

Abstract

Housing security is widely recognized as an indicator of social inclusion. However, there is limited understanding regarding how immigrants navigate the housing market based on their legal entry type. This study examines residential mobility and home ownership in conjunction among immigrants who entered Germany through different legal pathways. Using the German Socio-Economic Panel (GSOEP), we constructed housing trajectories for individuals aged 20 to 49 between the years 2000 to 2021 by residential mobility and tenure type. We focus on three refugee groups: those from Syria, Afghanistan, and Iraq, compared to EU immigrants, ethnic German immigrants, and other non-EU immigrants. Using discrete-time event history models, we analyze the likelihood of individuals experiencing residential moves. Refugee groups experience elevated spatial mobility in the first years since arrival compared to other immigrant groups; after five years their mobility resembles that of the other groups, especially once socio-economic conditions are considered. Refugees and ethnic German immigrants are more likely to move to government housing compared to other groups. This research contributes to the existing literature by highlighting how the legal pathway into a country can shape individuals' intentions to stay and their subsequent opportunities, including the possibility of long-term investments such as purchasing a home. Additionally, the higher levels of mobility observed among refugees, coupled with their lower rates of home ownership, suggest heightened residential instability and increased social exclusion.

Introduction

Housing is a significant pillar of well-being which encompasses equitable living conditions, supportive economic opportunities, and a sense of belonging. It is also one of the lesser studied aspects of immigrant social outcome, although there is a large literature on ethnic residential segregation, which often also discusses housing patterns (Andersson 1998). Immigrants' income, labor market integration, and well-being in the destination country are extensively explored in the social science literature (e.g., Basilio et al., 2017; Brell et al., 2020; Moreno-Galbis, 2019; Nyqvist et al., 2013; Sand & Gruber, 2018). Full access to equivalent opportunities compared to non-immigrant individuals in the destination country are broadly defined as "integration." Immigrants' access to similar quality of housing as their non-immigrant counterparts is little known, especially how housing trajectories evolve over migrants' lives, despite housing being fundamental to human security, in combination with income. In countries that recently experienced significant influx of asylum seekers and refugees (for the sake of simplicity, we call them refugees in this study), such as Germany, the evolution of their housing conditions compared to their predecessors who arrived under different circumstances, are little understood.

Previous research on residential mobility heavily emphasized the life course approach. This approach considers residential moves as part of interlinking life events, such as the birth of a child, conjugal union formation, and separation (Mulder & Hooimeijer, 1999). Within this framework, individual life cycles share space temporarily or indefinitely in conjunction with other processes, or "careers," such as education and employment. Among immigrants, however, the alignment of their housing preferences and their actual housing career can be obstructed by legal or social barriers in accessing both the private rental and ownership market (Mazziotta et al., 2015; Sawert, 2020). As a result, immigrants' residential mobility is shaped by similar catalysts as natives but often faces additional constraints.

Individuals' moves are often marked by a change in tenure type, such as from private rental to homeownership, or vice versa. The rate of residential mobility and the prevalence of homeownership varies across countries (Bayrakdar et al., 2019; Clark et al., 1997), but the examination of the immigrant and native gap in ownership can shed light on economic inequalities and social integration of

immigrants (Sinning, 2010), especially for those who arrived in the least favorable conditions: asylum seekers or refugees.

The issues of stay intention and the prospects of stay pertaining to immigrants' housing decisions are far lesser discussed in the literature. Stay intention is often shaped by the circumstances under which individuals migrated, and prospects of longer-term stays are directly influenced by one's legal pathway of entry. Refugees not only experience more government restrictions in their movement and settlement, but they also face additional hurdles in realizing their housing preferences. The instability of their condition and uncertainty of their return further complicate their housing situation compared to family or economic migrants. These factors and changes in their legal status are likely to lead to significant changes in their residential mobility and housing patterns over time.

In general, substantial home ownership gap exists between immigrant and native populations in high-income countries including Germany (Ihle & Siebert-Meyerhoff, 2019; Sinning, 2010). With the growth of refugee population in Europe, the examination of this significant population is imperative in reconceptualizing housing trajectory of non-native population in high income countries. Previous work highlighted the importance of considering whether the move entails an improvement of living conditions (Clark & Drever, 2001). Frequent relocations without establishing housing tenure can imply instability rather than improvement. Thus, it is vital to combine the two often separated concepts into one by examining whether individuals move to stable housing upon a residential move. Germany offers an excellent case to study residential mobility and home ownership trajectories among refugees. First, the country hosts a large refugee population from recent years allowing the study of experiences and patterns among recent refugees. Second, it offers high quality panel data, which also includes a boost sample of recent refugee populations from Syria and Afghanistan.

We analyze the housing trajectories of individuals aged 20 to 49 between the years 2000 to 2021 using the most recent German Socio-Economic Panel (GSOEP v38), with emphasis on four types of individuals by pathway of entry into Germany: EU immigrants, ethnic Germans, non-EU immigrants (also often referred to as third-country nationals), and refugees, further broken down into those from Syria, Iraq, or Afghanistan. Using partnership, birth, and employment biographies, we consider time-varying partnership, parental, and employment statuses at the time of residential moves. We examine three types of housing transitions: moving into government housing, moving into a private rental, and moving into an owned home. This is the first study to simultaneously investigate the residential mobility and housing tenure among refugees from a dynamic perspective. In particular, it offers a unique perspective by juxtaposing the experiences of refugees against those of more established immigrant categories like EU immigrants and economic labor migrants, who entered the country during preceding periods. This work illuminates the role legal status plays in immigrants' housing career, a foundational aspect of integration and security.

Background

Pathways into Germany

Germany has long been one of the most prominent migrant receivers in Europe since after World War II, starting with the arrival of political refugees from Central and Eastern Europe in the 1950s. Historically, ethnic Germans have been dispersed in many Central and Eastern European countries due to colonization, migration, and border changes. The first waves of ethnic Germans arrived to Germany from Romania and Poland between 1950 and mid-1980s, and the second wave brought individuals from the former Soviet Union in the late 1980s and early 1990s (Rock & Wolff, 2002). Immigrants with German family background were given a shortcut toward German citizenship compared to other immigrant groups, creating a favorable integration pathway. The ethnic German population tends to be concentrated primarily in Lower Saxony, North Rhine Westphalia, Baden Württemberg and Bavaria (Rock & Wolff, 2002).

After World War II, economic upturn led to the German government forming bilateral agreements with countries such as Spain, Italy, and Turkey which supplied unskilled labor migrants, commonly referred to as *Gastarbeiter* (guest workers) to compensate for Germany's labor shortage in its effort to rebuild the country. From the mid-1990s onward, citizens of countries that have joined the European Union have been entitled to free movement and indefinite stay in Germany. EU-enlargement saw large scales of east-to-west movement from countries such as Romania, Poland, and Bulgaria to Germany (Anghel et al., 2017).

