

Leaving Home in Insecure Conditions. The Role of Labour Market Policies and the Housing Market in Europe

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Abstract:

Leaving home is regarded as one of the key markers of the transition to adulthood. Previous studies have shown that the degree to which labour market vulnerability affects decisions about leaving the parental home and forming a family differs across countries and across different welfare state regimes. In countries that provide more generous supports for youth, the impact of labour market weakness on housing autonomy is reduced. Still, it remains unclear what dimensions of the institutional setting may be most important when it comes to buffering the relationship between labour market insecurity and individual autonomy among young people.

Against this background, the paper uses multilevel models to investigate whether and how passive labour market policies and the structure of the housing market can moderate the relationship between labour market exclusion and youth housing autonomy.

The results show that the level of expenditure on passive labour market policies, as well as the level of coverage of these policies, do not play a moderating role on the association between unemployment and housing autonomy, suggesting that further investigation in this domain would benefit from the inclusion of qualitative information on the design of passive measures. On the contrary, the structure of the housing market shows a positive role, although relatively low, in moderating the association between unemployment and housing autonomy, together with a negative moderating role of the level of indebtedness of the households. These findings shed light on the domains where policy intervention might provide better returns when it comes to fostering the achievement of housing autonomy for youth.

Keywords: autonomy, transition, adulthood, housing market, passive labour market policies, mortgage market.

1. Introduction

The paper investigates the relationship between labour market exclusion and youth housing autonomy, focusing on some specific institutional configurations that can moderate this relationship: passive labour market policies and the housing market. Literature states that country differences in labour market and welfare state have an impact on the decision to leave home for unemployed young people or young people working with temporary contracts. Indeed, due to recent developments in modern labour markets, youth are disproportionately affected by unemployment and temporary employment as compared to prime-age workers (Bell & Blanchflower, 2011; Müller & Gangl, 2003; O'Higgins, 2012). This can affect the young people's possibility to manage the cost of owing, renting or buying a house, in order to leave the parental home. At the same time, labour market exclusion affects the possibility of young people living independently to manage housing expenses in case of low income or unemployment, posing the risk of losing their housing autonomy.

However, despite the growing literature on the problem of housing affordability for household budgets, in particular in case of young people, there is a lack of studies that investigate the

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moderating effect of the configuration of the housing market.

Moreover, we also take into consideration the moderating effect of passive labour market policies, an important economic institutional support for young people with low or no income. The accessibility and generosity of passive labour market policies may moderate the negative association between unemployment and housing autonomy by providing unemployed youth with economic resources to manage the costs of housing, thus enhancing their transition to or their chances of remaining in independent living.

In the paper we test two hypotheses. Hypothesis 1 is about the moderating effect of expenditure in passive labour market policies on the relationship between unemployment and housing autonomy. We expect that the more generous the unemployment protection (both in expenditure and in coverage), the weaker the negative effect of unemployment on housing autonomy (thus positively moderating the association between labour market exclusion and housing autonomy). Hypothesis 2 tests the moderating role of the housing and mortgage market on the relationship between unemployment and housing autonomy. We expect that the higher the share of the rental market of the total housing market, the lower the negative impact of unemployment on housing autonomy. Similarly, the easier the access to mortgage is, the weaker the impact of unemployment on housing autonomy will be (thus positively moderating the association between labour market exclusion and housing autonomy).

We analyse such a moderating effect using two-step multilevel modelling, which includes as a first step the analysis of EU-SILC individual data and a second step using macro-level data from Eurostat, OECD and the European Mortgage Federation. The analyses highlight that the level of expenditure in a country on passive labour market policies does not seem to affect the association between labour market exclusion and housing autonomy. However, results highlight that the structure of the housing market may play a moderating role, although to a limited extent, which is either positive or negative, depending on the configuration taken. Our findings suffer of some limitation, nonetheless, they offer an interesting exploration of the contribution of some policy decisions when considering whether to foster the housing autonomy of young people.

The paper is organized as follows. The next paragraph frames the analyses of the previous literature, highlighting its innovative perspective. Paragraph 3 illustrates the research design: hypotheses, data and method of analysis. The findings are presented in Paragraph 4, followed by some conclusive observations (Par.5).

2. Theoretical background

Countries differ significantly in the extent to which they provide security against potential job loss and unemployment (Ebralidze, 2011; Gallie, 2010). Specific institutional configurations of the labour market and welfare state, as well as macro-structural conditions, are relevant explanations for country differences (Müller & Gangl, 2003) and for their impact on the decisions of leaving home among unemployed young people.

We expect that regulation and social policies filter the impact of increasing labour market exclusion and job insecurity for young people (Blossfeld, Buchholz, Hofäcker, & Bertolini, 2012; Mills & Blossfeld, 2003), and that can have an impact on their decisions about leaving their parental home (Bertolini, 2012; Bertolini, Hofäcker & Torrioni, 2014). Indeed, institutional factors such as the level of income security provided in case of job loss and a flexible mortgage market, can mediate the relationship between unemployment and housing autonomy.

As the literature points out, the availability of universal *unemployment protection* can influence peoples' propensity for leaving the parental home because they can count on income continuity, even if they work with precarious contracts or even if they are unemployed, so that they can still afford the housing expenses. Thus, generous expenditure on passive labour market policies

may positively moderate the relationship between unemployment and housing autonomy by guaranteeing income continuity in case of job loss, thus providing resources for supporting the costs of autonomous living.

