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Selection Effects Related to International  
Migration Flows**

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## ABSTRACT

### **Homeownership of Immigrants in France: Selection Effects Related to International Migration Flows\***

We investigate the difference in homeownership rates between natives and first-generation immigrants in France, and how this difference evolves over the 1975-1999 period, by using a large longitudinal dataset. We find that the homeownership gap is large and has increased. Entries into the territory have a large negative effect on the evolution of homeownership rates for immigrants. Although entrants have on average better education than people staying in the territory for the entire period (i.e. stayers), they are younger and thus at an earlier stage in the wealth accumulation process. They are also located in large cities, where the homeownership rate is lower, and the returns to their characteristics are lower than those for stayers. Leavers have a positive effect on the evolution of homeownership rates for immigrants because they have a low access to homeownership and they exit the country. But this effect is only one-third that of entrants. For stayers, we show that returns to characteristics change in favor of immigrants, which is consistent with assimilation theories. However, among stayers who access homeownership, immigrants end up in owned dwellings that are of lesser quality than natives.

JEL Classification: J15, R21

Keywords: homeownership, immigrants, longitudinal data

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# 1 Introduction

Low access to homeownership for immigrants and their descendants is a major concern in the United States and Europe, as homeownership is usually considered to be a marker of assimilation and a major contributor to well-being and wealth. Disparities in homeownership between natives and immigrants, as well as their evolution, have been studied mostly by using (repeated) cross-section data approaches (Borjas, 2002; Painter and Yu, 2008, 2010), with an emphasis on cohort methods (Myers and Lee, 1998; Sinning, 2010). In this article, we use a large longitudinal dataset constructed from five consecutive French censuses to follow individuals over thirty years and identify the contribution of international migration flows to the evolution of the difference in homeownership rates between natives and first-generation immigrants.

For immigrants, the evolution of the homeownership rate does not only reflect their access to homeownership, which is related to the accumulation of wealth and better access to the homeownership market. It also involves selection effects related to exits and entries into the territory by individuals with specific citizenship status, financial resources, family structure and preferences. The influence that international migration flows have on the evolution of immigrant homeownership rates has not been studied much in the literature, which mostly concerns racial or ethnic groups in the US. Some of these groups have been present in the host country for decades, if not centuries, and are rather tied to the territory.

African Americans have been the most studied group, and their homeownership rate has been shown to have increased significantly over the 1940-1980 period through purchases of affordable dwellings in city centers (Collins and Margo, 2011; Boustan and Margo, 2013), although the gap with whites remains very large (Gabriel and Rosenthal, 2005). Ethnic groups have also been investigated, such as Asians (Painter *et al.*, 2001, 2003; Coulson and Dalton, 2010) and Hispanics (Krivo, 1995; Krivo and Kaufman, 2004; Flippen, 2010), and evidence shows that there are significant disparities across groups defined by both country of origin and generation since arrival in the host country (Rosenbaum and Friedman, 2004). Importantly, accessing homeownership does not mean catching up in the housing market, since there is some overcrowding in owned homes for some groups, and housing quality is sometimes lower than that of natives (Myers and Lee, 1996; Friedman and Rosenbaum, 2004).

Access to homeownership for racial/ethnic groups has been studied using longitudinal data that track individuals (Charles and Hurst, 2002; Dawkins, 2005), but the focus is usually on individual decisions rather than on the aggregate homeownership rate, and sample sizes are rather small compared to census extractions. A recent exception is Zorlu *et al.* (2014), who analyzed transitions into homeownership for ethnic groups in the Netherlands by using a large longitudinal administrative dataset; but their matters of interest were neither first-generation immigrants nor selection processes related to movements in and

out of the country.

In this paper, we investigate differences in homeownership between natives and first-generation immigrants by using linked data from French censuses between 1968 and 1999, which include all individuals born in the first four days of October. Our main contributions are the assessment of how exits and entries into the territory impact immigrant homeownership rates, as well as the analysis of the evolution of homeownership rate differences between natives and immigrants who remain in the territory over a long period of time. In particular, we quantify the role that characteristics and their returns play in this evolution. For stayers accessing homeownership, we also compare the quality between native- and immigrant-owned dwellings.

We propose an empirical approach that decomposes the evolution of the homeownership rate over the 1975-1999 period for immigrants into the contributions of stayers, entrants and leavers.<sup>1</sup> These contributions not only involve the homeownership rates of these three subgroups, but also their weights in the sample at the initial and final dates. We then rely on standard decompositions for non-linear models proposed by Fairlie (1999, 2005), as these will allow us to study the role of individual observed characteristics and their returns in explaining differences in homeownership rates between immigrant stayers and leavers in 1975, as well as between immigrant stayers and entrants in 1999. These decompositions involve estimating logit models of homeownership for each subgroup of immigrants. We then use the same kind of decomposition to analyze the difference in homeownership rates between native and immigrant stayers and how this difference evolves over time.

We find that the homeownership gap between natives and immigrants is large and has increased over the 1975-1999 period. Importantly, entrants into the territory have a large negative effect on the evolution of immigrant homeownership rates. Although entrants have on average better education, they are also younger and at an earlier stage in the wealth accumulation process. Moreover, they locate themselves in large cities, where the homeownership rate is lower. Additionally, the returns to their characteristics are lower than that of stayers. By contrast, leavers have a positive effect on the evolution of immigrant homeownership rates, because they have low access to homeownership and they exit the country; but this effect is only one third that of entrants.

Interestingly, the returns to characteristics for native and immigrant stayers have evolved in favor of immigrants, which is consistent with steps towards assimilation. There are important variations across immigrant groups and the returns to characteristics have evolved in a more favorable way for Southern Europeans, suggesting their faster assimilation, whereas they have changed in a detrimental way for North Africans. Homeownership is not sufficient for granting assimilation into the housing market for immigrants since, among stayers accessing homeownership, immigrants end up with housing conditions

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<sup>1</sup>Data on year 1968 cannot be used to compute a homeownership rate, since the homeownership status is not reported.

that are not as good as those of natives. In particular, North Africans live in newly-owned dwellings that have fewer rooms per person than those of natives and that are located in municipalities where the unemployment rate is much higher. Southern Europeans accessing homeownership occupy an intermediate position between these two groups.

The rest of the paper is as follows. In Section 2, we discuss the mechanisms that affect immigrant access to homeownership and give some contextual information on immigration and homeownership in France after the Second World War. We present our dataset in Section 3 and descriptive statistics in Section 4. Our empirical approach is detailed in Section 5 and results are presented in Section 6. Finally, Section 7 concludes the paper.

## 2 The literature and the French context

### 2.1 Determinants of the homeownership gap

Homeownership has been encouraged in many countries, including France, since the Second World War. It is often considered as a sign of economic success and a worthwhile investment option to accumulate wealth. Moreover, homeownership in some neighborhoods can provide access to green amenities, good schools, safety and peer effects with educated households (Dietz and Haurin, 2003).

The literature investigating differences in access to homeownership between immigrants and natives as well as among ethnic groups mostly concerns the United States, and it shows that these differences can be very large. The gap in homeownership rates between native and immigrant households in 2000 is around 20 percentage points (Borjas, 2002). Staying in the territory for generations does not necessarily mean catching up. For instance, blacks have been present in the US territory for several centuries, but the gap in homeownership rate with whites is very large and reaches 25 percentage points (Gabriel and Rosenthal, 2005). Still, having an immigrant status while belonging to a racial/ethnic group is on average associated with less access to homeownership, although there are some differences between immigrants depending on their country of origin (Painter *et al.*, 2001, 2003).

A natural candidate for explaining the lower homeownership rate of many immigrant groups compared to natives is their lower level of endowments. This disadvantage can take the form of lower education, which can prevent immigrants from getting well-paid jobs and thus from accumulating the wealth needed to purchase a home. Even if some immigrants are highly educated and have obtained a good degree in their home country, their credentials may not be fully recognized in the host country, and this may lower their access to high-skilled positions. Moreover, immigrants may suffer from discrimination in the labor market, which reduces their access to jobs (Altonji and Blank, 1999; Bertrand and Mullainathan, 2004). The ability to speak the language of the host country is also important, and it has been shown that

immigrants with more language skills have a higher propensity to become homeowners (Alba and Logan, 1992; Painter and Yu, 2008, 2010). Immigrants in some ethnic groups are also less likely than natives to benefit from relatives transferring wealth for them to purchase a home. Charles and Hurst (2002) show that black buyers purchasing a home have much less help from their family than white buyers. In fact, Hilber and Liu (2008) show that differences in wealth between whites and blacks are a major driver of the difference in their access to homeownership.

Less access to housing and credit markets for racial/ethnic groups is also cited as a significant contributor to their having less access to homeownership. Some underlying mechanisms are likely to affect first-generation immigrants. In particular, some incoming immigrants may lack information on the two markets (Krivo, 1995). It has also been shown that some groups, such as blacks, face discrimination in the housing market which affects not only the screening of housing units, as some real estate agents recommending fewer units to them than to whites (Yinger, 1986), but also the type of mortgage and insurance made available to them (Yinger, 1996; Ross and Tootell, 2004). Interestingly, Charles and Hurst (2002) show that the difference in application rates to a mortgage between whites and blacks is a significant driver of the racial homeownership gap, and they conjecture that blacks apply less often because they anticipate rejection. It is also noteworthy that even if some individuals in minority groups access homeownership, they may be more vulnerable to adverse economic shocks that would make them default on their mortgage more often and force them to move out (Bayer *et al.*, 2015).

Immigrants' choice of location matters, since the proportion of owned dwellings and housing prices vary across cities. In the US, immigrants are clustered in cities where even natives have a low homeownership rate (Borjas, 2002). Those who locate themselves in immigrant gateways would do better than those arriving in mid-size cities (Painter *et al.*, 2003; Painter and Yu, 2010). Ethnic enclaves could favor homeownership by helping immigrants avoid discrimination, by supporting an ethnic secondary housing market, by proposing specific amenities and services to immigrants in segregated neighborhoods, and by providing information about housing and real estate. The local presence of same-origin immigrants is associated with a higher homeownership rate for immigrants (Borjas, 2002), and that of co-ethnics positively affects ethnic groups (Flippen, 2010; Finnigan, 2015).

Time spent in the host country also influences access to homeownership for immigrants (Myers and Lee, 1998; Borjas, 2002). Immigrants who arrive in the host country during their youth can get a local diploma, which is often more highly valued than a foreign diploma. The host language is learned over time and information is gathered on the society, particularly on the labor, housing and credit markets. Time spent in the host country facilitates wealth accumulation and marriage with natives, who can contribute to the down payment when purchasing a dwelling. It also allows for location and housing tenure adjustments after arrival in a gateway city. Finally, it can increase one's commitment to the host country, which has

been shown to positively affect the propensity to be a homeowner in Germany (Constant *et al.*, 2009).

