

Two hearts and a loan? Mortgages, employment insecurity and earnings among young couples in six European countries¹

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Abstract

Homeownership is increasingly understood by policy makers and social scientists as a fundamental asset against poverty risks, especially in times of economic uncertainty. However, in several Western countries, homeownership among younger generations appears to be increasingly difficult to achieve, likely due to growing employment instability and stringent criteria to access credit. This article uses multinomial logistic models and nationally representative EU-SILC data from six European countries to examine a) to what extent precarious employment among young couples is linked to being a mortgage holder; b) whether earned income can compensate for employment instability in being a mortgagee; c) cross-national differences in the relationship between being a mortgage holder, earnings, and employment insecurity. Our results indicate that the higher the levels of employment insecurity, the lower the chances of being a mortgage holder in all countries. Moreover, we find that at a given level of employment insecurity, households with higher levels of earned income have higher chances of being mortgage holders than households with lower earned income. However, while earned income has a stronger effect in achieving a mortgage among couples who have secure employment in Italy, earnings are more important among couples with lower levels of employment security in France, the United Kingdom, Spain, and Poland. These results suggest that the relationship between social inequalities and housing is partially mediated by the national context.

Keywords: housing, mortgage, Europe, employment instability, earned income.

Introduction

This article addresses inequalities in homeownership by asking to what extent employment instability and earned income are relevant in being mortgage holders among young couples (18-35 years old) in six European countries: Germany, Italy, Spain, Poland, the United Kingdom, and France.

Housing can be described as a “complex welfare good that supplements or mediates the provision of other welfare services at the household level” (Doling and Ronald, 2010: p. 166). Homeownership, in particular, represents a long-term economic investment that secures both present and future economic and living conditions, and that can be passed on to younger generations (Boehm and Schlottmann, 1999). Indeed, Doling and Ronald (2010) speak of a shift from state-managed social provisions towards an asset-based form of welfare, in which individual housing wealth can be used as protection against poverty risks. Thus, within the framework of a progressive retreat of the welfare state from the direct provision of housing services, the ownership of a house has become an important asset for young couples.

Given the importance of homeownership, it is somewhat worrisome that young people in several countries are finding it increasingly difficult to buy a property compared to former generations (Housing Europe, 2015). Indeed, thanks to the development of a huge range of mortgage products in the last decades and the liberalization of the mortgage market in many western European countries (Scanlon et al., 2008), purchasing a house should be easier than in the past. To the contrary, growing housing prices (Scanlon et al., 2008), increasing youth unemployment and employment instability (Barbieri and Cutuli, 2016; de Lange et al., 2014), make it difficult for young generations to become homeowners (Kurz and Blossfeld, 2004; Lennartz et al., 2015; Housing Europe, 2015). These difficulties have also been tied to the delayed transition to adulthood that occurs especially in southern European countries (Billari, 2004).

Previous studies have identified employment insecurity and earnings as two important *but distinct* predictors of homeownership. Instead, this study advances our understanding by asking to what extent employment instability and earned income are interrelated in the probability of being mortgage holders among young European couples. On the one hand, having a stable employment that guarantees a constant inflow of earnings is necessary for obtaining a mortgage, but it is a condition that young generations find increasingly hard to meet given their overrepresentation in forms of temporary and unstable employment. Indeed, scholars have long debated on the pros and cons of temporary contracts, especially whether they represent a stepping stone or a dead-end for younger generations of workers in different institutional settings (Barbieri and Cutuli, 2016; Gebel and Giesecke, 2016). On the other hand, net of employment insecurity, having a high level of

earned income should facilitate obtaining a mortgage, if anything else because it should signal greater savings capacity and make it easier to secure the initial down payment (Lersch and Dewilde, 2015; Scanlon et al., 2008).

However, in times of economic uncertainty, employment stability and high earned income may not be enough on their own to secure access to a mortgage, and a combination of the two might be required. Moreover, households play a relevant role in compensating individual market risks, but this role is strongly limited when household members have insecure labor market positions (Grotti and Scherer, 2014). Thus, household members who are better off because they have open-ended contracts and high earnings could be getting the additional advantage of accessing homeownership via mortgages, while less advantaged households are potentially being left behind, ultimately deepening existing social inequalities.

Using multinomial logistic regression models on data from the European Union Statistics on Income and Living Conditions (EU-SILC, 2010/2012), we test whether employment stability, earned income, or their combination are necessary for being mortgage holders in Germany, Italy, Spain, Poland, the United Kingdom and France, which are countries with different housing and welfare systems. Our results show that, in all countries, households with higher levels of earned income and greater employment security have higher chances of being mortgage holders than households with lower earned income or a lower level of job security. Importantly, we find evidence of cross-national variations in the interplay between employment security and earnings. High earnings increase the chances for couples with only one earner to be mortgage holders in Poland, Spain and the United Kingdom. Therefore, earnings act as a buffer against employment instability. Instead, we find no evident interaction between high earnings and employment insecurity in Germany and France, whereas earned income is associated with greater inequalities among secure households in Italy.

Background

The micro-level: income, employment insecurity and their interplay

A well-established finding in the literature on homeownership is the relevance of employment stability and personal finances for purchasing a property. For the United States, both earned income and wealth have been found to be relevant to become a homeowner (Quercia et al., 2003). The various single-country case studies in the seminal volume by Kurz and Blossfed (2004) also show how access to homeownership has become increasingly dependent on class, labor market position and income in European countries. Lersch and Dewilde (2015) discovered that labor market

insecurity negatively affects the likelihood of being a homeowner in many European countries, especially in those with a marketized housing system. Similarly, Diaz-Serrano (2005) shows that households with volatile earnings and credit constraints are less likely to own their house.