Finally, empirical research highlighted that the structure of *the housing and mortgage market* can also play a role in moderating the relationship between unemployment and housing autonomy. Indeed, where housing is affordable, bearing the costs of housing, even in case of job loss, becomes less challenging than in countries where rules to access to credit are strict and the market for affordable dwellings is lacking. Research on cross-national differences in the rate of homeownership across European countries showed that housing markets have some peculiar features within each country, which can moderate the relationship between unemployment and residential autonomy (Filandri, 2016). First, where homeownership is widespread, such as in Southern Europe or in Eastern Europe, renting is not considered to be an efficient solution due to the home ownership culture (Holdsworth & Solda, 2002), and it is made difficult by the very structure of the housing market. In addition, in these countries youth are often excluded from homeownership due to constraints in accessing the mortgage market and due to a limited rental sector, which offers little choice and high prices.

Moreover, the presence of differentiation in the housing market can play a crucial role in the (negative) relationship between the lack of employment and housing autonomy: young people in tertiary education or in early job careers need to have a different housing market than older and more established people (Addabbo & Kjeldstad, 2013; Ford, Rugg, & Burrows, 2002; Sandlie, 2011). Younger households may have substantially different patterns of leaving home if they act in mature and dominant home ownership sectors or in a more rapidly developing society, in which traditional housing practices mix with nascent private market developments (Bugeja-Bloch, 2012). For this reason, in Mediterranean countries young people tend to leave their original families much later than in the rest of Europe, also because of the insufficient supply of affordable dwellings (Baldini & Poggio, 2012; Mencarini & Tanturri, 2006; Mulder & Billari, 2010). Lower affordability is a key factor affecting the ability to leave home, and its effect is stronger in the presence of low investments into social housing (Bugeja-Bloch, 2012).

Leaving the parental home is a complex decision-making process, bringing into play many rational-economic elements, as well as cultural and institutional-related ones. The importance of macro and meso-level dimensions must be underlined in the structure of the constraints and opportunities within which young people are confronted in their paths towards housing autonomy (Baranowska-Rataj et al., 2015). At the macro level, we refer to the characteristics of welfare, labour and the housing market, social norms and cultural models, as well as to the structure of resources and inequalities related to family and social network at the meso level; finally, we refer to the individual situation as well as the decision-making mechanisms and strategies implemented at the micro level in the context of reference.

For the purpose of this analysis, it is appropriate to consider the assumption of economic rationality to explore the impact of welfare and housing regimes on the decision to leave home. We assume that in this decision the individual acts on the basis of a limited rationality and chooses a function of utility that satisfies, but doesn't maximize its own preferences, or introduces cultural norms into the cost/benefit calculation of such utility function. For example, among the scholars who have researched transition to adult life, Blossfeld & Prein (1998) think that rational-instrumental behaviour can co-exist with behaviour guided by norms.

Recently, in most countries the credit market has changed in different directions, becoming more or less accessible, depending on the degree of risk aversion in the economic environment and in the banking sector. The literature has highlighted that there is a negative correlation between the size of the mortgage market and the proportion of homeownership: higher levels of mortgage debt are seen as an indicator of less difficulties in buying houses (Aalbers, 2009; Filandri, 2016; Schwartz, 2013), while high rates of homeownership with a small mortgage market tend to exclude the youth. In this context, renting may also be difficult: the initial transition out of the parental home

is heavily dependent on the availability of certain kinds of housing, and the availability of a cheap, broad, and flexible rental market can make leaving the parental home more affordable.

Given this framework, we expect that a favourable structure of the housing market, characterised by a wide rental sector and/or an accessible mortgage market can positively moderate the relationship between unemployment and housing autonomy. Indeed, individuals with weak employment positions or low attachment to the labour market often do not possess sufficient resources to buy a home, and they encounter difficulties in finding accommodations with reasonable rent (Holdsworth & Solda, 2002; Jones, 1995; Filandri, 2016). If the housing market is characterised by a high supply of houses for rent and by a well-developed mortgage market, we can expect that the negative effect of unemployment on housing autonomy decreases, i.e. is positively moderated by the fact that reliance on income from employment is made less urgent, since access to housing is more affordable. Nonetheless, the effect of a high level of indebtedness due to housing may also have the opposite effect if we consider that recent literature has highlighted the difference between *purchase affordability* and *repayment affordability* (Gan & Hill, 2009; Filandri, 2016). The former refers to the ability to purchase a house thanks to access to an adequate mortgage, while the latter refers to the ability of the individual to repay the mortgage. The deregulation of the credit market, which has taken place in recent years, has led to a positive impact on purchase affordability, making access to mortgage easier. However, this does not have any relationship with the ability of the individual to repay the debt (repayment affordability). Indeed, extending access to credit also to individuals with lower income also implies increasing the risks associated with home ownership (Filandri, 2016).

Based on the literature presented in the previous section, we formulated the following hypotheses:

Hypothesis 1. The moderating role of passive labour market policies on the relationship between unemployment and housing autonomy: the more generous the unemployment protection is (both in expenditure and in coverage), the weaker the negative effect of unemployment on housing autonomy is (positively moderating the association between labour market exclusion and housing autonomy).

We expect that in countries where the investment in passive LMPs is higher, the negative relationship of unemployment on residential autonomy decreases. In fact, unemployment benefits help to guarantee a continuity of income, even if people are unemployed. This can support young people in making their decision to leave the parental home and to take on the responsibility of the regularly paying rent or mortgage for a new house.

Hypothesis 2. The moderating role of the housing and mortgage market on the relationship between unemployment and housing autonomy: the higher the share of the rental market is of the total housing market, the lower the impact of unemployment on housing autonomy will be. Similarly, the easier the access is to mortgage, the lower is the impact of unemployment on housing autonomy (positively moderating the association between labour market exclusion and housing autonomy).