## 2.2 Immigration and homeownership in France

To motivate our analysis, we now describe briefly international migration flows and homeownership in France following the Second World War. After the war, immigration was considered to be a top priority for demographic and labor issues.<sup>2</sup> Adults were lacking, due to both a reduction in births over earlier decades and war casualties, and workers were needed to rebuild the country. However, immigration remained low for ten years because of heavy regulations and slow economic growth. Newcomers consisted mostly of Italians, who had already been migrating to France for decades to take low-skilled jobs in the agricultural and industrial sectors. Because of overpopulation, poverty and local hiring by French firms, many Algerians emigrated to France. This was facilitated by the colonial status of Algeria, whose citizens were granted free mobility between the two territories. With the increase in economic growth in the late fifties, immigration from Italy intensified and firms soon began to seek labor in other countries, such as Portugal and Spain in Southern Europe, and Morocco and Tunisia in North Africa. Migrations from Algeria continued especially after the end of the Algerian War in 1962, since it was facilitated by mobility agreements. Immigrant labor worked mostly in industries such as mines, metalworking and chemicals. Some skilled workers were employed in the automobile industry. A large proportion of immigrants also worked in the building sector, especially the Portuguese and Algerians.

After 1973, unemployment rose sharply and many immigrants were laid off, particularly in the automobile and metalworking sectors, which were hit hard by the crisis. Some measures were taken to expel immigrants, and the French government tightened immigration regulations. In spite of the new measures, immigrants kept entering the country, especially families joining male workers. The new waves of immigrants included people from Turkey, Sub-Saharan Africa and Asia. The proportions of immigrants by country of origin are reported in Table B.1 for the years 1975 and 1999, when they were above 2%.<sup>3</sup> Together with historical considerations, they motivate our choice of studying not only immigrants as a whole, but also two specific subgroups: North Africans (Algerians, Moroccans and Tunisians) and Southern Europeans (Italians, Portuguese and Spaniards). These comprise six of the seven most important countries of origin in 1999.

After the Second World War, the French government subsidized the construction of new dwellings. Homeownership was promoted and subsidies were gradually introduced for first-time buyers in the form of subsidized loans (Gobillon and Le Blanc, 2008). During the seventies and the eighties, these loans were very attractive, as their interest rates were low compared to inflation, and the homeownership rate

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<sup>2</sup>Our brief history of immigration in France borrows heavily from Blanc-Chaléard (2001) and Weil (2005).

<sup>3</sup>These figures are computed from our data presented in the next section.



increased significantly from 45% in 1970 to 54% in 1988. However, the inflation rate fell at the end of the period and subsidized loans became less attractive. Consequently, they were replaced in 1996 by zero-rate loans with postponed repayment, which complemented other mortgages and still exist today. The homeownership rate has remained nearly constant since the end of the eighties, and it reached 56% in 2006.

It was not homeownership but rather finding a proper dwelling which was the main concern of most incoming immigrants after the war. A significant number of newcomers, especially North Africans and Portuguese, ended up in temporary dwellings in city centers, which quickly became ghettos. As there was a shortage of dwellings, the government encouraged the construction of large neighborhoods with concrete buildings (*Grands Ensembles*) in the suburbs of cities. A large share of these buildings were owned by the State, which provided social housing below the market rent for poor and medium-income households. These public dwellings attracted immigrants (Verdugo, 2015), but they were a source of social segregation and their construction was abandoned in the mid seventies. Existing buildings deteriorated because they were not maintained, and many immigrants kept living there in rather poor conditions. The concentration of immigrants of the same origin was self-sustaining, since it decreased mobility (Rathelot and Safi, 2014). It is important to note, though, that staying in a public dwelling can be a residential strategy to save money for accessing homeownership, whether it be in France (Goffette-Nagot and Sidibé, 2013) or in the home country after a return migration.

Previous evidence on the homeownership of immigrants in France is cross-section and shows that there are stark differences across immigrant groups, depending on their country of origin: the Algerians and Moroccans have a much lower homeownership rate than the Portuguese and Spaniards (Simon, 1995). The low access to homeownership of North African immigrants is not surprising, considering that they are on average low-skilled and thus less able to accumulate wealth to purchase a home. They may also suffer from discrimination on the housing market, although it is debated whether discrimination in France is based mostly on taste or the place of residence (Combes *et al.*, 2012; Bonnet *et al.*, 2015).

### 3 Data

Our main dataset is the Permanent Demographic Sample (*Echantillon Démographique Permanent* in French) which is built from exhaustive French censuses and registers of births, marriages and deaths collected by the French Institute of Statistics, INSEE (Couet, 2007). It tracks individuals born in the first four days of October through the five censuses 1968, 1975, 1982, 1990 and 1999. The sample size is very important, as around 900,000 individuals are tracked and it is thus possible to study subgroups of immigrants defined by country of origin. For the 1968 census, the housing tenure is not available and

we thus limit our analysis of homeownership to the period from 1975 onwards. Nevertheless, this early census will be used to determine whether individuals present in the 1975 census were already present in the 1968 census.

For the 1975, 1982, 1990 and 1999 censuses, the data contain some information on individual, household and dwelling characteristics. The sex, age, diploma and socio-professional category are given, as well as the employment status. We know about the couple status (single, divorced, widowed, married or with a partner) and the number of children. It is also possible to tell whether married individuals live or not with their husband or wife, and to distinguish between single and multi-family households. The immigrant status of individuals is determined using information on the country of birth and citizenship at birth.<sup>4</sup> For immigrants, we determine the intercensal period in which they immigrated to France (except when they immigrated before 1968). Thanks to the information on the partner, it is possible to determine whether individuals are involved with an immigrant or a native.

Moreover, we have information on the dwelling for ordinary households, which includes its number of rooms, whether it is a flat or a detached house, and whether it is owned or rented.<sup>5</sup> Since our data are extracted from censuses, we do not have information on income and wealth. US evidence suggests that it is the permanent income rather than the current income that influences access to homeownership (Coulson, 1999). We will proxy for wealth and permanent income with detailed variables for age, diploma, occupation and family. We will thus estimate a reduced form of the probability of homeownership.

The data also provide us with the municipality code and we use it to match the Permanent Demographic sample with census data at both the municipality and urban area levels.<sup>6</sup> Local variables include the local population, unemployment rate, homeownership rate, and the proportions of immigrants, North Africans and Southern Europeans. In our main specifications, the urban area size is broken down into six categories in order to take into account non-linear effects on homeownership. These categories are: rural area or belonging to several urban areas (labeled “Outside”), less than 50,000 inhabitants, between 50,000 and 200,000, between 200,000 and 500,000, between 500,000 and 10,000,000, and Paris.

There are shortcomings to the sample. For the 1975 census, the information on household and dwelling is not available for 11.4% of observations, as not all the completed census forms were processed in some

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<sup>4</sup>Immigrants consist of all the individuals born in a country other than France and whose citizenship at birth is not French. By contrast, natives are defined as all individuals born in mainland France whose citizenship at birth is French. Other individuals are excluded from our sample.

<sup>5</sup>Households are classified as “ordinary” if they live in a dwelling, regardless of whether it belongs to them, friends or relatives. Households are non-ordinary if they live in mobile homes, boats or collective dwellings (which include workers’ hostels, retirement homes, university halls of residence and remand establishments) or if they are homeless.

<sup>6</sup>Urban Areas were conceived by the French Institute of Statistics, and they consist of: (1) groups of bordering municipalities that have no pockets of clear land and which encompass an urban center (urban unit) that provides at least 10,000 jobs; and (2) rural districts or urban units (urban periphery), among which at least 40% of the employed residents work in the center or in the municipalities attracted by this center.

municipalities. These observations are excluded from the analysis. For the 1982 census, only a random sample of one fourth of the individuals is available. For financial reasons, the information was not processed for the other observations. For the 1999 census, there is more attrition for immigrants born on the second and third days of October. The attrition rate for these individuals is 10 points higher than for those born on the first and fourth days of October. We restrict our sample to mainland France, as data are less reliable for Corsica, and this makes the sample drop by 0.16%. Finally, we lose small proportions of observations because either location could not be determined or values of local variables were not available at the municipality or urban area level (0.82% and 0.01%, respectively).

We restrict our attention to individuals aged over 18 years and focus on homeownership by the household head or a spouse as opposed to rental in the public or private sector, or any other kind of stay.<sup>7</sup>

## 4 Descriptive statistics

We now provide figures on the sample composition and homeownership rates of natives and immigrants. Among immigrants, we report specific information for Southern Europeans (Italians, Portuguese and Spaniards) and North Africans (Algerians, Tunisians and Moroccans), which are, respectively, the first and second most important groups of immigrants. As shown by Table B.2, the proportion of immigrants is nearly constant at around 9% over the 1975-1999 period, except between 1975 and 1982, when it increased slightly.<sup>8</sup> This general trend masks some heterogeneity by origin. Whereas the proportion of Southern Europeans has decreased constantly, the proportion of North Africans has increased, mostly because of specific waves of immigrants coming from Morocco and Tunisia.

### 4.1 The evolution of the homeownership gap

Figure 1.a shows that the homeownership rates of natives and immigrants have increased over the period under study: from 41% in 1975 to 50% in 1999 for natives and 26% to 37% for immigrants. A major driver of this increase was the introduction of subsidized loans after the Second World War to encourage access to homeownership. Nevertheless, the difference in homeownership rates between the two groups has only slightly decreased by 1.4 points over the period. Interestingly, there is some heterogeneity in the homeownership rate across immigrant groups, both in level and in trend. The homeownership rate is particularly low for North Africans at every census date (starting at only 5% in 1975), and the gap

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<sup>7</sup>Other kind of stays include living at a parent's place, a friend's home, or in a place that is non-ordinary (see footnote 5 for a definition).

<sup>8</sup>Note that the number of observations increases significantly between 1975 and 1990. This occurs because the French population increased greatly after the Second World War and up until the eighties, and because 11.4% of observations could not be used for 1975 due to missing data issues.

with natives has only slightly decreased over the period: from 35 points to 33.5 points. By contrast, the homeownership rate is much higher for Southern Europeans at every census (starting at 28% in 1975), and the gap with natives has vanished over time. In 1999, the homeownership rate of Southern Europeans is even three points above that of natives.

Of course, these stylized facts mask important composition effects. In particular, there are ingoing and outgoing flows of migrants that yield changes in the immigrant population of the territory, and time spent in France is important for the wealth accumulation process to allow access to homeownership. As we have longitudinal data, it is possible to investigate more precisely the selection effects related to entries and exits between two dates by comparing the homeownership rates of stayers, entrants and leavers. Figure 1.b shows that immigrant entrants and leavers have much lower homeownership rates than stayers. Interestingly, the homeownership rate of leavers is larger than that of entrants, but Table B.4 shows that their proportion in the sample is a bit larger only in 1990. The ranking of homeownership rate for stayers, entrants and leavers is similar for Southern Europeans (see Figure A.1.a), except that leavers outnumber entrants from 1982 onwards. This occurs to a larger extent than it does for the overall population of immigrants. The situation differs for North Africans, as entrants and leavers have similar homeownership rates, which are much lower than those of stayers (see Figure A.1.b). Although the proportion of entrants in 1975 is much larger than that of leavers, the gap tends to narrow over time.

