavia in the 1990s, Iraq in the 2010s, and from Syria from 2015 onwards.

In the 1960s, Sweden extended its social welfare system to ensure equal social rights for immigrants and long-term residents alike. The motivation was to facilitate the integration of immigrants into their destination society. In 1975, a new immigration policy emerged, aiming to bring “equality, freedom of choice and partnership” to immigrants (Borevi, 2014). This

involved that immigrants would be able to maintain their cultural identity, while at the same time encouraged to play a contributing role in Swedish society.

The social welfare system in Sweden also embraced the housing sector through efforts towards good-quality and affordable housing for everyone, tenure universality, unitary rental schemes and housing benefits for families on low income (McCrone & Stephens, 1995). Despite the ambitious welfare system, the Swedish housing market has underperformed due to rapid urban growth accompanied by an insufficient number of new rental accommodations (Engerstam et al., 2022). In addition, in the 1990s much public rental housing was transformed into market-based cooperatives, which exacerbated rental market conditions and led to increased social inequalities in housing (Andersson & Turner, 2014). If we take Stockholm as an example, 32% of its residents lived in rental housing in 1990, whereas this percentage had been reduced to 18% in 2010 (Andersson & Turner, 2014). This resulted in long waiting queues for rental housing with 70% of Swedish municipalities now reporting a housing shortage (Government of Sweden, 2021).

However, the increased pressure on rental housing is not only related to housing policies and related changes in tenure types. As mentioned, Sweden has also received a large number of new immigrants of which a majority arrived as refugees and asylum seekers. These migrants often have poor labour market skills, which also affect their housing conditions and make them more prone to be overrepresented in the rental sector (Andersson, 2015; Musterd & Andersson, 2005).

In our study, we cover both immigrants from countries where emigrants tend to be labour migrants, such as those from Western Europe, and immigrants from origins that have tended to produce refugees, such as Latin America, Middle East, and Africa. We also focus attention on immigrants from India and Turkey. Immigration from India is a relatively new phenomenon in Sweden that requires much further research (Myrvold, 2012). Indian immigrants usually have high education and strong presence in the information technology and healthcare sectors (Myrvold, 2012). In contrast, immigration from Turkey started already in the 1960s and was initially mainly constituted by male labour migrants, which were later followed by their wives and children on a family-reunion basis. Turkish immigrants have tended to keep a relatively strong attachment to their culture and identity, and a social distance from native Swedes (Bayram et al., 2009). They are less likely to move out of the public rental sector and have a

higher probability of remaining in immigrant-dense neighbourhoods than what holds for native Swedes (Magnusson & Özüekren, 2002).

4. Hypotheses

Based on our theoretical background on immigration and housing, and the Swedish context, we propose the following four hypotheses:

H1: Immigrants from low- and middle-income countries are expected to show slower entry into first-time homeownership compared to native Swedes, due to the impact of several restricting cultural, social, and political-institutional factors.

H2: Immigrants from high-income countries are expected to show a more similar pattern of entry into first-time homeownership to that of native Swedes or even do better due to their high levels of pre-acquired financial resources and wealth.

H3: Immigrants arriving as children and the descendants of immigrants are expected to show closer entry levels to first-time homeownership to that of native Swedes as compared to immigrants arriving as adults. The closest levels are expected among the descendants of immigrants with one Swedish-born and one foreign-born parent due to their high levels of cultural, social, and financial assimilation.

H4: Immigrants arriving as children and the descendants of immigrants from high-income countries (e.g., Nordic and Western Europe) are expected to have a closer entry rates into first-time homeownership to that of native Swedes as compared to their counterparts from low- and middle-income countries.

5. Data and methods

5.1. Design

A longitudinal life-course design was employed to examine the association between moving into first-time homeownership and several socioeconomic determinants, including immigrant origin and generation. The life-course approach allows for a better understanding of the different factors that influence the entry into first-time homeownership across time and the generations of immigrants in Sweden. Based on this, moves into homeownership are expected

to be embedded within multiple interdependent trajectories related to life events and conditions such as migration, marriage formation, childbirth, education, employment, wealth accumulation, and housing market fluctuations (de Wind et al., 2016; Li & Li, 2006; Mulder & Wagner, 1998; Vono-de-Vilhena & Bayona-Carrasco, 2012).

5.2. Data and study population

In our study, we rely on individual-level register data from Statistics Sweden, that was accessed using the “Microdata Online Access (MONA)” platform (Statistics-Sweden, 2023c). Our data include information on all individuals with legal residence in Sweden starting in 1968, when the digitization of register records was initiated. The register data are updated continuously and include information on individuals’ socio-demographic characteristics (e.g., sex and date and country of birth), and vital events such as childbirths, civil-status changes, immigrations, emigrations, internal migrations (i.e., residential mobility), and deaths. They also cover annual information on educational attainment and activity, employment, earnings, and social-insurance benefits provided by the “Longitudinal Integrated Database for Health Insurance and Labour Market Studies (LISA)” and on residential property identification from the Property Register. Additionally, the data cover information from the “Longitudinal Database for Integration Studies (STATIV)”, which provides valuable information on many life domains that are specific to immigrants, including on any refugee status. Crucial for our purposes, our data also contain annual information on housing tenure and housing type. The Swedish register data are of high quality and provide accurate and complete information on the total population of Sweden, which is corroborated by several previous studies across a wide range of research disciplines (Antelius & Björklund, 2000; Filip et al., 2020; Gerdtham & Johannesson, 2005; Lindgren et al., 2016).

For this study, we had access to data from the Swedish population register from 1968 to 2017. After discarding observations with missing information on sex, year of birth, country of birth, and implausible timing of vital events, we identified a total of 15,560,525 individuals legally residing in Sweden sometime between 1968 and 2017. However, the data on education, earnings and social-insurance benefits were only available from 1990 onwards and the data on housing tenure and housing type from 1997 to 2016. Therefore, individuals were followed on a monthly basis from January 1997 to December 2016. The different register files were linked together for each individual and month during 1997-2016 using the unique anonymized

personal identification number derived from the unique identifier of each individual in the original registers (Ludvigsson et al., 2009).

In principle, individuals are followed from age 18 during 1997-2016 and studied until moving into first homeownership or until censoring (Figure 1). Individuals born in Sweden (2G and 2.5G) and immigrants who arrived in Sweden at an age of less than 18 years (1.5 G immigrants) enter the study at the month when they turned 18 during 1997-2016. We also included those living with their parents in 1997 at an age above 18 years. We assumed that they have had no independent housing trajectories prior to that date by validating that they have been living with their parents for the previous two years. We follow all adult immigrants (1G) starting at the month of registered migration to Sweden in 1997-2016.

Our design ensures that individuals do not own a house or apartment themselves before we start to observe them because the risk of homeownership before the age of 18 – the legal age of adulthood in Sweden – is minimal. All individuals were followed from the month of entry until moving to homeownership for the first time or until censoring due to emigration (re-entry upon immigrating back to Sweden is not allowed), turning 50 years old, death, or in December 2016, whichever comes first. This resulted in a final study population of 3,152,123 individuals that were followed over a period of up to 20 years, 1997-2016.

In our study, we are interested in understanding the determinants of both housing tenure and housing type. To achieve this, we constructed two different datasets. In the first one, first-time homeownership was defined as living in an apartment in a tenant-owner cooperative or a single-family house. It consisted of 3,152,123 individuals contributing a total of 208,666,080 person-months under risk of entry into owned housing. In the second dataset, first-time homeownership was defined more narrowly as living in a single-family house and involved 3,152,123 individuals with a total of 270,803,763 person-months under risk (Figure 1). Homeownership where the individual lived with his/her parents in the same house or apartment is not considered. A limitation for our study is that the data only cover the housing tenure and housing type of the residential unit in which an individual is registered but we have no possibility to determine if the registered resident actually owns the dwelling unit in which he or she lives. In some cases, this person could be sub-letting the dwelling unit from another person who actually owns the apartment or single-family house.

Constructing two datasets based on different homeownership criteria is beneficial for several reasons. Owning an apartment is more common in big metropolitan cities and among younger

adults who do not yet have enough accumulated wealth to buy a single-family house. Apartment ownership can be considered an intermediate stage between renting and owning a single-family house. In the context of immigration, owning a single-family house may be a stronger sign of settlement and integration because it requires more of financial investment and ties the buyer more strongly to the destination context than other types of tenure.

5.3. Variables

5.3.1. Homeownership

Our two homeownership outcomes were developed using the year and month in which an individual experienced a first residential move to an owned apartment or single-family house. For this purpose, we relied on annual data on the Dwelling Type (BoForm and BoFormGrupp) for the property that is linked to each individual's registered residence (Statistics-Sweden, 2017). The variable is classified with the following categories: 1=Owned detached single-family housing unit, 2=Rental housing unit, 3=Tenant-owner cooperative housing unit, and 4=Other type of housing unit. For our first outcome, categories 1 and 3 were considered as homeownership. For our second outcome, we restricted ourselves to category 1. Given that the data on housing is provided on an annual basis, we also used data on the dates of residential mobility to determine the exact month of each residential move. When monthly data on residential mobility were missing, we assumed that any move into first-time homeownership occurred in the middle of the year, during July.

5.3.2. Immigrant origin and generation

The Swedish population register allows for the multigenerational linkages of children to their parents in Sweden, which allows for the construction of data on migration background and generational belonging in Sweden. Following common practice, we define the following generations: 1G – first generation immigrants, arriving as adults at ages 18 and above; 1.5G – immigrants arriving as children at ages less than 18 years; 2G – the second generation in Sweden: descendants of immigrants with two foreign-born parents; and 2.5G – descendants of immigrants with one foreign-born and one Swedish-born parent.

We further categorised immigrants and their descendants by their country of origin which was grouped into Nordic, Western Europe, North America and Oceania, Central and Eastern Europe, Ex-Yugoslavia, Poland, Southern Europe, Latin America, Turkey, Iran, Middle East and Northern Africa, India, East Asia, South-East Asia, and Sub-Saharan Africa (Appendix Table A1). For the second generation, the individual was assigned the birth country of his/her

parents. If the parents were from different countries, the individual was assigned to the country of his or her mother. This is because based on socialization theory, children spend more time with their mother and thus may show a more similar behaviour to that of their mother (McKinney & Renk, 2007; Schoppe-Sullivan et al., 2013). For 2.5G, the individual was assigned the birth country of the foreign-born parent.

5.3.3. Other independent variables

To properly assess the determinants of first-time homeownership for immigrants in Sweden, we also include the following set of socio-demographic and contextual control variables: sex, age at entry into study, marital status, parity (childless, childless and pregnant with the 1st child, and being a parent with different numbers of children), educational attainment¹, earnings (based on data on earnings quintiles and benefits received in relation to studies or unemployment)², region of residence in Sweden³, and year of entry into study. We also include a dummy for 1G immigrants in their first year in Sweden because the conditions for finding housing may differ very much for those who are very recently arrived in the country.

Previous research has shown that moving to homeownership and single-family housing is strongly interrelated with family demographic events such as cohabitation, marriage, and childbirth. In Germany, moving to homeownership was associated with marriage and becoming a parent in the same or the following year (Mulder & Wagner, 2001). In Italy and Sweden, it is shown that couples who were secure in their housing situation (e.g., homeowners) were more likely to have their first child than others (Ström, 2010; Vignoli et al., 2013). Living

¹ The harmonized classification of the Swedish SUN codes from the Swedish registers were used to create the education variable, which indicates the highest achieved level of education during each calendar year (Statistics-Sweden, 2023b). For foreign-born individuals in the first and second years after immigration, we imputed missing information on education with that of the following year. This is because there is often about one to two years delay in recording information on immigrants' education in the administrative data (Khaef, 2022; Saarela & Weber, 2017).

² The earnings variable was created in four steps based on data on taxable earnings and social-insurance benefits (Statistics-Sweden, 2023b). In the first step, we created five-category cut-offs based on the quintiles of the sum of earnings and earnings-related benefits (e.g., sick leave and parental leave) in 2010. In a second step, we weighted the five cut-offs with the rate of inflation in each year (Statistics-Sweden, 2023a). In a third step, we categorised the sum of earnings and earnings-related benefits for each individual in each year into five categories, i.e., very low, low, moderate, high, very high, based on the weighted cut-offs. In a fourth step, we added into the earnings variable a category for student benefits and unemployment benefits.

³ The region variable was created based on the municipality of residence for each individual in each year. Municipalities were classified into six regions following the groupings proposed by the "Swedish Association of Local Authorities and Regions" (SKR, 2022); See Appendix Table A2.

in detached single-family housing in Finland was associated with higher fertility than living in apartments (Kulu & Vikat, 2007).

Gender inequalities are also present in entry to homeownership. Single women are less likely to own a house compared to single men and the earning potential for single men and men in couples often has a greater effect on homeownership than that of women (Blaauboer, 2010). Age matters, too. Due to age differentials in couples, women often move into owned housing at younger ages than men. However, moving to homeownership is more common among older adults who have better financial resources to make such a move, with younger people more often remaining in the rental sector (McKee, 2012).