Around 2015, Germany began to receive the largest numbers of refugees in Europe following the outbreak of the Syrian War (Dumont et al., 2016). Compared to non-migrants in their respective countries, refugees from Iraq and Syria have been found to be more educated on average (Guichard, 2020), but less educated compared to native Germans (Worbs & Baraulina, 2017). Although refugees and ethnic Germans often have arrived in Germany with a shared goal of avoiding political persecution, circumstances for migrants without German ancestry differ substantially. Recent legal restrictions placed on refugees prohibited their immediate access to the labor market (Salikutluk et al., 2016; Dustmann et al., 2017) and private and/or higher quality housing (Al Masri et al., 2021). In combination with the non-voluntary nature of their movement compounded by the experience of the psychological trauma of violence and upheaval, literature has point to the particularly vulnerable situations of refugees among all immigrant groups (Adam et al., 2021; Baier et al., 2020; Cortes, 2004; Dustmann et al., 2017; Salikutluk et al., 2016).

Legal entry pathway and housing

Depending on immigrants' mode of entry, government-sponsored housing might be immediately available to them or even compulsory. In contrast, the private rental market requires more navigation. Immigrants often enter the destination country with limited access to social capital (Bourdieu, 1986) or potential links to access resources, one of which may be housing. Furthermore, ethnic minorities often face discrimination in the private rental market (Ghekiere et al., 2022; Ghekiere & Verhaeghe, 2022). This may work for or against mobility, with inadequate housing leading to frequent moves, while difficulty in accessing better housing might entice one to stay put.

Immigrants who arrived in Germany as refugees face several housing restrictions, though specificities vary across federal states. In general, refugees are first obliged to stay at an initial reception center (also known as arrival center) up to 24 months during legal proceedings upon their entrance (AIDA, 2023). During asylum proceedings, immigrants are not allowed to leave their residential district, after which the distribution of refugee immigrants follow a quota system which is calculated based on tax revenues and the number of inhabitants by federal states (Schmid & Kück, 2017). Each state has its own Reception Act, or laws that govern the management of the inflow refugees (ibid). Refugees are required to move to a collective or communal accommodation center, known as the *Gemeinschaftsunterkünfte* (GU) before being allowed to freely move to private accommodations once asylum is granted (Weidinger & Kordel, 2023). As a result, most refugees spend more time shuffling between government-sponsored housing before settling in a more permanent situation compared to other groups. In theory, after initial periods of frequent moves facilitated by the German government, refugees may explore private housing markets which may better accommodate their desired arrangement.

Upward, downward, or lateral move

For all individuals, regardless of migration status, a desire for a residential move occurs when there is a mismatch between one's current housing situation and one's preferences. One's preference can be shaped by demographic events, such as conjugal union formation (Clark & Huang, 2003), separation (Ferrari et al., 2019; Mikolai & Kulu, 2019), birth of a child (Clark & Huang, 2003; Kulu, 2008; Mikolai et al., 2020), empty nest (Wulff et al., 2010), widowhood (Egsgaard, 2022), or employment changes (including retirement) (Clark & Davies Withers, 1999; Ermisch & Jenkins, 1999). It can also be a

function of lifestyle choices, with a move to a better property indicating an upward move, a move to a smaller property indicating austerity, or a move from private rental toward ownership suggesting a desire for permanence (Dupuis & Thorns, 1998).

Desires, however, are not shaped in an individual-level or household-level vacuum. The realization of the desires are further subject to social conditions such as the housing stock, interest rates, norms pertaining to ownership, and for non-majority individuals, ease into accessing an often discriminatory housing market (Mazziotta et al., 2015; Sawert, 2020). It is thus arguable that true integration is not a measure of equal outcomes among majority and minority groups, but the full removal of all barriers that lead to differential levels of realization of preferences. The relationship between desire and realization for immigrants is particularly difficult to disentangle.

The complexity in studying immigrants' intention to own a home stems from the fact that the desire to settle in the destination country varies among transitional individuals. While some may aspire to eventually own a home, others envision doing so in their country of origin, albeit in the distant future (Owusu, 1998). Consequently, renting becomes a temporary strategy in the destination country as part of their long-term plan to return to their home country. Understanding the connection between the intention to stay and home ownership is further complicated by the narrative of legal entry, as some pathways are significantly closer linked to the possibility of long-term residency.

Immigrants, like natives, are subject to macroeconomic conditions such as mortgage interest rate and the housing market, when it comes to home ownership. However, immigrants often face additional barriers in accessing lending, such as being charged a higher interest rate (Diaz-Serrano & Raya, 2014) and possibly other discriminatory practices such as being less responsive to requests for information (Hanson et al., 2016). Although many studies are evidenced on phenotypical or name-based discrimination, little is known about how legal entry type might be associated with bank agent's perception of one's eligibility for a loan, though both EU nationals' and Ethnic Germans' fast track access to citizenship tend to open doors that are less likely to crack open for third country nationals and refugees.

In contrast to the extensive exploration of immigrants' health, economic prospects, and educational trajectories, the study of housing dynamics among immigrants has received less attention. There is a large tradition of research on ethnic residential segregation, which, however, often uses ecological and cross-sectional data (Andersson 1998). This phenomenon may stem from the perception that housing predominantly aligns with private market forces, potentially overshadowing its reflection of the social welfare system of the destination country (Torgersen, 1987). German housing is marked by low ownership compared to countries such as the United Kingdom or France (citation). Its rental market is integrated with both private and non-profit sectors, of which non-profit element is comparatively weak at 20-25%, limiting its influence on housing standards and tenure protection, compared to countries as such as the Netherlands where non-profit sector dominates (Kemeny, 2006).

Data & Methods

The German Socio-Economic Panel (GSOEP) is a representative, longitudinal household survey that spans from 1984 to the present day. The panel design is suitable for social science research pertaining to housing, family, and employment and carries frequent oversampling of populations of interest such as immigrants. Most recently, the Institute for Employment Research (IAB) and the Research Centre on Migration, Integration, and Asylum of the Federal Office of Migration and Refugees (BAMF-FZ) worked with GSOEP to survey refugees and asylum seekers that entered Germany following the 2015 Syrian Refugee Crisis to facilitate research of vulnerable individuals' acclimation process in Germany. Although asylum seeker and refugee often refer to two distinct types of forced migrants (Phillips, 2006), they are not differentiated in GSOEP data. Biography files within GSOEP hold prospective and retrospective data on individuals' partnership, birth, and employment history, facilitating life course research for immigrants who have spent much of their life outside of Germany. We focus on observations between 2000 to 2021 of individuals aged 20 to 49. The restrictions allow us to highlight

the housing trajectories of refugee immigrants in their prime partnership and employment years, both of which influence their housing trajectories.

We aim to uncover group differences in two outcomes: mobility and tenure changes. Mobility encapsulates residential moves, while tenure changes unveil the nature of the move, e.g., from private rental to another private rental, or to government housing, or to homeownership. The analyses for the two outcomes are shown separately, focusing on immigrants of different legal entry pathways compared to non-immigrants. We distinguish two periods post arrival—less than five years or five years or more. This category is time-varying for individuals.