These findings have troubling implications for the perpetuation of social inequalities, as homeownership is not only associated with better current and future living conditions: it also allows the accumulation of assets that can be transferred to the next generations. The fact that becoming a homeowner requires a steady inflow of labor-related income is especially problematic in the light of the increasing segmentation of the labor market that took place over the past decades (Barbieri and Cutuli, 2016). Indeed, consequent to the shift towards a post-industrial economic system, the workforce is increasingly divided into two categories: the “insiders”, workers with protected job positions, and the “outsiders”, such as flexible and temporary workers, and certain categories of self-employed. Labor market outsiders are considerably more likely to experience periods where maintaining a constant inflow of earnings to sustain housing costs might be difficult, especially compared to “insiders” positions. Since temporary employment has become the principal way by which youth enter the labor market (Bruno et al., 2012), new generations are more economically vulnerable compared to their predecessors because of their overrepresentation in less stable labor market positions (Barbieri and Cutuli, 2016). Indeed, temporary labor market positions can be a stepping stone toward a prospective permanent labor market position or a dead-end trap between temporary contracts and periods of unemployment (Gebel, 2015; Booth et al., 2002; Bruno et al., 2012; Scarpetta, 2014), especially under certain institutional configurations (Barbieri and Cutuli, 2016; Gebel and Giesecke, 2016). Therefore, to increase our understanding of the integrative power of instable labor market positions, it is increasingly relevant to focus on a “downward comparison” between temporary contracts and unemployment (Gebel, 2015:5) in addition to an “upward comparison” between temporary and permanent contracts.

Concerning homeownership, on the one hand, young adults are often not eligible for a mortgage because they lack the economic resources for the initial down payment (Lersch and Dewilde, 2015); on the other hand, even if they do qualify for a mortgage, they risk not being able to pay (Lennartz et al., 2015). In sum, due to higher job insecurity, young generations have greater difficulties in making a large financial commitment, such as a mortgage, compared to previous cohorts.

Temporary and insecure employment, however, does not inevitably entail negative economic consequences. Indeed, if temporary workers are paid above average, have the same, or better, social security of insiders (regarding cash benefits for unemployment, for instance) and have a high chance of finding another job when the contract expires, the risks tied to insecure employment are minimal and temporary labor market positions are more likely to act as bridges than traps (Booth et

al., 2002). The extent to which these conditions occur largely depends on the country's labor market characteristics (Gebel and Giesecke, 2016) and social security systems (Esping-Andersen, 1990). However, usually outsiders have lower earnings and lower social protection (Booth et al., 2002; Bruno et al., 2012; Barbieri and Cutuli, 2016). Therefore, it is reasonable to expect that insecure employment would hinder the chances of being owners with a mortgage. Nonetheless, there are exceptions to this. Indeed, certain types of self-employed jobs entail high earnings but have no job security whatsoever. In these cases, having high earnings should, to some extent, limit the negative consequences of insecure employment positions. Moreover, household characteristics can moderate the negative effects of employment insecurity (Grotti and Scherer, 2014). Thus, even households where only one partner has a stable employment position and high earnings could have higher chances of being mortgage holders. Based on this reasoning, we have developed three micro-level hypotheses:

H1 – Earnings: Net of employment insecurity, households with higher earnings are more likely to be mortgage holders than households with lower income.

H2 – Employment insecurity: Net of income, households with greater employment security are more likely to be mortgage holders than less secure households.

H3 – High earnings as a buffer: Among households with higher earnings, the negative effect of employment insecurity should be weaker than among households with lower earnings.

Beyond the individual level, nation-specific economic and institutional settings and labor market characteristics play an important role in hampering or enhancing the negative consequences of insecure employment. These differences, discussed in the following section, likely lead to important cross-national variations in the effects of employment insecurity and earnings on the probability of being mortgage holders.

The macro-level: welfare regimes, labor markets, and housing systems

The relationship between employment insecurity, income and being mortgage holders is bound to be affected by macro-level national characteristics, in particular welfare regimes (Esping-Andersen 1990), labor markets (Gebel and Giesecke, 2016; Scarpetta, 2014), and housing market structures (Kemeny, 2005). Thus, for the analysis, we have selected six European countries that differ in these areas: Germany, Spain, France, Italy, Poland and the UK. In the following paragraphs, we discuss the traits of each country – summarized in Table 1 – and we use them to develop our macro-level hypotheses.

[Table 1 here]

Germany traditionally belongs to the conservative/corporatist welfare regime (Esping-Andersen, 1990), although it has somewhat deviated over the years from the initial model due to labor market

and family policy reforms (Spiess and Wrohlich, 2008). The national level of youth unemployment is quite low, and apprenticeship contracts alleviate the transition from school to work (O'Higgins, 2012). Employment protection legislation (EPL) for permanent contracts is well developed (OECD, 2016) while the partial and targeted deregulation of temporary contracts make these rather common among young workers (Gebel and Giesecke, 2016; de Lange et al., 2014). The German housing situation displays relatively low levels of homeownership (Kurtz, 2004) and a much richer rental market (Voigtländer, 2014). Because of this, low income households can resort to rentals while they save up for the large down payment that is required in the prudential, fixed-rate, long-term German mortgage system (Andrews et al., 2011; Voigtländer, 2014). Purchasing a house is less attractive in Germany than in other countries also because of the non-deductibility of taxes on mortgage interest for owners who occupy their dwelling (Scanlon et al., 2008) and because of the comparatively high transaction costs related to its purchase (European Central Bank, 2009). According to Kemeny's classification (1995; 2005) the German rental market can be defined as unitary or tenure neutral, where there is no clear government preference towards a given tenure status.

