

IMMIGRANTS' HOME-OWNERSHIP DECISION IN MIGRATION PROJECTS. SUBJECTIVE DETERMINANTS AND EXTERNAL CONSTRAINTS

Elisa Barbiano di Belgiojoso, Stefania Maria Lorenza Rimoldi

1. Introduction

Homeownership is usually considered an indicator of economic success as well as a status marker of well-being (Constant et al., 2009; Gobillon and Solignac, 2015; Davidov and Weick, 2011). For immigrants, indeed, it is also commonly considered an important step in the migration process toward settlement, since buying a home represents a decision to invest in the host country, reflecting the will and the commitment to stay (Davidov and Weick, 2011; Constant et al., 2009).

Assuming this perspective, the homeownership rate (hereafter HOR) among migrants should increase along the time spent in the host country. Scholars univocally agree in recognizing that years since migration positively affects the HOR (Davidov and Weick, 2011; Constant et al., 2009; Borjas, 2002; Gobillon and Solignac, 2015; Sinnig, 2006). In fact, over the course of time immigrants acquire knowledge of the new society by increasing their language skills, and mature commitment towards the host country by reinforcing their social networks and by gaining a deeper knowledge of the housing market. Hence, in those countries where migration is a well-established phenomenon, accompanied by family reunification and long-term migrants, the HOR is expected to increase along the settlement process of the migrant population.

However, the time spent in the host country is just one of many factors impacting on homeownership (Constant et al., 2009; Davidov and Weick, 2011; Sinnig, 2010). Actually, a range of factors that can be grouped in 5 dimensions, is usually considered crucial: first, socioeconomic characteristics such as family status and composition, employment status, income, education (see e.g.: Sinnig, 2010; Davidov and Weick, 2011); second, demographic characteristics such as age and country of origin (e.g. Borjas, 2002; Constant et al., 2009; Davidov and Weick, 2011); third, institutional characteristics such as housing market conditions and knowledge of the country's credit and financial systems (e.g. Constant et al., 2009; Amuendo-Dorantes and Mundra, 2012); fourth, differences in the HOR could result from cultural differences and attitudes towards homeownership (e.g. Constant et al, 2009; Sinnig, 2010; Owuso, 1998); and finally, these differences

can reflect difficulties in financing, segregation and discrimination practices in the housing market (Costant et al., 2009; Gobillon and Solignac, 2015).

In short, the evolution over time of the HOR among migrants can be ascribed to the following two elements. First of all, to the economic context, because the decision to buy a home can be delayed in case of unfavourable housing market conditions (Constant et al., 2009): this results in a stabilization of the HOR. Secondly, to the change in the composition of the group of stayers, due to the arrival of new migrants with different characteristics as regards gender, age, marital and family status, origin, migrant status and years since migration, all being, as stated above, determinant factors in the decision to buy a home in the host country (e.g. Gobillon and Solignac, 2015). In such a situation, the variation of the HOR can be ascribed to both the changed propensity to be a homeowner and the altered composition of the staying migrants' population (cohort effect) (Firebaugh, 1997; Kitagawa, 1955). Thus, the increase of rate can be explained due to the increase in homeownership propensity, but also to the increase in the relative importance of the segment of population typically characterized by a higher HOR. For example, in populations where migration is a well-established phenomenon, the proportion of migrants with higher length of stay usually increases in time. Therefore, the increase of the HOR can be ascribed either to a cohort effect or to the increase of the rate despite the cohort composition.

This study has two aims: firstly, to examine the main factors affecting the attitude towards homeownership, in order to identify the elements responsible for the variations detected along the period observed; secondly, to decompose the variation over time into two components: the structural variation (cohort replacement) and the 'pure' propensity to homeownership (intra-cohort variation).