We additionally created several time-varying covariates: partnership, parenthood, work status, and home ownership level by federal state. Research has shown that partnered individuals are less likely to move than single individuals, and separation promotes residential moves as partners go their separate ways (Kulu et al., 2021). Furthermore, exogamous union between an immigrant and a non-immigrant may deter moves, through mechanisms such as native partner providing access to better housing which requires little upgrading. For our analyses, we create time-varying partnership status which can be single, partnered with a native (German-born), partnered with a foreigner (non-German-born), and separated or widowed, and unknown. Birth of children are known to promote moves, as families need bigger space or new configuration for new members of the family (Mikolai et al., 2020). We constructed a parity variable to account for individuals having no children, one child, or two or more children. We also expect that individuals might adjust their housing situation in the event of job acquisition or job loss (Clark & Davies Withers, 1999). Employment is thus categorized as employed (part- or full-time), unemployed, inactive (e.g., student, homemaker, apprentice) in our study. Due to the number of missing episodes on employment (30%) we model missing employment as a separate outcome rather than impute or delete rows with missing values. Individuals' propensity to own a dwelling is plausibly linked to the housing market on the state-level. At the same time, immigrants are likely to live in larger cities, where access to ownership is more difficult. Using the owner-occupancy rate provided by the Statistical Office of Germany (Destatis, 2023), we controlled for the local housing market ownership rate by ranking percentage of ownership by tertile: low, medium, and high ownership, e.g., with Saarland ranked as high at 60%, and Berlin as low at 16%.

The classification of individuals' educational attainment is determined based on the variables established by the International Standard Classification of Education in 1997 and 2011. To simplify the educational categories, we have divided them into low, medium, and high groups, following the guidelines provided by Eurostat. (Eurostat, 2020). Roughly 5% of cases are missing information on education (over 99% of these cases consist of natives). They are imputed as having medium level of education. We control for important demographic variables such as age and birth cohort. Age groups are created in five-year intervals from 20 to 49 (e.g., 20-24, 25-29, and so on). We additionally account for birth cohorts, which are divided into three categories: those born between 1951-1974, 1975-1989, and 1990 or more recent. In our preliminary analyses, we separated the sample by gender to observe whether male and female immigrants experience different housing trajectories. Their patterns are almost identical, because housing information is organized on the household level, and individuals in our sample share households. Therefore, we do not to separate nor control for the sex of the individuals in our models.

In our analyses, we consider the fact that immigrants are geographically distributed differently from non-immigrants with immigrants more likely to live in urban areas (Schönwälder & Söhn, 2009) where mobility tends to be higher while homeownership lower. Using percentages provided by the German Federal Statistical Office (Destatis), we grouped individuals federal state of residence by home ownership percentage into tertiles: low, medium, high, as shown in Table 2. In Berlin, where only 16% of individuals live in owned home, home ownership of the area is considered “low” whereas Thuringia is “medium” at 42%, and Saarland “high” at 60%. The variable then allows us to control for the time-varying geographic location of the individual in relation to their mobility and tenure type.

For our regression models, we use discrete time competing risks regression models under the event history analysis framework. Using annual data, we first estimate the probability of individuals moving or not moving (binomial) and then moving to a private rental, government housing, or home ownership (multinomial). Individuals are considered under moving risk every year they are observed in the GSOEP. Our modelling strategy for the binary outcome, move or no move, allowed for the inclusion of a wide range of covariates. But due to the demanding nature of competing risks analysis, we limited parameters for types of moves, focusing on only age, migration background, birth cohort, and average home ownership of the lander of the individual to account for differential geographic distribution among immigrants and non-immigrants, which tend to have distinct housing markets. Results are shown in average marginal effects (AME) for ease of interpretation. Data preparation and visualization were performed in R version 4.3.0. Statistical analyses were conducted in STATA version 16.1.

Results

We begin by first describing our sample. Table 1 shows the sample description in person-years, number of moves observed between 2000-2021, and the rate of move by migration background and by demographic, social, family, and economic characteristics. The native, non-immigrant, population dominates the sample, but due to GSOEP's oversampling design and recent refugee boosts, we are able to divide the immigrants by duration in Germany (fewer than three years, or three years or longer).

In Figure 1, we show the distribution of immigrant type by year of immigration by persons on the left panel, and immigrant type by year of observation by person-years on the right panel. The color-filled area represents 100% of the sample population (persons) in each group. It is important to bear in mind that the sample is stratified by those observed within the year 2000 to 2021 window, so this does not represent the full sample of GSOEP. The left panel shows that compared to third country nationals and Ethnic Germans, a large proportion of EU immigrants and refugees were included more recently in the sample. Opposed to the twin-peaks displayed by the EU-immigrants, refugees' single-peak around 2015 shows that this group's arrival was crisis-driven because of the Syrian War. On the right panel, the area under the curves shows 100% of the sample person-years in groups by years. This picture largely corresponds to the left, with Ethnic Germans in general observed for longer periods, while higher proportion of the other groups observed in fewer, and more recent years. Due to our inclusion of non-immigrants in our model, we do not control for year of arrival in our models, but through our descriptive analyses, we observe that groups generally arrive in waves and migration background broadly accounts for the period of arrival.

Next, we show the average marginal effects (AME) of our discrete-time survival models. In Figure 2, we show the annual probability of experiencing a residential move by migration background. The outcome is binary (move or no move). The probability of a move is compared to that of a non-immigrant native, shown in the gray dot on the dotted line. When immigrants have lived in Germany for five or more years they are depicted in dark blue, while when they have lived in Germany for less than five years in light blue. The three panels of the coefficient plots depict three separate models. All models account for migration background, age group, birth cohort, and whether one has experienced a move within the observation window ("history of move"). The middle panel shows Model 2 which additionally considers socio-economic (SES) characteristics of individuals, namely education and employment. The right panel shows Model 3 which on top of SES, also includes time-varying partnership and parenthood status of individuals.

In all models, refugee groups stand out as having different patterns of mobility than all other groups, with higher than native level of mobility, but their duration of stay plays a stabilizing role. In the first five years of move, both EU and non-EU migrants are less likely to move than natives, but Syrian, Afghan, and Iraqi refugees are far more likely to move. This is expected due to refugee settlement policies. Once education and employment status are controlled for (Model 2), the differences between natives and refugee groups diminish. Partnership and parity play little additional role (Model 3) for any of the immigrant groups. With duration of stay (after five years), all immigrant groups, including

refugees, assimilate to natives' level of spatial mobility. We conducted sensitivity check by changing the duration of stay to the categories of fewer than three years or three or more years of stay, and found that despite a weaker effect, the direction and levels of differences among groups are similar to a five-year cut-off.

To examine the types of moves individuals make, we use a competing risks framework in which individuals can move into government housing, private rental, or owned property. Those with missing data on housing tenure type have been list-wise deleted (1.2% of observations). An alternative strategy of censoring missing values yielded highly similar results (not shown), so we chose list-wise deletion. The AME coefficients of these models are shown in Figure 3. The three panels of the coefficient plots show the three distinct types of moves, with the baseline risks of natives moving to government housing, private rental, and owned home as reference respectively. Age group, birth cohort, and state-level owner occupancy are controlled in all models. Due to the complexity of the models and sample size, we do not control for additional variables in the competing risks models.