Italy belongs to the Southern European welfare model (Ferrera, 1996) and the conservative welfare regime (Esping-Andersen, 1990). Its rigid labor market presents an insider-outsider divide along the lines of age and gender produced by the partial and targeted deregulation of temporary employment (Gebel and Giesecke, 2016). The difficulties of Italian youth in achieving independence from their family of origin are well-documented in previous studies (Billari, 2004). Overall, the national housing system is characterized by the dominant preference toward homeownership and by a very limited rental market (Baldini and Poggio, 2014). However, only recently Italy has developed a mortgage market in line with the rest of Europe (Aalbers, 2007). Up to the 1990s, loans were given for small amounts and short periods of time, and had high transaction costs (Del Boca and Lusardi, 2003). The liberalization of the mortgage market in 1992 with foreign banks entering the loan market led to an increase in the number of households accessing a mortgage. Public interventions supporting first-time buyers are fragmented and mainly managed at the regional level, with the private market left to its dynamics (Kurz and Blossfeld, 2004; Baldini and Poggio, 2014). Therefore, intergenerational transfers are still common alternatives to the credit market for the purchase of a house for young family members (Castles and Ferrera, 1996; Del Boca and Lusardi, 2003; Stephens, 2003). This scenario reflects what Kemeny (1995; 2005) theorized as a dualist rental system.

Spain, another Southern European welfare state, is characterized by a growing use of temporary work contracts (O'Higgins, 2012), recent reductions of EPL for permanent employment (Gebel and Giesecke, 2016) and mismatches between the educational system and the labor market (Brzinsky-

Fay, 2007). The Spanish rental system fits within Kemeny's dualist system, in which direct and indirect public policy interventions tend to favor owner-occupation. Indeed, Spain displays a relatively high level of homeownership which occurred thanks to the rapid growth experienced by the country during the second half of the twentieth century. Traditionally, the high Spanish rate of homeownership made home leaving difficult (Mulder, 2006) and the family of origin played a crucial role in helping young people buy a house (Fuentes et al., 2013; Castles and Ferrera, 1996; Kurtz and Blossfeld, 2004). It is against this background that the speculative housing boom occurred. Eventually, the interplay between real estate growth and the diffusion of subprime practices in the context of a strong promotion of homeownership hit the wall of the Great Economic Recession. During those years, hundreds of thousands of mortgagees were no longer able to sustain their mortgage payments and an overwhelmingly large number of evictions and repossessions took place (Fuentes et al., 2013).

France is “a problem for the model builders” (Caldwell and Schindlmayr, 2003: p. 255) since it falls between the northern European and conservative type of welfare (Esping-Andersen, 1990). Unlike other nations, in its transition towards a post-industrial economy France implemented anti-poverty programs to enlarge its basic safety nets against the inequalities generated by labor market transformations. These programs focused on the provision of minimum guarantees to workers holding non-standard labor positions to tackle the deepening divide between insiders and outsiders (Palier and Thelen, 2012). France has a so-called unitary rental system (Kemeny, 1995; 2005), in which there is no clear government preference toward a specific tenure, although Scanlon and Whitehead (2004) claim that the taxation system is biased towards owner-occupation. Indeed, the national housing market is rather heterogeneous, with a strong social housing sector managed by the *Habitation à loyer modéré* organizations and a relevant share of owners with mortgages (European Central Bank, 2009). Several programs aid households to undertake such financial commitment, among which interest-free mortgages for up to a third of the sum needed and public guarantees to back up the mortgage or loans cost (European Central Bank 2009; Neuteboom, 2004). Moreover, the public program *prêt pour l'accession sociale* (PAS) helps low-income household to undertake a mortgage (Scanlon and Whitehead, 2004).

Poland has been classified by Fenger² (2007) as a post-communist European welfare system. The restructuring of the economic system in the post 1989-era lead to fluctuations in GDP growth

² Fenger (2007) developed a classification for Central and Eastern European welfare regimes identifying three clusters: the Former-USSR type (Belarus, Estonia, Latvia, Lithuania, Russia, Ukraine), the Post-communist European type (Bulgaria, Croatia, Czech Republic, Hungary, Poland, Slovakia) and the developing welfare state type (Georgia, Romania, Moldova).

and unemployment, increases in socio-economic inequalities, youth unemployment and in general to a growing vulnerability of families, which became more dependent on their private assets and labor market incomes (Kotowska et al., 2008). During the transition period, Poland underwent a process of privatization of the formerly public housing stock, which consisted mainly of the sale of dwellings to existing tenants implemented by local authorities (Stephens, 2003; Stephens et al. 2016). This process influenced the Polish housing system, which presents very high levels of owner-occupation, an underdeveloped rental market (Radzimski, 2014), low levels of mortgage debt (Fisher and Jaffe, 2003; Stephens et al. 2016) but increasing housing loans (European Central Bank, 2009). Moreover, the national government has introduced measures to economically support young people who want to become homeowners, such as the “Flat for the Youth” program, where state subsidies contribute to the down payment for housing purchases (Hypostat, 2015). Kemeny’s classification does not engage directly with the analysis of the Polish rental system. However, it can be considered a dualist one like Italy and Spain, due to the state’s support for homeownership.