2. Data

Our analyses are based on 2001-2015 annual surveys carried out by ORIM (Regional Observatory on Immigration). Data were collected by the Foundation for Initiatives and Studies on Multi-Ethnicity (ISMU) in order to monitor and study the foreign population living in the Lombardy Region. The surveys were conducted every year on nearly 8,000 immigrants aged 15 and over, living in Italy at the time of the interview and born in high emigration countries (Blangiardo, 2016). Interviewees were randomly selected on the basis of the Centre Sampling Method (Baio et al., 2011), a method specifically designed to collect information on a representative sample of immigrants (both legally and illegally present). This survey method is based on the hypothesis that in everyday life immigrants attend a range of "aggregation centres" (such as specific immigrant services, phone centres,

churches, markets, worship places, ethnic shops, etc.), and that information on the numbers attending these centres can be used to correct the sample by giving to each interviewee a different weight, according to how likely it was for the person to be found by interviewers. The method is based on a two-stage design. The questionnaires are allocated across municipalities (first level units) selected according to their share of immigrants, their socio-economic situation and their demographic representativeness at regional level. Immigrants (second level units) are randomly selected among those who attend one or more of a set of aggregation centres previously identified in each of the first level units. Interviews are performed face-to-face by interviewers with a foreign background, most of whom cultural-linguistic mediators who underwent specific training.

For the analysis, a pooled dataset was used with all the surveys available from 2001 to 2015, and 7 periods were considered each consisting of a 2-year period except for the last one (period 1=2001-2002; period 2=2003-2004... up to period 7=2013-2015). Before proceeding, it is noteworthy to highlight both the advantages and disadvantages of the data set. On the negative side, these data are cross-sectional, thus preventing from studying the change in homeownership due to changes in individual conditions; secondly, they concern only the Lombardy Region. Nevertheless, Lombardy Region is usually considered as a representative case study in the Italian context, as 22% of families live in this Region (Istat Census data-warehouse). On the positive side, these data constitute a broad and representative sample since they cover 15 years of migration in Lombardy Region and include approximately 110,000 individuals.

3. Methods

In order to pursue the first objective - that is to identify the factors responsible for the variations in the HOR detected along the interval observed - logistic regression models were adopted, one for each of the seven periods. Being the dependent variable 'Live in homeownership' (0 = 'No' - reference; 1='Yes'), the following covariates were tested: age (quadratic), citizenship, education and marital status as demographic characters, length of stay in Italy, kind of permit, occupational status, cohabitation and where children live as socioeconomic variables. The categorical variables are coded as follows. Citizenship: 1 = 'Other Africa' (reference category); 2 = 'North Africa'; 3 = 'East Europe'; 4 = 'Asia'; 5 = 'Latin America'. Education: 1 = 'Primary education at most' (reference); 2 = 'Secondary or tertiary education'. Marital status: 1= 'Never married' (reference); 2 = 'Married'; 3 = 'Other'. Kind of permit: 1= 'Irregular' (reference); 2= 'Work permit'; 3 = 'Family permit'; 4 = 'Other'; 5 = 'Long term regular'. Occupational

status: 1 = 'Unemployed' (reference); 2 = 'Regularly employed'; 3 = 'Irregularly employed'; 4 = 'Self-employed' 5 = 'Non-professional status'; 6 = 'Other'. Cohabitation: 1 = 'Alone' (reference); 2 = 'With partner, no children'; 3 = 'Neither partner, nor children'; 4 = 'No partner, with children'; 5 = 'With partner and children'. Where children live: 1 = 'No children' (reference); 2 = 'All children in Italy'; 3 = 'All children abroad'; 4 = 'Other'.