On the left panel, we observe that Ethnic Germans and refugees (especially those from Iraq) are more likely to move to government housing than all other groups. In the case of refugees, duration of stay does not fully attenuate the higher tendency to move to government housing. This is the case for Ethnic Germans as well, but to a lesser degree. Both EU and non-EU immigrants have similar probabilities of moving to government housing compared to natives. In the middle panel, both EU and non-EU immigrants show lower probabilities of moving into private rental compared to natives upon arrival, but their private rental move risks become similar with duration of stay, shown by the darker blue dots. Refugees, particularly Syrians and Iraqis are more likely to move to private rental than natives at first, but the differences diminish after some time in Germany. Afghan refugees have lower private rental move rates compared to the other two refugee groups. On the right panel, we see that the most striking difference among groups is in home ownership. Ethnic Germans who have lived in Germany for at least five years are slightly even more likely than natives to move to homeownership, though they are less likely to at first. EU and non-EU immigrants are similarly likely to move to homeownership as native Germans after some duration in the country but less likely at first. By contrast, refugees never reach the native level of ownership, not initially, nor after five or more years in Germany.

Discussion

This study is motivated by the urgent need to consider housing as part of a wider integration agenda in high-income and top refugee-recipient countries, such as Germany. Residential stability and housing security are important aspects of integration for immigrants, but particularly among those who arrived under unfavorable circumstances such as asylum seekers and refugees. Despite large volumes of migration across borders due to conflict and other humanitarian crises, little research has targeted the long-term housing security of refugee migrants in destination countries. In addition, frameworks surrounding housing for immigrants often only focus on tenure or residential mobility, but rather one in conjunction of the other as a mean to detect upward housing mobility. Little research has examined how residential and housing trajectories evolve after immigration. After some time in the destination, immigrants can move to pursue better housing opportunities as a steppingstone for their social and economic advancement. However, a move does not necessarily signify an upward move, nor the further realization of one's housing preference.

In this study, we combine both concepts of residential mobility and housing tenure which examines with a move signifies a betterment of circumstances (e.g., from government housing to private rental, or from private rental to ownership) or continual precarity (e.g., from government housing to government housing). We particularly stress the roles of legal entry pathway and duration of stay in the destination. Taken together, our analytical strategy unveils the process of housing integration among different immigrant groups in Germany, particularly highlighting the unique challenges faced by refugee groups such as Syrian, Afghan, and Iraqi refugees.

We consider socio-economic factors such as employment and education, and demographic processes such as the birth of a child or partnership formation as essential factors for residential moves in our modeling strategies. The longitudinal nature of the data allows us to incorporate these life events along with geographic factors such as moving from a lower owner occupancy state to a higher owner occupancy state in our modeling strategy. The sampling design of the GSOEP takes into account the relatively recent increase in asylum seekers and refugees through the inclusion of the IAB-BAMF-SOEP Refugee Survey, enabling us to examine their housing integration alongside other important immigrant groups, including those who arrived as EU nationals, third country nationals, or Ethnic Germans.

We found that refugees exhibit distinct residential mobility and tenure type from immigrants who entered Germany via other legal pathways. They are more residentially mobile than all other groups initially, as expected, due to legal conditions pertaining to individuals seeking refuge in Germany. It is no surprise that refugees in Germany, subject to institutional allocation processes and legal regulations (AIDA, 2023; Baier et al., 2020), are likely to experience heightened mobility as function not because of the housing market but due to law, although education and employment status still partially attenuate refugees' mobility rate, showing additional disadvantage experienced by lower educated or unemployed immigrants who arrived as refugees. However, after five years in Germany, all groups of immigrants, including those with refugee background, assimilate to native level of residential mobility.

Regardless of mobility level, we find that refugees are more likely to move in and out of government housing and private rental rather than owned homes, exhibiting a pattern of moves more linked to insecurity rather than upgrade. Furthermore, refugees are less likely to enter homeownership compared to all other legal entry groups, despite duration of stay. By contrast, Ethnic Germans who have spent a few years in Germany are more likely to purchase a home even compared to a native. This falls in line with research conducted in countries that have found that certain immigrant groups invest in housing as a means to accumulate wealth and pursue the improvement of their own and their family's lives in the destination country (Davidov & Weick, 2011; Ihle & Siebert-Meyerhoff, 2019; Zorlu et al., 2014). Our study has several limitations. First, tenure type is extracted from household-level data, which means that an individual, for example, "lives in an owned dwelling" rather than is the "owner" of the dwelling. However, we find it implausible that a large number of individuals, especially with non-native backgrounds, might live in owned households not as paid renters (which would qualify one as living a private rental). Second, the homeownership rate in Germany is lower compared to many other European countries (Huber & Schmidt, 2022). The generalizability of these findings remains to be seen. Considering the institutional context of Germany and its housing opportunity structure, we observe notable differences between natives and immigrants in their housing careers.

Homeownership not only reflects the intention of stay and signifies integration but can also serve as a catalyst for civic participation and foster a deeper sense of membership within a society. Prior research demonstrated that homeowners exhibit higher rates of voting in local elections and actively engage in neighborhood organizations (McCabe, 2013). These forms of civic engagement are crucial for individuals in shaping their identity and developing a sense of belonging.

In line with previous research on North America (Gillespie et al., 2020), we find that refugees are exposed to residential insecurity signified by high numbers of moves from one type of government housing to another upon entry. Their housing situation tend to stabilize with duration of stay, but they are still more likely to move into government housing and less likely into owned homes compared to all other groups. Overall, the study supports that the legal pathway significantly shapes refugees' residential mobility and housing outcomes. The first five years are characterized by residential instability, which are often related to moves between different governmental housing due to institutional allocation processes and re-settlement. On the one hand, the government provides basic housing security to refugees; on the other hand, the need to move between regions due to allocation processes increases residential instability. Interestingly, once legal barriers are removed, refugees show similar residential mobility levels to other migrant groups and natives suggesting significantly reduced residential instability. All immigrant groups including refugees are less likely to own a house. First,

they usually have less resources than natives to invest in housing (e.g., due to the lack of property to inherit in the destination country); second, some may consider returning to home country, and for refugees, there is also much uncertainty in the first five years due to their legal status. After the period of a prolonged residential instability and uncertainty they participate in the private housing market, which in the Germany context signifies a level of security. Our study highlights the urgent need to review policies surrounding refugee settlement in Germany, as housing forms the foundation of social and economic integration and wellbeing.