The *United Kingdom* is the European representative of the liberal welfare regime (Esping-Andersen, 1990). The insider/outsider divide is much less pronounced in the UK than in Germany, Spain, and Italy due to its less restrictive employment protection legislation (OECD, 2016). Nonetheless, a secondary job market made of bad-quality part-time and temporary jobs absorbs a good portion of low-skilled workers (Booth et al., 2002). Moreover, there is a relatively low level of coordination between the labor market and the vocational training system, making younger cohorts’ transition from education to work rather difficult (Brzinsky-Fay, 2007). The dualist rental system (Kemeny, 1995; 2005) – characterized by a high share of owner-occupiers – saw a prolonged trend of rising prices both in the rental and owner occupation sector. The country experienced a deregulation of the mortgage markets in the late seventies, which resulted in a greater availability of loans (Stephens, 2007). Indeed, for several years the English mortgage market was considered among the most accessible (Bicakova and Sierminska, 2008) and one from which atypical workers were not completely ruled out (Neuteboom, 2004). However, consequent to the Great Financial Crisis (GFC), access to mortgage finance has become more restrictive for all but the lowest risk borrowers (Scanlon and Adamczuck, 2016). Indeed, the GFC ended the 2000s period of more relaxed borrowing conditions and with the mortgage market review of 2014, the government limited the diffusion of unconventional mortgage products and introduced more stringent affordability assessments for the borrower. Meanwhile, the “Help to buy” program was introduced to combine a reorganization of the mortgage market with governmental aid schemes (Scanlon and Adamczuck, 2016).

Based on the cross-national differences in housing systems, labor protection legislation and welfare systems, we expect the relationship between insecure employment and income to vary depending on the context. Specifically, we formulate the following macro-level hypotheses:

H4 – Labor market protection: In segmented and rigid labor markets, temporary workers face greater economic uncertainty compared to employees with open-ended contracts. Therefore, employment insecurity is expected to have the strongest negative effect on being a mortgage holder in countries with stricter employment protection legislation (Italy and Germany).

H5 – Mortgage availability: Employment insecurity and low earnings should not reduce the chances of obtaining a loan if mortgages are widely available. Therefore, they are expected to have the weakest negative effect on being a mortgage holder in countries that experienced a deregulation of the mortgage markets before the period under study (Spain and the United Kingdom).

H6 – Policies for vulnerable households: If policies are enacted to protect temporary and low-earning workers from economic uncertainty, employment conditions and earnings should not be strongly associated with the chances of being a mortgage holder. Thus, employment insecurity and low earnings are expected to have the weakest negative effect on being a mortgage holder in countries that implemented policies to help low income and vulnerable households (France and Poland).

Data, variables and method

We analyze data from three waves of the European Union Statistics on Income and Living Conditions (EU-SILC 2010³, 2011 and 2012), a database that produces comparable, timely and nationally representative cross-sectional and longitudinal data on income, poverty, and social exclusion. It is a suitable data source for our analysis as it includes information at the individual (employment status and earnings) and household level (housing tenure). Our sample consists of young adults in couples age 18 to 35 in Germany, Italy, Spain, France, Poland, and the United Kingdom. Focusing on couples rather than individuals allows us to address the important issue of whether households can compensate for individual market risks (Grotti and Scherer, 2014).

We analyze housing tenure⁴ status using a categorical dependent variable with four outcomes that distinguish between being: 1) the owner paying a mortgage; 2) the tenant or subtenant paying

³ Data for Germany and Italy in 2010 are not available. The analyses were run also for each year separately and the results are consistent.

⁴ Subjects who completely own their house (i.e. are not paying a mortgage) have been excluded from the analyses because their employment condition is unlikely to affect their rather secure and “safe” housing situation.

rent at prevailing or market rate; 3) the tenant paying a reduced rate; 4) living in the accommodation for free.

The first independent variable is the sum of the gross earnings of the partners. The measure has been adjusted by applying purchasing power parities (base EU28) to allow cross-national comparisons. It was then median-centered and divided by 1000. Since the countries differ in their earnings distribution, it is not meaningful to directly compare the coefficients for earnings among the models for different countries. Thus, when presenting the results, we calculate the predicted probabilities of being mortgage holders at three points of the *country specific* earnings distribution, which are the 25th percentile, the median, and the 75th percentile.

The second independent variable concerns the employment situation of the couple, which we built by crossing the employment status (employed vs. not employed), the type of employment (employee vs. self-employed) and, for employees, the type of contract (permanent vs. temporary) of both partners. Table 2 summarizes the criteria for the construction of the variable. The first category comprises couples where both partners are employees with a permanent contract (“Both secure” used as reference category). The second category comprises couples where one member is an employee with a permanent contract, and the other is either self-employed or an employee with a temporary contract (“One secure and a half”). Our third category includes couples where only one member has a permanent contract and the other is not employed (“One secure”). Our fourth category (“Insecure”) comprises couples where no one has a permanent contract, i.e., two employees with a temporary contract, two self-employed, and a mix of one temporary and one non-employed partner.