Evidently, moving into homeownership is influenced by economic factors, including earnings capacity and employment security. Employment insecurity has negatively affected moves to homeownership in Northern and Western Europe, where mortgages are less available to people with insecure employment (Lersch & Dewilde, 2015). Moving to homeownership can also be related to educational investments. Higher education attainment manifests itself in better jobs and higher earnings, which is reflected in a study from Spain whereby young people with non-university education were less likely than others to access homeownership (Colom Andrés & Molés Machí, 2021).

Finally, contextual factors such as the region of residence and the housing market in that region play an important role in accessing homeownership. In the metropolitan areas of Sweden where space is more limited, renting is common and access to homeownership more often available through owning an apartment. In contrast, access to single-family housing is more available outside the most densely populated municipalities and in the ring of commuting municipalities that surrounds the three largest metropolitan municipalities of Sweden (Haandrikman et al., 2021).

5.4. Methods

We first calculate descriptive statistics with person-months under risk of moving into homeownership and the distribution of such moves, by each of our independent variables. By means of Kaplan-Meier survival curves, we also describe the patterns of entry into first-time homeownership by time since age 18 for aggregated groups of people with different parental migration backgrounds, and by time since migration for aggregated groups of adult immigrants to Sweden; the two timescales involved are thus not directly comparable with each other.

Cox proportional hazards models with time since age 18 as the baseline were used to study the associations between the two outcomes of entry into first-time homeownership and our immigration and other independent variables. The basic model is as follows:

$$h_i(t) = h_0(t) \times \exp(\beta_1 X_{i1} + \beta_2 X_{i2} + \dots + \beta_p X_{ip}) \quad (1)$$

where $h_i(t)$ represents the hazard of entry into first-time homeownership for individual i at age t and $h_0(t)$ represents the baseline hazard, which is left unspecified. To allow for joint models and comparability of results, the origin time is specified at age 18 for all individuals in the study, including for the adult immigrants who enter the study at their registered immigration to Sweden with a left-truncated spell of observation. $X_{i1}, X_{i2}, \dots, X_{ip}$ represent the independent variables which include time-fixed variables such as migration background, sex, and age at and year of entry into the study and time-varying variables such as marital status, parity, earnings, education, and region of residence; $\beta_1, \beta_2, \dots, \beta_p$ are parameter estimates for the independent variables.

We fitted joint models for all generations with different migration backgrounds and separate models for first generation immigrants. For the latter, we additionally included a variable for time since registered immigration into Sweden, an indicator of whether a migrant had acquired Swedish citizenship, and whether he or she was a refugee or asylum seeker.

Our analyses revealed that a very high percentage (32%) of all adult immigrants moved to first-time homeownership already during their first year in Sweden. This prompted us to perform an additional analysis of homeownership entries in the very first year since immigrations to Sweden. For this purpose, we estimated binary logistic regression models adjusted for refugee/asylum seeker status, age of arrival in Sweden, sex, education, region of residence, and year of registered migration to Sweden.

Results from the Cox models are presented as hazard ratios (HRs) with 95% confidence intervals (CIs). Coefficient plots are used to visualise the HRs of entry into first-time homeownership across immigrant groups and their descendants. For the logistic regression, results are reported as odds ratios (ORs) with 95% CIs. Statistical significance is considered at a p-value of < 0.05 . Data preparation and statistical analyses were conducted in STATA₁₇.

6. Results

6.1. Descriptive statistics on first-time apartment and single-family homeownership

Table 1 presents descriptive statistics on the number of person-months at risk and entries into first-time homeownership, by migration background and our socio-demographic, economic, and contextual covariates. Our study includes 3,152,123 individuals that are followed for up to 240 months during 1997-2016 with a total of 208,666,080 person-months at risk and 1,622,610 entries into first-time apartment and single-family homeownership. Most individuals who entered the housing market during this time period and had not yet become homeowners were native Swedes with two Swedish-born parents (63%), had Swedish citizenship at entry into the study (79%), were childless (82%), never married (84%), still studying (28%), and lived in a large (26%) or metropolitan (21%) city. Around 60% of those who moved to first-time homeownership were native Swedes. The remaining 40% were distributed over 13% 1G immigrants from European countries including the Nordic ones, 5% 1G immigrants from the Middle East, North Africa, Turkey, and Iran, 5% 1.5G immigrants, and 9% together for the 2G and 2.5G people as the largest aggregated groups of individuals with a migration background (Table 1). The behaviour of people with a migration background thus had a very large impact on the Swedish housing market during the period we study.

In Figure 2, we present the Kaplan-Meier estimates for first-time entry into apartment and single-family homeownership by aggregated groups of individuals with different migration backgrounds. The estimates for first-generation 1G immigrants demonstrate that very large fractions of adult immigrants to Sweden moved into owned housing already during their first year in Sweden: almost half of immigrants from a Nordic or Western country moved into an owned apartment or single-family home during their first year in Sweden; about a quarter of immigrants from other parts of the world moved directly into homeownership. For those who already lived in Sweden when turning 18, we see a clear gradient with individuals in the 2.5 generation showing more similar patterns to those of the native Swedes, and with individuals in the 1.5 and 2G generations having slightly slower progression rates into homeownership. However, the rate of moving into first-time homeownership was even more strongly associated with the region in the world where the immigrants and their descendants originated from: we observe much faster transition rates for immigrants and their descendants from high-income countries (i.e., Nordic and Western Europe, North America) than for individuals with a migration background in other parts of the world. Still, the vast majority of all aggregated

groups of individuals acquire homeownership during the course of the life trajectories that we follow.

6.2. Descriptive statistics on first-time single-family homeownership

Our corresponding analyses of entry into first-time single-family ownership comprise a total of 270,803,763 person-months at risk and 948,987 entries into homeownership from the same study population described in our previous section. The distribution of risk-time over the different covariates (Table 2) thus looks similar to that described above. However, the percentage of individuals moving to single-family homeownership that were native Swedes was slightly larger than when apartment tenure was also considered.

The Kaplan-Meier estimates for first-time single-family homeownership show that about a quarter of newly arrived adult immigrants from Nordic and Western countries and about 10% of immigrants from other regions of the world moved directly into single-family homeownership during their very first year in Sweden. Between half and three quarters of individuals in the different groups with different migration background eventually move into single-family homeownership. The estimates also reveal a gradient in transition rates between the generations and between migrants and the descendants of migrants from the two broad regions of the world. The 2.5G show patterns that are more similar to those of native Swedes but the differences between the descendants of immigrants that belong to the 1.5 and 2G are small (Figure 3). Again, differences between immigrants and the descendants of immigrants from the two broad regions of the world were more substantial, with those with a migration background in Western countries having transition rates that were much more similar to those of native Swedes.

6.3. Determinants of first-time apartment and single-family homeownership

In Figure 4, we present the association between more detailed definitions of immigrant origins and entry into first-time apartment and single-family homeownership based on output from our multivariate models. For 1G immigrants, we notice a clear pattern differentiating those arriving from high-income countries from those arriving from middle- and low-income countries. Immigrants from Nordic countries, Western Europe, and North America showed a very high tendency of moving into first-time homeownership which even exceeded that of native Swedes. In contrast, immigrants from other regions showed a lower risk of entry into first-time homeownership than native Swedes, especially those from Sub-Saharan Africa, Middle East

and North Africa, India, and Ex-Yugoslavia. An exception to this is that immigrants from South-East Asia also had an elevated risk of entry into first-time homeownership compared to native Swedes, a pattern that presumably can be linked to the high level of marriage migration to Sweden from that region (Haandrikman, 2014; Webster & Haandrikman, 2014).

In contrast, all groups of individuals from the 1.5G, 2G, and 2.5G country backgrounds were less likely to move into first-time homeownership than native Swedes. As expected, individuals from the 2.5G groups showed the nearest hazard ratios of entry to first-time homeownership to that of native Swedes, while 1.5G and 2G individuals were less likely to move into first-time homeownership than those in the 2.5G groups. However, 1.5G individuals had in general higher rates of entry into first-time homeownership than those of the 2G (Figure 4).

Differentiating generations with a migration background by their specific country backgrounds shows that 1.5G, 2G and 2.5G individuals with a Sub-Saharan African origin consistently had the lowest hazards of entry into first-time homeownership, whereas individuals with a Nordic and Western European origin had the highest hazards, and close to that of the native Swedes. For immigrants from other countries, the results varied more based on the generation. For example, 2G individuals from India were 48% less likely to move to first-time homeownership compared to native Swedes, whereas 1.5G and 2.5G Indians were 12% less likely to move to first-time homeownership. Descendants of immigrants from Latin America, Southern Europe, and North America and Oceania showed a similar story with the 2G groups showing the lowest hazard of entry into first-time homeownership compared to the corresponding groups of 1.5G and 2.5G individuals. On the other hand, for individuals with a Middle Eastern and North African migration background, the difference between the 2G and 1.5G was very small. Similar findings hold for individuals with a migration background in Poland, Central-Eastern Europe, Ex-Yugoslavia, Turkey, and Iran with higher hazard ratios for the 2.5G than for the 1.5 and 2G categories (Figure 4).

Our Appendix Table A3 shows the full models with estimates also for our socio-demographic control variables. As our Kaplan-Meier curves indicated that the propensity to enter into homeownership was very high in immediate connection to a migration to Sweden we had included a dummy variable for the first year in Sweden for 1G individuals in the model. To further explore this relationship, we also estimated a separate model for first generation immigrants where we added a variable for the duration since migration to Sweden (Appendix Table A4). The output from this model demonstrates that the propensity to enter into

homeownership was about five times as high in the first year in Sweden as compared to the hazard in subsequent years. The model for 1G immigrants also shows that refugee migrants had a much lower propensity to enter into homeownership than immigrants with other types of residence permits ($HR=0.58$; $95\%CI=0.58, 0.59$), while acquiring a Swedish citizenship was related to an elevated hazard of entry into first-time homeownership in Sweden ($HR=1.36$; $95\%CI=1.34, 1.38$). The relationship between the different immigrant country groups otherwise looks very much the same as that presented in our Figure 4.

6.4. Determinants of first-time single-family homeownership

The group differences in hazards of entry into single-family homeownership look very similar to those observed for entry into any type of homeownership. In Figure 5 we show the results for our different country groups and generations. The findings include elevated transition rates for first-generation immigrants from Nordic and Western countries and a pattern where groups of 2.5G individuals have hazards that are closer to that of native Swedes than what holds for the corresponding groups of 1.5 and 2G individuals. Immigrants from Sub-Saharan Africa also had the lowest transition rates into single-family housing.

The full model results are provided in our Appendix Table A5. The associations of different covariates with entry into single-family homeownership are similar to those for entry into any type of homeownership, but the role of being or becoming a parent is more pronounced for entry into single-family housing and people living in the three metropolitan cities of Sweden have much lower transition rates than those living in other types of municipalities. As in our previous section, we also estimated separate models for immigrants to Sweden (Appendix Table 6). The roles of being newly arrived in Sweden, having a refugee status, and acquiring Swedish citizenship also look very similar to those observed for entry into any type of homeownership.

6.5. Separate analysis for 1G immigrants in their first year in Sweden

As the behaviour of immigrants in their very first year in Sweden and its housing market appears to be very specific, we conclude our empirical analyses with models that assess the structure of entry into homeownership in that specific year. Table 3 provides summary statistics for the newly arrived 1G immigrants during 1997-2016. A very high fraction of them moved into first-time homeownership already in their first year since registered arrival in Sweden: 32%; 16% for single-family homeownership.

A logistic regression model shows that immigrants from other Nordic countries had much higher risk of entry into first-time apartment and single-family homeownership in their first year in Sweden than immigrants from other regions. Immigrants from Western Europe, North America/Oceania, and South-East Asia had higher risks than other groups of non-Nordic immigrants. Immigrants from Sub-Saharan Africa, followed by immigrants from India and Middle East and North Africa showed the lowest risks of entry into first-time homeownership in their first year in Sweden. Refugees and younger immigrants were less likely to acquire homeownership in their first year after arrival. Immigrants with higher education and those arriving in 2010 onwards were more likely to move into first-time homeownership in their first year in Sweden (Table 4a).

The corresponding analysis for entry into single-family homeownership shows that immigrants from Western Europe and North America/Oceania were even more likely to acquire homeownership in their first year in Sweden than immigrants from other Nordic countries. Again, immigrants from Sub-Saharan Africa and India had the lowest risks of entry into single-family homeownership in their first year in Sweden. Older immigrants and those living outside the metropolitan or other large cities were more likely to own a single-family house in their first year in Sweden (Table 4b).

7. Concluding discussion

Based on large-scale and comprehensive individual-level register data of Sweden, we investigated the association between entry into first-time apartment and single-family homeownership and several socio-demographic, economic, and contextual antecedents, with specific focus on immigrant origin and generation. Entry into first-time homeownership of adult immigrants from different high and middle to low-income countries was compared to that of their descendants (1.5G, 2G, and 2.5G) and native Swedes. The novelties of our study were threefold. First, we differentiated the housing careers of immigrants arriving as adults (1G) versus those arriving as children (1.5G), and Swedish-born descendants to migrants with a full and mixed parental migration background, i.e., those of 2G and 2.5G people having two or only one foreign-born parent(s). Second, we distinguished groups of immigrants and their descendants by the most common country backgrounds in Sweden, considering people with a background in high- as well as in low- to middle-income countries. Third, we contributed new

insight by analysing homeownership related to apartments as well as single-family housing, thus capturing associations in behaviour for both housing type and tenure.