References

- Adam, F., Föbker, S., Imani, D., Pfaffenbach, C., Weiss, G., & Wiegandt, C.-C. (2021). "Lost in transition"? Integration of refugees into the local housing market in Germany. *Journal of Urban Affairs*, 43(6), 831–850. <https://doi.org/10.1080/07352166.2018.1562302>
- AIDA, (Asylum information database). (2023). Types of accommodation. *Asylum Information Database | European Council on Refugees and Exiles*.
<https://asylumineurope.org/reports/country/germany/reception-conditions/housing/types-accommodation/>
- Al Masri, F., Müller, M., Nebl, J., Greupner, T., Hahn, A., & Straka, D. (2021). Quality of life among Syrian refugees in Germany: A cross-sectional pilot study. *Archives of Public Health*, 79(1), 213. <https://doi.org/10.1186/s13690-021-00745-7>
- Anghel, R., Botezat, A., Coşciug, A., Manafi, I., & Roman, M. (2017). *International Migration, Return Migration, and Their Effects: A Comprehensive Review on the Romanian Case* (SSRN Scholarly Paper 2895293). <https://doi.org/10.2139/ssrn.2895293>
- Baier, A., Tissot, A., & Rother, N. (2020). *The housing situation of refugees in Germany* (04/2020). Federal Office for Migration and Refugees.
https://www.ssoar.info/ssoar/bitstream/handle/document/67564/ssoar-2018-baier_et_al-The_Housing_Situation_of_Refugees.pdf?sequence=1&isAllowed=y&lnkname=ssoar-2018-baier_et_al-The_Housing_Situation_of_Refugees.pdf
- Basilio, L., Bauer, T. K., & Kramer, A. (2017). Transferability of Human Capital and Immigrant Assimilation: An Analysis for Germany. *LABOUR*, 31(3), 245–264.
<https://doi.org/10.1111/labr.12096>
- Bayrakdar, S., Coulter, R., Lersch, P., & Vidal, S. (2019). Family formation, parental background and young adults' first entry into homeownership in Britain and Germany. *Housing Studies*, 34(6), 974–996. <https://doi.org/10.1080/02673037.2018.1509949>

- Brell, C., Dustmann, C., & Preston, I. (2020). The Labor Market Integration of Refugee Migrants in High-Income Countries. *Journal of Economic Perspectives*, 34(1), 94–121.
<https://doi.org/10.1257/jep.34.1.94>
- Clark, W. A. V., & Davies Withers, S. (1999). Changing Jobs and Changing Houses: Mobility Outcomes of Employment Transitions. *Journal of Regional Science*, 39(4), 653–673.
<https://doi.org/10.1111/0022-4146.00154>
- Clark, W. A. V., Deurloo, M. C., & Dieleman, F. M. (1997). Entry to Home-ownership in Germany: Some Comparisons with the United States. *Urban Studies*, 34(1), 7–19.
- Clark, W. A. V., & Drever, A. I. (2001). Do Immigrants Improve Their Housing Quality When They Move? Evidence from the German Socio-Economic Panel. *Vierteljahrshefte Zur Wirtschaftsforschung*, {"id":142,"journal_id":25,"name":"70","created_at":"2023-01-05 22:18:19","updated_at":"2023-01-05 22:18:19","price_individual_gbp":null,"price_individual_eur":null,"price_individual_usd":null,"price_institutional_gbp":null,"price_institutional_eur":null,"price_institutional_usd":null}(1), 87–94. <https://doi.org/10.3790/vjh.70.1.87>
- Clark, W. A. V., & Huang, Y. (2003). The Life Course and Residential Mobility in British Housing Markets. *Environment and Planning A: Economy and Space*, 35(2), 323–339.
<https://doi.org/10.1068/a3542>
- Cortes, K. E. (2004). Are Refugees Different from Economic Immigrants? Some Empirical Evidence on the Heterogeneity of Immigrant Groups in the United States. *The Review of Economics and Statistics*, 86(2), 465–480. <https://doi.org/10.1162/003465304323031058>
- Davidov, E., & Weick, S. (2011). Transition to Homeownership Among Immigrant Groups and Natives in West Germany, 1984–2008. *Journal of Immigrant & Refugee Studies*, 9(4), 393–415.
<https://doi.org/10.1080/15562948.2011.616807>

- Destatis, (Statistisches Bundesamt). (2023). *Households living in their own dwellings (owner-occupied rate)*, 2022. https://www.destatis.de/EN/Themes/Society-Environment/Housing/_Graphic/_Interactive/owner-occupier-housing.html
- Diaz-Serrano, L., & Raya, J. M. (2014). Mortgages, immigrants and discrimination: An analysis of the interest rates in Spain. *Regional Science and Urban Economics*, 45, 22–32. <https://doi.org/10.1016/j.regsciurbeco.2013.12.004>
- Dupuis, A., & Thorns, D. C. (1998). Home, Home Ownership and the Search for Ontological Security. *The Sociological Review*, 46(1), 24–47. <https://doi.org/10.1111/1467-954X.00088>
- Dustmann, C., Fasani, F., Frattini, T., Minale, L., & Schönberg, U. (2017). On the economics and politics of refugee migration. *Economic Policy*, 32(91), 497–550. <https://doi.org/10.1093/epolic/eix008>
- Egsgaard, A. (2022). Home after widowhood: A longitudinal study of residential mobility and housing preferences following a partner's death. *Housing Studies*, 0(0), 1–26. <https://doi.org/10.1080/02673037.2022.2135169>
- Ermisch, J. F., & Jenkins, S. P. (1999). Retirement and housing adjustment in later life: Evidence from the British Household Panel Survey. *Labour Economics*, 6(2), 311–333. [https://doi.org/10.1016/S0927-5371\(99\)00018-4](https://doi.org/10.1016/S0927-5371(99)00018-4)
- Eurostat. (2020). *International Standard Classification of Education (ISCED)*. [https://ec.europa.eu/eurostat/statistics-explained/index.php/International_Standard_Classification_of_Education_\(ISCED\)#ISCE](https://ec.europa.eu/eurostat/statistics-explained/index.php/International_Standard_Classification_of_Education_(ISCED)#ISCE)
- Ferrari, G., Bonnet, C., & Solaz, A. (2019). 'Will the one who keeps the children keep the house?' Residential mobility after divorce by parenthood status and custody arrangements in France. *Demographic Research*, S27(14), 359–394. <https://doi.org/10.4054/DemRes.2019.40.14>
- Gillespie, S., Cardeli, E., Sideridis, G., Issa, O., & Ellis, B. H. (2020). Residential mobility, mental health, and community violence exposure among Somali refugees and immigrants in North America. *Health & Place*, 65, 102419. <https://doi.org/10.1016/j.healthplace.2020.102419>