[Table 2 here]

Other variables included in the models are: the age of the oldest member of the household; the marital status of the couple (married = 0, not married = 1); the level of education of both partners: up to lower secondary as reference category (ISCED 0, 1 and 2), completed upper secondary (ISCED 3), more than upper secondary (ISCED 4 and 5); a numerical variable indicating the number of children in the household; a categorical variable tapping the age of the smallest child (No children as reference category, from 0 to 1 year old, 2 to 4, 5 and above); the population density of the area of residence (densely populated as reference category, intermediate, thinly populated); and the year of the study (earliest year available as reference). Table 3 reports summary statistics for each country and the overall sample.

[Table 3 here]

For the analyses we rely on multinomial logistic regression models, the standard approach for modeling a dependent nominal variable (Long and Freese, 2014). To test our cross-national

hypotheses, we run four models separately by country⁵: the first model includes only the control variables; the second model adds the insecurity variable, and the third model also includes the earnings variable; finally, the fourth model comprises the interaction between earnings and employment insecurity. For space limitations, we present model 4 in the appendix. Rather than referring to the coefficients in the tables that are not straightforward to interpret, we discuss the results displayed in graphical form in Figures 1 and 2, that report the predicted probabilities of being a mortgage holder in each country by the level of household insecurity and earned income. Predictions were obtained from the coefficients of model 4.

Results

Table 3 shows the distribution of the dependent variable in each country. Mortgages are very common in Spain (0.70), followed by the UK (0.56). The diffusion of mortgages in this age group is relatively similar in France (0.43), Italy (0.41), and Poland (0.40) while this tenure status is the least common in Germany (0.25). Renting an apartment at market price is the most common solution for German youth (0.66), while it is not nearly as common in the other countries. Renting at a reduced price is most common in France (0.21) and to a smaller extent in the United Kingdom (0.12), while it is uncommon in the remaining countries (0.05 in Germany, 0.02 in Spain, about 0.05 in Italy and nearly 0.06 in Poland). Finally, living in the accommodation for free is nearly as common as having a mortgage in Poland (0.36) and it is quite common in Italy as well (0.22). In contrast, this housing tenure is undertaken only by a minority of couples in Germany (0.04), Spain (0.07), France (0.04) and the United Kingdom (0.01).

As for the employment situation of the couple, Table 3 shows that the both secure and one secure and a half categories are more present in the UK, Germany, and France than Spain, Italy and Poland. This distribution reflects official data on female labor force participation and youth unemployment and is in line with the devastating effects of the recent economic crisis. Another well-known pattern that emerges is the widespread presence of one earner households in Germany (0.27) and Italy (0.27).

To what extent is the probability of being a mortgage holder associated with different levels of earned income and employment (in)security? To answer this question, Figure 1 reports the

⁵ As a robustness check, we also estimated a pooled model with country fixed effects and three-way-interactions between employment insecurity, income and country. The results were substantially the same, therefore we chose to report the models separately by country as they allow the effects of the control variables to be country-specific. Moreover, since we are focusing on a small set of countries, we chose to model the effects separately by country rather than using macro-level indicators to test cross-national differences.

predicted probabilities of being a mortgage holder in each of the countries conditioning on the earned income of the couple (Panel A); the employment status (Panel B); and the employment status at the 75th percentile of the earnings distribution (Panel C). Panel A confirms H1: net of employment insecurity, households with earnings above the median (white squares) are more likely to have a mortgage than households with income below the median (white dots) in all the six countries. However, the differences between income groups are smaller in Spain and the UK than elsewhere. Panel B shows that H2 is also confirmed: in all countries, households with greater employment security (white dots) are more likely to be mortgage holders than insecure households (black squares). However, there are interesting cross-national variations: insecure households are considerably less likely than other households to be mortgage holders in countries with rigid labor markets such as Germany, Italy and Spain, whereas insecure and one secure households have roughly the same probabilities of being mortgage holders in Poland, France and the UK.

[Figure 1 about here]

Finally, Panel C shows that H3 – i.e. among households with higher earnings, the negative effect of employment insecurity should be weaker than among households with lower earnings – is not fully confirmed. Indeed, young people with higher earnings but living in insecure households have much lower chances of being owners with a mortgage compared to other households with the same earnings in Germany, Italy, Spain, and to a smaller extent Poland, whereas in France and the UK insecure and one secure households have similar probabilities regardless of their earned income. However, earnings do seem to offer protection among one earner households in most countries, especially Poland, Italy and Spain.

To test the macro-level hypotheses, Figure 2 reports the predicted probabilities – derived from the multinomial logit model – of being a mortgage holder in each of the countries conditioning on the employment status of the couple at three levels of earned income: the 25th percentile (solid line), the median (dashed line), and the 75th percentile (dotted line). The figure confirms that the lower the couples earned income and the greater the employment insecurity, the lower the chances of being mortgage holders. In Germany, the chances of being mortgage holders are not especially high for anyone, reflecting the preference for other forms of living arrangements. Couples with higher earned income are more likely to be mortgage holders than couples with average or lower earnings, but if the employment situation is insecure, then even couples with a high level of earned income have relatively low chances of being mortgage holders. In Spain, the overall chances of being mortgage holders are very high and are relatively high even among insecure households. However, employment insecurity decreases the chances of being mortgage holders among all income groups. Particularly striking is the earned income difference among the one secure category, suggesting that

earnings play a larger role when there is only one stable worker in the household. In France, secure households are overall more likely to have a mortgage compared to other households. Moreover, income differences are widest among the members of the insecure group, lending support to the income buffer hypothesis. As for Italy, employment insecurity has a strong negative relationship with being mortgage holders among median and high earned income couples, while the probabilities of being mortgage holders are almost un-affected by employment insecurity among low income households. In Poland, at median levels of earned income, the probabilities of being mortgage holders are largest for secure households and smallest for insecure ones. Moreover, in these two groups, earnings differences are relatively small and not statistically significant. In contrast, and similar to Spain, the level of earned income makes a great difference for single earner – but secure – households. As for the United Kingdom, the probability of being mortgage holders is relatively high. Moreover, differences between earning groups are rather small throughout the employment security variable and not statistically significant. Nonetheless, the pattern that emerges is similar to the one found in Spain and Poland, as one secure households in the lower part of the earned income distribution appear to be just as vulnerable to exclusion from the mortgage market as insecure households.