In line with our first two hypotheses, adult 1G immigrants from low- and middle- income countries such as Sub-Saharan Africa, the Middle East and North Africa, and India experienced the most delayed entry into first-time homeownership, whereas immigrants from high-income countries in Northern and Western Europe, as well as overseas Western countries experienced faster entry into homeownership than native Swedes. The general expectation that immigrants experience delayed entries into homeownership thus only holds for those from low-and middle-income countries. These findings could be explained by several cultural, social, financial, and political-institutional factors that may affect the behaviour of different groups of immigrants. For example, immigrants from high-income countries have more pre-acquired wealth and financial resources to purchase a home. They are often economic migrants and have better education and employment opportunities than others, which provides financial stability for mortgages and homeownership investment. The fact that immigrants from India, despite often being recruited to high-income professions in Sweden, are less likely to move into homeownership may reflect their lack of intention to remain in Sweden in the long run.

Having refugee status was related to lower risks of moving into owned housing. When adjusting for refugee status we still find that immigrants from Ex-Yugoslavia, Iran, Sub-Saharan Africa, and the Middle East and North Africa were less likely to move into homeownership. However, most of these immigrants have permanent settlement intentions and with time they assimilate with better employment and earnings capacity, which in the long run translates into homeownership. The majority of individuals from low- and middle-income countries also end up living in an owned apartment or single-family home, which shows that tendencies of residential segmentation are more of short-term nature than the end product of different groups of immigrants' housing trajectories.

In line with our third hypothesis, we found a tendency where individuals with one Swedish-born and one immigrant parent had patterns in behaviour that were more similar to that of native Swedes than what holds for the 1.5 and 2G descendants of immigrant parents and for most groups of 1G immigrants. However, we did not find very clear evidence that the patterns among 1.5 and 2G individuals were markedly different from the corresponding groups of 1G immigrants. Unexpectedly, we found that 2G individuals in general had lower rates of entry into homeownership than those of 1.5G, which partly contradicts predictions of a straight-lined

assimilation across new generations of inhabitants in Sweden. The findings that all groups of individuals in the second generation in Sweden have lower rates of moving into homeownership than native Swedes can still be regarded as evidence of segmentation in terms of their preferences, aspirations, and available resources for housing careers. We speculate that a minority of individuals with a migration background may opt to invest in a housing career in another country than Sweden.

In line with our hypotheses 1, 2, and 4, we also found that differences between the generations were not always the same across groups with different country backgrounds. Immigrants and their descendants from Sub-Saharan Africa exhibited persistently delayed entry into first-time homeownership compared to other groups. In contrast, first-generation adult immigrants from high-income Western countries even outperformed native Swedes in the housing market. The latter outcome largely depends on the very high rates of moving into owned housing already in their first year in Sweden. The findings that 2G individuals with a parental background in India, Latin American, and Southern Europe experienced a more delayed entry into first-time homeownership than their 1.5G counterparts is also compelling. A study on Latin American immigrants and their descendants in Sweden suggests that the descendants of Latin Americans do not always perform very well in terms of integration and often have lower educational attainment than their parents, which impact their labour market involvement negatively (Andersson, 2015).

Analysing the two different definitions of homeownership in separate models revealed very similar associations with immigrant and generational belonging for the two housing outcomes, even if the absolute levels of moving into single-family ownership are much lower than those of the combined category of homeownership. In contrast, the finding that a very high fraction of immigrants moved into homeownership already in their first year in Sweden is striking. This holds in particular for immigrants from high-income countries and are presumably related to the shortages and long waiting queues for rental housing in Sweden (Government of Sweden, 2021). Thus, many newly arrived immigrants are forced to either buy an apartment or house, if they can afford so, or to seek subletting or other opportunities.

Entry into first-time homeownership was also associated with age and sex, first-child pregnancy, having children, high income and education, being married and living in municipalities with better access to single-family housing. All these associations are corroborated by findings from previous literature (Colom Andrés & Molés Machí, 2021;

Lersch & Dewilde, 2015; McKee, 2012; Mulder & Wagner, 2001; Oikarinen et al., 2015). Another related finding is that entry into homeownership was higher during the 2010s than during the earlier part of our study period. This may partly be related to the higher incomes and a stronger Swedish economy during the 2010s but also to increasing constraints in the housing market and related shortages of rental housing during the same period. The situation with high levels of migration have contributed to those shortages, and the fact that some 40% of new entrants into the housing market during our study period have had some degree of migration background indicates that the housing trajectories of foreign-born people and their descendants are essential to consider in any study on the Swedish housing market during this time period. Future research should also expand on the many aspects of how homeownership moves of immigrants and their descendants are interrelated with the simultaneous changes in life-course domains such as partnership, parenthood, and employment.

In conclusion, by using large-scale register data from Sweden, this study showed a gradual housing assimilation across migrant generations, although the descendants of immigrants from the 2.5 generation still had lower homeownership levels than native Swedes. The observed differences in homeownership levels between the descendants of immigrants from high- and low-income countries suggest the presence of some housing segmentation due to migration background, preferences and available resources. These differences, however, are reduced over time and across migrant generations.

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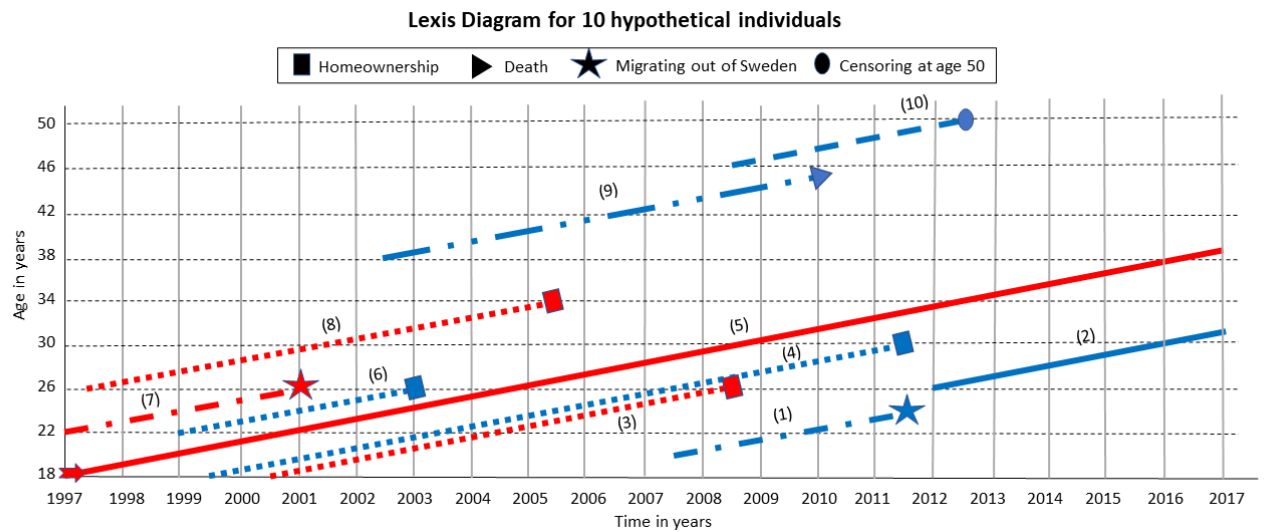
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Figure 1. Lexis-diagram illustrating the structure of the homeownership datasets



The blue colour represents 1G immigrants and the red colour represents Swedish-born individuals and 1.5G immigrants. Swedish-born individuals and 1.5G immigrants enter the study at the age of 18, except in 1997, where entry is possible for those aged more than 18 if they are still living with their parents. 1G immigrants of age 18+ enter the study when they register their immigration in Sweden. Structuring the dataset on single-family and apartment homeownership depends on censoring because of death ($n=10,483$; 0.33%), migration out of Sweden ($n=208,359$; 6.61%), turning 50 years old ($n=82,194$; 2.61%), reaching the end of the study period in December 2016 ($n=1,228,477$; 38.97%), or the event occurrence of homeownership ($n=1,622,610$; 51.48%). Structuring the dataset on single-family homeownership depends on censoring because of death ($n=12,915$; 0.41%), migration out of Sweden ($n=274,415$; 8.71%), turning 50 years old ($n=100,688$; 3.19%), reaching the end of the study period in December 2016 ($n=1,815,118$; 57.58%), or to the event occurrence of homeownership ($n=948,987$; 30.11%).

Table 1. Descriptive statistics on first-time entry to apartment and single-family homeownership, by immigration origin and generation and socio-demographic characteristics (N=3,152,123 individuals in Sweden).

	Person-months under risk	%	Homeowner- ship entries	%
Immigrant origin and generation				
Native Swedes	130657007	62.6	970690	59.8
Nordic 1G	1206229	0.6	49500	3.1
Western Europe 1G	1533803	0.7	49503	3.1
Central and Eastern Europe 1G	3058718	1.5	51787	3.2
Ex-Yugoslavia 1G	3175073	1.5	27321	1.7
Poland 1G	1783325	0.9	27059	1.7
Southern Europe 1G	667081	0.3	15157	0.9
North America and Oceania 1G	521091	0.2	15733	1.0
Latin America 1G	1310810	0.6	17583	1.1
Turkey 1G	1109802	0.5	11090	0.7
Iran 1G	1266783	0.6	13089	0.8
Middle East and Northern Africa 1G	9285619	4.4	57129	3.5
India 1G	664071	0.3	8332	0.5
East Asia 1G	1211315	0.6	18038	1.1
South-East Asia 1G	1326343	0.6	27879	1.7
Sub-Saharan Africa 1G	4805232	2.3	18156	1.1
Other 1G	1969325	0.9	15749	1.0
Nordic 1.5G	761157	0.4	4496	0.3
Western Europe 1.5G	562027	0.3	3239	0.2
Central and Eastern Europe 1.5G	1125518	0.5	5290	0.3
Ex-Yugoslavia 1.5G	3206016	1.5	14679	0.9
Poland 1.5G	666853	0.3	3115	0.2
Southern Europe 1.5G	185257	0.1	774	0.0
North America and Oceania 1.5G	165402	0.1	996	0.1
Latin America 1.5G	1752002	0.8	8601	0.5
Turkey 1.5G	663537	0.3	2597	0.2
Iran 1.5G	1090304	0.5	5975	0.4
Middle East and Northern Africa 1.5G	3307093	1.6	13041	0.8
India 1.5G	458708	0.2	3007	0.2
East Asia 1.5G	524014	0.3	3354	0.2
South-East Asia 1.5G	950983	0.5	5151	0.3
Sub-Saharan Africa 1.5G	1675116	0.8	4117	0.3
Other 1.5G	891987	0.4	5045	0.3
Nordic 2G	2290965	1.1	14447	0.9
Western Europe 2G	189916	0.1	999	0.1
Central and Eastern Europe 2G	357559	0.2	1831	0.1
Ex-Yugoslavia 2G	1477719	0.7	6924	0.4
Poland 2G	546663	0.3	2712	0.2
Southern Europe 2G	373154	0.2	1553	0.1
North America and Oceania 2G	18551	0.0	81	0.0
Latin America 2G	633042	0.3	2334	0.1

Turkey 2G	1356850	0.7	6311	0.4
Iran 2G	376110	0.2	2039	0.1
Middle East and Northern Africa 2G	1384370	0.7	5601	0.3
India 2G	101842	0.0	405	0.0
East Asia 2G	94139	0.0	493	0.0
South-East Asia 2G	264844	0.1	1211	0.1
Sub-Saharan Africa 2G	430492	0.2	892	0.1
Other 2G	198304	0.1	623	0.0
Nordic 2.5G	6973541	3.3	48894	3.0
Western Europe 2.5G	1794097	0.9	12038	0.7
Central and Eastern Europe 2.5G	609090	0.3	3739	0.2
Ex-Yugoslavia 2.5G	758362	0.4	4518	0.3
Poland 2.5G	708049	0.3	4346	0.3
Southern Europe 2.5G	900662	0.4	5070	0.3
North America and Oceania 2.5G	439019	0.2	2730	0.2
Latin America 2.5G	725303	0.3	3877	0.2
Turkey 2.5G	217303	0.1	1146	0.1
Iran 2.5G	218984	0.1	1327	0.1
Middle East and Northern Africa 2.5G	551575	0.3	2923	0.2
India 2.5G	83588	0.0	508	0.0
East Asia 2.5G	162534	0.1	978	0.1
South-East Asia 2.5G	368547	0.2	2108	0.1
Sub-Saharan Africa 2.5G	351168	0.2	1680	0.1
Other 2.5G	172137	0.1	1000	0.1
Age at entry into study				
18 years	142642183	68.4	1001713	61.7
19-29 years	44955825	21.5	396799	24.5
30-39 years	16329739	7.8	163441	10.1
40-50 years	4738333	2.3	60657	3.7
Dummy for 1G immigrants in first year in Sweden				
Not 1G immigrant in first year in Sweden	199598230	95.7	1326635	81.8
1G immigrant in the first year in Sweden	9067850	4.3	295975	18.2
Swedish citizenship				
Have Swedish citizenship at entry into study	165603018	79.4	1168224	72.0
Do not have Swedish citizenship	29813574	14.3	397137	24.5
Have switched into Swedish citizenship	10848107	5.2	49828	3.1
Unknown information	2401381	1.2	7421	0.5
Sex				
Male	117133261	56.1	834061	51.4
Female	91532819	43.9	788549	48.6
Parity				
Childless	171648550	82.3	1242233	76.6
Childless and pregnant with the 1st child	3459022	1.7	73517	4.5
1 child	15734336	7.5	177819	11.0
2 children	10668456	5.1	91852	5.7
3 children	4302588	2.1	26079	1.6
4 children	1672035	0.8	7358	0.5
5+ children	1181093	0.6	3752	0.2