- Hanson, A., Hawley, Z., Martin, H., & Liu, B. (2016). Discrimination in mortgage lending: Evidence from a correspondence experiment. *Journal of Urban Economics*, 92, 48–65.
<https://doi.org/10.1016/j.jue.2015.12.004>
- Huber, S. J., & Schmidt, T. (2022). Nevertheless, they persist: Cross-country differences in homeownership behavior. *Journal of Housing Economics*, 55, 101804.
<https://doi.org/10.1016/j.jhe.2021.101804>
- Ihle, D., & Siebert-Meyerhoff, A. (2019). The Evolution of Immigrants' Homeownership in Germany. *Jahrbücher Für Nationalökonomie Und Statistik*, 239(2), 155–201.
<https://doi.org/10.1515/jbnst-2017-0129>
- Kemeny, J. (2006). Corporatism and Housing Regimes. *Housing, Theory and Society*, 23(1), 1–18.
<https://doi.org/10.1080/14036090500375423>
- Kulu, H. (2008). Fertility and Spatial Mobility in the Life Course: Evidence from Austria. *Environment and Planning A: Economy and Space*, 40(3), 632–652. <https://doi.org/10.1068/a3914>
- Kulu, H., Mikolai, J., Thomas, M. J., Vidal, S., Schnor, C., Willaert, D., Visser, F. H. L., & Mulder, C. H. (2021). Separation and Elevated Residential Mobility: A Cross-Country Comparison. *European Journal of Population*, 37(1), 121–150. <https://doi.org/10.1007/s10680-020-09561-1>
- Mazziotta, A., Zerr, M., & Rohmann, A. (2015). The Effects of Multiple Stigmas on Discrimination in the German Housing Market. *Social Psychology*, 46(6), 325–334. <https://doi.org/10.1027/1864-9335/a000249>
- McCabe, B. J. (2013). Are Homeowners Better Citizens? Homeownership and Community Participation in the United States. *Social Forces*, 91(3), 929–954.
<https://doi.org/10.1093/sf/sos185>
- Mikolai, J., & Kulu, H. (2019). Union dissolution and housing trajectories in Britain. *Demographic Research*, S27(7), 161–196. <https://doi.org/10.4054/DemRes.2019.41.7>

- Mikolaj, J., Kulu, H., & Mulder, C. H. (2020). Family life transitions, residential relocations, and housing in the life course: Current research and opportunities for future work: Introduction to the Special Collection on "Separation, Divorce, and Residential Mobility in a Comparative Perspective." *Demographic Research*, *S27*(2), 35–58.
<https://doi.org/10.4054/DemRes.2020.43.2>
- Moreno-Galbis, E. (2019). *Risky Working Conditions: An Immigrant Trap or an Income Effect?* Aix-Marseille School of Economics, Marseille, France.
<https://EconPapers.repec.org/RePEc:aim:wpaimx:1908>
- Mulder, C. H., & Hooimeijer, P. (1999). Residential Relocations in the Life Course. In L. J. G. van Wissen & P. A. Dykstra (Eds.), *Population Issues: An Interdisciplinary Focus* (pp. 159–186). Springer Netherlands. https://doi.org/10.1007/978-94-011-4389-9_6
- Nyqvist, F., Forsman, A. K., Giuntoli, G., & Cattan, M. (2013). Social capital as a resource for mental well-being in older people: A systematic review. *Aging & Mental Health*, *17*(4), 394–410.
<https://doi.org/10.1080/13607863.2012.742490>
- Owusu, T. Y. (1998). To Buy or Not to Buy: Determinants of Home Ownership Among Ghanaian Immigrants in Toronto. *Canadian Geographies / Géographies Canadiennes*, *42*(1), 40–52.
<https://doi.org/10.1111/j.1541-0064.1998.tb01551.x>
- Phillips, D. (2006). Moving Towards Integration: The Housing of Asylum Seekers and Refugees in Britain. *Housing Studies*, *21*(4), 539–553. <https://doi.org/10.1080/02673030600709074>
- Rock, D., & Wolff, S. (Eds.). (2002). *Coming home to Germany? : The integration of ethnic Germans from Central and Eastern Europe in the Federal Republic*. Berghahn Books.
- Salikutluk, Z., Giesecke, J., & Kroh, M. (2016). Refugees entered the labor market later than other migrants. *DIW Economic Bulletin*, *6*(34/35), 407–413.
- Sand, G., & Gruber, S. (2018). Differences in Subjective Well-being Between Older Migrants and Natives in Europe. *Journal of Immigrant and Minority Health*, *20*(1), 83–90.
<https://doi.org/10.1007/s10903-016-0537-5>

- Sawert, T. (2020). Understanding the mechanisms of ethnic discrimination: A field experiment on discrimination against Turks, Syrians and Americans in the Berlin shared housing market. *Journal of Ethnic and Migration Studies*, 46(19), 3937–3954.
<https://doi.org/10.1080/1369183X.2019.1577727>
- Schmid, V., & Kück, S. (2017). Access to Housing in Germany. In *Structural Context of Refugee Integration in Canada and Germany* (Vol. 15). <https://d-nb.info/1186314311/34>
- Schönwälder, K., & Söhn, J. (2009). Immigrant Settlement Structures in Germany: General Patterns and Urban Levels of Concentration of Major Groups. *Urban Studies*, 46(7), 1439–1460.
<https://doi.org/10.1177/0042098009104575>
- Sinning, M. (2010). Homeownership and Economic Performance of Immigrants in Germany. *Urban Studies*, 47(2), 387–409. <https://doi.org/10.1177/0042098009349021>
- Torgersen, U. (1987). Housing: The Wobbly Pillar under the Welfare State. *Scandinavian Housing and Planning Research*, 4(sup1), 116–126. <https://doi.org/10.1080/02815737.1987.10801428>
- Weidinger, T., & Kordel, S. (2023). Access to and exclusion from housing over time: Refugees' experiences in rural areas. *International Migration*, 61(3), 54–71.
<https://doi.org/10.1111/imig.12807>
- Wulff, M., Champion, A., & Lobo, M. (2010). Household diversity and migration in mid-life: Understanding residential mobility among 45–64 year olds in Melbourne, Australia. *Population, Space and Place*, 16(4), 307–321. <https://doi.org/10.1002/psp.553>
- Zorlu, A., Mulder, C. H., & van Gaalen, R. (2014). Ethnic disparities in the transition to home ownership. *Journal of Housing Economics*, 26, 151–163.
<https://doi.org/10.1016/j.jhe.2014.01.004>

Tables & Figures

Table 1. Sample descriptions

	Person- years	Moves	Rate
Origin group			
Native	261,964	24,936	0.095
EU migrant, <5	2,886	168	0.058
EU migrant, 5+	6,350	602	0.095
Ethnic German, <5	333	33	0.099
Ethnic German, 5+	16,483	1,662	0.101
Other immigrant (TCN), <5	3,947	287	0.073
Other immigrant (TCN), 5+	22,370	1,964	0.088
Syrian refugee, <5	11,942	2,274	0.190
Syrian refugee, 5+	6,028	691	0.115
Afghan refugee, <5	2,778	569	0.205
Afghan refugee, 5+	1,500	182	0.121
Iraqi refugee, <5	3,301	714	0.216
Iraqi refugee, 5+	1,974	223	0.113
Age group			
20-24	50,244	7,482	0.149
25-29	46,816	7,916	0.169
30-34	54,736	7,112	0.130
35-39	64,274	5,798	0.090
40-49	138,606	7,670	0.055
Education			
Low	69,480	9,252	0.133
Medium	185,739	16,862	0.091
High	99,457	9,864	0.099
Employment			
Employed	191,762	17,205	0.090
Unemployed	9,809	1,268	0.129
Inactive	43,654	5,040	0.115
Missing	109,451	12,465	0.114
Partnership			
Single	81,350	10,199	0.125