The cross-national differences in the relationship among the probability of being a mortgage holder, employment insecurity, and earned income do not completely match our expectations. First, we do not find support for the labor market rigidity hypothesis (H4). In fact, employment insecurity does not have a stronger negative effect on being a mortgage holder in Italy and Germany than elsewhere. However, compared to other countries and among the high earners, Italy displays a much larger difference between secure and insecure couples. As for hypothesis 5, our results do show that all subjects regardless of income and employment insecurity have higher chances of being mortgage holders in Spain and the United Kingdom compared to couples in other countries. However, the negative effect of employment insecurity is visible in both countries, whereas the earned income effect is more moderate than elsewhere. Nonetheless, income effects emerge strongly among one earner couples. Interestingly, in both countries the largest differences regarding earnings can be seen within the one secure category. This situation represents the so-called single earner household, consisting in large part of male-breadwinners and female-homemakers. This result indicates that earned income is an important predictor for housing tenure among single earner households and much less among other household types in Spain and the UK. A similar pattern emerged in Poland, where a single earner household with high earned income has roughly the same probability of being a mortgage holder as a one and a half secure household with high earned income.

The hypothesis about policies for vulnerable households (H6) stated that employment insecurity and low earnings would have the weakest negative effect on being a mortgage holder in countries with policies for mortgage access targeting low income and insecure households (France and Poland). Once again, the hypothesis is only partially confirmed, as employment security and earned income play a very large role in being a mortgage holder in Poland and a significant, albeit more moderate, role in France as well.

[Figure 2 about here]

Conclusion

This article has investigated inequalities in homeownership by analyzing whether earned income and employment instability play a role in being mortgage holders among young couples in Germany, Italy, Spain, Poland, the UK, and France.

Our study makes three main contributions to the literature. First, most of the research on housing outcomes is based on data from the US and the UK (Lennartz et al., 2015), whereas this article expands our knowledge on the relationship between household endowments and homeownership to other, less studied contexts, such as Eastern and Southern European countries. Second, we combine two sources of inequalities that are often studied separately, that is the precariousness of employment on the one side (Bicakova and Sierminska, 2008), and earned income on the other side (Quercia et al., 2003; Diaz-Serrano, 2005). By focusing on job stability beyond the employed vs. not employed dichotomy and by addressing the interplay between earnings and employment stability, our study advances a more nuanced understanding of inequality in homeownership. Furthermore, our study also addresses the implications of the stepping stone vs. dead-end nature of temporary contracts for housing outcomes. Third, by focusing on couples rather than on individuals, the article underlines the relevance of the household as important source of protection against market risks and it contributes to the demographic literature on the obstacles faced by contemporary youth in the transition to adulthood and family formation in Europe.

The results pointed towards the importance of both employment security and earned income for being mortgage holders among young European couples. Indeed, our findings indicate that having low earned income and insecure employment reduces the chances of being mortgage holders in all six countries. However, cross-national differences in the results suggest that contextual features play a role in mediating the relationship between household assets and mortgages, ultimately increasing or decreasing inequalities. For example, the relatively small differences between couples with different earned income in Spain and the UK suggest that the availability of mortgage products at the time of the study facilitated young couples' housing purchase regardless of their income, with

all the medium and long-term consequences that this can entail. In contrast, the large difference between households with different levels of earned income and employment insecurity in Italy reflects the difficulties young couples face in becoming homeowners in countries characterized by a strong dualisation in employment. Indeed, Italian youth are likely to rely on parental resources, if they can.

An additional relevant finding that emerged from the analyses is the difficult situation of households with only one earner, especially those who have below average earned income. Indeed, in all countries except Germany, these couples have roughly the same low chances of being mortgage holders of couples who are completely insecure, suggesting that the one-earner household model is likely no longer a way to fully sustain a family, at least among low earners.

A few shortcomings of the present study need to be acknowledged. First, our article presents a static picture of a phenomenon that is intrinsically dynamic. Hence, longitudinal data would be more suited to model the relationship between earnings, employment, and mortgage access. However, the longitudinal component of the EU-SILC is not quite apt for the scope as i) each wave covers a relatively short number of years and ii) the data is at the household rather than individual level, making it difficult to track moves from, for example, living in the parental home to becoming an owner. Second, our results might be somewhat affected by the fact that the data cover the crucial years of the economic recession and financial crisis, hence increasing the number of subjects in poor economic conditions. Unfortunately, EU-SILC data before 2010 do not include information on mortgages. Hence, a future update of the analyses is recommended to monitor the evolution of young people's access to mortgages as European economies slowly recover. Third, Northern Europe is left out of our selection of countries because information on the contract of the respondents' partner is not available, hence impeding the construction of our employment insecurity variable at the couple level. Thus, we were not able to address the relationship between employment, earnings and mortgages in countries with lower levels of societal inequality. Lastly, we do not account for the fact that respondents might have received parental help in accessing the mortgage, for example by providing the resources for the down payment, nor can we assess the impact of wealth on being mortgage holders. While such information would certainly allow a more accurate description of mortgage access especially in some countries, it is, unfortunately, unavailable in the dataset. Future studies based on different data could fruitfully address the interplay of context, earnings, employment and being mortgage holders while controlling for parental resources and wealth.