We expect a positive moderating role of the share of the rental sector on the relationship between unemployment and housing autonomy, given that a higher share of rented dwellings implies a large supply of rental options and affordable pricing. On the side of the mortgage market, a widespread use of mortgages for purchasing homes is expected to positively moderate the relationship, because easier access to mortgages increases the ‘purchasing affordability’ of individuals. On the contrary, the ratio between residential loans and the disposable income of families is expected to negatively moderate the relationship, because a high ratio may indicate greater exposure of a household to financial vulnerability and to the risk of not repaying their debts (‘repayment affordability’).

3. Research design

3.1 Data and variables

The multilevel analyses presented here are based on individual cross-sectional data of the European Statistics on Income and Living Conditions (EU-SILC) for 2014. The database contains individual-level observations for 28 European countries, which qualifies data as multilevel with individuals at level one, nested in countries at level two. The sample used for the individual-level regressions is made up of individuals aged 16 to 29 years old, who are employed or unemployed. Inactive individuals are excluded in order to reduce the noise due to their internal heterogeneity based on gender, by which inactive women tend to be more residentially autonomous than men. Students, as a subset of the inactive population, are also excluded because the main purpose of the analysis is to investigate the relationship between (involuntary) labour market exclusion, namely unemployment, and housing autonomy.

The dependent variable, housing autonomy, refers to the residential condition of the individual: an individual is considered as having reached housing autonomy when he/she lives in a household not including his/her parents (variable equal to 1 if parents are not members of the household, equal to 0 otherwise). This operationalisation of housing autonomy is far from exhaustive and encompassing, as it does not take into account several types of residential arrangements that may occur in real life (e.g. living with siblings, friends or with other relatives). Moreover, it statistically underestimates the residential autonomy of individuals who are married and live with their family of origin or with parents-in-law¹. However, despite being a rather crude definition, focussing on the presence or absence of at least one parent in the household serves our main purpose, which is not autonomy per se but residential autonomy from the family of origin, as a fundamental step toward adult life and other relevant steps toward adulthood.

The main independent variable is labour market exclusion, operationalised as a dichotomous variable equal to 1 if the self-reported economic status of the respondent is unemployed, equal to 0 if employed.

The logistic regressions also include a set of control variables such as age, gender, immigration status, level of education, area of residence (urban or rural). Finally, since housing autonomy is strongly associated with cohabitation with a partner (Iacovou, 2010; Ruspini, 2015), which may represent the main driver of the decision to live independently but also a buffer in case of labour market exclusion, we introduced the presence of a partner in the household as a further control.

One of the limitations to the use of cross-sectional data is that we cannot exclude a reverse causation problem, more specifically, establish which is the direction of the relationship between employment and housing autonomy because the current living condition of the individual may itself affect his/her employment condition. With cross-sectional data, we are indeed able to observe the characteristics of individuals who are already out of parental homes, but we do not know the conditions under which the individuals took the decision to exit their parental homes. However, while we acknowledge this limitation, we are also aware that extensive availability of high-quality longitudinal data for all European Member States is lacking.

The macro-level indicators used in the second level regression are collected from official sources such as Eurostat, OECD and the European Mortgage Federation. The macro-level variables used are summarised here below (a detail of values of macro-level indicators per each EU28 country is provided in Table A.1 of the appendix):

¹ This residential arrangement represents a very limited case (less or equal to 1%) in Western European countries, while it is a little more frequent (less or equal to 5%) in some European (mainly Eastern but not only) countries such as Bulgaria, Cyprus, Croatia, Lithuania, Latvia, Poland, Portugal, Romania and Slovenia.

Table 1: List of macro level indicators

Hypothesis	Macro-level indicator	Source
Hypothesis 1. Passive LMP	LMP expenditure as percentage of GDP: Passive labour market policies (categories 8-9)	OECD
	Participant stocks as a percentage of the labour force: (Passive measures: categories 80-90) ²	OECD
	LMP expenditure per active population ³ : Passive labour market policies (categories 8-9)	Eurostat
	Expenditure on unemployment benefits as a % of GDP: Full unemployment benefits	Eurostat
Hypothesis 2. Housing and Mortgage Market	Share of the rental sector of the total housing market: % tenant	Eurostat
	Share of owners without mortgage of the total housing market	Eurostat
	Total Outstanding Residential Loans to GDP Ratio	European Mortgage Federation (EMF)
	Total Outstanding Residential Loans to Disposable Income of Household Ratio	European Mortgage Federation (EMF)

3.2 Method

Multilevel analysis on housing autonomy has been performed using a two-step approach. As recently highlighted in the literature (Bryan & Jenkins, 2013, 2016; Heisig, Schaeffer, & Giesecke, 2017), this method turns out to be particularly useful when the researcher has a dataset characterised by a relatively small number of macro-level units but a relatively high number of observations within each group (countries).

Two-step approaches have an additional advantage: cross-country studies, like the one proposed here, are based on the ‘invariant coefficients assumption’, which neglects the cross-country variation in the effect of control variables at the lower level. This may reduce the precision of estimated context effects, resulting in low statistical power. However, recent research has showed that two-step approaches “generally produced accurate statistical inference [...] and relatively high precision when clusters were large and when there was substantial heterogeneity in the effects of controls” (Heisig et al., 2017, p. 823).

The first step involves the estimation of individual level regressions between the dependent and independent variables, separately for each country. Such a coefficient, estimated in the first step for each country, becomes the dependent variable in the second step, which entails estimating the effect of the macro-level variable (independent) on the coefficient of the individual level relationship (dependent variable) through a linear regression model. The process requires an additional adjustment of standard errors, which in the case of estimated dependent variables tends to be biased and inconsistently estimated due to the heteroscedasticity of the first-level sampling error, where variance differs across observations (Jusko, 2005; Lewis & Linzer, 2005). Following Bryan & Jenkins (2013, p. 9), the first step can be represented as follows:

² Category 8 (or 80) indicates Out-of-work income maintenance and support; category 9 (or 90) indicates Early retirement measures.