For the second part of the analysis, a decomposition method was adopted. Since the aim was to decompose the difference in rate at two points in time ($t=1$ and $t=2$) into cohort replacement and within-in cohort change, Firebaugh's (1997) and Kitagawa's (1955) studies were followed. Hence, the two-component equation (1) was employed to decompose the difference in the homeownership rate between time 2 and 1 $\Delta\mu = \mu_2 - \mu_1$ being μ_t the percentage of homeowner at time t with respect to different characteristics of the population (e.g. years since migration, origin, family status etc.) whose modalities represent the cohorts:

$$\Delta\mu = \sum_j \left(\frac{p_{j1} + p_{j2}}{2} \right) \cdot \Delta\mu_j + \sum_j \left(\frac{\mu_{j1} + \mu_{j2}}{2} \right) \cdot \Delta p_j \quad (1)$$

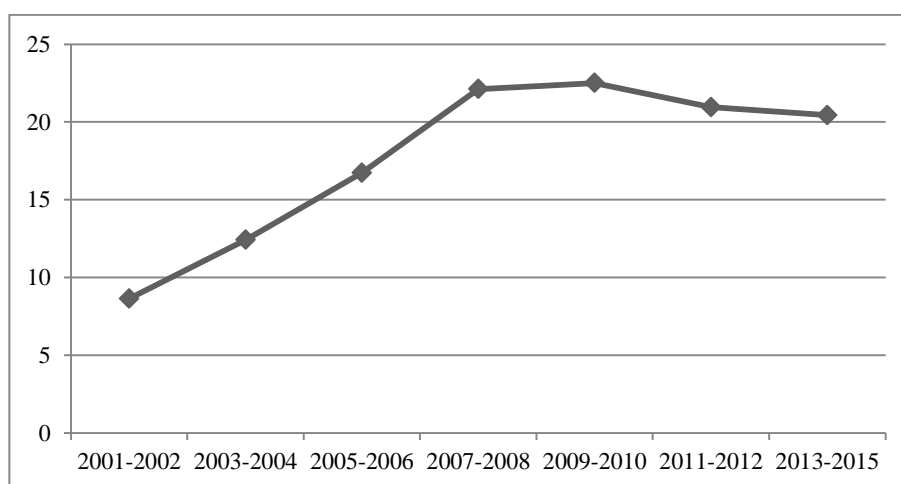
where μ_{jt} is the percentage of homeowner for the j^{th} cohort at time t , and p_{jt} is j 's population share at time t ¹ and thus $\Delta\mu_j = \mu_{j2} - \mu_{j1}$ is the difference between the two points on the homeownership rate for the j^{th} cohort, while $\Delta p_j = p_{j2} - p_{j1}$ is the difference between the two points on the population shares for cohort j . The first term is the within-cohort change (the within-cohort change for the j^{th} cohort weighted by the cohort's average population share) which shows that part of the difference between the HORs is due to the difference in the specific homeownership rates at the two time points. While the second term is the contribution of the cohort effect and shows that part of the difference between the HORs is due to the difference in the composition of the population at the two time points (change in the population share for the j^{th} cohort weighted by the cohort's average homeowner percentage).

¹ The p_j sum to 1.

4. Homeownership among migrants in Lombardy Region

As shown in Figure 1, we identified three phases concerning homeownership strongly connected to Lombardy's migration history. The first phase (2001-2006) is characterized by a high immigration rate from various origins, especially from East European countries (Blangiardo, 2014), and by a progressive settlement of the communities with longer durations of stay, for which the settlement process was well underway (for example Moroccans) with a rapid increase in the percentage of homeowners up to 22%. The second period (2007-2010) is characterized by a slowdown in immigration to Lombardy, with new family permits increasing faster than work permits (Blangiardo, 2014) which combined with the economic recession generated a stabilization of the relative frequency of homeowners. Finally, the last phase (2011-2015) is connoted by the persisting economic crisis and the increase in remigration intentions (both onward and return migration) on the one hand, and the increase in the acquisition of citizenship on the other hand (Blangiardo, 2016). This resulted in a slow decrease of the percentage of homeowners.

Figure 1 – Percentage of homeowner migrants. Lombardy Region. Years: 2001-2015.



Source: elaboration on ORIM data.