Earnings				
Very low income	9415504	4.5	68612	4.2
Low income	32625298	15.6	251337	15.5
Moderate income	28441367	13.6	275443	17.0
High income	20621655	9.9	245461	15.1
Very high income	14096194	6.8	214773	13.2
Student	58785034	28.2	242994	15.0
Unemployment benefit	13410716	6.4	59788	3.7
Not belonging to the above categories/unknown information	31270312	15.0	264202	16.3
Education				
Post-secondary 5 or more years	2164387	1.0	35269	2.2
Post-secondary 3 to 4 years	22372268	10.7	307998	19.0
Post-secondary less than 3 years	29947099	14.4	245462	15.1
Secondary 3 years	89250131	42.8	631568	38.9
Secondary less than 3 years	19417910	9.3	128355	7.9
Pre-secondary 9 or less schooling years	38246792	18.3	186086	11.5
Unknown information	7267493	3.5	87872	5.4
Marital status				
Single	176352114	84.5	1300183	80.1
Married	26902857	12.9	283274	17.5
Registered partnership	32332	0.0	497	0.0
Divorced	5083735	2.4	36619	2.3
Widowed	120172	0.1	826	0.1
Unknow information	174870	0.1	1211	0.1
Region of residence				
Metropolitan cities (Stockholm, Göteborg, and Malmö)	43407736	20.8	399787	24.6
Commuter municipality near metropolitan cities	31643660	15.2	291532	18.0
Large cities	54664135	26.2	378877	23.3
Commuter municipalities near large or small cities	33428284	16.0	274952	16.9
Small cities and towns	23157385	11.1	184418	11.4
Rural municipalities	11028941	5.3	93044	5.7
Unknown information	11335939	5.4	0	0.0
Year of entry into study				
<2000	62169291	29.8	432665	26.7
2000-2004	52221874	25.0	407761	25.1
2005-2009	55182949	26.4	431714	26.6
2010+	39091966	18.7	350470	21.6
Total	208666080	100.0	1622610	100.0

Figure 2. Kaplan Meier estimates for entry into first-time apartment and single-family homeownership (N=3,152,123 individuals in Sweden).

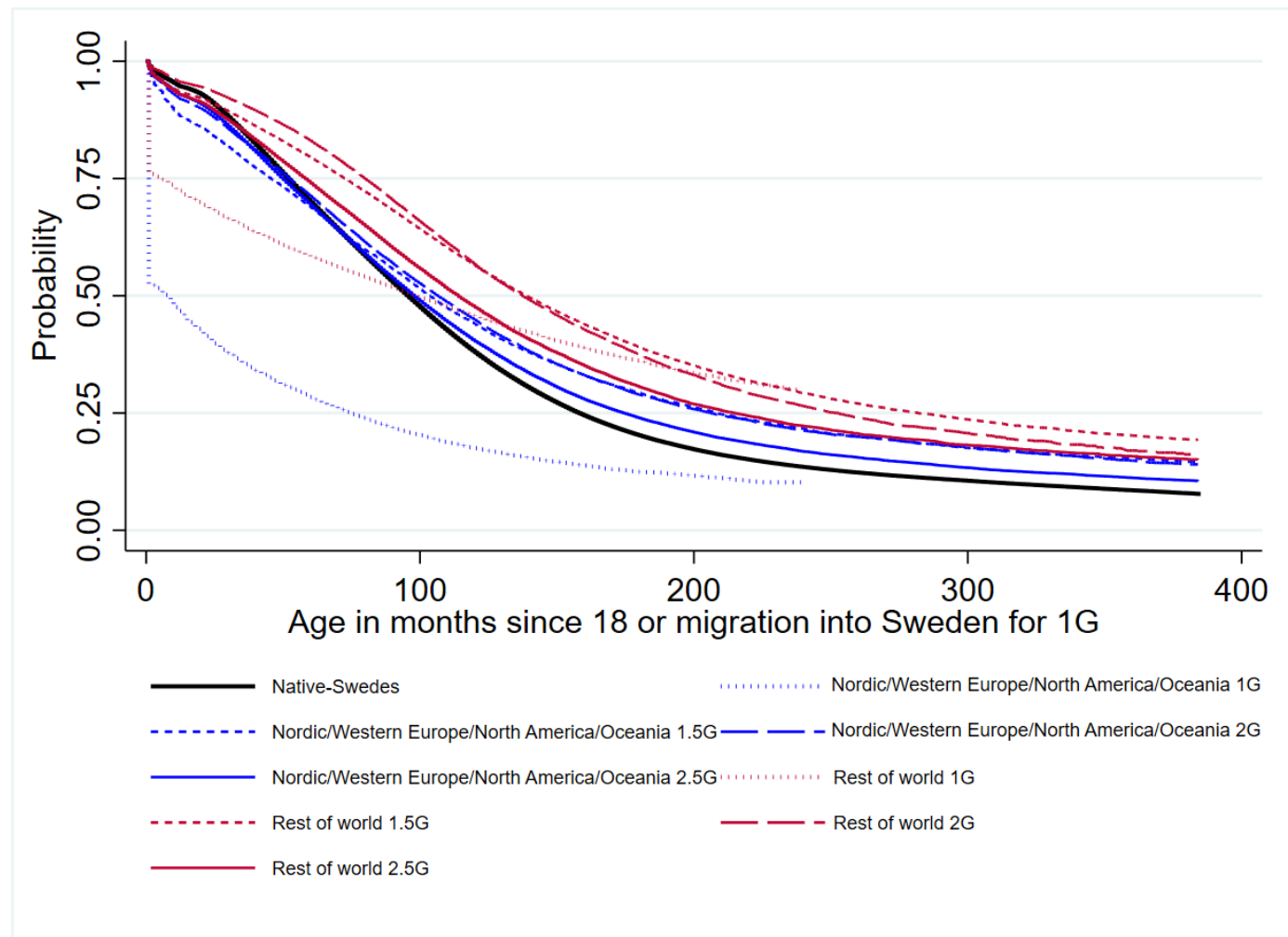


Table 2. Descriptive statistics on entry into first-time single-family homeownership, by immigration origin and generation and socio-demographic characteristics (N=3,152,123 individuals in Sweden).

	Person-months under risk	%	Homeowner- ship entries	%
Immigrant origin and generation				
Native Swedes	169731854	62.7	609000	64.2
Nordic 1G	2354826	0.9	27151	2.9
Western Europe 1G	2546496	0.9	32501	3.4
Central and Eastern Europe 1G	4389706	1.6	30805	3.2
Ex-Yugoslavia 1G	4240379	1.6	13750	1.4
Poland 1G	2374220	0.9	18080	1.9
Southern Europe 1G	1128888	0.4	6351	0.7
North America and Oceania 1G	924353	0.3	8855	0.9
Latin America 1G	2009387	0.7	8209	0.9
Turkey 1G	1571943	0.6	4414	0.5
Iran 1G	1778547	0.7	5618	0.6
Middle East and Northern Africa 1G	10909479	4.0	30408	3.2
India 1G	888926	0.3	2857	0.3
East Asia 1G	1774707	0.7	7971	0.8
South-East Asia 1G	2125372	0.8	18315	1.9
Sub-Saharan Africa 1G	5454827	2.0	7885	0.8
Other 1G	2548956	0.9	5827	0.6
Nordic 1.5G	948550	0.4	2792	0.3
Western Europe 1.5G	691058	0.3	1756	0.2
Central and Eastern Europe 1.5G	1364062	0.5	2354	0.2
Ex-Yugoslavia 1.5G	3902531	1.4	6321	0.7
Poland 1.5G	827407	0.3	1639	0.2
Southern Europe 1.5G	221867	0.1	364	0.0
North America and Oceania 1.5G	205661	0.1	516	0.1
Latin America 1.5G	2293987	0.8	3568	0.4
Turkey 1.5G	789988	0.3	1275	0.1
Iran 1.5G	1480394	0.5	2098	0.2
Middle East and Northern Africa 1.5G	3812874	1.4	5913	0.6
India 1.5G	629123	0.2	1682	0.2
East Asia 1.5G	721546	0.3	1347	0.1
South-East Asia 1.5G	1201527	0.4	2592	0.3
Sub-Saharan Africa 1.5G	1867664	0.7	1606	0.2
Other 1.5G	1107325	0.4	2372	0.2
Nordic 2G	3061675	1.1	8222	0.9
Western Europe 2G	241049	0.1	458	0.0
Central and Eastern Europe 2G	454442	0.2	727	0.1
Ex-Yugoslavia 2G	1842813	0.7	3000	0.3
Poland 2G	700801	0.3	987	0.1
Southern Europe 2G	470805	0.2	611	0.1
North America and Oceania 2G	22687	0.0	27	0.0
Latin America 2G	749845	0.3	667	0.1

Turkey 2G	1622795	0.6	2653	0.3
Iran 2G	454684	0.2	389	0.0
Middle East and Northern Africa 2G	1571167	0.6	2012	0.2
India 2G	120618	0.0	118	0.0
East Asia 2G	119371	0.0	99	0.0
South-East Asia 2G	311625	0.1	365	0.0
Sub-Saharan Africa 2G	465756	0.2	223	0.0
Other 2G	223506	0.1	169	0.0
Nordic 2.5G	9136985	3.4	29132	3.1
Western Europe 2.5G	2378761	0.9	6627	0.7
Central and Eastern Europe 2.5G	804032	0.3	1936	0.2
Ex-Yugoslavia 2.5G	965035	0.4	2329	0.2
Poland 2.5G	930708	0.3	2164	0.2
Southern Europe 2.5G	1187035	0.4	2331	0.2
North America and Oceania 2.5G	565286	0.2	1201	0.1
Latin America 2.5G	906995	0.3	1539	0.2
Turkey 2.5G	274106	0.1	473	0.0
Iran 2.5G	278996	0.1	498	0.1
Middle East and Northern Africa 2.5G	695961	0.3	1249	0.1
India 2.5G	108490	0.0	221	0.0
East Asia 2.5G	208960	0.1	330	0.0
South-East Asia 2.5G	453421	0.2	941	0.1
Sub-Saharan Africa 2.5G	434704	0.2	654	0.1
Other 2.5G	222219	0.1	443	0.0
Age at entry into study				
18 years	182364125	67.3	567146	59.8
19-29 years	62136841	22.9	245759	25.9
30-39 years	20721354	7.7	97000	10.2
40-50 years	5581443	2.1	39082	4.1
Dummy for 1G immigrants in first year in Sweden				
Not 1G immigrant in first year in Sweden	259863791	96.0	804422	84.8
1G immigrant in the first year in Sweden	10939972	4.0	144565	15.2
Swedish citizenship				
Have Swedish citizenship at entry into study	214021767	79.0	703926	74.2
Do not have Swedish citizenship	38513556	14.2	205883	21.7
Have switched into Swedish citizenship	15365728	5.7	35379	3.7
Unknown information	2902712	1.1	3799	0.4
Sex				
Male	149700000	55.3	480163	50.6
Female	121103763	44.7	468824	49.4
Parity				
Childless	214521114	79.2	553571	58.3
Childless and pregnant with the 1st child	5719415	2.1	64578	6.8
1 child	25409196	9.4	190369	20.1
2 children	16386588	6.1	106953	11.3
3 children	5501081	2.0	24731	2.6
4 children	1943725	0.7	6041	0.6
5+ children	1322644	0.5	2744	0.3

Earnings				
Very low income	11185422	4.1	38325	4.0
Low income	40489420	15.0	133688	14.1
Moderate income	38344465	14.2	165461	17.4
High income	32050338	11.8	165731	17.5
Very high income	29913593	11.0	180963	19.1
Student	65738887	24.3	92612	9.8
Unemployment benefit	15794553	5.8	34882	3.7
Not belonging to the above categories/unknown information	37287085	13.8	137325	14.5
Education				
Post-secondary 5 or more years	4107359	1.5	22601	2.4
Post-secondary 3 to 4 years	39417990	14.6	202699	21.4
Post-secondary less than 3 years	41024953	15.1	123961	13.1
Secondary 3 years	109667986	40.5	358896	37.8
Secondary less than 3 years	24103514	8.9	84337	8.9
Pre-secondary 9 or less schooling years	43687835	16.1	112021	11.8
Unknown information	8794126	3.2	44472	4.7
Marital status				
Single	224033340	82.7	691977	72.9
Married	39169767	14.5	231731	24.4
Registered partnership	66952	0.0	317	0.0
Divorced	7174516	2.6	23730	2.5
Widowed	161386	0.1	530	0.1
Unknow information	197802	0.1	702	0.1
Region of residence				
Metropolitan cities (Stockholm, Göteborg, and Malmö)	67484059	24.9	80485	8.5
Commuter municipality near metropolitan cities	43096281	15.9	196044	20.7
Large cities	70167542	25.9	195741	20.6
Commuter municipalities near large or small cities	38231646	14.1	252970	26.7
Small cities and towns	28198396	10.4	138868	14.6
Rural municipalities	12289900	4.5	84879	8.9
Unknown information	11335939	4.2	0	0.0
Year of entry into the study				
<2000	85349839	31.5	319200	33.6
2000-2004	71606848	26.4	254569	26.8
2005-2009	69393314	25.6	217940	23.0
2010+	44453762	16.4	157278	16.6
Total	270803763	100.0	948987	100.0

Figure 3. Kaplan Meier estimates for entry into first-time single-family homeownership (N=3,152,123 individuals in Sweden).