To conclude, considering the importance of homeownership for the present and future economic well-being of young households (Lersch and Dewilde, 2015) and for the persistence of social

inequalities in housing tenure between and within generations (Lennartz et al., 2015), the fact that young couples with insecure employment and low earnings have lower chances of being mortgage holders compared to more secure households with higher earnings is preoccupying. Especially in times of global economic uncertainty and welfare retrenchment, being able to afford a stable place to live is of the utmost importance for citizens' well-being. In contrast, along with employment stability, being homeowners appears to be becoming a growing watershed between the younger and older generations, the higher and the lower social strata, and ultimately the “winners” and the “losers” of contemporary societies. Given the large divide between these two groups, future policies in the field should design interventions to address the combined negative effect of insecure employment and low earnings on being mortgage holders. Our results suggest that when mortgages are widely available, such as in Spain and the UK during the period under investigation, differences between income and employment groups are smaller. However, considering the negative medium and long-term consequences of “easy lending”, the soundest route lies in the creation or reinforcement of social safety nets such as unemployment benefits, basic income and active labor market policies, so that even in the event of sudden job loss, individuals can manage their loans while searching for a new employment position. Such type of interventions would not only be beneficial for vulnerable households who wish to acquire a house safely, but would also contribute to a broader reduction of general social inequalities.

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Tables and figures

Table 1 Relevant country characteristics

	WELFARE SYSTEMS	HOUSING SYSTEMS	LOW INCOME – YOUNG HOUSING POLICY MEASURES	EPL
GERMANY	Conservative-Corporatist (Esping-Andersen, 1990)	Low levels of homeownership, developed rental market. Unitary rental market (Kemeny, 1995; 2005)	Regulated rental market as an alternative for low income groups (Andrews et al., 2011; Voigtländer, 2014)	High protection permanent contract, partial deregulation for temporary employment (Gebel and Giesecke, 2016)
ITALY	Southern European (Ferrera, 1994). Conservative (Esping-Andersen, 1990)	Dominant role of homeownership, low development of mortgage market and social housing. Dualist rental market (Kemeny, 1995; 2005)	Intergenerational transfers, fragmented public intervention, mainly regional level. (Castles and Ferrera, 1996; Del Boca and Lusardi, 2003; Stephens, 2003; Kurz and Blossfeld, 2004; Baldini and Poggio, 2014)	Insider-outsider divide by gender and age. Partial deregulation of temporary contracts (Barbieri and Cutuli 2016)
SPAIN	Southern European (Esping-Andersen, 1990)	High level of homeownership. 2008 housing bubble burst. Dualist rental market (Kemeny, 1995; 2005)	Importance of family of origin and intergenerational transfers (Fuentes et al., 2013; Castles and Ferrera, 1996; Kurtz and Blossfeld, 2004)	Decrease of protection for permanent positions and growing use of temporary contracts (Gebel and Giesecke, 2016)
FRANCE	Conservative-Nordic regime features (Esping-Andersen, 1990)	Heterogeneous housing market. Debated Unitary-Dualist rental market (Kemeny, 1995; 2005)	Anti-poverty programs. Interest free mortgages, public guarantees, PAS. (Palier and Thelen, 2012; Scanlon and Whitehead, 2004)	Relatively high protection for permanent workers (Scarpetta, 2014; Gebel and Giesecke, 2016)
POLAND	Post-communist European type (Fenger, 2007)	“Give it away privatisation”, high rate of homeownership. Dualist rental market (Kemeny, 1995; 2005)	National support for mortgage finance, poorly developed housing finance system (Hypostat, 2015; Stephens, 2003)	Average protection of permanent workers against individual and collective dismissal. Use of temporary contracts among youth (Scarpetta, 2014)
UK	Liberal (Esping-Andersen, 1990)	High share of homeownership, increase in mortgage undertaking after de-regulation. Dualist rental market (Kemeny, 1995; 2005)	Public-private assurance scheme for mortgage repayments. Very accessible mortgage market (Bicakova and Sierminska 2008; Neuteboom, 2004; Scanlon and Whitehead, 2004; Fuentes et al., 2013)	Relatively unrestrictive regulation for individual and collective dismissal (Scarpetta, 2014; Booth et al., 2002)

Table 2 Construction of the household-level employment insecurity variable

Her position	His position			
	Employee permanent	Employee temporary	Self-employed	Not employed
Employee permanent	Both secure	One secure and a half	One secure and a half	One secure
Employee temporary	One secure and a half	Insecure	Insecure	Insecure
Self-employed	One secure and a half	Insecure	Insecure	Insecure
Not employed	One secure	Insecure	Insecure	

Table 3 Summary statistics by country and overall. EU-SILC, 2010/2012 own calculation.