If the stagnant percentage of homeowners over the 3-year period 2007-2010 can be certainly ascribed to the economic crisis that strongly affected the housing market stopping home purchase, the trend of the last 5 years does not have a unique possible explanation. Reasons are multiple and overlapping, such as: first, some may have sold their house to face the crisis but, being homeownership usually

considered as a guarantee in time of crisis, home selling seems an extreme measure; second, stayers are negatively selected according to homeownership, this seems not to be very reasonable (e.g. the median length of stay has increased and it is usually positively associated with homeownership); and finally, preferences for homeownership among migrants have changed over time due to a different migration project that also considers a possible remigration plan. In the next section, a feasible explanation to the homeownership rate trend is suggested, although only the second and the third reasons can be afforded through the data available.

Before proceeding with the decomposition, the statistical contribution of each of the factors identified was tested as impacting on homeownership in Lombardy. Results of logistics models are reported in Table 1.

The results of the models highlight that homeownership is positively associated to higher education levels, in all the periods observed, confirming previous results (Davidov and Weick, 2011). The effect of age is in general not significant, while citizenship shows positive impacts with regard to immigrants from Asia and Latin America and negative impacts pertaining to those from North Africa and East Europe, compared to Other Africans. On the contrary, the marital status does not seem to influence significantly the homeownership attitude. Actually, it is not the status but the living condition to be determinant; in other words, it is the 'family' *in loco* (that is, people who live with the immigrants) the conditional structure for the decision to buy a home, as stated by Constant et al. (2009). In particular, the main effect is ruled by the presence of a partner, especially in absence of children: we may suppose that the decision to buy a home pertains to young couples with migratory projects addressed to settle in Italy permanently. This hypothesis is confirmed by the variable 'where children live': both situations, with children in Italy or all children abroad, show a substantial negative impact on homeownership, compared to having no children, although for different reasons. We suggest that as regards immigrants with all children in Italy, this has to do with economic constraints when inside a settlement project in Italy, while for immigrants with all children abroad reasons may be ascribed to short-term migratory projects.

Other evidence for the link between 'family' and homeownership comes from the variable 'kind of permit': compared to being irregularly present in Italy, family permit has a considerable and statistically significant effect on homeownership. Work permit has a positive effect as well, although a valuable reduction in the coefficient can be noticed in 2009-2010. Long-term regular migrants' propensity to buy a home is obviously high.

Table 1 – Logistic regression analyses by period (response variable: Homeownership; reference category: 'No')

	Coefficients						
	2001-02	2003-04	2005-06	2007-08	2009-10	2011-12	2013-15
Demographic variables							
<i>Age quadratic</i>	0.000	-0.000	-0.000	0.000	0.000	0.000	0.000
<i>Citizenship</i>							
Other Africa (ref.)							
North Africa	-0.347***	-0.117	-0.252***	-0.165**	-0.427***	-0.343***	-0.276**
East Europe	-0.089	-0.248**	-0.223**	-0.087	-0.230**	-0.068	0.216**
Asia	0.170	0.292***	0.139	0.213**	0.324***	0.186*	0.327***
Latin America	0.877***	0.505***	0.341***	0.391***	0.370***	0.525***	0.384***
<i>Education</i>							
Primary ed. at most (ref.)							
Secondary or tertiary	0.278***	0.326***	0.421***	0.387***	0.332***	0.298***	0.476***
<i>Marital status</i>							
Never married (ref.)							
Married	-0.411**	0.284	0.157	-0.011	-0.004	0.159	-0.092
Other	-0.109	0.230	0.300	-0.059	-0.252*	-0.161	-0.026
Socio-economic variables							
<i>Length of stay in Italy</i>	0.102***	0.097***	0.091***	0.073***	0.079***	0.086***	0.080***
<i>Kind of permit</i>							
Irregularly in Italy (ref.)							
Work	-0.63	0.407*	0.640***	0.461***	0.351***	0.672***	0.498**
Family permit	0.539**	0.813***	1.070***	0.794***	0.726***	0.937***	0.924***
Other	0.322	0.152	0.119	0.113	-0.129	0.514	-0.472
Long term regular	0.981***	1.345***	1.624***	1.344***	1.272***	1.561***	1.254***
<i>Occupational status</i>							
Unemployed (ref.)							
Regularly employed	0.066	0.293*	0.588***	0.360***	0.074	0.063	0.276**
Irregularly employed	-0.697***	-0.032	0.111	-0.124	-0.128	0.062	0.036
Self-employed	0.657***	0.821***	1.282***	0.918***	-0.436***	0.473***	0.330**
Non professional status	0.480***	0.627***	0.962***	0.493***	0.202*	0.430***	0.492***
Other	-	0.347	0.960**	0.776**	0.067	0.380	0.394
<i>Cohabitation</i>							
Alone (ref.)							
With partner, no children	1.749***	1.063***	1.233***	1.244***	1.015***	1.569***	1.488***
Neither partner, nor children	0.356	-0.342	-0.425***	0.097	0.115	0.269	0.078
No partner, with children	0.297	0.342	0.204	0.540**	0.324***	0.751***	0.646**
With partner and children	1.206***	0.825***	1.000***	1.521***	0.370***	1.456***	1.294***
<i>Where children live</i>							
No children (ref.)							
All children in Italy	-1.126***	-0.661***	-0.454**	-0.261	-0.534***	-0.377*	-0.588***
All children abroad	-0.371**	-0.246*	-0.327***	-0.223**	-0.207*	-0.168	-0.444***
Other	-	-1.224	-0.909***	0.298	-0.022	-0.724	-