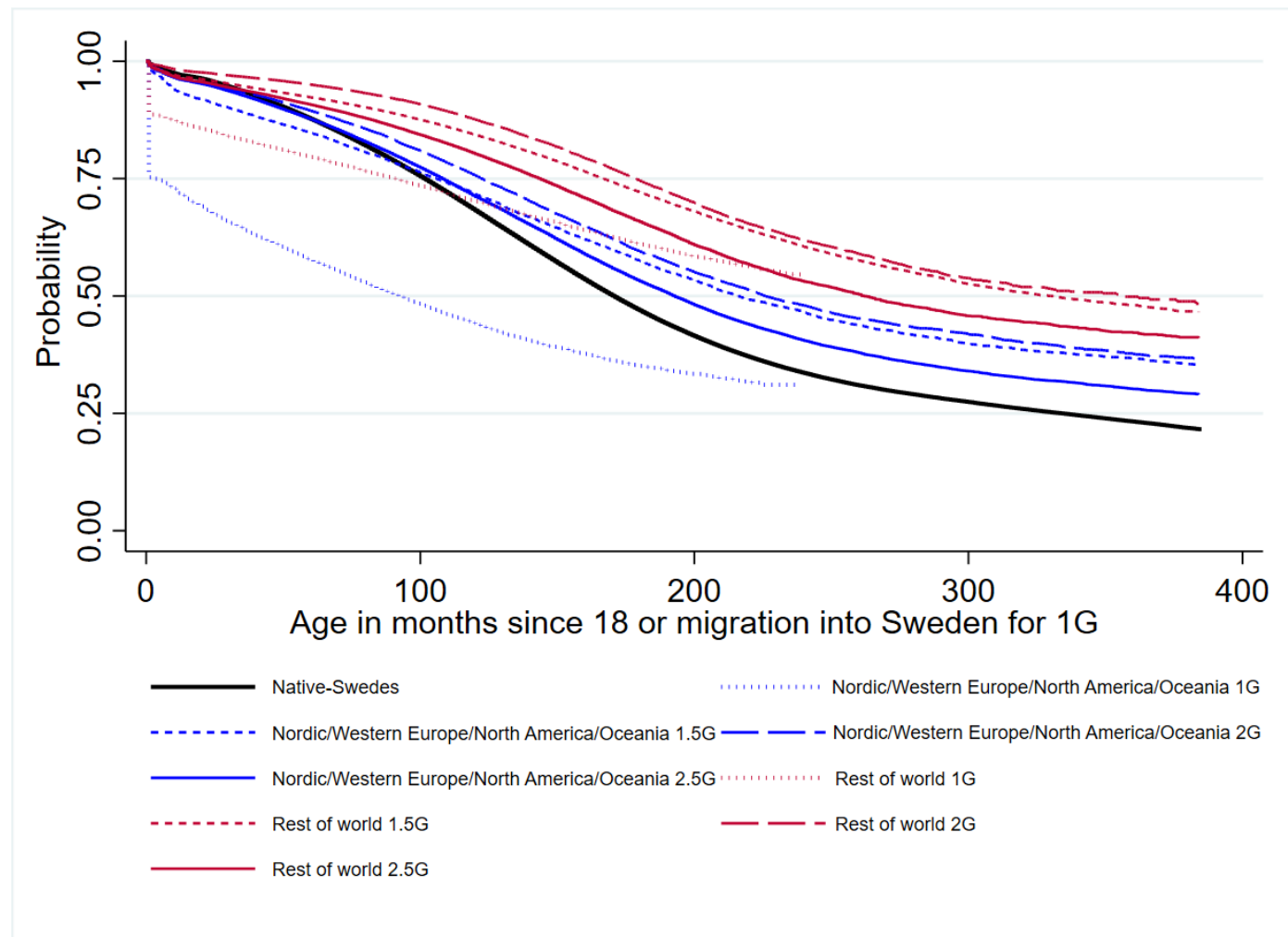
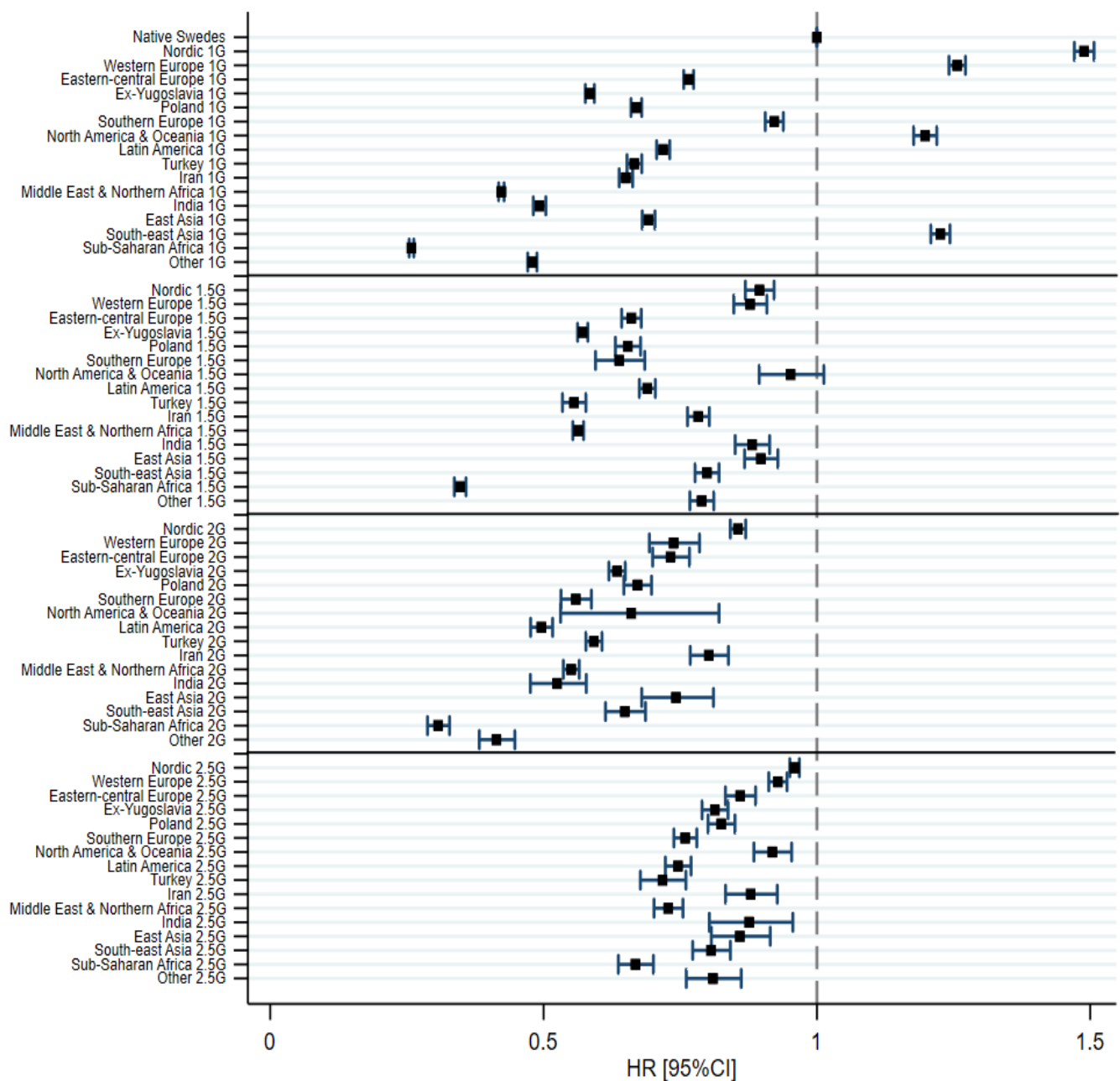
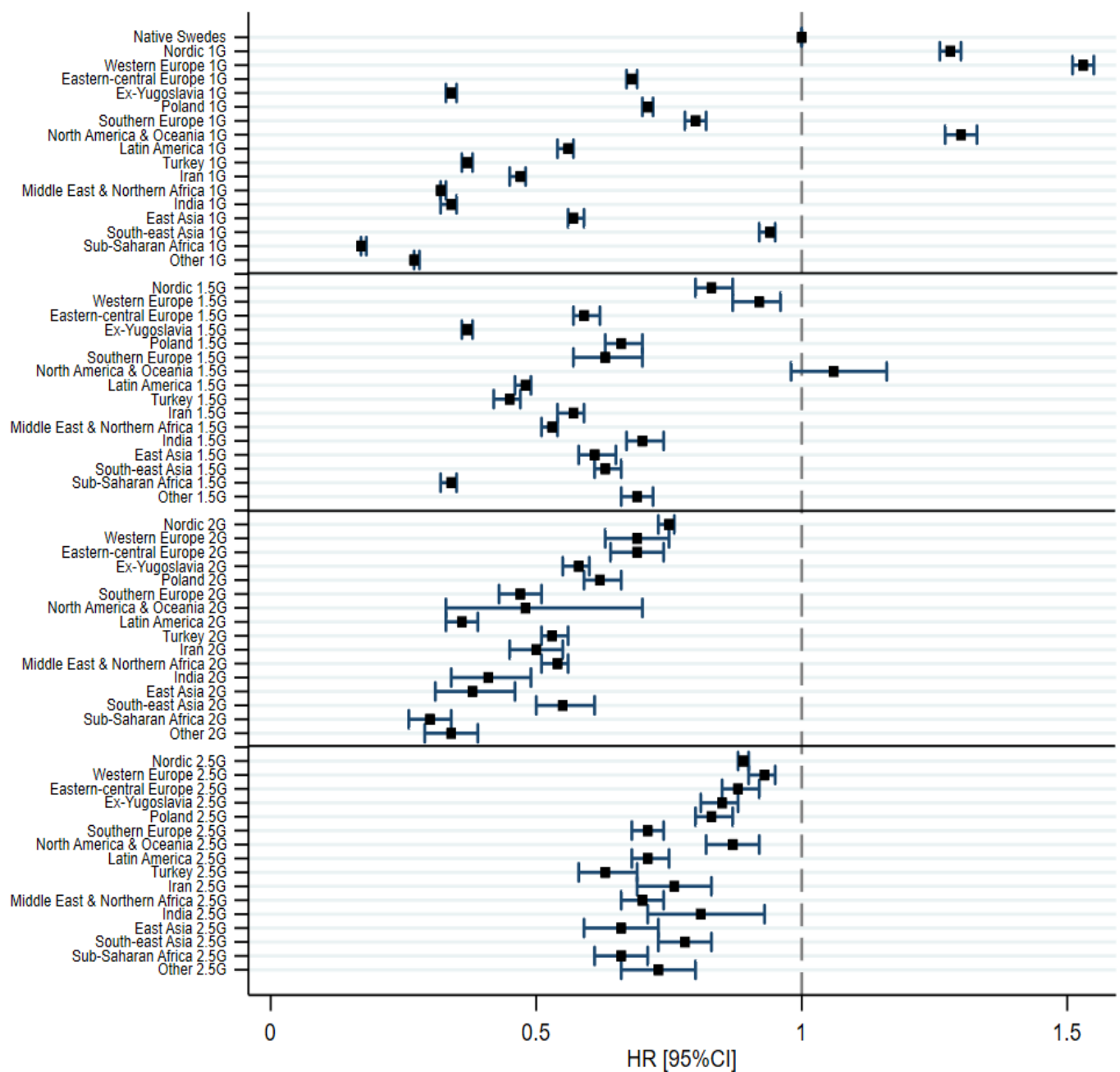


Figure 4. Hazard ratios of entry into first-time apartment and single-family homeownership, by immigration origin and generation in Sweden (N=3,152,123 individuals).