³ Here we divided the amount of expenditure on passive labour market policies per the total of active population in each country. Thus, the indicator gives a rough estimate of the amount of PLMP potentially available to each active member of the population. However, real chances of access are not considered and may be influenced by the design of the policies.

$$y_{ic} = X_{ic} \beta + v_c + \varepsilon_{ic} \quad (1)$$

where v_c is a fixed effect for country c which combines both observed and unobserved country characteristics. The second step is represented by:

$$\hat{v}_c = \alpha + Z_c \gamma + \eta_c \quad (2)$$

where (\hat{v}_c) is an estimate of the country-specific fixed effect and η_c is a residual error term.

In our case, we first estimated the country-level logistic regressions, with the dependent variable being residentially autonomous (not living with parents) and the independent variable the proxy for labour market exclusion (being unemployed), with controls included. We then estimated the average marginal effects, which turn into the dependent variable of a linear regression model in the second step, where the independent variable is the macro level indicator of interest (e.g. fraction of the rental sector for the hypothesis on the structure of the housing market). Finally, standard errors of this second regression are corrected in order to take into consideration the uncertainty coming from using an estimated dependent variable. The error term of the second step regression includes a first component due to the individual-level regression (heteroscedasticity due to variance in the sampling error across countries) and a second component is the country-level error term. Thus, standard errors of the second step linear regression model are corrected by adding a weight that is computed as in (Huber, 2005) and Baranowska & Gebel (2008).

4. Findings

In this section, we present the results emerging from the two-step multilevel regression for the moderating role of selected macro-level factors on the association between labour market exclusion and housing autonomy.

As a first step, we present results from the logistic regressions run at individual level for each country. Figure 2 illustrates the average marginal effect of being unemployed (vs. being employed) on autonomous living in all 28 Member States in the year 2014 (Table A.2 in the Appendix shows regression coefficients). The regressions show that in the great majority of the EU28 countries, being unemployed is negatively associated with a condition of autonomous living (compared to those who are employed). The association is substantial and statistically significant for half of the countries considered: in Denmark, Estonia, Greece, France, Ireland, Italy, Lithuania⁴, Luxemburg, Latvia, the Netherlands, Portugal, Romania and Sweden, the gap in the chances of living autonomously for unemployed young people is between 5 and 10 percentage points lower than for employed people. This negative relationship is also observable in Cyprus, Spain, Hungary and Poland, but with a lower gap (less than 5 percentage points) in the chances of living autonomously between the two groups. On the contrary, Malta stands out as an outlier, indicating an advantage for unemployed people, however, this finding might be affected by the small sample size. The remaining countries show an insignificant relationship between unemployment and housing autonomy, with extremely low and non-significant coefficients⁵.

4 The estimates for Lithuania and Latvia are not statistically significant (respectively p-value equal to 0.12 and 0.079) but have been included in the group following a less restrictive approach to p-value, also in light of the small sample size of the two countries (Bernardi, Chakhaia, & Leopold, 2016).

5 In this respect, it has to be considered that with cross-sectional data we cannot get rid of a reverse causation problem, as we are able to observe the characteristics of individuals who are already out of parental home, but we do not know the conditions under which the individual took the decision to exit the parental home.

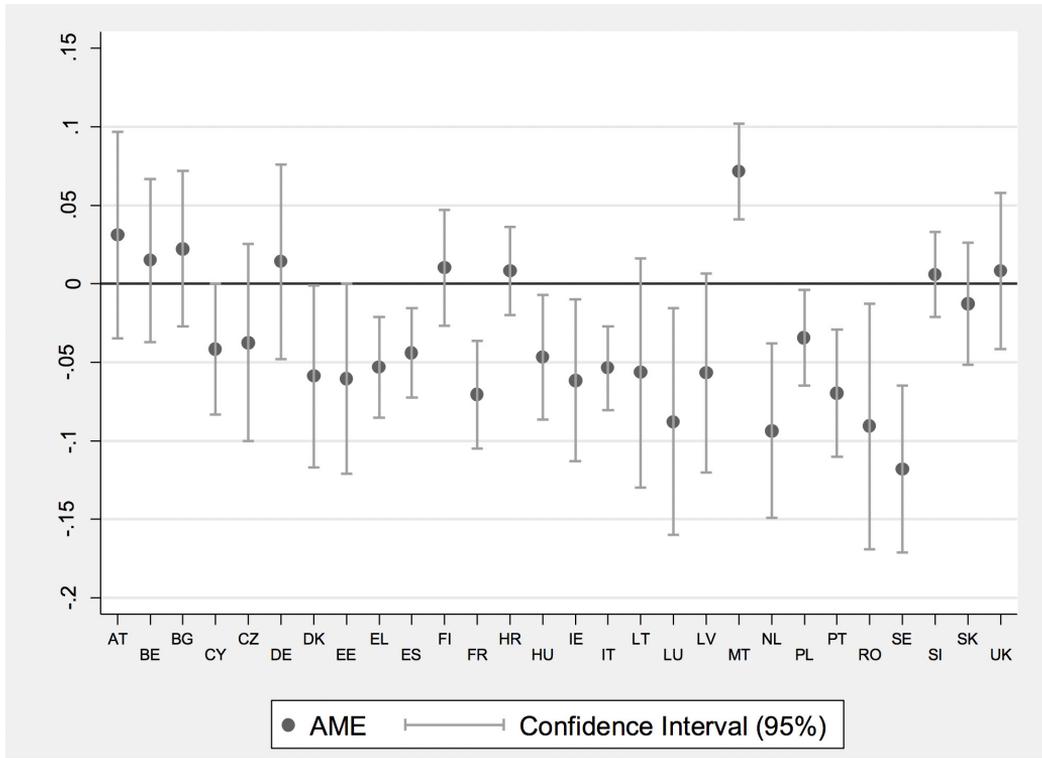


Figure 1: Average marginal effect of being unemployed (vs. employed) on housing autonomy

Source: own elaboration on EUSILC UDB 2014 – version 2 of August 2016

Given this overview of the relationship occurring at an individual level (step 1), we can now test whether some of the country variation can be explained by structural and institutional features.