*: $p < 0.1$; **: $p < 0.05$; ***: $p < 0.01$

Source: elaboration on ORIM data.

The effect of the occupational status is more interesting as regards the research questions advanced beforehand. Along the whole interval under observation, immigrants regularly employed and self-employed had more chances to be homeowners compared to the unemployed. However, during the recession phase (2009-10), the coefficient becomes not significant for the former (lasting to the last period) and negative for the latter (starting from 2011-12 the coefficient is positive but considerably lower than before).

Finally, confirming previous results (Gobillon and Sovignac, 2015; Constant et al., 2009), the length of stay in Italy is always positively associated to homeownership, although during the recession phase its impact is definitely lower.

5. Decomposition

In order to decompose the HOR variation, two periods were distinguished: 2001-2007 and 2008-2015. Moreover, the variation was decomposed with respect to some of the main factors affecting homeownership, based on the results of the logistic regression. According to Table 2, the intra-cohort effect definitely prevails against the cohort replacement effect, regardless of the period and the considered dimension (variable), except for the years since migration and irregularity in the second period. Hence, the difference in the HOR is ascribable mainly to the difference in the specific homeownership rate at the two time points. Although the migrant population living in Lombardy has deeply modified over the analysed period, the difference in the composition of the population has had a negligible effect on the HOR.

For the first period, the signs of the two components are the same (both positive) indicating that replacement cohort effect and intra-cohort variation act in the same direction affecting the HOR positively. The sole exceptions are the origin and the educational variables: although the cohort effect is negligible, it is negative. On the contrary, for the second period the two components are generally discordant with the exception of origin: the intra-cohort effect is higher and negative, while the cohort replacement effect is positive and very small. The process of the population's settlement (family reunification, increase in the inactive population due to the presence of children and reunited wives), only slightly contrasts the changes in the homeownership preference.

Unsurprisingly, the decomposition according to the variable years since migration and irregularity indicates for the second period two important issues: first, the cohort effect is not negligible, thus the difference between the two components is smaller; and second, the two components are discordant. In the

second period, the median length of stay increased considerably due to the settlement of those communities with longer durations of stay and the slowdown in immigration toward Italy. According to literature, this cohort replacement should have generated a high increase in the HOR because of the strong and positive relationship between homeownership and the duration of stay. However, this did not occur due to the stronger and negative effect of the intra-cohort component: something has changed in the homeownership preference. The HOR considerably decreased between 2007-2008 and 2013-2015, despite the new arrivals and especially for those cohorts with the highest HOR, as shown in Figure 2. Similarly, the process of naturalization and acquisition of a regular status should have generated a higher increase in the homeownership rate, but this effect was mitigated by the intra-cohort component (higher and negative).