The dashed line at HR=1 indicates statistical insignificance; The model is adjusted for sex, age at entry into study, marital status, parity, education, earnings, region of residence, year of entry into study, and a dummy for 1G immigrants in their first year in Sweden.

Figure 5. Hazard ratios of entry into first-time single-family homeownership, by immigration origin and generation in Sweden (N=3,152,123 individuals).



The dashed line at HR=1 indicates statistical insignificance; The model is adjusted for sex, age at entry into study, marital status, parity, education, earnings, region of residence, year of entry into study, and a dummy for 1G immigrants in their first year in Sweden.

Table 3. Descriptive statistics for adult immigrants in their first year in Sweden (N=903,027 1G immigrants)

	Frequency	%
Entry to apartment or single-family homeownership in the first year since immigration		
Yes	290723	32
No	612304	68
Entry to single-family homeownership in the first year since immigration		
Yes	142004	16
No	761023	84
Immigrant groups		
Nordic 1G	77063	9
Western Europe 1G	73633	8
Central and Eastern Europe 1G	93240	10
Ex-Yugoslavia 1G	53673	6
Poland 1G	50898	6
Southern Europe 1G	26845	3
USA, Canada, and Australia 1G	25025	3
Latin America 1G	31575	4
Turkey 1G	21281	2
Iran 1G	25282	3
Middle East and Northern Africa 1G	190742	21
India 1G	23381	3
East Asia 1G	37215	4
South-East Asia 1G	41561	5
Sub-Saharan Africa 1G	89125	10
Other 1G	42488	5
Residence permit type at time of immigration to Sweden		
Not a refugee immigrant	656344	73
Refugee/asylum seeker immigrant	235604	26
Unknown information	11079	1
Age of arrival in Sweden		
18-19 years	43225	5
20-29 years	445847	49
30-39 years	290614	32
40-50 years	123341	14
Sex		
Male	470433	52
Female	432594	48
Education		
Post-secondary 5 or more years	27126	3
Post-secondary 3 to 4 years	194235	22
Post-secondary less than 3 years	157812	17
Secondary 3 years	76147	8
Secondary less than 3 years	99075	11
Pre-secondary 9 or less schooling years	160983	18
Unknown information	187649	21

Region of residence		
Metropolitan cities (Stockholm, Göteborg, and Malmö)	273965	30
Commuter municipality near metropolitan cities	153033	17
Large cities	210689	23
Commuter municipalities near large or small cities	135330	15
Small cities and towns	76009	8
Rural municipalities	47913	5
Unknown information	6088	1
Year of arrival in Sweden		
<2010	459071	51
2010+	443956	49

Table 4a. Logistic regression for factors associated with entry into first-time apartment and single-family homeownership for adult immigrants in their first year in Sweden.

	HR [95%CI]
Immigrant origin (Ref: Nordic 1G)	1.00
Western Europe 1G	0.89 [0.87, 0.91]**
Central and Eastern Europe 1G	0.49 [0.48, 0.50]**
Ex-Yugoslavia 1G	0.36 [0.35, 0.37]**
Poland 1G	0.41 [0.40, 0.42]**
Southern Europe 1G	0.55 [0.54, 0.57]**
USA, Canada, and Australia 1G	0.81 [0.79, 0.84]**
Latin America 1G	0.46 [0.45, 0.47]**
Turkey 1G	0.41 [0.40, 0.43]**
Iran 1G	0.39 [0.38, 0.40]**
Middle East and Northern Africa 1G	0.31 [0.30, 0.32]**
India 1G	0.27 [0.26, 0.28]**
East Asia 1G	0.39 [0.38, 0.40]**
South-East Asia 1G	0.86 [0.84, 0.88]**
Sub-Saharan Africa 1G	0.19 [0.18, 0.19]**
Other 1G	0.30 [0.29, 0.31]**
Residence permit type at time of immigration into Sweden (Ref: Not a refugee immigrant)	1.00
Refugee/asylum seeker immigrant	0.37 [0.37, 0.38]**
Unknown information	0.85 [0.81, 0.89]**
Age of arrival in Sweden (Ref: 20-29 years)	1.00
18-19 years	0.82 [0.80, 0.84]**
30-39 years	1.33 [1.32, 1.35]**
40-50 years	1.49 [1.47, 1.52]**
Sex (Ref: Male)	1.00
Female	1.18 [1.17, 1.19]**
Education (Ref: Secondary 3 years)	1.00
Post-secondary 5 or more years	1.07 [1.04, 1.11]**
Post-secondary 3 to 4 years	1.15 [1.13, 1.17]**
Post-secondary less than 3 years	0.97 [0.95, 0.99]*
Secondary less than 3 years	0.99 [0.97, 1.01]
Pre-secondary 9 or less schooling years	0.85 [0.84, 0.87]**
Unknown information	0.94 [0.92, 0.96]**
Region of residence (Ref: Large cities)	1.00
Metropolitan cities (Stockholm, Göteborg, and Malmö)	1.46 [1.44, 1.48]**
Commuter municipality near metropolitan cities	2.34 [2.31, 2.38]**
Commuter municipalities near large or small cities	1.71 [1.68, 1.74]**
Small cities and towns	1.54 [1.51, 1.57]**
Rural municipalities	1.65 [1.61, 1.69]**
Year of arrival in Sweden (Ref: <2010)	1.00
2010+	1.38 [1.36, 1.39]**

**P-value<0.01; *P-value<0.05

Table 4b. Logistic regression for factors associated with entry into first-time single-family homeownership for adult immigrants in their first year in Sweden.

	HR [95%CI]
Immigrant origin (Ref: Nordic 1G)	1.00
Western Europe 1G	1.37 [1.34, 1.41]**
Central and Eastern Europe 1G	0.70 [0.69, 0.72]**
Ex-Yugoslavia 1G	0.34 [0.33, 0.36]**
Poland 1G	0.71 [0.69, 0.73]**
Southern Europe 1G	0.60 [0.58, 0.63]**
USA, Canada, and Australia 1G	1.07 [1.03, 1.11]**
Latin America 1G	0.50 [0.49, 0.52]**
Turkey 1G	0.32 [0.31, 0.34]**
Iran 1G	0.42 [0.40, 0.44]**
Middle East and Northern Africa 1G	0.39 [0.38, 0.40]**
India 1G	0.27 [0.26, 0.29]**
East Asia 1G	0.48 [0.47, 0.50]**
South-East Asia 1G	1.01 [0.98, 1.04]
Sub-Saharan Africa 1G	0.22 [0.22, 0.23]**
Other 1G	0.26 [0.25, 0.28]**
Residence permit type at time of immigration into Sweden (Ref: Not a refugee immigrant)	1.00
Refugee/asylum seeker immigrant	0.35 [0.34, 0.35]**
Unknown information	0.84 [0.79, 0.90]**
Age of arrival in Sweden (Ref: 20-29 years)	1.00
18-19 years	0.99 [0.96, 1.02]
30-39 years	1.47 [1.45, 1.49]**
40-50 years	1.87 [1.84, 1.91]**
Sex (Ref: Male)	1.00
Female	1.12 [1.11, 1.13]**
Education (Ref: Secondary 3 years)	1.00
Post-secondary 5 or more years	0.89 [0.86, 0.93]**
Post-secondary 3 to 4 years	1.05 [1.02, 1.07]**
Post-secondary less than 3 years	0.99 [0.96, 1.01]
Secondary less than 3 years	0.98 [0.95, 1.01]
Pre-secondary 9 or less schooling years	0.87 [0.85, 0.90]**
Unknown information	0.93 [0.91, 0.95]**
Region of residence (Ref: Large cities)	1.00
Metropolitan cities (Stockholm, Göteborg, and Malmö)	0.52 [0.51, 0.53]**
Commuter municipality near metropolitan cities	2.15 [2.11, 2.19]**
Commuter municipalities near large or small cities	3.14 [3.08, 3.20]**
Small cities and towns	2.32 [2.26, 2.37]**
Rural municipalities	3.28 [3.19, 3.36]**
Year of arrival in Sweden (Ref: <2010)	1.00
2010+	1.29 [1.28, 1.31]**

**P-value<0.01; *P-value<0.05

Appendix

Table A1. Definition of immigrant groups according to countries of origin

Immigrant groups	Countries of origin
Nordic	Finland, Denmark, Iceland, Norway
Western Europe	UK, Ireland, Germany, Austria, Switzerland, France, Belgium, Netherlands, Luxemburg
North America and Oceania	USA, Canada, Australia, New Zealand
Central and Eastern Europe	Bulgaria, Romania, Czech Republic, Slovakia, Hungary, Estonia, Latvia, Lithuania, Russia, Ukraine, Moldova, Belarus, and also Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan
Ex-Yugoslavia	Yugoslavia, Croatia, Macedonia, Montenegro, Serbia, Slovenia, Bosnia and Herzegovina
Poland	Poland
Southern Europe	Andorra, Portugal, Spain, Greece, Cyprus, Italy, Malta
Latin America	Mexico, Guatemala, Honduras, Nicaragua, El Salvador, Costa Rica, Panama, Belize, Caribbean, Chile, Argentina, Bolivia, Brazil, Colombia, Ecuador, Guyana, Paraguay, Peru, Surinam, Uruguay, Venezuela, Brazil
Turkey	Turkey
Iran	Iran
Middle East and Northern Africa	Egypt, Algeria, Morocco, Libya, Tunisia, Lebanon, Syria, Iraq, and other Middle East (UAE, Bahrain, Yemen, Jordan, Kuwait, Oman, Palestine, Qatar, Saudi Arabia)
India	India
East Asia	China, Hong Kong, Japan, Korea, Singapore, Taiwan, Korea
South-East Asia	Brunei, Burma, Cambodia, Timor-Leste, Indonesia, Laos, Malaysia, Pacific Islands, Philippines, Vietnam, Thailand
Sub-Saharan Africa	Somalia, Djibouti, Eritrea, Ethiopia, Nigeria, Kenya, Ghana, Uganda, Zambia, Tanzania, and the rest of sub-Saharan Africa

Table A2. Definition of municipalities' classification into six regions

Region name	Definition
Metropolitan cities (Stockholm, Göteborg, and Malmö)	Municipalities with at least 200,000 inhabitants
Commuter municipality near metropolitan cities	Municipalities that have a commuting rate of over 40 percent to a metropolitan city or municipality close to metropolitan city
Large cities	Municipalities with more than 50,000 inhabitants and which have at least 40,000 and fewer than 200,000 inhabitants in the urban area that belong to the group
Commuter municipalities near large or small cities	Municipalities that have a commuting rate of 25 percent or more of the employed night population; It also includes municipalities that has its main commute to a different location than one of the larger cities or municipalities close to large cities, and municipalities that have a commute from another municipality that exceeds 30 percent of the daytime population
Small cities and towns	Municipalities where the largest urban area has at least 15,000 and less than 40,000 inhabitants
Rural municipalities	Rural municipalities with a large distance to a larger city and with a low commute. The number of inhabitants in the largest rural area is less than 15,000.

Table A3. Hazard ratios of entry into first-time apartment and single-family homeownership in Sweden (N=3,152,123 individuals).