One of the advantages of the two-step approach is that it provides a clear visualisation of the multi-level relationship between micro and macro-level variables in a simple scatterplot. In Figures 2 to 4, we plot the average marginal effects calculated at the individual level with the macro-level indicators of interests for each of the hypothesis considered. Here below we examine in detail each of the formulated hypotheses.

Hypothesis 1. Passive labour market policies

Starting with hypothesis 1, about the positive moderating effect of Passive Labour Market Policies, we can see that a clear linear relationship cannot be observed (Figure 2), contrary to what was hypothesised. Indeed, the average marginal effects of the single countries are scattered across the different levels of expenditure and coverage for passive labour market policies, without indicating a clear relationship. The upper left graph shows a positive trend of decreasing the negative effect of unemployment on housing autonomy for increasing levels of expenditure in PLMP, but only for a limited group of OECD countries. A subgroup of countries (Italy, Spain, Portugal, but also Denmark, France and the Netherlands), show negative and substantial associations between unemployment and housing autonomy despite high levels of PLMP expenditure. Similarly, when considering the ratio between public expenditure in LMP (in euros) and active population in all EU28 Member states (lower right corner), a group of countries emerges with very low levels of expenditure (<500 euros per active population member) but very heterogeneous outcomes in terms of unemployment and housing autonomy (left side of the graph).

These preliminary considerations are further confirmed by the estimates of the second step regression (Table 2), which show extremely small and statistically insignificant relationships accompanied by insignificant R squared values. We also tested the same relationship with lagged variables (years 2013 and 2012), to take into consideration a possible delay in the effect of labour market policies. However, the estimates keep showing a non-significant relationship.

Thus, from the analyses performed on the selected indicators for the level of expenditure on Passive labour Market policies in a country, we cannot support the hypothesis of a positive moderating role of the association between labour market exclusion and autonomous living for youth.

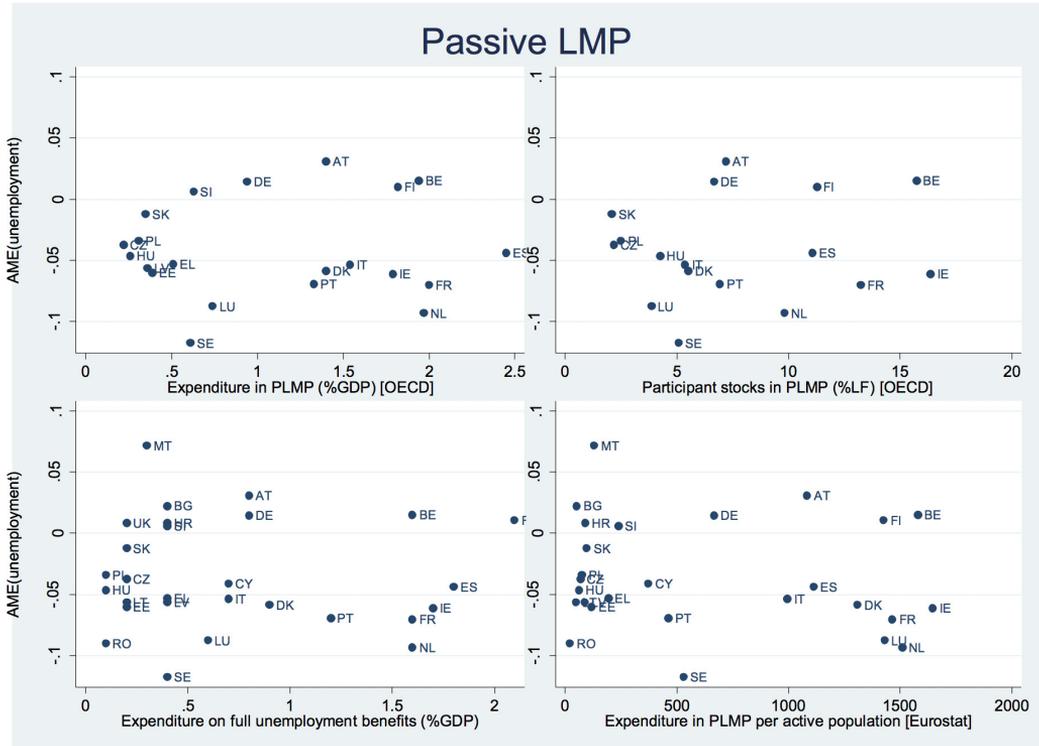


Figure 2: Passive labour market policies indicators and average marginal effect of being unemployed on housing autonomy

Source: own elaboration on EUSILC UDB 2014 and OECD, Eurostat data

Table 2: Second step regression for macro-level PLMP indicators and the association between unemployment and housing autonomy. Linear regression coefficients

Passive Labour Market Policies	(1)	(2)	(3)	(4)	(5)	(6)
Expenditure in PLMP (%GDP) [OECD]	0.00115 (0.0140)					
Participant stocks in PLMP (%LF) [OECD]		0.000934 (0.00258)				
Expenditure on full unemployment benefits			0.000251 (0.0157)			
Expenditure in PLMP (per active population) [Eurostat]				-8.28e-06 (1.46e-05)		
Observations	21	17	28	27	27	26
R-squared	0.000	0.009	0.000	0.013	0.000	0.000

Notes: Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, + $p < 0.1$.