Table 2 – Algebraic decomposition of homeownership rate 2001-2015 by different cohorts. Lombardy Region.

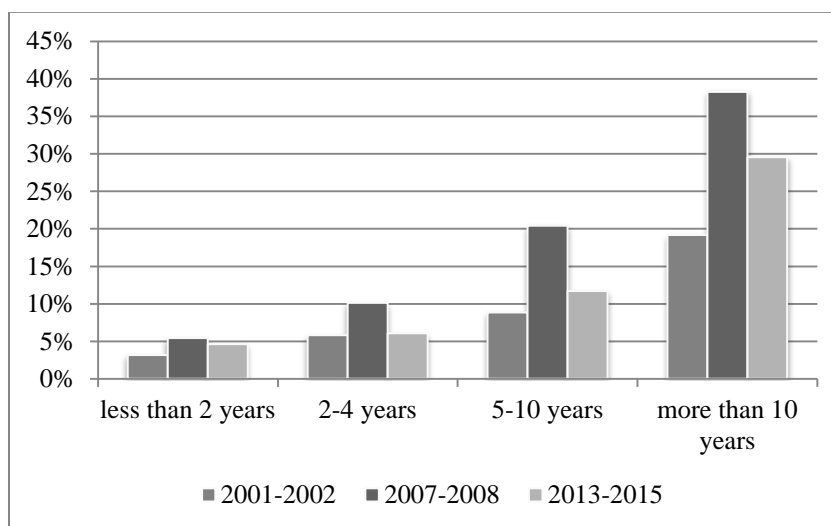
cohort	Period 2001-2002 compared to 2007-2008			Period 2007-2008 compared to 2012-2015		
	Intra-cohort effect	Cohort effect	HOR change	Intra-cohort effect	Cohort effect	HOR change
Year since migration	0.1020	0.0299		-0.0749	0.0547	
Origin	0.1396	-0.0049		-0.0131	-0.0038	
Family ²	0.1103	0.0244	0.1348	-0.0228	0.0061	-0.0168
Occupational status	0.1240	0.0123		-0.0214	0.0048	
Irregularity	0.1257	0.0119		-0.0277	0.0108	
Education	0.1328	0.0022		-0.0143	-0.0017	

Source: elaboration on ORIM data.

Finally, the occupational status describes the same mechanism: between the first and second periods, the HOR decreased considerably especially among migrants characterized by higher stability (migrants regularly employed with an open-ended contract or self-employed or housewives and students). The economic crisis that affected the labour market with an increase in unemployment and a reduction in the open-ended contracts did not reduce the HOR. Indeed, the cohort replacement effect is positive (although small). The overall difference is rather to be ascribed to differences in the specific HOR between 2007-2008 and 2013-2015.

² For the family variable, the following categories were considered: all family members in emigration, transnational family, other (not married, migrants without partner and children in Italy; this category includes also migrants living in Italy with relatives, sometimes parents).

Figure 2 – *Percentage of homeowner migrants by years since migration and period. Lombardy Region. Years: 2001-2015.*



Source: elaboration on ORIM data.

6. Conclusion

The study identifies the main factors impacting on homeownership during the period 2001-2015 with the aim to decompose the variation of the HOR over time into two components: the structural variation (cohort replacement) and the ‘pure’ propensity to homeownership (intra-cohort variation).