	HR [95%CI]
Immigrant origin and generation (Ref: Native Swedes)	1.00
Nordic 1G	1.49 [1.47, 1.51]**
Western Europe 1G	1.26 [1.24, 1.27]**
Central and Eastern Europe 1G	0.77 [0.76, 0.77]**
Ex-Yugoslavia 1G	0.58 [0.58, 0.59]**
Poland 1G	0.67 [0.66, 0.68]**
Southern Europe 1G	0.92 [0.91, 0.94]**
North America and Oceania 1G	1.20 [1.18, 1.22]**
Latin America 1G	0.72 [0.71, 0.73]**
Turkey 1G	0.67 [0.65, 0.68]**
Iran 1G	0.65 [0.64, 0.66]**
Middle East and Northern Africa 1G	0.42 [0.42, 0.43]**
India 1G	0.49 [0.48, 0.50]**
East Asia 1G	0.69 [0.68, 0.70]**
South-East Asia 1G	1.23 [1.21, 1.24]**
Sub-Saharan Africa 1G	0.26 [0.25, 0.26]**
Other 1G	0.48 [0.47, 0.49]**
	0.89 [0.87, 0.92]**
Nordic 1.5G	
Western Europe 1.5G	0.88 [0.85, 0.91]**
Central and Eastern Europe 1.5G	0.66 [0.64, 0.68]**
Ex-Yugoslavia 1.5G	0.57 [0.56, 0.58]**
Poland 1.5G	0.65 [0.63, 0.68]**
Southern Europe 1.5G	0.64 [0.60, 0.69]**
North America and Oceania 1.5G	0.95 [0.89, 1.01]
Latin America 1.5G	0.69 [0.68, 0.70]**
Turkey 1.5G	0.56 [0.53, 0.58]**
Iran 1.5G	0.78 [0.76, 0.80]**
Middle East and Northern Africa 1.5G	0.56 [0.55, 0.57]**
India 1.5G	0.88 [0.85, 0.91]**
East Asia 1.5G	0.90 [0.87, 0.93]**
South-East Asia 1.5G	0.80 [0.78, 0.82]**
Sub-Saharan Africa 1.5G	0.35 [0.34, 0.36]**
Other 1.5G	0.79 [0.77, 0.81]**
	0.86 [0.84, 0.87]**
Nordic 2G	
Western Europe 2G	0.74 [0.69, 0.79]**
Central and Eastern Europe 2G	0.73 [0.7, 0.77]**
Ex-Yugoslavia 2G	0.63 [0.62, 0.65]**
Poland 2G	0.67 [0.65, 0.7]**
Southern Europe 2G	0.56 [0.53, 0.59]**
North America and Oceania 2G	0.66 [0.53, 0.82]**
Latin America 2G	0.50 [0.48, 0.52]**
Turkey 2G	0.59 [0.58, 0.61]**
Iran 2G	0.80 [0.77, 0.84]**
Middle East and Northern Africa 2G	0.55 [0.54, 0.57]**

India 2G	0.52 [0.48, 0.58]**
East Asia 2G	0.74 [0.68, 0.81]**
South-East Asia 2G	0.65 [0.61, 0.69]**
Sub-Saharan Africa 2G	0.31 [0.29, 0.33]**
Other 2G	0.41 [0.38, 0.45]**
	0.96 [0.95, 0.97]**
Nordic 2.5G	
Western Europe 2.5G	0.93 [0.91, 0.95]**
Central and Eastern Europe 2.5G	0.86 [0.83, 0.89]**
Ex-Yugoslavia 2.5G	0.81 [0.79, 0.84]**
Poland 2.5G	0.83 [0.80, 0.85]**
Southern Europe 2.5G	0.76 [0.74, 0.78]**
North America and Oceania 2.5G	0.92 [0.88, 0.95]**
Latin America 2.5G	0.75 [0.72, 0.77]**
Turkey 2.5G	0.72 [0.68, 0.76]**
Iran 2.5G	0.88 [0.83, 0.93]**
Middle East and Northern Africa 2.5G	0.73 [0.70, 0.76]**
India 2.5G	0.88 [0.80, 0.96]**
East Asia 2.5G	0.86 [0.81, 0.91]**
South-East Asia 2.5G	0.81 [0.77, 0.84]**
Sub-Saharan Africa 2.5G	0.67 [0.64, 0.70]**
Other 2.5G	0.81 [0.76, 0.86]**
Age at entry into study (Ref: 18 years)	1.00
19-29 years	0.90 [0.89, 0.91]**
30-39 years	1.29 [1.27, 1.30]**
40-50 years	2.73 [2.68, 2.78]**
Dummy for 1G immigrants in first year in Sweden (Ref: Not 1G immigrant in the first year in Sweden)	1.00
1G immigrant in the first year in Sweden	6.00 [5.96, 6.04]**
Sex (Ref: Male)	1.00
Female	1.27 [1.27, 1.28]**
Parity (Ref: Childless)	1.00
Childless and pregnant with 1st child	2.08 [2.07, 2.10]**
1 child	1.35 [1.34, 1.36]**
2 children	1.19 [1.18, 1.20]**
3 children	1.06 [1.04, 1.07]**
4 children	0.94 [0.92, 0.96]**
5+ children	0.86 [0.84, 0.89]**
Earnings (Ref: Moderate income)	1.00
Very low income	0.60 [0.60, 0.61]**
Low income	0.81 [0.81, 0.82]**
High income	1.23 [1.22, 1.24]**
Very high income	1.49 [1.48, 1.50]**
Student	0.53 [0.52, 0.53]**
Unemployed, receiving unemployment benefit	0.54 [0.53, 0.54]**
Not belonging to the above categories/unknown information	0.61 [0.61, 0.62]**
Education (Ref: Secondary 3 years)	1.00
Post-secondary 5 or more years	1.19 [1.17, 1.20]**
Post-secondary 3 to 4 years	1.26 [1.26, 1.27]**
Post-secondary less than 3 years	1.07 [1.06, 1.08]**

Secondary less than 3 years	0.90 [0.90, 0.91]**
Pre-secondary 9 or less schooling years	0.78 [0.78, 0.79]**
Unknown information	0.97 [0.96, 0.98]**
Marital status (Ref: Single)	1.00
Married	1.13 [1.12, 1.13]**
Registered partnership	1.28 [1.17, 1.40]**
Divorced	1.14 [1.12, 1.15]**
Widowed	1.05 [0.98, 1.13]
Unknow information	1.06 [1.00, 1.12]
Region of residence (Ref: Large cities)	1.00
Metropolitan cities (Stockholm, Göteborg, and Malmö)	1.21 [1.21, 1.22]**
Commuter municipality near metropolitan cities	1.35 [1.34, 1.36]**
Commuter municipalities near large or small cities	1.25 [1.25, 1.26]**
Small cities and towns	1.19 [1.18, 1.19]**
Rural municipalities	1.24 [1.23, 1.25]**
Year of entry into the study (Ref: 2000-2004)	1.00
<2000	0.97 [0.96, 0.97]**
2005-2009	1.02 [1.02, 1.02]**
2010+	1.15 [1.15, 1.16]**

**P-value<0.01; *P-value<0.05

Table A4. Hazard ratios of entry into first-time apartment and single-family homeownership, for adult immigrants to Sweden (N=903,027 1G immigrants).

	Model 1	Model 2
	HR [95%CI]	HR [95%CI]
Immigrant origin (Ref: Nordic 1G)	1.00	1.00
Western Europe 1G	0.87 [0.86, 0.88]**	0.84 [0.83, 0.85]**
Central and Eastern Europe 1G	0.51 [0.51, 0.52]**	0.49 [0.48, 0.5]**
Ex-Yugoslavia 1G	0.45 [0.44, 0.45]**	0.43 [0.42, 0.44]**
Poland 1G	0.43 [0.42, 0.43]**	0.41 [0.4, 0.42]**
Southern Europe 1G	0.60 [0.59, 0.61]**	0.58 [0.57, 0.59]**
North America and Oceania 1G	0.79 [0.78, 0.81]**	0.77 [0.75, 0.78]**
Latin America 1G	0.49 [0.48, 0.49]**	0.46 [0.45, 0.47]**
Turkey 1G	0.42 [0.41, 0.43]**	0.39 [0.38, 0.4]**
Iran 1G	0.46 [0.46, 0.47]**	0.43 [0.42, 0.44]**
Middle East and Northern Africa 1G	0.35 [0.34, 0.35]**	0.33 [0.33, 0.34]**
India 1G	0.34 [0.33, 0.34]**	0.33 [0.32, 0.33]**
East Asia 1G	0.45 [0.44, 0.45]**	0.43 [0.42, 0.44]**
South-East Asia 1G	0.77 [0.76, 0.78]**	0.73 [0.71, 0.74]**
Sub-Saharan Africa 1G	0.20 [0.19, 0.20]**	0.19 [0.18, 0.19]**
Other 1G	0.34 [0.33, 0.35]**	0.32 [0.32, 0.33]**
Time since immigration to Sweden (Ref: 2 years)	1.00	1.00
1 year	5.19 [5.13, 5.25]**	5.07 [5.01, 5.13]**
3 years	1.02 [1.00, 1.03]	1.00 [0.99, 1.02]
4 years	1.02 [1.00, 1.04]	0.98 [0.96, 1]*
5 years	1.05 [1.03, 1.07]**	0.98 [0.95, 1]*
6 years	1.11 [1.08, 1.13]**	0.98 [0.96, 1]
More than 6 years	1.44 [1.41, 1.47]**	1.18 [1.16, 1.21]**
Residence permit type at time of migration to Sweden (Ref: Not a refugee immigrant)	1.00	1.00
Refugee/asylum seeker immigrant	0.57 [0.56, 0.58]**	0.58 [0.58, 0.59]**
Unknown information	0.87 [0.84, 0.90]**	0.91 [0.88, 0.94]**
Swedish citizenship (Ref: Do not have Swedish citizenship)		1.00
Switched to Swedish citizenship		1.36 [1.34, 1.38]**
Had Swedish citizenship when arriving in Sweden		1.41 [1.35, 1.46]**
Unknown information		0.33 [0.32, 0.33]**
Age of arrival in Sweden (Ref: 20-29 years)	1.00	1.00
18-19 years	0.54 [0.52, 0.55]**	0.54 [0.53, 0.56]**
30-39 years	1.68 [1.65, 1.70]**	1.69 [1.66, 1.72]**
40-50 years	3.56 [3.46, 3.66]**	3.67 [3.56, 3.77]**
Sex (Ref: Male)	1.00	1.00
Female	1.14 [1.14, 1.15]**	1.13 [1.13, 1.14]**
Parity (Ref: Childless)	1.00	1.00
Childless and pregnant with 1st child	1.19 [1.17, 1.21]**	1.18 [1.16, 1.2]**
1 child	0.95 [0.94, 0.96]**	0.95 [0.94, 0.96]**
2 children	1.01 [1.00, 1.02]	1.00 [0.99, 1.01]
3 children	0.95 [0.93, 0.96]**	0.94 [0.92, 0.96]**

4 children	0.82 [0.79, 0.84]**	0.81 [0.79, 0.83]**
5+ children	0.75 [0.72, 0.78]**	0.74 [0.72, 0.77]**
Earnings (Ref: Moderate income)	1.00	1.00
Very low income	0.92 [0.91, 0.93]**	0.95 [0.94, 0.96]**
Low income	0.99 [0.98, 1.00]	1.00 [0.99, 1.02]
High income	1.11 [1.09, 1.13]**	1.11 [1.09, 1.12]**
Very high income	1.33 [1.31, 1.35]**	1.33 [1.31, 1.35]**
Student	0.65 [0.64, 0.66]**	0.64 [0.63, 0.65]**
Unemployed, receiving unemployment benefit	0.70 [0.69, 0.71]**	0.71 [0.69, 0.72]**
Not belonging to the above categories/unknown information	1.03 [1.02, 1.05]**	1.07 [1.06, 1.09]**
Education (Ref: Secondary 3 years)	1.00	1.00
Post-secondary 5 or more years	1.15 [1.13, 1.17]**	1.19 [1.17, 1.21]**
Post-secondary 3 to 4 years	1.16 [1.15, 1.17]**	1.17 [1.15, 1.18]**
Post-secondary less than 3 years	0.99 [0.98, 1.00]	0.99 [0.98, 1.01]
Secondary less than 3 years	0.99 [0.98, 1.01]	1.00 [0.99, 1.01]
Pre-secondary 9 or less schooling years	0.82 [0.81, 0.83]**	0.82 [0.81, 0.84]**
Unknown information	0.94 [0.93, 0.95]**	0.98 [0.97, 0.99]**
Marital status (Ref: Single)	1.00	1.00
Married	1.07 [1.06, 1.08]**	1.06 [1.06, 1.07]**
Registered partnership	1.18 [1.06, 1.31]**	1.16 [1.04, 1.28]*
Divorced	1.14 [1.12, 1.15]**	1.13 [1.11, 1.14]**
Widowed	1.03 [0.95, 1.11]	1.01 [0.94, 1.09]
Unknow information	1.01 [0.95, 1.07]	1.01 [0.95, 1.07]
Region of residence (Ref: Large cities)	1.00	1.00
Metropolitan cities (Stockholm, Göteborg, and Malmö)	1.31 [1.30, 1.33]**	1.31 [1.30, 1.33]**
Commuter municipality near metropolitan cities	2.14 [2.11, 2.16]**	2.13 [2.11, 2.15]**
Commuter municipalities near large or small cities	1.77 [1.75, 1.79]**	1.78 [1.77, 1.8]**
Small cities and towns	1.51 [1.49, 1.53]**	1.52 [1.50, 1.54]**
Rural municipalities	1.73 [1.71, 1.76]**	1.75 [1.72, 1.77]**
Year of arrival in Sweden (Ref: <2010)	1.00	1.00
2010+	1.41 [1.40, 1.42]**	1.42 [1.41, 1.43]**

**P-value<0.01; *P-value<0.05

Table A5. Hazard ratios of entry into first-time single-family homeownership in Sweden (N=3,152,123 individuals).