Partnered, partner not native	47,714	4,688	0.098
Partnered, partner native	122,726	8,136	0.066
Separated or widowed	22,384	2,857	0.128
Missing	80,502	10,098	0.125
Parity			
0 child	129,638	16,932	0.131
1 child	67,550	7,030	0.104
2+ children	157,488	12,016	0.076
Birth cohort			
1951-1974	165,255	11,202	0.068
1975-1989	143,586	17,827	0.124
1990+	45,835	6,949	0.152
Federal state			
Baden-Wuerttemberg	41,023	3,829	0.093
Bavaria	53,966	4,599	0.085
Berlin	13,998	1,478	0.106
Brandenburg	12,979	1,331	0.103
Bremen	3,070	303	0.099
Hamburg	5,951	620	0.104
Hesse	25,332	2,480	0.098
Lower Saxony	33,892	3,426	0.101
Mecklenburg-West Pomerania	7,178	765	0.107
North Rhine-Westphalia	72,454	6,917	0.095
Rhineland-Palatinate	16,137	1,451	0.090
Saarland	3,964	374	0.094
Saxony	21,559	1,998	0.093
Saxony-Anhalt	12,167	1,119	0.092
Schleswig-Holstein	12,544	1,462	0.117
Thuringia	12,925	1,118	0.086
Missing	5,537	2,708	0.489

Table 2. Homeownership categorization

Federal state	Owner-occupied rate	Level
Berlin	16.0	Low

Hamburg	20.1	
Bremen	32.7	
Saxony	34.7	
Mecklenburg-West Pomerania	38.7	
North Rhine-Westphalia	38.8	
<hr/>		
Thuringia	42.0	
Hesse	42.4	
Saxony-Anhalt	43.0	Medium
Brandenburg	45.1	
Schleswig-Holstein	45.6	
<hr/>		
Bavaria	45.9	
Baden-Wuerttemberg	48.5	
Lower Saxony	49.1	High
Rhineland-Palatinate	50.9	
Saarland	60.0	
<hr/>		

Source: Data of “Owner-occupied rate” from German Federal Statistical Office (Destasis); authors’ categorization of level by tertile

Figure 1. Sample distribution of immigrant type by year of immigration (persons) and year of observation (person-years) in GSOEP

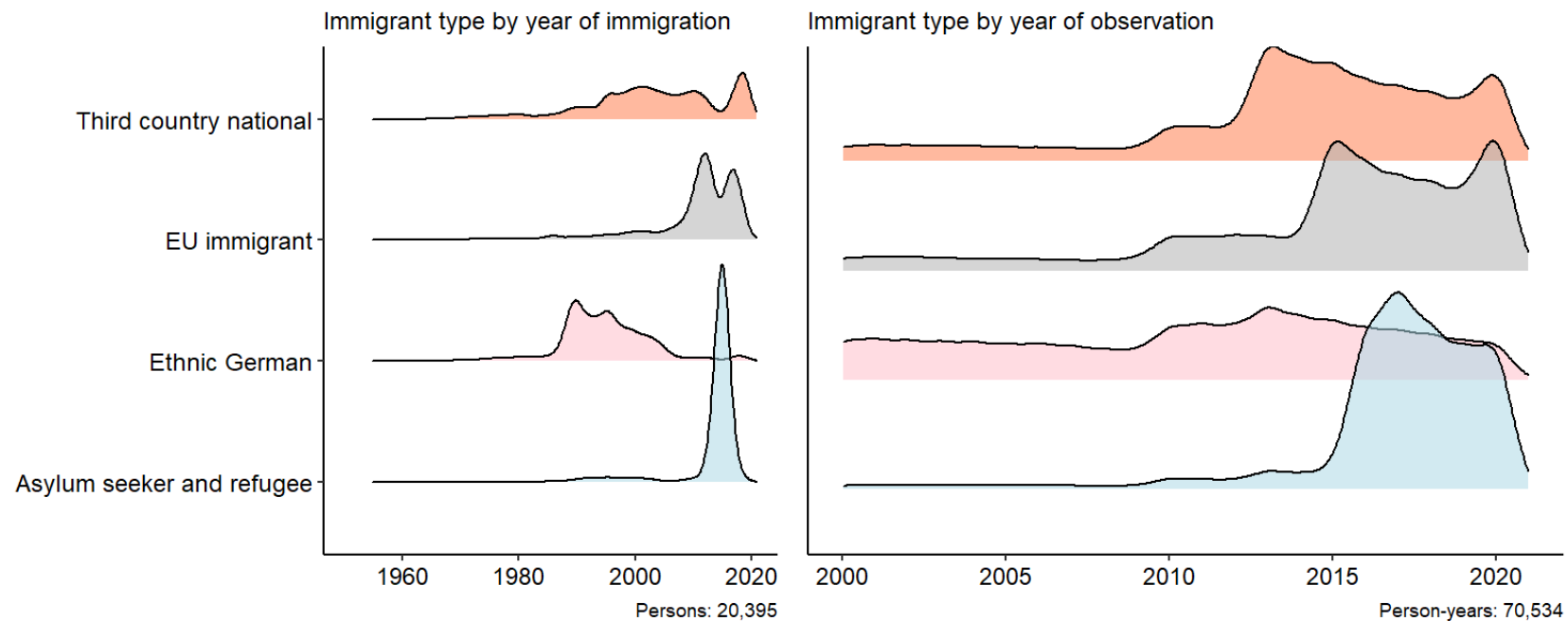
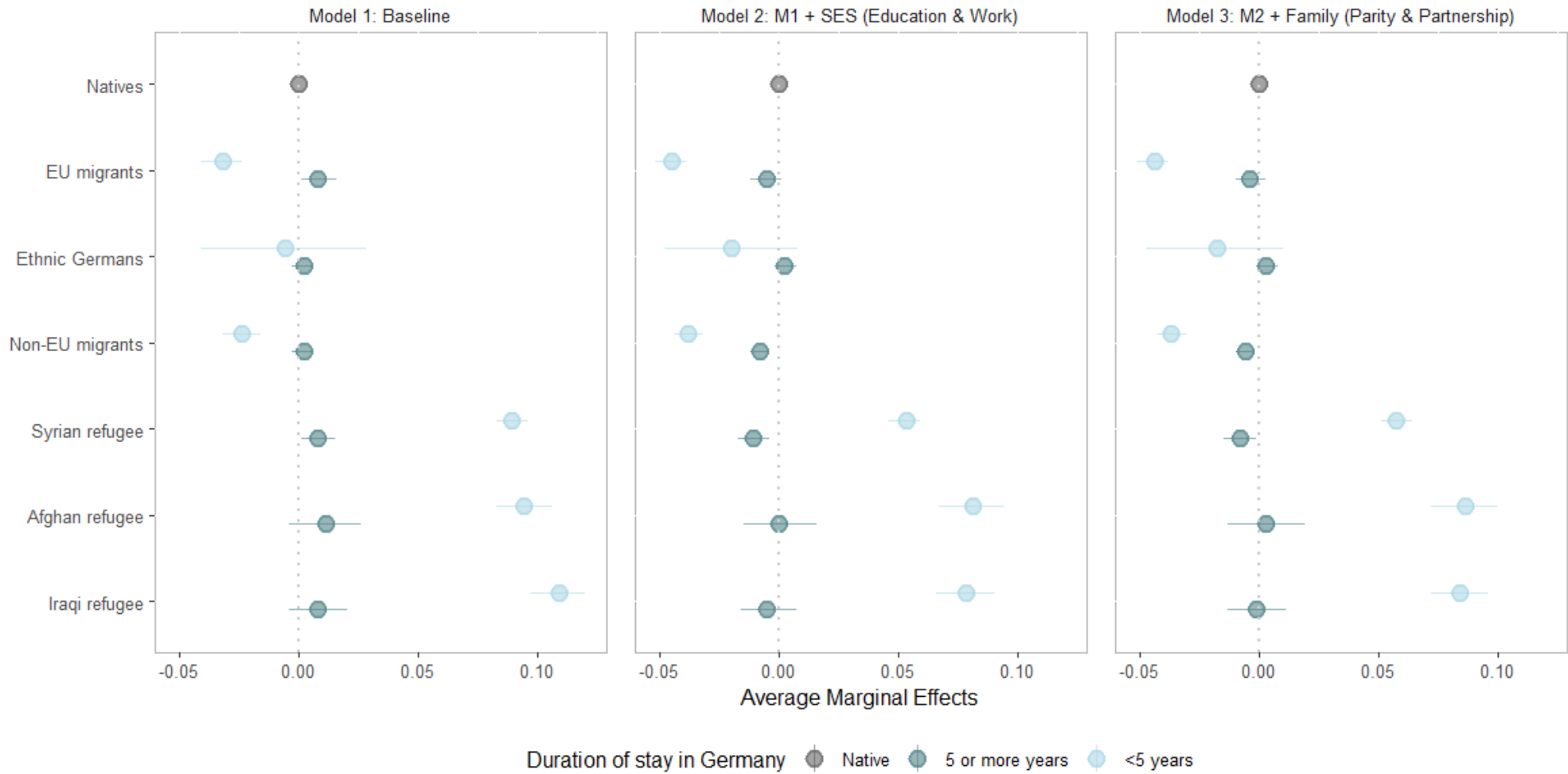