We then focus on the immigrants staying in France over the entire 1975-1999 period and assess whether they catch up with natives with respect to homeownership rates. As shown by Figure 1.c, the pattern is rather different from the one obtained for the whole sample. The initial gap in homeownership rates between natives and immigrants in 1975 is smaller, at 8 points instead of 15 points, but it increases over time to reach 11 points in 1999. The gap between natives and North Africans is also lower at 29 points, but it grows significantly larger and reaches 39 points. Finally, Southern Europeans have a homeownership rate that is slightly lower than that of natives, and they never catch up with them throughout the entire period.

For immigrant stayers, there are also cohort effects related to the period of entry. Figure 1.d shows that immigrants who entered the territory before 1968 have a homeownership rate in 1975 which is close to that of natives, at around 40%, whereas that of immigrants entering during the 1968-1975 period is much lower at 8%. Even if the homeownership rate of late immigrant entrants increases much faster than that of early entrants, there is no catch-up before the end of the period.

[ Insert Figure 1 ]

## 4.2 Differences in characteristics between natives and immigrants

Several composition effects may contribute to the difference in homeownership rates between natives and immigrants, and how this difference evolves over time. In particular, immigrant leavers and entrants may differ from immigrant stayers in the characteristics that may influence needs and resources, and more broadly access to homeownership. We report in Table 1 some descriptive statistics on characteristics in 1975 and 1999 for natives and immigrants, depending on whether they are stayers between the two dates, leavers or entrants. Here and for the rest of the paper, we restrict the sample to individuals aged 18 and over in 1975 to avoid including in the data entries of individuals who were too young to be in our sample at the initial date but reached age 18 over the period. As a consequence, some young individuals immigrating over the period are excluded, and we thus control to some extent for selection of immigrants depending on their age.

We first compare the characteristics in 1975 of immigrants who left the country between 1975 and 1999 and immigrant stayers. Not surprisingly, the proportion of individuals aged 65 and over is much larger among leavers than among stayers. Indeed, some leavers are people who died over the period, and this mostly occurs at old ages. However, the sample of immigrant leavers also includes a large number of individuals leaving France who were younger than most people who died. Immigrant leavers are less educated than stayers, more often males, more often retired, and they have fewer children living in the household. Interestingly, they are located in municipalities and urban areas that are characterized on average by a lower homeownership rate.

We then compare the characteristics in 1999 of immigrant entrants and stayers. Immigrant entrants are more often North Africans and on average younger, which is not surprising as immigration is more likely to occur at younger ages (although we focus here on individuals aged 18 or over in 1975 and, hence, at least 42 in 1999). Interestingly, they much more often have some college education than immigrant stayers, as well as more children in the household. A much larger proportion of them are located in the Paris urban area and, consequently, they live in municipalities and urban areas characterized on average by a lower homeownership rate. The unemployment rate in their municipality is on average higher, suggesting that they are not located in attractive places.

We finally compare the characteristics in 1975 of native and immigrant stayers, as well as their evolution over the 1975-1999 period. The age distribution differs between the two groups, especially at the extremes: the proportion of individuals below age 30 is lower for immigrants than for natives, but it is the opposite for individuals aged 50 and over. This is a consequence of the composition and timing of immigration waves. As expected, immigrants have lower-level diplomas, although education increases over time as some young individuals graduate or older ones obtain a degree in order to acquire skills. Nev-

ertheless, education also increases for natives, and the difference in qualifications with natives remains similar over the period. The proportion of employed workers drops over time as many individuals retire, and this goes together with a decrease in individuals who work in socio-professional categories that are defined only for workers in the labor force. There is no clear-cut pattern for the evolution of the difference between natives and immigrants in the distribution of individuals across socio-professional categories.

Turning to the family situation, it can be noted that there are fewer single- and multi-family households among immigrant stayers in 1975, but more families with four children or more. Married immigrants also live less often with their partners and, not surprisingly, immigrants are much more likely than natives to have a partner who is an immigrant. Among the significant evolutions over the period, the numbers of single- and multi-family households decrease, especially for natives, since individuals form couples and nuclear families become more prevalent. It is possible to check that there are fewer children in households, with a significant decrease in the proportion of households that have four or more children, especially for immigrants.

Native and immigrant stayers also exhibit significant differences in characteristics of location: the proportion of immigrants in urban areas with more than 500,000 inhabitants is higher than that of natives in 1975; and it is lower outside of urban areas, with differences remaining constant over time. In fact, immigrants are located in places characterized by a lower homeownership rate, and the municipalities where they reside are marked by higher unemployment rates, especially in 1999, when the national level of unemployment was high.

[ Insert Table 1 ]

## 5 Empirical strategy

### 5.1 Assessing the impact of international migration flows on homeownership

We are first interested in assessing the influences of entries and exits on the evolution of the homeownership rate for immigrants. For that purpose, we propose a decomposition of this evolution between the two dates  $t = 1975$  and  $t + 1 = 1999$  that distinguishes between stayers, leavers and entrants. We denote by  $H_{it}$  a dummy equal to one if individual  $i$  is a homeowner at date  $t$ , and zero otherwise; and  $i \in t$  indicates the fact that individual  $i$  is in the sample at date  $t$ . The probability of being a homeowner can be decomposed such that:

$$P(H_{it} = 1 | i \in t) = \omega_t P(H_{it} = 1 | i \in t, i \in t + 1) + (1 - \omega_t) P(H_{it} = 1 | i \in t, i \notin t + 1) \quad (1)$$

where  $\omega_t = P(i \in t+1 | i \in t)$  is the probability of remaining in the sample between the two dates after having been in the sample at the initial date. According to this formula, the probability of being a homeowner can be rewritten as a weighted average of the probabilities of being a homeowner for stayers and leavers. In the same way, the probability of being a homeowner at the final date verifies:

$$P(H_{it+1} = 1 | i \in t+1) = \omega_{t+1} P(H_{it+1} = 1 | i \in t, i \in t+1) + (1 - \omega_{t+1}) P(H_{it+1} = 1 | i \notin t, i \in t+1) \quad (2)$$

where  $\omega_{t+1} = P(i \in t | i \in t+1)$  is the probability of individuals being present at the initial date of the period if they are present at its final date. The probability of being a homeowner can thus be rewritten as a weighted average of the probabilities of being a homeowner for stayers and entrants. It is then easy to show that the evolution of the homeownership rate verifies the following decomposition into three terms:

$$\begin{aligned} & P(H_{it+1} = 1 | i \in t+1) - P(H_{it} = 1 | i \in t) \\ = & P(H_{it+1} = 1 | i \in t, i \in t+1) - P(H_{it} = 1 | i \in t, i \in t+1) \\ + & (1 - \omega_{t+1}) [P(H_{it+1} = 1 | \notin t, i \in t+1) - P(H_{it+1} = 1 | i \in t, i \in t+1)] \\ + & (1 - \omega_t) [P(H_{it} = 1 | i \in t, i \in t+1) - P(H_{it} = 1 | i \in t, i \notin t+1)] \end{aligned} \quad (3)$$

where the first right-hand-side term is the evolution of the homeownership rate for stayers, and the other right-hand-side terms capture the influences of entrants and leavers. The second term increases in absolute terms with the proportion of entrants  $(1 - \omega_{t+1})$  and corrects the homeownership rate for their presence at the final date with the difference in homeownership rates between stayers and entrants. It is negative when the homeownership rate of stayers is higher than that of entrants. The third term increases in absolute terms with the proportion of leavers  $(1 - \omega_t)$  and corrects the homeownership rate for their presence at the initial date with the difference in homeownership rates between stayers and leavers. It is positive when the homeownership rate of stayers is higher than that of leavers. Standard errors and significance levels are computed by bootstrap using 1000 replications.

## 5.2 Quantifying the influence of individual characteristics

We then assess to what extent the difference in homeownership rates between immigrant stayers and immigrant entrants/leavers relates to differences in characteristics and their returns. For that purpose, we resort to the decompositions for non-linear models proposed by Fairlie (1999, 2005). For a given individual  $i$ , we denote by  $X_{it}$  the set of characteristics at date  $t$ , and by  $\beta_{gt}$  the returns to these characteristics which are allowed to vary with the group  $g$ , with  $g = m$  for immigrant stayers,  $g = l$  for immigrant leavers and  $g = e$  for immigrant entrants. Considering first only stayers and leavers, we estimate a logit model

for being a homeowner at date  $t$  for each group, such that the probability for an individual in group  $g$  of being a homeowner given his or her observed characteristics is  $F(X_{it}\beta_{gt})$ , where  $F(\cdot)$  is the cumulative of the logistic distribution. We introduce the function  $R(g, \beta, t)$ , which corresponds to the homeownership rate of group  $g$  at time  $t$  if the returns to characteristics are  $\beta$ :

$$R(g, \beta, t) = \frac{1}{N_{gt}} \sum_{i \in (g,t)} F(X_{it}\beta) \quad (4)$$

with  $N_{gt}$  being the number of individuals in group  $g$  at date  $t$ . In particular,  $R(g, \beta_{gt}, t)$  is a predictor of the observed homeownership rate. We can decompose the gap in homeownership rates between immigrant stayers and leavers at date  $t$  in the following way:

$$R(m, \beta_{mt}, t) - R(l, \beta_{lt}, t) = [R(m, \beta_{mt}, t) - R(l, \beta_{mt}, t)] + [R(l, \beta_{mt}, t) - R(l, \beta_{lt}, t)] \quad (5)$$

where the first right-hand-side term captures the influence of the differences in characteristics between immigrant stayers and leavers (with returns fixed to those of stayers), and the second right-hand-side term captures the influence of the differences in the returns (with characteristics fixed to those of leavers). Put differently, the first contribution quantifies how much difference there would be in the homeownership rate gap if immigrant stayers had the same characteristics as immigrant leavers; and the second contribution states how much difference there would be in the homeownership rate gap if immigrant leavers had the same returns to characteristics as immigrant stayers. Computation of the different terms involves estimating parameters  $\beta_{gt}$  by maximum likelihood and then plugging the estimators into the formula for the homeownership rate given by equation (4). Standard errors and significance levels are computed by bootstrap using 100 replications.<sup>9</sup> We can decompose in the same way the gap in homeownership rates between immigrant stayers and entrants at date  $t + 1$ ,  $R(m, \beta_{mt+1}, t + 1) - R(e, \beta_{et+1}, t + 1)$ .

Finally, we decompose the gap in homeownership rates between native and immigrant stayers as well as its evolution. First, note that the decomposition in level can be conducted at each date in the same way as for immigrant stayers and leavers/entrants. We denote by  $g = n$  the group of native stayers and by  $\Delta R(g, \beta, t) = R(g, \beta, t + 1) - R(g, \beta, t)$  the evolution of the homeownership rate between the two dates  $t$  and  $t + 1$ . We can decompose the difference in the evolution of homeownership rates between native and immigrant stayers by differencing equation (5) applied to the groups  $n$  and  $m$ , and rearranging the

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<sup>9</sup>We do not use more replications because the procedure is cumbersome: at each iteration, we need to re-estimate logit models before computing the terms in the decomposition.



terms:<sup>10</sup>

$$\Delta R(n, \beta_{nt}, t) - \Delta R(m, \beta_{mt}, t) = [\Delta R(n, \beta_{nt}, t) - \Delta R(m, \beta_{nt}, t)] + [\Delta R(m, \beta_{nt}, t) - \Delta R(m, \beta_{mt}, t)] \quad (6)$$

The difference in the evolution can be written as the sum of two terms corresponding, respectively, to changes resulting from differences in the evolution of the characteristics between native and immigrant stayers (with returns fixed to those of natives), and to changes related to differences in the evolution of the returns to these characteristics (with characteristics fixed to those of immigrant stayers).