Source: own elaboration on EUSILC UDB 2014 and OECD, Eurostat data

Hypothesis 2. Housing and mortgage market

Figure 3 provides a visualisation of the relationship between the average marginal effects of being unemployed on the chances of living autonomously and the macro-level indicators selected as proxies for the structure of the housing market (Figure 3). Again, the relationship is not straightforward but some of the indicators seem to show a weak moderating effect. Indeed, a negative moderating role of the level of indebtedness of families can be spotted in the second graph, with marginal effects ordered in a somehow descending order. On the contrary, a positive moderating role of the share of owners with no mortgage, reducing the negative effect of unemployment and housing autonomy, seems to be observable for some of the countries in the fourth frame. Last, excluding some outliers, increasing shares of people living in a rented dwelling seem to be loosely associated with a weaker effect of unemployment on housing autonomy (third frame).

We, therefore, tested these relationships in the second step regression (Table 3), which confirms some of the intuitions. Indeed, the proxy for the level of indebtedness of households (Residential Loans on Disposable Income of Household Ratio) shows a negative and statistically significant coefficient, accompanied by a substantial value of r-squared (models 2 and 3), which indicates a negative moderating role of the level of indebtedness of households. Namely, increasing levels of the ratio between mortgages and disposable income further worsen the negative relationship between unemployment and housing autonomy. This result partly contradicts our hypothesis of a positive moderating role of easier access to the mortgage market. Indeed, higher levels of exposure to debt turn to further worsen the negative relationship between unemployment and the housing autonomy of youth. Searching for a possible explanation of this result, we have to consider that in literature the proxy we used for the level of household debt may also highlight some problems in household budget management (Lacan & Lazarus, 2015; Marron, 2012). If the share of residential loans to disposable income increases, people can be exposed to over indebtedness, which means being exposed to such a high debt level that it exceeds the ability to repay it. In this situation, not only does the risk of not repaying their debts increase ('repayment affordability'), but also the income availability of individuals can decrease, with relevant consequences for the possibilities of being independent in terms of finances and housing. In fact, a high ratio of debts to disposable income can expose people to financial vulnerability, distress, and the inability to be autonomous while unemployed, taking into account the possibility of facing household expenses. Moreover, we do not have evidence that a developed credit market assures access to youth in particular, who are our specific population of interest: the credit market could indeed be open, but it may be open mainly to other categories of customers, different from young people with low experience in the

labour market and a low level of salary.

On the contrary, in line with what was hypothesised for the structure of the housing market, the share of population living in a rented dwelling seems to have a small but positive moderating effect, thus weakening the (negative) effect of unemployment on housing autonomy. This positive association assumes a very small value but becomes slightly significant and assumes a reasonable r-squared (12%) when excluding the two extreme cases of Malta and Sweden. Finally, the proxy introduced as an indicator of a predominant homeownership culture, associated with a poorly developed mortgage market (corresponding to high share of owners with no mortgage), shows neither a significant nor a substantial association, despite the graphs suggesting a positive moderating effect for a subset of countries.

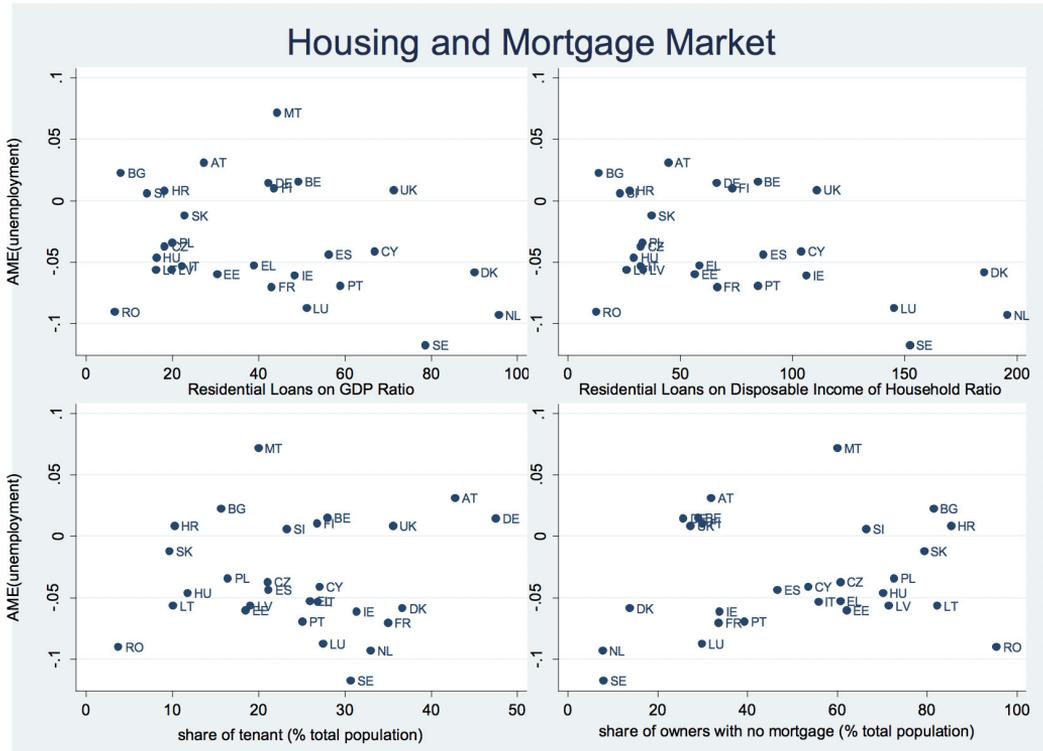


Figure 3: Indicators for the structure of the housing and mortgage market and average marginal effect of being unemployed on housing autonomy