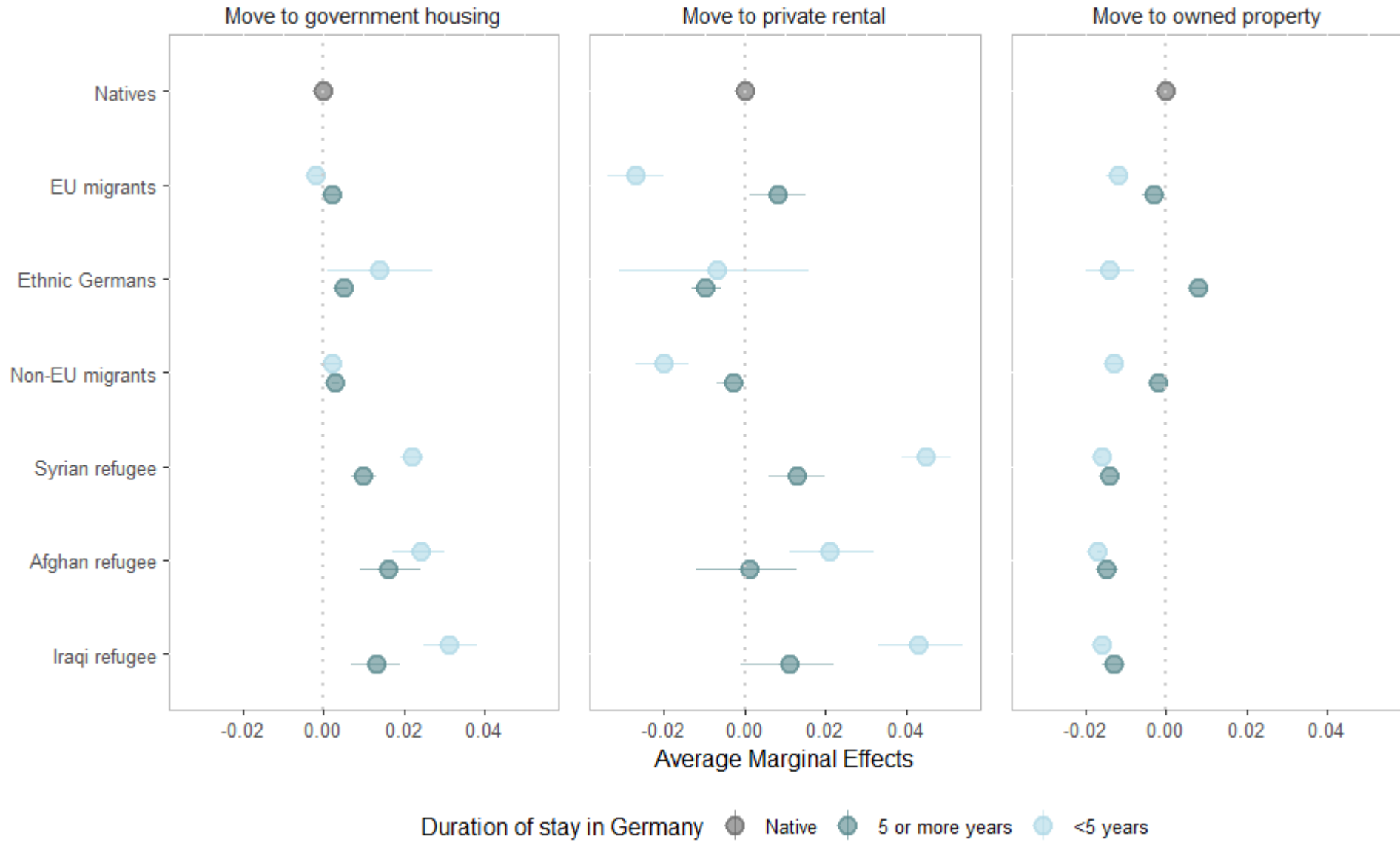
Figure 2. Annual probability (average marginal effects) of experiencing a move by migration background.



Baseline model includes age group, birth cohort, and history of move; adjusted model additionally includes education, employment, partnership, and parity

Note: Age group, birth cohort, and history of move are controlled in all models.

Figure 3. Annual probability (average marginal effects) of experiencing a move to social housing, private rental, or homeownership by migration background.



*Age and birth cohort controlled in all models

Note: Age, birth cohort, and state-level owner occupancy are controlled in all models