## 6 Results

### 6.1 The role of entrants and leavers in immigrant homeownership rates

We report the results of decomposition (5) in Table 2, which gives the contributions of stayers, leavers and entrants to the evolution of the homeownership rate of immigrants over the 1975-1999 period. Results are contrasted with those obtained for natives.<sup>11</sup>

For immigrants, the contribution of leavers is positive because their homeownership rate in 1975 is lower than that of stayers: adding leavers to the sample makes the homeownership rate lower at the initial date, and thus its evolution is greater. By contrast, the contribution of entrants is negative because their homeownership rate is lower than that of stayers in 1999: adding entrants to the sample makes the homeownership rate lower at the final date, and thus its evolution is smaller. Overall, the negative effect of entrants is the most important, and the evolution of homeownership rates for the whole sample is lower than that of stayers.

Selection mechanisms due to entrants and leavers are very different for natives. Entrants do not contribute much to the evolution of the homeownership rate, since their proportion in the sample at the final date is very small. This is because the migration inflow of natives in France is very low compared to that of immigrants. Interestingly, the contribution of leavers is negative, which points toward their higher homeownership rate compared to stayers at the final date. Native leavers are indeed mostly individuals who died over the 1975-1999 period; they are on average quite old (see Table 1) and they have accumulated enough wealth over the life cycle to purchase a home. By contrast, immigrant leavers involve

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<sup>10</sup>Since the difference in the evolution of homeownership rates is equal to the evolution of the difference in homeownership rates, we will refer to the two indistinctly in the interpretations of the decomposition.

<sup>11</sup>The evolution of the difference in homeownership rates between natives and immigrants is now positive at 5.8 points, whereas for the initial sample it was negative at -1.4 points (see Table B.2). This points toward significant selection effects resulting from our sample restriction: whereas individuals under 18 in 1975 are now excluded from the sample, they were not before. Note that in the current analysis, individuals with missing information on homeownership status in 1975 or 1999 are excluded.

a large proportion of emigrants who are not that old and may not have accumulated enough wealth to access homeownership. Moreover, some of them may have planned to return to their home country and saved money rather than buying a dwelling in their host country.

Decompositions are also made for specific immigrant groups. For Southern Europeans, the contribution of entrants is small, as their proportion in the sample is low at the final date, and the difference in homeownership rates between stayers and entrants is lower than when considering all immigrants. As a result, the evolution of the homeownership rate for the entire Southern European population is very close to that of stayers. For North Africans, the contribution of entrants is rather large. This comes not only from the difference in homeownership rates between stayers and entrants (which is lower than for Southern Europeans), but also from the large proportion of entrants at the final date. Consequently, the evolution of the homeownership rate for the entire North African population is lower than that of stayers. Overall, differences between the two immigrant groups reflect differences in the timing and composition of immigration waves.

[ Insert Table 2 ]

## **6.2 The influence of characteristics on the gap between stayers and leavers/entrants**

We next investigate to what extent the difference in homeownership rates between stayers and leavers/entrants is related to differences in characteristics and their returns using decomposition (5). We first consider the gap between immigrant stayers and leavers in 1975. Table 3 gives the estimated coefficients of the logit model of homeownership for these two subgroups. They show that the profile of age coefficients differs, with the gap in homeownership between young and middle-aged individuals being smaller for leavers than for stayers. This can reflect some difficulties that leavers have in accumulating wealth during their thirties, or decisions to avoid investing in the host country because they planned on returning to their home countries. By contrast, the difference between younger and older individuals is slightly larger for leavers than for stayers. This can be explained by some older leavers being better off and owning a dwelling before they return to their home country after retirement. Employment does not increase the propensity to be a homeowner for leavers, whereas it does for stayers; and this suggests that leavers may have lower quality jobs or save money for investing in their home country. Being retired or in a couple is not associated to homeownership for leavers as much as it is for stayers, possibly because of return migration plans.

[ Insert Table 3 ]

We now turn to the decomposition of the homeownership gap between immigrant stayers and leavers in 1975. The difference in homeownership rates is positive at 4.2 points, as reported in Table 4, and the contribution of characteristics to this gap is negative at -2.1 points. Therefore, the actual difference is larger than the one predicted from characteristics, and this is consistent with leavers having lower returns to characteristics than stayers. This selection on returns is particularly strong for Southern Europeans and can also be detected for early immigrants who arrived before 1968. Two explanations for this selection process are failure to accumulate wealth and plans to return to the home country, which makes leavers save money rather than purchase a home.

There are also slight differences in the effects of homeownership determinants between immigrant stayers and entrants in 1999, as shown by the results of logit models of homeownership reported in Table 3. The most important difference is related to age, since entrants aged 35-49 in 1975 (who are almost all retired in 1999) have the same propensity to be homeowners as those aged 30-34. This is not true for stayers, as the propensity to be a homeowner is greater for the older group; and this difference can be explained by stayers having spent more time in the host country, which can be associated with greater wealth.

The gap in homeownership rates between immigrant stayers and entrants in 1999 is large at 17.2 points, as reported in Table 4. Nevertheless, its decomposition shows that the contribution of explanatory variables to this difference is only 6.3 points. This suggests an important role of the differences in returns to characteristics. A possible explanation is that stayers with specific characteristics have had time to accumulate wealth in the host country, which makes them more able to access homeownership than entrants who may not have been able to accumulate wealth to the same extent in their home country. This pattern remains when focusing more specifically on Southern Europeans or North Africans.

[ Insert Table 4 ]

### **6.3 The contribution of characteristics to the homeownership gap for stayers**

We also assess the role of characteristics and their returns in explaining the difference in homeownership rates between native and immigrant stayers, and how it evolves over the 1975-1999 period, by using decompositions (5) and (6). For that purpose, we first evaluate the extent to which the effects of homeownership determinants differ between the two groups in 1975 and 1999 by estimating logit models of homeownership, whose results are reported in Table 3.<sup>12</sup>

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<sup>12</sup>In the implementation, we faced an issue with the fact that individuals are never homeowners by definition if they are over 18 and different from household heads and their partners. It is not possible to include a dummy for their category in

For 1975, we find the expected result that the propensity to be a homeowner increases with age. Interestingly, the increase is more important for immigrants than for natives, and this can be explained by the assimilation process inherent in the time spent in the host country. Diplomas have the usual positive influence, and their effects are comparable for the two groups. Being a female has a larger positive impact for immigrants than for natives, possibly because some female immigrants enter France while having a partner in stable economic conditions. Being employed and in a high-skill socio-professional category also seem to matter more for immigrants, and this could occur because they may need to rely more on their own resources than natives, due to less wealth being transmitted from their parents.

Among family variables, being married, divorced or widowed, have large positive effects on the propensity to be a homeowner, especially for immigrants. Interestingly, not living with a partner while being married has a large negative effect, especially for immigrants. This may result from the anticipation of a return migration or from the household head having an unstable economic situation which prevents him or her from accessing homeownership. Having a partner who is an immigrant also decreases the propensity to be a homeowner, especially for immigrants, which may indicate a lack of resources for purchasing a dwelling when the two partners are immigrants. Interestingly, having a large number of children (four or above) decreases the propensity to be a homeowner, especially for immigrants who often have less wealth and cannot afford a dwelling large enough for a large family.

Finally, individuals have a higher propensity to be a homeowner if they live outside of urban areas whether they are natives or immigrants, and this is consistent with the structure of local housing markets. In our specification, we take into account the location of individuals by using dummies for urban area population brackets, which indirectly capture the effects of many local factors. In an alternative specification, we investigate more specifically whether the homeownership rate in the urban area influences the propensity to be a homeowner to the same extent for native and immigrant stayers. More precisely, dummies for urban area population brackets are replaced by a dummy for being located in an urban area and its interactions with the logarithm of the urban area population and the logarithm of the homeownership rate.<sup>13</sup> To deal with the existence of unobserved urban area factors that can bias the estimated coefficients

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a logit model, as homeownership for them is perfectly determined. At the same time, residing with a household head and possibly his or her partner can be partially determined by the homeownership decision, and this constitutes a consequence rather than a cause of that decision. As logit models are used for decompositions, we need to introduce the same explanatory variables for native and immigrant stayers, and since the period of arrival in the country is specific mostly to immigrants, it cannot be considered. In alternative specifications of the logit model for immigrant stayers, we introduced a dummy for entering the country over the 1968-1975 period (rather than before 1968), and we found the expected result that this dummy has a negative effect on homeownership. For 1975, its estimated coefficient and standard error are -2.827\*\*\* (0.233); and for 1999, they are -1.643\*\*\* (0.090). The progress over time for late immigrants can be explained by an improvement in their professional situation in the labor market. When introducing the dummy for entering the country over the 1968-1975 period, the estimated coefficients of all the other variables remain nearly unchanged.

<sup>13</sup>It would be tempting to add variables at the municipality level in the specification, such as the municipal proportion of immigrants; but these variables are likely to be endogenous, since the housing tenure influences the place where individuals are located. We thus decided to discard municipality variables from the regressions, but in section 6.4 we will characterize

as well as their standard errors (Moulton, 1990), we estimate a mixed logit that involves random terms at the urban area level, which are supposed to be independent and identically distributed, and to follow a centered normal law with a common variance parameter that will be estimated. We find that the homeownership rate of the urban area has a larger effect on the propensity to be a homeowner for natives than for immigrants, as shown in Table B.5 (although the difference is not significant at the 5% level). This suggests that immigrant stayers may benefit less than native stayers from being located in an urban area with a higher homeownership rate.

Turning to the results for 1999, the age profile for the propensity to be a homeowner (where age is measured in 1975) is now much different. “Older” individuals are less often homeowners, as some of them are far past 60 and have moved to rental dwellings with good access to services in city centers, to nursing homes or to relatives’ places of residence. Interestingly, the age profile is less steep for immigrants, perhaps because, among individuals below fifty, immigrants are less often homeowners than natives. Diploma effects are much more important than in 1975, as individuals have been able to reap the benefits of having a higher education. Returns to diploma remain lower for immigrants, probably because diplomas obtained abroad are not as well valued as French diplomas, and immigrants may have less access to jobs requiring qualifications. The effects of socio-professional categories are close to those obtained for 1975, and some significant disparities between locations have emerged. Individuals now have a lower propensity to be homeowners in Paris urban area than in any other location. This is likely to occur because more wealth must be accumulated over time to access homeownership in Paris, due to high housing prices. For family variables, the magnitude of some effects changes and, interestingly, a large number of children in the dwelling has a larger negative effect on an immigrant’s propensity to be a homeowner in 1999 than in 1975. This may result from a selection effect such that parents still having children at home at older ages lack resources to access homeownership.