Comparing results for the two periods (2001-2007 and 2008-2015) - chosen so that the influence of the economic crisis could emerge - the intra-cohort effect definitely prevails against the cohort replacement effect, regardless of the period and the decomposition variable considered, except for the years since migration and legal status during 2008-2015. Hence, differences in the HOR are mainly due to differences in the homeownership propensity, while variations in population composition have a negligible effect. In particular, during the first interval, both components affect the HOR positively, and this seems to match the literature on this subject; in the second period the cohort replacement effect (positive and very small) only slightly mitigates the intra-cohort effect (higher and negative). These results show that something has changed in the immigrant propensity to homeownership after 2007. Moreover, this change has particularly affected the most stable immigrants (regularly employed with an open-ended contract or self-employed or housewives and students).

In conclusion, results indicate an important change in the homeownership propensity, possibly linked to a more important change in migration projects, the latter caused by the economic recession occurred starting from the end of 2007.

This evidence deserves to be fully investigated by further analyses taking into consideration the relationship between homeownership and migratory intention.

References

- AMUEDO-DORANTES M. MUNDRA K. 2012. Immigrant Homeownership and Immigration Status: Evidence from Spain. IZA DP No. 6676.
- BLANGIARDO G.C. 2014. Gli aspetti statistici. In FONDAZIONE ISMU (Ed.). *Ventesimo Rapporto sulle migrazioni: 1994-2014*. Milano: Franco Angeli. pp. 31-46.
- BLANGIARDO G.C. 2016. *L'immigrazione straniera in Lombardia*. La quindicesima indagine regionale Rapporto 2015. Osservatorio Regionale per L'integrazione e la Multietnicità. Eupolis.
- BORJAS G. 2002. Homeownership in the immigrant population. *Journal of Urban Economics*. Vol. 52. pp. 448-476.
- CONSTANT A.F. ROBERTS R. ZIMMERMANN K.F. 2009. Ethnic Identity and Immigrant Homeownership. *Urban Studies*. Vol.46. No.9. pp. 1879-1898.
- DAVIDOV E. WEICK S. 2011. Transition to Homeownership among Immigrant Groups and Natives in West Germany, 1984-2008. *Journal of Immigrant & Refugee Studies* Vol. 9. No 4. pp. 393-415.
- FIREBAUGH G. 1997. *Analyzing repeated surveys*. Sage.
- GOBILLON L. SOLIGNAC M. 2011. Homeownership of Immigrants in France: Selection Effects Related to International Migration Flows. PSC Working Paper Series 65.
- KITAGAWA E.M. 1955. Components of a Difference Between Two Rates. *Journal of the American Statistical Association*. Vol. 50. No. 272. pp. 1168-1194.
- OWUSO J. 1998. To Buy or not to Buy: Determinants of Home Ownership among Ghanaian Immigrants in Toronto. *The Canadian Geographer/Le Geographe canadien*. Vol. 42. No. 1. pp. 40-52.
- SINNING M. 2010. Homeownership and Economic Performance of Immigrants in Germany. *Urban Studies*. Vol. 47. No. 2. pp. 387-409.

SUMMARY

Immigrants' home-ownership decision in migration projects. Subjective determinants and external constraints

According to the data of the 2001-2015 ISMU-ORIM Surveys, the propensity towards homeownership among immigrants in Lombardy increased until 2007. Since 2009 this propensity has decreased, and it continues to decrease, although at a slower pace. This work examined the main determinants of the attitude towards homeownership, in order to identify the factors responsible for the variations detected during the period observed. Therefore, the homeownership rate (HOR) variation was decomposed into two components: the structural variation that affects yearly population (cohort replacement) and the residual 'pure' propensity to homeownership. The results highlighted that differences in the HOR are mainly due to differences in the homeownership propensity, while variations in population composition have a negligible effect except for variables associated with family settlement for the second period. This could be considered as a sign that something has changed in migration projects.

Elisa BARBIANO DI BELGIOJOSO. Department of Statistic and Quantitative Methods. University of Milan-Bicocca. elisa.barbiano@unimib.it
Stefania Maria Lorenza RIMOLDI. Department of Statistic and Quantitative Methods. University of Milan-Bicocca. stefania.rimoldi@unimib.it