	HR [95%CI]
Immigrant origin and generation (Ref: Native Swedes)	1.00
Nordic 1G	1.28 [1.26, 1.30]**
Western Europe 1G	1.53 [1.51, 1.55]**
Central and Eastern Europe 1G	0.68 [0.67, 0.69]**
Ex-Yugoslavia 1G	0.34 [0.33, 0.35]**
Poland 1G	0.71 [0.70, 0.72]**
Southern Europe 1G	0.80 [0.78, 0.82]**
North America and Oceania 1G	1.30 [1.27, 1.33]**
Latin America 1G	0.56 [0.54, 0.57]**
Turkey 1G	0.37 [0.36, 0.38]**
Iran 1G	0.47 [0.45, 0.48]**
Middle East and Northern Africa 1G	0.32 [0.32, 0.33]**
India 1G	0.34 [0.32, 0.35]**
East Asia 1G	0.57 [0.56, 0.59]**
South-East Asia 1G	0.94 [0.92, 0.95]**
Sub-Saharan Africa 1G	0.17 [0.17, 0.18]**
Other 1G	0.27 [0.27, 0.28]**
Nordic 1.5G	0.83 [0.8, 0.87]**
Western Europe 1.5G	0.92 [0.87, 0.96]**
Central and Eastern Europe 1.5G	0.59 [0.57, 0.62]**
Ex-Yugoslavia 1.5G	0.37 [0.36, 0.38]**
Poland 1.5G	0.66 [0.63, 0.70]**
Southern Europe 1.5G	0.63 [0.57, 0.70]**
North America and Oceania 1.5G	1.06 [0.98, 1.16]
Latin America 1.5G	0.48 [0.46, 0.49]**
Turkey 1.5G	0.45 [0.42, 0.47]**
Iran 1.5G	0.57 [0.54, 0.59]**
Middle East and Northern Africa 1.5G	0.53 [0.51, 0.54]**
India 1.5G	0.70 [0.67, 0.74]**
East Asia 1.5G	0.61 [0.58, 0.65]**
South-East Asia 1.5G	0.63 [0.61, 0.66]**
Sub-Saharan Africa 1.5G	0.34 [0.32, 0.35]**
Other 1.5G	0.69 [0.66, 0.72]**
Nordic 2G	0.75 [0.73, 0.76]**
Western Europe 2G	0.69 [0.63, 0.75]**
Central and Eastern Europe 2G	0.69 [0.64, 0.74]**
Ex-Yugoslavia 2G	0.58 [0.55, 0.6]**
Poland 2G	0.62 [0.59, 0.66]**
Southern Europe 2G	0.47 [0.43, 0.51]**
North America and Oceania 2G	0.48 [0.33, 0.7]**
Latin America 2G	0.36 [0.33, 0.39]**
Turkey 2G	0.53 [0.51, 0.56]**
Iran 2G	0.50 [0.45, 0.55]**
Middle East and Northern Africa 2G	0.54 [0.51, 0.56]**

India 2G	0.41 [0.34, 0.49]**
East Asia 2G	0.38 [0.31, 0.46]**
South-East Asia 2G	0.55 [0.50, 0.61]**
Sub-Saharan Africa 2G	0.30 [0.26, 0.34]**
Other 2G	0.34 [0.29, 0.39]**
Nordic 2.5G	0.89 [0.88, 0.90]**
Western Europe 2.5G	0.93 [0.90, 0.95]**
Central and Eastern Europe 2.5G	0.88 [0.85, 0.92]**
Ex-Yugoslavia 2.5G	0.85 [0.81, 0.88]**
Poland 2.5G	0.83 [0.80, 0.87]**
Southern Europe 2.5G	0.71 [0.68, 0.74]**
North America and Oceania 2.5G	0.87 [0.82, 0.92]**
Latin America 2.5G	0.71 [0.68, 0.75]**
Turkey 2.5G	0.63 [0.58, 0.69]**
Iran 2.5G	0.76 [0.69, 0.83]**
Middle East and Northern Africa 2.5G	0.70 [0.66, 0.74]**
India 2.5G	0.81 [0.71, 0.93]**
East Asia 2.5G	0.66 [0.59, 0.73]**
South-East Asia 2.5G	0.78 [0.73, 0.83]**
Sub-Saharan Africa 2.5G	0.66 [0.61, 0.71]**
Other 2.5G	0.73 [0.66, 0.80]**
Age at entry into study (Ref: 18 years)	1.00
19-29 years	0.88 [0.88, 0.89]**
30-39 years	0.83 [0.82, 0.84]**
40-50 years	1.59 [1.56, 1.63]**
Dummy for 1G immigrants in first year in Sweden (Ref: Not 1G immigrant in the first year in Sweden)	1.00
1G immigrant in the first year in Sweden	6.20 [6.14, 6.26]**
Sex (Ref: Male)	1.00
Female	1.32 [1.31, 1.33]**
Parity (Ref: Childless)	1.00
Childless and pregnant with 1st child	3.25 [3.23, 3.28]**
1 child	2.45 [2.43, 2.46]**
2 children	2.26 [2.24, 2.28]**
3 children	1.89 [1.87, 1.92]**
4 children	1.64 [1.60, 1.69]**
5+ children	1.45 [1.40, 1.51]**
Earnings (Ref: Moderate income)	1.00
Very low income	0.66 [0.66, 0.67]**
Low income	0.83 [0.82, 0.84]**
High income	1.20 [1.19, 1.21]**
Very high income	1.49 [1.47, 1.50]**
Student	0.49 [0.49, 0.49]**
Unemployed, receiving unemployment benefit	0.57 [0.56, 0.58]**
Not belonging to the above categories/unknown information	0.69 [0.68, 0.69]**
Education (Ref: Secondary 3 years)	1.00
Post-secondary 5 or more years	1.00 [0.99, 1.02]
Post-secondary 3 to 4 years	1.17 [1.17, 1.18]**
Post-secondary less than 3 years	1.02 [1.01, 1.02]**

Secondary less than 3 years	0.87 [0.86, 0.88]**
Pre-secondary 9 or less schooling years	0.80 [0.80, 0.81]**
Unknown information	1.03 [1.02, 1.04]**
Marital status (Ref: Single)	1.00
Married	1.25 [1.24, 1.26]**
Registered partnership	1.40 [1.25, 1.56]**
Divorced	1.04 [1.02, 1.05]**
Widowed	0.92 [0.84, 1.00]
Unknow information	0.98 [0.91, 1.06]
Region of residence (Ref: Large cities)	1.00
Metropolitan cities (Stockholm, Göteborg, and Malmö)	0.34 [0.33, 0.34]**
Commuter municipality near metropolitan cities	1.51 [1.50, 1.52]**
Commuter municipalities near large or small cities	2.64 [2.62, 2.65]**
Small cities and towns	1.90 [1.89, 1.91]**
Rural municipalities	2.72 [2.70, 2.74]**
Year of entry into the study (Ref: 2000-2004)	1.00
<2000	1.03 [1.02, 1.03]**
2005-2009	0.97 [0.97, 0.98]**
2010+	1.11 [1.10, 1.12]**

**P-value<0.01; *P-value<0.05

Table A6. Hazard ratios of entry into first-time single-family homeownership, for adult immigrants to Sweden (N=903,027 1G immigrants).

	Model 1	Model 2
	HR [95%CI]	HR [95%CI]
Immigrant origin (Ref: Nordic 1G)	1.00	1.00
Western Europe 1G	1.24 [1.22, 1.26]**	1.20 [1.18, 1.22]**
Central and Eastern Europe 1G	0.63 [0.62, 0.64]**	0.59 [0.58, 0.60]**
Ex-Yugoslavia 1G	0.39 [0.38, 0.39]**	0.36 [0.36, 0.37]**
Poland 1G	0.62 [0.61, 0.63]**	0.60 [0.58, 0.61]**
Southern Europe 1G	0.61 [0.59, 0.63]**	0.58 [0.57, 0.60]**
North America and Oceania 1G	1.00 [0.97, 1.02]	0.96 [0.94, 0.98]**
Latin America 1G	0.49 [0.48, 0.50]**	0.46 [0.45, 0.47]**
Turkey 1G	0.32 [0.31, 0.33]**	0.30 [0.29, 0.31]**
Iran 1G	0.46 [0.45, 0.48]**	0.42 [0.41, 0.44]**
Middle East and Northern Africa 1G	0.39 [0.38, 0.40]**	0.37 [0.36, 0.38]**
India 1G	0.30 [0.29, 0.31]**	0.29 [0.27, 0.30]**
East Asia 1G	0.46 [0.45, 0.48]**	0.44 [0.43, 0.46]**
South-East Asia 1G	0.83 [0.81, 0.84]**	0.77 [0.75, 0.78]**
Sub-Saharan Africa 1G	0.20 [0.19, 0.20]**	0.18 [0.18, 0.19]**
Other 1G	0.28 [0.27, 0.28]**	0.26 [0.25, 0.27]**
Time since immigration to Sweden (Ref: 2 years)	1.00	1.00
1 year	4.97 [4.89, 5.05]**	4.86 [4.78, 4.94]**
3 years	0.99 [0.96, 1.01]	0.98 [0.95, 1.00]*
4 years	0.99 [0.97, 1.02]	0.95 [0.93, 0.97]**
5 years	1.06 [1.04, 1.09]**	0.98 [0.95, 1.00]
6 years	1.14 [1.10, 1.17]**	0.99 [0.96, 1.02]
More than 6 years	1.53 [1.50, 1.57]**	1.23 [1.20, 1.27]**
Residence permit type at time of migration to Sweden (Ref: Not a refugee immigrant)	1.00	1.00
Refugee/asylum seeker immigrant	0.50 [0.49, 0.51]**	0.51 [0.50, 0.52]**
Unknown information	0.85 [0.81, 0.90]**	0.89 [0.85, 0.94]**
Swedish citizenship (Ref: Do not have Swedish citizenship)		1.00
Switched into Swedish citizenship		1.44 [1.41, 1.47]**
Had Swedish citizenship when arriving in Sweden		1.32 [1.25, 1.40]**
Unknown information		0.32 [0.31, 0.33]**
Age of arrival in Sweden (Ref: 20-29 years)	1.00	1.00
18-19 years	0.63 [0.60, 0.65]**	0.62 [0.6, 0.65]**
30-39 years	1.35 [1.33, 1.38]**	1.37 [1.35, 1.4]**
40-50 years	2.80 [2.70, 2.90]**	2.90 [2.8, 3.01]**
Sex (Ref: Male)	1.00	1.00
Female	1.07 [1.06, 1.08]**	1.06 [1.05, 1.07]**
Parity (Ref: Childless)	1.00	1.00
Childless and pregnant with 1st child	1.24 [1.21, 1.26]**	1.23 [1.20, 1.25]**
1 child	1.17 [1.16, 1.19]**	1.17 [1.16, 1.18]**
2 children	1.44 [1.42, 1.46]**	1.43 [1.41, 1.45]**
3 children	1.44 [1.42, 1.47]**	1.43 [1.41, 1.46]**

4 children	1.24 [1.20, 1.29]**	1.24 [1.20, 1.28]**
5+ children	1.11 [1.06, 1.16]**	1.10 [1.05, 1.15]**
Earnings (Ref: Moderate income)	1.00	1.00
Very low income	0.95 [0.94, 0.97]**	0.99 [0.97, 1.01]
Low income	1.01 [0.99, 1.03]	1.02 [1.00, 1.04]*
High income	1.05 [1.03, 1.07]**	1.04 [1.02, 1.07]**
Very high income	1.18 [1.15, 1.20]**	1.18 [1.16, 1.2]**
Student	0.64 [0.62, 0.65]**	0.63 [0.61, 0.65]**
Unemployed, receiving unemployment benefit	0.67 [0.66, 0.69]**	0.68 [0.66, 0.70]**
Not belonging to the above categories/unknown information	1.08 [1.07, 1.10]**	1.13 [1.12, 1.15]**
Education (Ref: Secondary 3 years)	1.00	1.00
Post-secondary 5 or more years	1.04 [1.01, 1.06]**	1.07 [1.05, 1.10]**
Post-secondary 3 to 4 years	1.12 [1.10, 1.14]**	1.13 [1.11, 1.15]**
Post-secondary less than 3 years	1.01 [0.99, 1.02]	1.01 [0.99, 1.03]
Secondary less than 3 years	0.97 [0.96, 0.99]*	0.98 [0.96, 1.00]*
Pre-secondary 9 or less schooling years	0.80 [0.79, 0.82]**	0.81 [0.79, 0.82]**
Unknown information	0.95 [0.94, 0.97]**	0.99 [0.97, 1.01]
Marital status (Ref: Single)	1.00	1.00
Married	1.08 [1.07, 1.09]**	1.07 [1.06, 1.08]**
Registered partnership	1.06 [0.91, 1.23]	1.03 [0.89, 1.19]
Divorced	1.05 [1.04, 1.07]**	1.04 [1.02, 1.06]**
Widowed	0.88 [0.80, 0.98]*	0.87 [0.79, 0.97]*
Unknow information	0.95 [0.88, 1.03]	0.95 [0.88, 1.03]
Region of residence (Ref: Large cities)	1.00	1.00
Metropolitan cities (Stockholm, Göteborg, and Malmö)	0.48 [0.47, 0.49]**	0.48 [0.47, 0.49]**
Commuter municipality near metropolitan cities	1.87 [1.84, 1.89]**	1.87 [1.85, 1.89]**
Commuter municipalities near large or small cities	3.03 [2.99, 3.07]**	3.06 [3.02, 3.10]**
Small cities and towns	2.20 [2.17, 2.24]**	2.21 [2.17, 2.24]**
Rural municipalities	3.16 [3.11, 3.22]**	3.18 [3.13, 3.24]**
Year of arrival in Sweden (Ref: <2010)	1.00	1.00
2010+	1.32 [1.30, 1.33]**	1.32 [1.31, 1.34]**

**P-value<0.01; *P-value<0.05

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