We now decompose the difference in level and evolution of homeownership rates between native and immigrant stayers. Table 5 shows that this difference increased between 1975 and 1999 from 8.9 points to 12.4 points. The contribution of the gap in characteristics between the two groups also increased in value from 1.3 to 5.9 points and in percentage from 14.6 to 47.6%. This increase is related to changes in both the characteristics and their returns for natives (as these returns are those used as the references for evaluating the effects of characteristics). A likely interpretation is that there are variations in the speed of wealth accumulation, depending on characteristics which create differences in access to homeownership

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the municipality of residence for renters accessing homeownership before and after their move. Here, we would rather stick to variables at the urban area level, which are less likely to be endogenous since it is possible to check that most moves to access homeownership happen within the same urban area. Note that it would make sense to introduce a measure of the relative costs of renting and owning in the urban area in line with the literature (Henderson and Ioannides, 1983), but the information needed to construct such a measure is not available for the entire period of study.

across individuals over time. Immigrants have characteristics leading to less wealth, and this would explain why the gap with natives in homeownership rates is larger at the end of the period.<sup>14</sup> Interestingly, the decomposition of the difference in the evolution of homeownership rates between natives and immigrants shows that explanatory variables predict a larger increase in this difference than observed. In fact, this larger increase is compensated by changes in the returns to characteristics, which are overall slightly in favor of immigrants, possibly as a consequence of an assimilation process.

We also compute decompositions stratified by the arrival periods of immigrants. Results are very different for early immigrants who arrived in France before 1968 and for those who arrived later during the 1968-1975 period. The difference in homeownership rates between early immigrants and natives has increased from 2.2 to 9.3 points. This change comes from an increase in the contribution of differences in characteristics. Additional descriptive statistics show that early immigrants are initially rather old in 1975, with 43% being over 45 years of age. Many of them retired before 1999, which places them on the decreasing slope of the bell-shaped life-cycle curve for homeownership. For late immigrants, the difference in homeownership rates with natives is initially much larger at 29.5 points, but it decreases to 22.1 points over the 1975-1999 period. This decrease can be explained by changes in characteristics that are this time in favor of immigrants. Additional descriptive statistics show that late immigrants are initially younger (only 8% of them are over 45), and on average they are able to improve their professional situation and get married over the period, which can help them to accumulate wealth to purchase a home. In particular, the proportion of late immigrants who are married increases by 10 points over the period, and the proportion of those who are executives or occupy an intermediate position more than doubles, from 4% to 9%.

Decompositions are also conducted to compare native stayers with subgroups of immigrant stayers as defined by their country of origin. Interestingly, for Southern Europeans, the difference in homeownership rates with natives is rather small at 7.4 points in 1975, and it slightly decreases over time by 0.8 points, whereas changes in explanatory variables would predict a significant increase of 2.8 points. Changes in the returns to characteristics act as a counterbalancing force that is consistent with a trend towards assimilation. The difference in homeownership rates between North Africans and natives is very large at 30.0 points in 1975, and it increases a lot over the period, by 9.9 points; whereas changes in explanatory variables would predict a decrease of 2.5 points. As a consequence, a great part of the evolution in the gap in homeownership rates is explained by differences from natives in the evolution of returns to characteristics. This result suggests North Africans experience some important difficulties in accumulating wealth.

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<sup>14</sup>Note in particular that, for the proportion of individuals with no diploma, a large gap between natives and immigrants remains in 1999 (the gap is even a bit larger than in 1975), and disparities in the returns to diplomas have increased a lot over time.

[ Insert Table 5 ]

## 6.4 Characterization of dwellings by housing status transition of renters

Renters do not purchase dwellings with the same physical and locational attributes when accessing homeownership, because they differ in their ability to accumulate wealth and to access the housing market according to their individual characteristics, such as whether or not they are immigrants. Figure 6 provides descriptive statistics on dwellings and municipality characteristics in 1975 and 1999 for native and immigrant stayers who are renters in 1975 and homeowners in 1999. We focus on individuals in ordinary households at the two dates for whom we have information on the dwellings.

Living conditions in dwellings are characterized by the number of rooms per person and whether the dwelling is a detached house. Even if the number of rooms per person in 1975 is larger for natives (1.17) than for immigrants (1.01), the difference remains the same when individuals become homeowners, as the number of rooms per person is 0.8 greater for each group in 1999. This increase can be a result of their moving to larger dwellings, but also of a decrease in family size, specifically because of children leaving their parents' homes. Interestingly, North Africans have a number of rooms per person that is similar to that of Southern Europeans (0.95) in 1975; but it increases over time to a far lesser extent and reaches only 1.37 in 1999, as compared to 1.73 for Southern Europeans. Not surprisingly, immigrants who arrived before 1968 have a number of rooms per person that is larger than more recent immigrants who arrived over the 1968-1975 period, and this is the case in both 1975 and 1999. This occurs because they are older and their children are more likely to have moved out. The pattern is somewhat different for living in a detached house. Indeed, natives live more often in detached houses in 1975 than the whole population of immigrants, whether they are North Africans, Southern Europeans, recent or late immigrants. However, the increase in the proportion of individuals in detached houses over the 1975-1999 period is larger than that of natives for every group of immigrants. Still, natives end up with the largest proportion of individuals in detached houses in 1999, at 87%, while the corresponding proportion is slightly lower for Southern Europeans at 82% and much lower for North Africans at 70%.

Considering local characteristics, we use the unemployment rate in the municipality of residence as an indicator of the quality of the residential environment. This rate is low in 1975 for natives as well as for all groups of immigrants, and this can be explained by a low unemployment rate at the national level. Nevertheless, the municipal unemployment rate is slightly higher for North Africans (3.5%) than for natives and Southern Europeans (2.6%). The gaps between groups widen between 1975 and 1999, although all individuals are homeowners in 1999. This can be explained both by the patterns of mobility when accessing homeownership and a large increase in unemployment at the national level,

which widens differences in unemployment rates between municipalities. The average unemployment rate in the municipality of residence ends up being very high for North Africans, at 14.3%, compared to only 9.9% for natives and 11.1% for Southern Europeans. Interestingly, it is slightly higher for immigrants who arrived before 1968 than for those who arrived over the 1968-1975 period. This can be explained either by the purchase of dwellings at an earlier date in places that may have deteriorated or by a greater willingness to purchase a home even if it is located in a less attractive area.

We also study changes in the proportion of immigrants in the municipality of residence over the 1975-1999 period, and this allows us to assess whether native and immigrant renters accessing homeownership have moved away from locations where immigrants are concentrated, which are on average poorer. In 1975, immigrant renters live in municipalities where the proportion of immigrants (12.8%) is much higher than that of native renters (8.4%). While this proportion is similar for Southern European renters (13.0%), it is higher for North African renters (14.0%). Interestingly, the proportion of immigrants in the municipality of residence decreases over the 1975-1999 period for natives, for the entire population of immigrants and for Southern Europeans, but it increases for North Africans. Part of this increase is due to an increase in the proportion of North Africans in the municipality of residence. Nevertheless, there are substitutions affecting the composition of immigrants in the municipality of residence over the period, since the municipal proportion of Southern Europeans decreases even for North Africans. Together with the results from the municipal unemployment rate, this suggests that North Africans accessing homeownership may end up in less wealthy municipalities where more immigrants are concentrated.

[ Insert Table 6 ]

## 7 Conclusion

Using a large longitudinal dataset covering a period of twenty-five years, we assessed to what extent immigrant homeownership rates are influenced by exits and entries into the French territory. We showed that there are important selection effects. In particular, entrants have a lower homeownership rate than immigrants who have remained in the country over the entire period. Although they are more often college graduates, they are also younger and at an earlier stage in the wealth accumulation process. Moreover, they settle in large cities, such as Paris, where the homeownership rate is lower. Finally, the returns to their characteristics are lower than those of stayers.

We also investigated the evolution of the difference in homeownership rates between native and immigrant stayers. We find that this difference widens over time, but an even larger increase would be



predicted by changes in the characteristics of the individuals in the two groups. In fact, the returns to characteristics have evolved in favor of immigrants, which is consistent with an assimilation process. Nevertheless, among individuals accessing homeownership, housing conditions in newly owned dwellings are not as good for immigrants as for natives. They end up less often in a detached house, benefit from fewer rooms per person, and occupy dwellings in municipalities where the unemployment rate is higher.

In further work, it could be of interest to distinguish individuals who become independent after living with family or friends. These include not only young people leaving their parents' homes but also immigrants who have obtained their own dwelling after being housed by relatives or friends. This could help identify the specific residential strategies of immigrants arriving in the host country and determine whether they are assimilated into the housing market. An analysis of housing transitions would be useful to identify the related mechanisms, and it would also make it possible to determine how local conditions in the municipality of residence affect access to homeownership.

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Figure 1: Homeownership rates of natives and immigrants