Source: own elaboration on EUSILC UDB 2014 and European Mortgage Federation, Eurostat data

Table 3: Second step regression for macro-level indicators of the housing market and the association between unemployment and housing autonomy. Linear regression coefficients

Housing and Mortgage Market	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Ratio of Residential Loans to GDP	-0.000377 (0.000328)						
Ratio of Residential Loans to Disposable Income of Household		-0.000286** (0.000138)	-0.000407*** (0.000129)				
share of tenants				0.000915 (0.000753)	0.00119+ (0.000642)		
share of owners with no mortgage						0.000125 (0.000326)	0.000454 (0.000324)
Observations	28	27	26	28	26	28	26
R-squared	0.048	0.146	0.293	0.054	0.125	0.006	0.076

Notes: Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, + $p < 0.1$. Model 3 excludes Romania; Model 5 excludes Malta and Sweden; Model 7 excludes Malta and Romania.

Source: own elaboration on EUSILC UDB 2014 and OECD, Eurostat data

5. Conclusions

Autonomy from the parental home is considered a key transition into adulthood and a prerequisite for further transitions into adult life. Despite the youth having been disproportionately affected by recent developments in the labour market compared to adult workers, showing higher risk of unemployment, precarious employment and discontinuous careers, the patterns of transition out of parental homes differ among youth in different European countries. The mechanisms at play in this process can be multiple, but research has shown that the institutional setting can influence the set of opportunities that the youth face. In this paper, we focused on two particular institutional and structural features, investigating whether and to what extent passive labour market policies and the structure of the housing market may play a moderating role on the relationship between labour market exclusion and youth housing autonomy.

Using a multilevel approach on individual data from EU-SILC and macro-level data from Eurostat, OECD and the European Mortgage Federation, we tested two hypotheses. First, we tested whether it holds true that the more generous the unemployment protection is (both in expenditure and in coverage), the weaker is the negative effect of unemployment on housing autonomy. Second, we tested whether a configuration of the housing market offering more rental opportunities and easier access to mortgages may weaken the impact of unemployment on housing autonomy. The major findings emerging from the multilevel analyses show that the level of expenditure on passive labour market policies, as well as the level of coverage of these policies, do not have a significant moderating role, namely, the association between the level of expenditure in passive labour market policies is not significantly associated with a lower effect of unemployment on housing autonomy. Therefore, this finding does not support hypothesis 1, according to which we expected that more generous expenditure on measures for supporting the incomes of unemployed people may help reduce the negative association between unemployment and the housing autonomy. However, this result has to be interpreted also considering the design of the passive

labour market policies, which in many countries have restricted criteria of access that exclude youth from the beneficiaries. Indeed, as mentioned in the discussion section, the used macro-level indicators provide information about the amount of measures potentially available to the entire active population. Access, however, may vary considerably among countries, excluding (or including) particular groups, based on a previous job (excluding new entrants) or on characteristics of the last job (penalising discontinuous and precarious careers). Further research investigating qualitative characteristics of the access and coverage of passive labour market policies may help shed light on the underlying mechanisms.

As far as the second hypothesis is concerned, findings show that the structure of the housing market does moderate the association between youth exclusion from the labour market and their housing autonomy, as hypothesised. Although the magnitude of the association remains limited, this result highlights the relevance of the structure of the housing market on youth autonomy, in particular, in presence of low labour market attachment. This issue has to be seriously taken into account in the design of policies to support young people. This result is also in line with previous research studies that refer to “greater problems of affordability, reduced investment in social housing and the need for higher deposits in a more risk-averse economic environment as key factors affecting the ability to leave home” (Bugeja-Bloch, 2012). It would be interesting to expand this avenue of research by further analysing which specific measures may contribute to making housing more affordable to young people and the different configurations of affordability that can be considered. More widespread social housing and economic support for rented dwellings are measures that can act on the possibility of young people to have access to houses at affordable costs. On the contrary, acting on *purchase affordability*, making mortgage more accessible – for example, with the provision of institutional guarantee funds – can have an unforeseen effect on the *repayment affordability*, the possibility for people to repair their debts, overall in a system of easy access to credit and high level of over indebtedness. In fact, we found that the level of family debt negatively moderates, i.e. further worsens, the relationship between unemployment and the housing market, even when controlling for PLMP expenditure and the structure of the housing market.

Finally, regarding the positive moderating relationship between a higher share of tenants and the effect of unemployment on housing autonomy, we can advance some considerations on the transmission of inequalities. Indeed, the link between unemployment and housing autonomy can be viewed also in terms of housing pressure, namely the weight of housing expenses on the household budget. Indeed, we can consider a high share of owners as a proxy for intergenerational transmission of wealth through the house: without mortgage or rent to be paid, the housing pressure is lower and young people can decide (and afford) to live autonomously also in case of low market attachment, thanks to the availability of a dwelling property of their family of origin. This situation raises important issues of intergenerational inequalities based on the distribution of wealth in a specific country, as young people who cannot benefit of such an option are further disadvantaged, and it is a domain that is less subject to alleviation with appropriate policies.