	DE	ES	FR	IT	PL	UK	Total
Mortgage	.25	.7	.43	.41	.4	.56	.46
Tenant	.66	.2	.32	.31	.18	.31	.32
Reduced Rent	.049	.023	.21	.054	.059	.12	.1
Free accommodation	.04	.077	.041	.22	.36	.014	.11
Both secure	.44	.29	.43	.28	.26	.62	.4
One secure and a half	.17	.24	.23	.23	.24	.13	.21
One secure	.27	.22	.18	.27	.2	.19	.21
Both insecure	.12	.24	.15	.22	.3	.059	.18
Earnings in Euros and adjusted for PPP - EU28							
25p	28805	20265	25353	22131	13679	27058	21838
Median	43233	31069	36245	35198	20618	42082	34163
75p	58421	41595	46729	47131	31431	58793	47771
Education male partner							
Low ed.	.053	.39	.08	.32	.052	.053	.15
Medium ed.	.44	.24	.5	.5	.57	.5	.46
High ed.	.51	.36	.42	.18	.37	.45	.4
Education female partner							
Low ed.	.056	.31	.062	.2	.052	.033	.11
Medium ed.	.4	.24	.41	.52	.44	.45	.4
High ed.	.54	.45	.52	.28	.51	.52	.49
Population density							
Densely populated	.49	.47	.46	.37	.52	.61	.49
Intermediate	.33	.25	.28	.42	.14	.27	.27
Thinly populated	.18	.28	.26	.2	.34	.12	.24
Age of household head (mean)	31	32	30	32	31	31	31
Not married	.42	.33	.64	.22	.13	.47	.41
Number of children (mean)	.76	.74	.88	.84	1.1	.92	.88
Age of the youngest child							
No children in the household	.51	.5	.46	.41	.27	.46	.44
0 /1	.15	.17	.21	.27	.2	.22	.2
2/4	.24	.24	.26	.24	.35	.22	.26
5+	.092	.092	.064	.076	.19	.11	.1
2010	0	.42	.32	0	.32	.26	.25
2011	.51	.3	.33	.55	.33	.31	.37
2012	.49	.28	.35	.45	.35	.43	.38
N	1186	1538	2569	904	1370	1384	8951

Figure 1 Predicted probabilities of being mortgage holders by earnings (Panel A), employment insecurity (Panel B) and employment insecurity at the 75th percentile of the earnings distribution (Panel C). Couples age 18-35. Predictions are adjusted for age of the oldest partner, education, marital status, presence and number of children, degree of urbanization and year. EU-SILC, 2010/2012 own calculation.

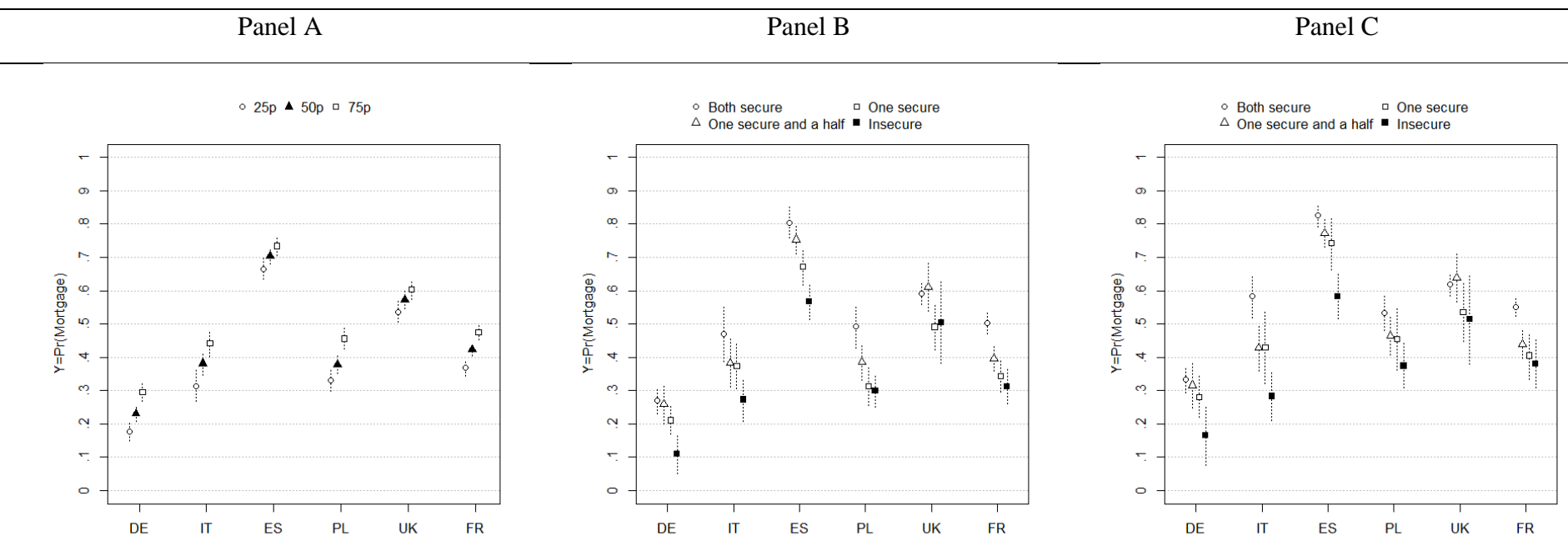


Figure 2: Predicted probabilities of being mortgage holders by employment insecurity and earnings. Couples age 18-35. Predictions are adjusted for age of the oldest partner, education, marital status, presence and number of children, degree of urbanization and year. EU-SILC, 2010/2012 own calculation.