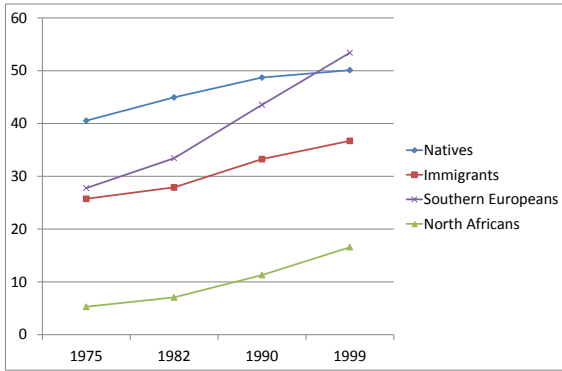


Fig. 1.a: All natives and immigrants

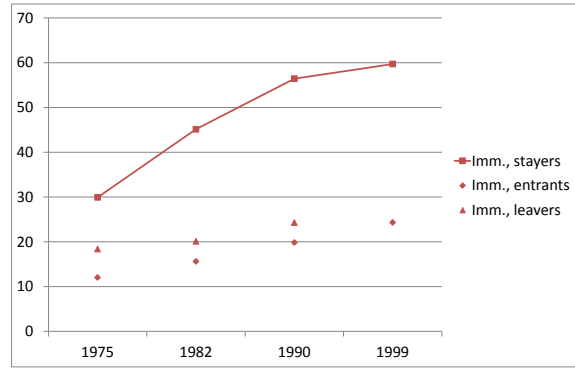


Fig. 1.b: Immigrant stayers, entrants and leavers

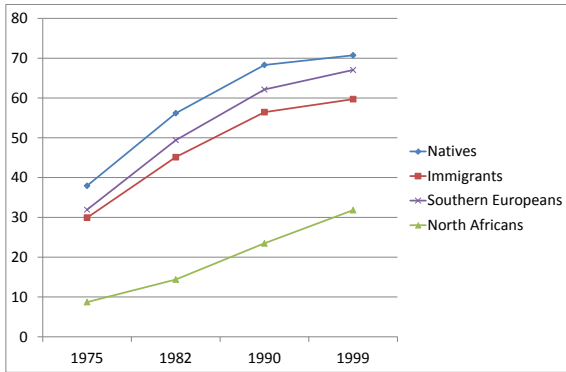


Fig. 1.c: Native and immigrant stayers

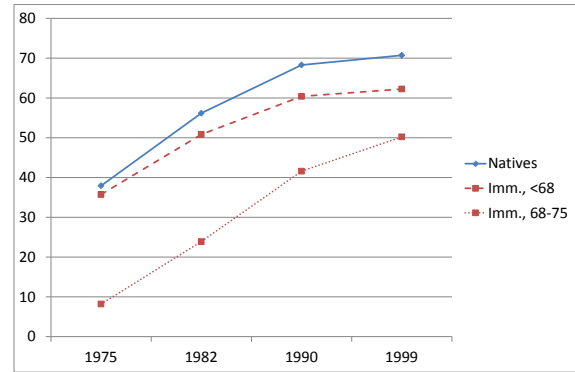


Fig. 1.d: Natives and cohorts of immigrant stayers

Note: computed from the Permanent Demographic Sample on the population of individuals located in mainland France and who are at least 18 years old. When a household owns a dwelling, it is considered to be the property of the household head and his or her partner (if any), but not the property of the other members of the household (if any). "Imm." refers to immigrants. At a given census date, entrants are individuals present in the corresponding census who are absent in the previous census, and leavers are individuals present in the corresponding census who are absent in the next census. Note that leavers cannot be determined in 1999 since there is no next exhaustive census. Stayers are individuals who are present in each of the four censuses 1975, 1982, 1990 and 1999. Fig. 1.a is constructed from the figures in Table B.2, Fig. 1.b from those in Tables B.3 and B.4, and Fig. 1.c and Fig. 1.d from those in Table B.3.

Table 1: Average characteristics of native and immigrant stayers, leavers and entrants (1975 and 1999)

Proportion (%)	Stayers				Leavers		Entrants	
	1975		1999		1975		1999	
	Nat.	Imm.	Nat.	Imm.	Nat.	Imm.	Nat.	Imm.
Homeowner	37.2	28.3	69.5	57.1	46.7	24.1	62.2	39.9
<i>Proportion of immigrants</i>								
North Africans		13.7		13.7		14.6		23.5
Southern Europeans		54.5		54.5		50.7		25.8
<i>Age in 1975</i>								
18-24	21.8	14.0	21.8	14.0	3.9	7.9	26.2	37.1
25-29	15.6	14.4	15.6	14.4	2.8	9.7	19.7	18.7
30-34	10.8	13.5	10.8	13.5	2.5	9.0	13.3	12.6
35-39	10.4	12.4	10.4	12.4	2.9	8.4	8.8	9.1
40-44	11.1	10.8	11.1	10.8	4.4	7.5	8.1	7.1
45-49	10.3	10.3	10.3	10.3	6.0	7.3	7.6	5.2
50-54	8.8	10.4	8.8	10.4	7.7	7.0	7.4	4.3
55-59	4.9	6.8	4.9	6.8	7.1	6.6	3.9	2.8
60-64	3.6	4.7	3.6	4.7	11.0	8.1	2.8	1.7
≥ 65	2.7	2.7	2.7	2.7	51.7	28.5	2.2	1.4
<i>Educational level</i>								
No diploma	36.7	65.9	20.6	48.2	56.9	78.5	19.1	43.1
Junior high school	28.5	16.6	37.0	26.2	29.6	11.5	32.1	19.2
Short professional track	20.9	9.7	22.4	13.8	7.4	4.0	21.6	10.9
High school graduate	6.7	3.2	8.9	4.6	2.9	2.4	10.3	8.9
Some college	7.2	4.6	11.1	7.2	3.2	3.6	16.9	17.9
Female	54.8	50.4	54.8	50.4	49.1	41.9	51.7	49.2
Employed	66.1	60.7	39.5	32.9	33.4	47.9	46.1	44.8
<i>Professional category</i>								
Self-employed and farmers	10.9	5.1	5.8	4.1	8.3	3.4	6.4	5.8
Executive	4.4	2.3	5.7	2.9	2.0	1.5	9.2	6.5
Intermediate	11.2	5.2	9.8	4.6	4.5	3.0	11.9	6.9
Employee	18.0	10.1	11.9	9.7	6.4	6.1	13.2	13.7
Blue collar	23.9	40.9	9.8	17.0	13.6	35.9	11.1	23.1
Retired	4.0	3.9	43.1	40.5	41.7	21.0	33.3	20.2
Out of labor force (other)	27.6	32.5	13.9	21.2	23.5	29.1	14.9	23.8
Out of labor force (other) * female	23.5	30.0	12.2	18.4	21.0	24.8	11.9	19.6
<i>Family status</i>								
Single	23.1	16.9	10.1	5.8	14.7	17.0	16.5	10.4
Married	72.1	78.1	66.8	71.9	60.1	68.1	60.2	72.5
Divorced/widowed	4.8	5.0	23.1	22.3	25.2	14.9	23.3	17.1
Multi-family household	21.9	12.8	8.2	10.1	12.9	11.7	9.5	12.8
Family head or partner (if any)	72.0	78.2	74.5	77.2	61.8	62.0	70.5	77.5
Married with absent partner	1.6	4.7	1.8	3.3	2.2	10.6	2.6	6.8
Not married with present partner	1.9	2.7	5.0	3.5	2.3	2.9	7.4	5.5
Immigrant partner	3.3	45.3	3.4	41.8	2.7	41.5	5.9	50.8
1 child	19.6	17.9	15.2	15.5	9.0	11.6	15.6	14.3
2 children	17.6	17.8	10.2	11.1	6.0	9.4	11.7	15.1
3 children	9.5	10.9	6.5	8.3	3.9	6.0	7.7	12.4
≥ 4 children	6.7	13.9	2.1	5.8	3.4	6.9	2.8	12.7
<i>Urban area size bracket</i>								
Outside	27.0	16.2	29.8	17.3	32.8	16.4	23.4	11.7
< 50,000	9.9	8.5	10.3	8.6	9.4	8.1	8.8	6.2
50,000 - 200,000	16.9	14.1	17.1	14.2	15.4	13.4	14.5	10.6
200,000 - 500,000	16.0	15.6	15.4	15.5	14.3	14.8	12.7	11.1
500,000 - 10,000,000	15.5	22.0	15.4	22.1	14.4	21.8	23.4	19.7
Paris	14.7	23.7	11.9	22.3	13.6	25.7	17.2	40.8
<i>Urban area variables</i>								
Homeownership rate	35.17	33.39	46.41	44.49	35.23	33.33	45.59	43.10
Average population (millions)	1.70	2.34	1.87	2.86	1.71	2.53	2.47	4.62
Proportion of Immigrants	8.66	11.59	9.12	12.07	8.67	11.67	10.28	13.64
Proportion of North Africans	2.22	2.99	2.79	3.70	2.20	3.04	3.22	4.09
Proportion of Southern Europeans	4.03	5.50	2.72	3.67	4.02	5.44	2.97	3.75
<i>Municipality variables</i>								
Homeownership rate	38.82	33.53	51.32	44.89	39.57	33.38	48.52	40.62
Proportion of Immigrants	7.28	12.78	7.15	12.60	6.99	12.83	8.78	15.27
Proportion of North Africans	1.69	3.17	1.96	3.81	1.60	3.19	2.57	4.68
Proportion of Southern Europeans	3.60	6.45	2.39	4.22	3.41	6.25	2.69	3.91
Unemployment rate (males)	2.54	2.89	10.50	12.39	2.62	3.04	11.46	12.89
<i>Dwelling characteristics</i>								
Ordinary household (OH)	98.37	96.69	97.42	97.38	95.92	91.36	96.54	96.01
Detached House (among OH)	59.90	40.14	72.25	58.07	65.41	40.26	65.36	39.76
Number of rooms (among OH)	3.87	3.55	4.29	4.08	3.53	3.12	4.10	3.79
N	189,570	11,012	189,570	11,012	100,516	17,336	18,117	11,564

Note: computed from the Permanent Demographic Sample on the population of individuals located in mainland France and who are at least 18 years old in 1975. Dwelling characteristics are available in the data for ordinary households (OH) only. The number of rooms is censored at 9 in the data. When it is declared to be higher than 8, we fix it to 9. Matched data from censuses (1/5 sample in 1975 and 1/4 sample in 1999 aggregated at the municipality level) provide information on municipality variables. "Outside" corresponds to municipalities in rural areas or belonging to several urban areas.

Table 2: Decomposition of the evolution of homeownership rate between 1975 and 1999 (in points)

	Evolution (pts)	Contribution to evolution (pts)			Decomposition of contribution			
		Stayers	Leavers	Entrants	Proportion (%)		Gap with stayers	
					Leavers	Entrants	Leavers	Entrants
<i>Immigrants</i>								
All	22.6*** (0.4)	28.8*** (0.5)	2.6*** (0.3)	-8.8*** (0.3)	61.2*** (0.3)	51.2*** (0.3)	4.2*** (0.5)	-17.2*** (0.7)
North Africans	18.2*** (0.7)	22.4*** (1.2)	2.1*** (0.5)	-6.3*** (0.8)	62.7*** (0.8)	64.3*** (0.7)	3.3*** (1.2)	-9.8*** (1.4)
Southern Europeans	31.3*** (0.6)	33.1*** (0.7)	2.4*** (0.5)	-4.2*** (0.3)	59.4*** (0.4)	33.2*** (0.5)	4.1*** (0.8)	-12.5*** (1.1)
<i>Natives</i>								
All	28.4*** (0.1)	32.3*** (0.1)	-3.3*** (0.1)	-0.6*** (0.03)	34.7*** (0.1)	8.7*** (0.1)	-9.5*** (0.2)	-7.3*** (0.4)

Note: computed from the Permanent Demographic Sample on the population of individuals located in mainland France and who are at least 18 years old in 1975. When a household owns a dwelling, it is considered to be the property of the household head and his partner (if any), but not the property of the other members of the household (if any). Columns 3-5 give the results of decomposition (3). Column 6 (resp. 7) gives the proportion of leavers (resp. entrants) in the sample at the initial (resp. final) date. "Gap with stayers" corresponds to the differences in homeownership rates between stayers and leavers (column 8), or between entrants and stayers (column 9). Significance levels: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table 3: Logit model of homeownership for native and immigrant stayers, immigrant leavers and entrants in 1975 and 1999

	1975			1999		
	Native stayers	Immigrant stayers	Immigrant leavers	Native stayers	Immigrant stayers	Immigrant entrants
<i>Age in 1975</i>						
18-24	0.131*** (0.005)	0.294*** (0.053)	0.449*** (0.094)	0.558*** (0.013)	0.968 (0.082)	0.661*** (0.048)
25-29	0.453*** (0.010)	0.638*** (0.071)	0.771* (0.104)	0.762*** (0.071)	1.130 (0.091)	0.807*** (0.062)
30-34	ref	ref	ref	ref	ref	ref
35-39	1.549*** (0.033)	2.183*** (0.206)	1.473*** (0.176)	1.212*** (0.034)	1.149 (0.102)	0.893 (0.084)
40-44	1.932*** (0.041)	2.554*** (0.246)	1.842*** (0.217)	1.307*** (0.039)	1.113 (0.114)	1.075 (0.117)
45-49	2.340*** (0.051)	3.605*** (0.346)	2.542*** (0.291)	1.299*** (0.039)	1.223* (0.133)	1.142 (0.137)
50-54	2.633*** (0.063)	4.204*** (0.409)	3.523*** (0.395)	1.173*** (0.037)	1.354*** (0.149)	1.220 (0.159)
55-59	2.862*** (0.083)	4.057*** (0.457)	3.951*** (0.453)	0.955 (0.033)	1.211 (0.145)	1.516*** (0.225)
60-64	3.553*** (0.122)	4.937*** (0.656)	5.683*** (0.648)	0.761*** (0.028)	1.043 (0.140)	0.963 (0.177)
≥ 65	3.519*** (0.143)	5.619*** (0.954)	6.325*** (0.721)	0.543*** (0.022)	0.749* (0.120)	0.881 (0.181)
<i>Educational level</i>						
No diploma	ref	ref	ref	ref	ref	ref
Junior high school	1.203*** (0.017)	1.283*** (0.086)	1.513*** (0.091)	1.526*** (0.023)	1.521*** (0.078)	1.423*** (0.082)
Short professional track	1.338*** (0.023)	1.485*** (0.133)	1.578*** (0.175)	1.789*** (0.032)	1.854*** (0.130)	1.735*** (0.124)
High school graduate	1.182*** (0.033)	1.142 (0.184)	1.255 (0.186)	2.198*** (0.053)	1.642*** (0.175)	1.832*** (0.144)
Some college	1.148*** (0.032)	1.282* (0.179)	1.503*** (0.184)	2.220*** (0.054)	1.788*** (0.182)	1.759*** (0.120)
Female	1.090*** (0.017)	1.311*** (0.102)	1.134** (0.069)	1.093*** (0.015)	1.364*** (0.075)	1.322*** (0.074)
Employed	1.261*** (0.051)	1.609*** (0.273)	0.963 (0.133)	1.980*** (0.057)	1.820*** (0.180)	1.765*** (0.136)
<i>Professional category</i>						
Self-employed and farmers	1.644*** (0.035)	2.716*** (0.297)	3.171*** (0.347)	1.438*** (0.045)	2.359*** (0.299)	1.784*** (0.180)
Executive	1.410*** (0.045)	1.889*** (0.321)	1.466** (0.245)	1.412*** (0.048)	2.216*** (0.366)	1.486*** (0.154)
Intermediate	1.211*** (0.026)	1.554*** (0.176)	1.583*** (0.195)	1.363*** (0.036)	1.598*** (0.190)	1.512*** (0.146)
Employee	1.053*** (0.021)	1.040 (0.108)	1.015 (0.105)	0.971 (0.024)	1.139 (0.103)	0.942 (0.075)
Blue collar	ref	ref	ref	ref	ref	ref
Retired	1.660*** (0.084)	2.237*** (0.463)	1.254 (0.188)	2.163*** (0.081)	1.977*** (0.241)	2.056*** (0.223)
Out of labor force (other)	0.865* (0.072)	1.700* (0.514)	0.916 (0.178)	1.119** (0.056)	1.030 (0.167)	1.106 (0.147)
Out of labor force (other) * female	1.791*** (0.137)	1.051 (0.287)	1.270 (0.206)	1.541*** (0.067)	1.515*** (0.222)	1.148 (0.148)
<i>Urban area size</i>						
Outside	1.558*** (0.030)	1.453*** (0.114)	1.479*** (0.095)	2.126*** (0.042)	2.161*** (0.153)	2.854*** (0.200)
< 50,000	1.071*** (0.025)	1.064 (0.105)	0.967 (0.081)	1.523*** (0.036)	1.475*** (0.125)	1.533*** (0.140)
50,000 - 200,000	1.158*** (0.024)	1.056 (0.089)	0.978 (0.069)	1.547*** (0.032)	1.330*** (0.095)	1.331*** (0.094)
200,000 - 500,000	1.058*** (0.022)	0.955 (0.079)	0.857** (0.060)	1.397*** (0.030)	1.426*** (0.100)	1.336*** (0.094)
500,000 - 10,000,000	1.054** (0.022)	1.025 (0.077)	0.920 (0.058)	1.276*** (0.027)	1.203*** (0.077)	1.156** (0.068)
Paris	ref	ref	ref	ref	ref	ref
<i>Family status</i>						
Single	ref	ref	ref	ref	ref	ref
Married	2.683*** (0.125)	4.695*** (1.049)	3.005*** (0.580)	4.353*** (0.162)	3.679*** (0.569)	4.189*** (0.575)
Divorced/widowed	1.337*** (0.046)	2.493*** (0.427)	2.024*** (0.208)	1.369*** (0.027)	1.784*** (0.193)	1.669*** (0.159)
Multi-family household	0.257*** (0.007)	0.562*** (0.074)	0.273*** (0.027)	0.409*** (0.008)	0.566*** (0.040)	0.638*** (0.045)
Family head or his partner (if any)	1.441*** (0.007)	1.943*** (0.393)	2.689*** (0.470)	1.484*** (0.054)	2.206*** (0.276)	2.358*** (0.284)
Married with absent partner	0.343*** (0.020)	0.160*** (0.044)	0.237*** (0.050)	0.243*** (0.011)	0.249*** (0.042)	0.225*** (0.033)
Not married with present partner	1.224*** (0.071)	1.276 (0.313)	1.159 (0.239)	1.452*** (0.059)	1.336* (0.223)	1.400** (0.198)
Immigrant partner	0.721*** (0.021)	0.580*** (0.033)	0.579*** (0.031)	0.770*** (0.024)	0.588*** (0.033)	0.521*** (0.032)
1 child	1.132*** (0.021)	1.094 (0.088)	1.229*** (0.086)	1.111*** (0.022)	0.996 (0.067)	0.950 (0.067)
2 children	1.252*** (0.024)	1.166* (0.058)	1.401*** (0.111)	1.231*** (0.029)	0.868* (0.070)	1.042 (0.076)
3 children	1.255*** (0.028)	0.930 (0.089)	1.286*** (0.125)	1.117*** (0.034)	0.736*** (0.069)	0.826** (0.068)
≥ 4 children	1.135*** (0.029)	0.785** (0.075)	0.943 (0.090)	0.939 (0.040)	0.463*** (0.049)	0.620*** (0.053)
Constant	-2.483*** (0.054)	-4.188*** (0.243)	-3.894*** (0.196)	-1.888*** (0.043)	-2.420*** (0.158)	-2.750*** (0.133)
N	189,570	11,012	17,336	189,570	11,012	11,564

Note: computed from the Permanent Demographic Sample on the population of individuals located in mainland France and who are at least 18 years old in 1975. Odds ratio are reported as well as their standard errors in parentheses (\* p < 0.1, \*\* p < 0.05, \*\*\* p < 0.01). N: number of observations. "Outside" corresponds to isolated municipalities or under the influence of multiple urban areas.



Table 4: Decomposition of the difference in homeownership rates between stayers and leavers in 1975 / entrants in 1999

Difference in homeownership rates (points in favor of stayers)	Raw difference	Reference: stayers	
		Contribution of Characteristics	Returns
<i>Leavers, 1975</i>			
Natives	-9.5*** (0.2)	-14.4*** (0.4)	4.9*** (0.4)
Immigrants	4.2*** (0.6)	-2.1*** (0.9)	6.3*** (0.9)
North Africans	3.3*** (0.8)	1.7 (1.4)	1.6 (1.4)
Southern Europeans	4.1*** (0.8)	-4.0*** (1.1)	8.1*** (1.3)
Arrived before 1968	1.2** (0.6)	-5.3*** (1.1)	6.5*** (1.3)
Arrived in 1968-1975	-4.5*** (0.6)	-4.6** (1.9)	0.1 (1.9)
<i>Entrants, 1999</i>			
Natives	7.3*** (0.3)	4.2*** (0.2)	3.1*** (0.3)
Immigrants	17.2*** (0.6)	6.3*** (0.6)	10.9*** (0.8)
North Africans	9.8*** (1.3)	-0.2 (1.2)	10.0*** (1.8)
Southern Europeans	12.5*** (1.2)	5.7*** (0.6)	6.8*** (1.2)

*Note: computed from the Permanent Demographic Sample on the population of individuals who are at least 18 years old in 1975. When a household owns a dwelling, it is considered to be the property of the household head and his or her partner (if any), but not the property of the other members of the household (if any). Contributions of characteristics and their returns are consistent with decomposition (5). Significance levels: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .*

Table 5: Decomposition of the difference in homeownership rates between native and immigrant stayers and its evolution over the 1975-1999 period

Difference in homeownership rates (points in favor of natives)	Raw difference	Reference: natives	
		Contribution of Characteristics	Returns
<i>All</i>			
1975	8.9*** (0.5)	1.3*** (0.3)	7.6*** (0.5)
1999	12.4*** (0.5)	5.9*** (0.3)	6.5*** (0.6)
1975-1999 difference	3.5*** (0.7)	4.6*** (0.5)	-1.1 (0.7)
<i>Southern Europeans</i>			
1975	7.4*** (0.6)	1.5*** (0.4)	5.9*** (0.6)
1999	6.6*** (0.6)	4.2*** (0.4)	2.4*** (0.7)
1975-1999 difference	-0.8 (0.8)	2.8*** (0.6)	-3.6*** (0.8)
<i>North Africans</i>			
1975	30.0*** (0.7)	14.1*** (0.6)	15.9*** (0.8)
1999	39.9*** (1.2)	11.6*** (0.7)	28.3*** (1.4)
1975-1999 difference	9.9*** (1.3)	-2.5*** (0.9)	12.4*** (1.6)
<i>Arrival before 1968</i>			
1975	2.2*** (0.5)	-3.5*** (0.4)	5.7*** (0.6)
1999	9.3*** (0.5)	5.1*** (0.3)	4.2*** (0.6)
1975-1999 difference	7.1*** (0.7)	8.5*** (0.4)	-1.4* (0.8)
<i>Arrived during the 1968-1975 period</i>			
1975	29.4*** (0.6)	16.0*** (0.4)	13.4*** (0.6)
1999	22.1*** (0.9)	8.4*** (0.6)	13.7*** (0.9)
1975-1999 difference	-7.4*** (1.0)	-7.6*** (0.7)	0.2 (1.1)

Note: computed from the Permanent Demographic Sample on the population of individuals located in mainland France and who are at least 18 years old in 1975. When a household owns a dwelling, it is considered to be the property of the household head and his or her partner (if any), but not the property of the other members of the household (if any). Contributions of characteristics and their returns are consistent with decompositions (5) and (6). Significance levels: \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table 6: Characterization of dwellings for renters in 1975 who become homeowners in 1999, sample restricted to individuals in ordinary households

	Year	Natives	Immigrants				
			All	NA	SE	<68	68-75
<i>Dwelling characteristics</i>							
Number of rooms / pers. ( $\leq 5$ pers. in 75)	1975	1.17	1.01	0.95	0.95	1.04	0.92
	1999	1.99	1.80	1.37	1.73	1.91	1.51
	<i>diff</i>	<i>0.82</i>	<i>0.79</i>	<i>0.42</i>	<i>0.78</i>	<i>0.87</i>	<i>0.59</i>
Detached house	1975	49.86	30.23	17.16	32.78	32.94	23.71
	1999	86.80	79.00	69.82	82.24	78.35	80.57
	<i>diff</i>	<i>36.94</i>	<i>48.77</i>	<i>52.66</i>	<i>49.46</i>	<i>45.41</i>	<i>56.86</i>
<i>Municipality characteristics</i>							
Unemployment rate	1975	2.59	2.84	3.47	2.64	2.87	2.79
	1999	9.89	11.49	14.30	11.11	11.68	11.04
	<i>diff</i>	<i>7.30</i>	<i>8.65</i>	<i>10.83</i>	<i>8.47</i>	<i>8.81</i>	<i>8.25</i>
Proportion of immigrants	1975	8.37	12.84	14.04	13.06	13.08	12.24
	1999	7.23	11.91	15.26	11.57	11.69	12.43
	<i>diff</i>	<i>-1.14</i>	<i>-0.93</i>	<i>1.22</i>	<i>-1.49</i>	<i>-1.39</i>	<i>0.19</i>
Proportion of North Africans	1975	2.47	3.42	4.61	3.24	3.47	3.32
	1999	2.60	3.89	5.54	3.61	3.89	3.92
	<i>diff</i>	<i>0.13</i>	<i>0.47</i>	<i>0.93</i>	<i>0.37</i>	<i>0.42</i>	<i>0.60</i>
Proportion of Southern Europeans	1975	4.41	6.77	5.54	7.56	6.97	6.29
	1999	2.75	4.46	3.93	4.93	4.45	4.48
	<i>diff</i>	<i>-1.66</i>	<i>-2.31</i>	<i>-1.61</i>	<i>-2.63</i>	<i>-2.52</i>	<i>-1.81</i>

*Note: computed from the Permanent Demographic Sample on the population of individuals in an ordinary household living in an ordinary dwelling located in mainland France and who are at least 18 years old in 1975. When a household owns a dwelling, it is considered to be the property of the household head and his or her partner (if any), but not the property of the other members of the household (if any). When computing the number of rooms per person, the sample is restricted to individuals in households containing 5 persons or less in 1975 because the number of persons is censored at 6 in the data. When the number of individuals in the household in 1999 is declared to be higher than 5, we fix it to 6. The number of rooms is censored at 9 in the data. When it is declared to be higher than 8 in 1975 or 1999, we fix it to 9. Matched data from censuses (1/5 sample in 1975 and 1/4 sample in 1999 aggregated at the municipality level) provide information on municipality variables.*

Figure A.1: Homeownership rates of natives, Southern Europeans and North Africans

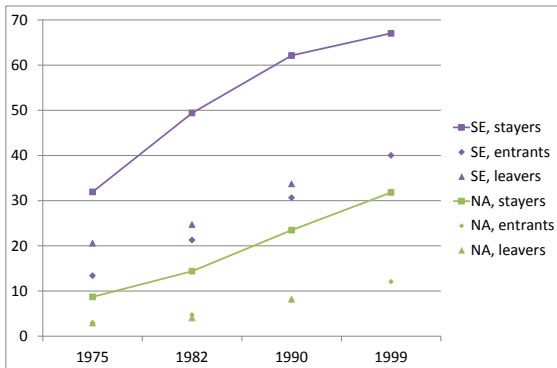


Fig. A.1.a: Immigrant stayers, entrants and leavers

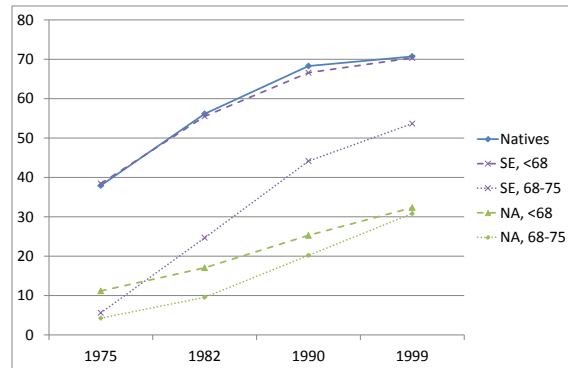


Fig. A.1.b: Natives and cohorts of immigrant stayers

Note: computed from the Permanent Demographic Sample on the population of individuals located in mainland France and who are at least 18 years old. When a household owns a dwelling, it is considered to be the property of the household head and his or her partner (if any), but not the property of the other members of the household (if any). "Imm." refers to immigrants. At a given census date, entrants are individuals present in the corresponding census who are absent in the previous census, and leavers are individuals present in the corresponding census who are absent in the next census. Note that leavers cannot be determined in 1999 since there is no next exhaustive census. Stayers are individuals who are present in each of the four censuses 1975, 1982, 1990 and 1999. Fig. A.1.a is constructed from figures in Tables B.3 and B.4, and Fig. A.1.b from those in Table B.3.

Table B.1: Proportion of immigrants in 1975 and 1999 by country of origin

1975		1999	
Country	Proportion (%)	Country	Proportion (%)
Italy	19.4	Portugal	14.7
Portugal	19.0	Algeria	10.9
Spain	15.4	Italy	9.9
Algeria	10.6	Morocco	8.2
Poland	4.5	Spain	7.4
Tunisia	3.6	Turkey	5.2
Belgium	2.5	Tunisia	4.4
Morocco	2.1	Poland	2.2
Yugoslavia	2.0	Germany	2.2
Germany	2.0	Belgium	2.0
N	38,345		43,344

*Note: computed from the Permanent Demographic Sample on the population of individuals located in mainland France. Only countries which represent at least 2% of immigrants in a given year are reported.*

Table B.2: Homeownership rates of natives and immigrants (1975-1999)

	1975	1982	1990	1999
Proportion of homeowners (%)				
Natives	40.54	44.95	48.71	50.11
Immigrants	25.74	27.91	33.26	36.72
<i>including:</i>				
North Africans	5.29	7.06	11.29	16.57
Southern Europeans	27.77	33.42	43.55	53.41
Proportion of immigrants in the population				
Immigrants	8.78	9.01	9.01	8.95
<i>including:</i>				
North Africans	1.28	1.63	1.72	2.08
Southern Europeans	4.73	4.17	3.69	2.99
Number of observations				
Natives	291,940	88,572	387,625	414,640
Immigrants	28,111	8,771	38,390	40,756
<i>including:</i>				
North Africans	4,085	1,586	7,346	9,491
Southern Europeans	15,143	4,061	15,712	13,613

*Note: computed from the Permanent Demographic Sample on the population of individuals located in mainland France and who are at least 18 years old. When a household owns a dwelling, it is considered to be the property of the household head and his or her partner (if any), but not the property of the other members of the household (if any).*

Table B.3: Homeownership rates of native and immigrant stayers (1975-1999, 1/4 sample)

	1975	1982	1990	1999	N
Natives	37.94	56.17	68.30	70.73	44,098
Immigrants	29.93	45.14	56.44	59.71	2,142
<i>including:</i>					
North Africans	8.71	14.39	23.48	31.82	264
Southern Europeans	31.93	49.40	62.13	67.04	1,162
Immigrants, arrival $\leq$ 1968	35.74	50.83	60.41	62.25	1,690
<i>including:</i>					
North Africans	11.18	17.06	25.29	32.35	170
Southern Europeans	38.45	55.53	66.60	70.35	931
Immigrants, 1968 < arrival $\leq$ 1975	8.19	23.89	41.59	50.22	452
<i>including:</i>					
North Africans	4.26	9.57	20.21	30.85	94
Southern Europeans	5.63	24.68	44.16	53.68	231

*Note: computed from the Permanent Demographic Sample on the population of individuals located in mainland France and who are at least 18 years old. When a household owns a dwelling, it is considered to be the property of the household head and his or her partner (if any), but not the property of the other members of the household (if any). The sample is restricted to one fourth of stayers, as we focus on individuals who can be tracked over the entire period and only one-fourth of the 1982 Census information is available. N: number of observations.*

Table B.4: Homeownership rates for entrants and leavers (1975-1999)

	Sample	1975	1982	1990	1999
Homeownership rate					
Natives	All	40.54	44.93	48.68	50.08
	Entrants	37.41	36.87	40.27	38.48
	Leavers	38.17	40.04	44.43	
Immigrants	All	25.74	27.90	33.31	36.68
	Entrants	12.04	15.62	19.84	24.32
	Leavers	18.38	20.10	24.30	
North Africans	All	5.28	7.04	11.26	16.57
	Entrants	3.00	4.74	7.90	12.08
	Leavers	2.91	4.03	8.19	
Southern Europeans	All	27.77	33.44	43.55	53.41
	Entrants	13.41	21.30	30.66	40.03
	Leavers	20.59	24.71	33.70	
Proportion of entrants/leavers					
Natives	Entrants	6.73	5.86	6.53	5.22
	Leavers	13.67	14.64	13.85	
Immigrants	Entrants	41.18	37.27	36.49	38.94
	Leavers	38.40	36.20	38.97	
North Africans	Entrants	64.48	51.89	45.83	43.80
	Leavers	48.77	43.82	40.73	
Southern Europeans	Entrants	38.22	26.13	24.75	24.09
	Leavers	36.23	32.28	35.58	

*Note: computed from the Permanent Demographic Sample on the population of individuals located in mainland France and who are at least 18 years old. When a household owns a dwelling, it is considered to be the property of the household head and his or her partner (if any), but not the property of the other members of the household (if any).*



Table B.5: Logit model of homeownership for stayers, entrants and leavers when urban area variables are introduced

Urban area variable	Stayers				Leavers		Entrants	
	1975		1999		1975		1999	
	Nat.	Imm.	Nat.	Imm.	Nat.	Imm.	Nat.	Imm.
Population (in logarithm)	1.0569*** (0.0140)	1.0200 (0.0331)	1.0220** (0.0108)	1.0023 (0.0308)	1.0006 (0.0137)	1.0136 (0.0303)	1.0183 (0.0192)	0.9659 (0.0312)
Homeownership rate	1.0563*** (0.0029)	1.0421*** (0.0091)	1.0517*** (0.0027)	1.0456*** (0.0092)	1.0478*** (0.0031)	1.0406*** (0.0082)	1.0449*** (0.0062)	1.0317*** (0.0097)

*Note: computed from the Permanent Demographic Sample on the population of individuals located in mainland France and who are at least 18 years old in 1975. Matched data from censuses (1/5 sample in 1975 and 1/4 sample in 1999 aggregated at the municipality level) provide information on municipality variables. Odds ratios are reported as well as their standard errors in parentheses (\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ ). We report only estimated coefficients and standard errors for the urban area variables that are interacted with the dummy for being located in an urban area.*