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Appendix

Table A.1: Summary of macro-level indicators

Country	Passive Labour Market Policies				Structure of the Housing and Mortgage Market			
	Expenditure on PLMP (%GDP) [OECD]	Participant stocks in PLMP (%LF) [OECD]	Expenditure on full unemployment benefits (%GDP) [Eurostat]	Expenditure on PLMP per active population (€) [Eurostat]	Residential Loans on GDP Ratio [EMF]	Residential Loans on Disposable Income of Household Ratio [EMF]	share of tenants (%) [Eurostat]	share of owners, no mortgage (%) [Eurostat]
AT	1.40	7.2	0.80	1083.98	27.5	44.7	42.8	31.9
BE	1.94	15.7	1.60	1578.82	49.3	84.6	28.0	29.1
BG			0.40	53.02	8.2	13.9	15.7	81.5
CY			0.70	373.00	67.0	103.9	27.1	53.6
CZ	0.22	2.2	0.20	67.47	18.3	32.6	21.1	60.7
DE	0.94	6.7	0.80	667.57	42.4	66.3	47.5	25.8
DK	1.40	5.5	0.90	1310.60	90.0	185.5	36.7	13.8
EE	0.39		0.20	118.74	30.4	56.5	18.5	62.1
EL	0.51		0.40	192.99	39.1	58.6	26.0	60.7
ES	2.45	11.1	1.80	1112.94	56.3	87.2	21.2	46.7
FI	1.82	11.3	2.10	1427.03	43.7	73.1	26.8	30.1
FR	2.00	13.2	1.60	1465.92	43.1	66.4	35.0	33.6
HR			0.40	89.99	18.3	27.5	10.3	85.4
HU	0.26	4.3	0.10	62.02	16.4	29.5	11.8	70.2
IE	1.79	16.4	1.70	1647.85	48.5	106.4	31.4	33.8
IT	1.54	5.4	0.70	994.61	22.3	32.6	26.9	55.8
LT			0.20	48.05	16.3	26.1	10.1	82.3
LU	0.74	3.9	0.60	1432.02	51.2	145.4	27.5	29.9
LV	0.36		0.40	87.25	19.9	33.6	19.1	71.5
MT			0.30	131.02	44.4		20.0	60.1
NL	1.97	9.8	1.60	1509.06	95.7	195.9	33.0	7.7
PL	0.31	2.5	0.10	74.14	20.1	33.3	16.5	72.7
PT	1.33	6.9	1.20	461.72	59.1	84.7	25.1	39.4
RO			0.10	22.27	6.7	12.6	3.8	95.5
SE	0.61	5.1	0.40	530.47	78.8	152.3	30.7	7.9
SI	0.63		0.40	238.33	14.3	23.2	23.3	66.5
SK	0.35	2.1	0.20	97.06	23.0	37.3	9.7	79.4
UK			0.20		71.3	110.9	35.6	27.3

Source: OECD, Eurostat, EMF for the year 2014

Table A.2: Logistic regression on labour market status and housing autonomy (coefficients)

	AT	BE	BG	CY	CZ	DE	DK	EE	EL	ES	FI	FR	HR	HU
LM status (ref=employed) unemployed	0.272 (0.295)	0.150 (0.268)	0.229 (0.260)	-0.461 (0.237)	-0.365 (0.314)	0.154 (0.343)	-0.736* (0.383)	-0.534 (0.273)	-0.604** (0.185)	-0.492** (0.162)	0.118 (0.220)	-0.796*** (0.201)	0.161 (0.284)	-0.520* (0.227)
age	0.317*** (0.0323)	0.383*** (0.0437)	0.0627 (0.0449)	0.313*** (0.0468)	0.250*** (0.0403)	0.386*** (0.0358)	0.381*** (0.0525)	0.145*** (0.0335)	0.115** (0.0388)	0.100*** (0.0296)	0.362*** (0.0329)	0.320*** (0.0317)	0.133* (0.0538)	0.251*** (0.0361)
female	0.283 (0.188)	0.498* (0.210)	1.684*** (0.242)	1.035*** (0.234)	0.0241 (0.196)	0.994*** (0.182)	-0.0720 (0.300)	0.239 (0.175)	0.336 (0.188)	0.133 (0.153)	1.172*** (0.181)	0.708*** (0.160)	0.801** (0.274)	0.897*** (0.170)
education (ref=low) medium	0.257 (0.273)	-0.252 (0.320)	-0.0207 (0.292)	-0.608 (0.331)	0.0304 (0.393)	0.0589 (0.275)	-0.496 (0.320)	-0.326 (0.223)	-0.208 (0.325)	0.0146 (0.196)	0.0290 (0.239)	0.490 (0.270)	-1.328* (0.602)	-0.517* (0.237)
high	0.471 (0.320)	-0.635 (0.345)	0.00926 (0.389)	-1.276*** (0.354)	-0.532 (0.439)	-0.0870 (0.332)	0.586 (0.528)	-0.0232 (0.279)	0.0654 (0.352)	-0.226 (0.191)	1.052** (0.372)	0.703* (0.286)	-1.283 (0.670)	-0.121 (0.288)
non-citizen	0.290 (0.347)	0.701 (0.371)	n.a.	1.776*** (0.286)	2.109** (0.721)	1.372 (0.706)	1.165 (1.113)	-0.807* (0.352)	0.338 (0.336)	1.521*** (0.230)	0.159 (0.896)	-0.340 (0.625)	1.060 (1.493)	-1.378 (1.292)
urban area	1.454*** (0.209)	0.840*** (0.215)	0.456 (0.256)	0.430* (0.213)	1.253*** (0.197)	1.434*** (0.193)	1.083*** (0.297)	0.994*** (0.177)	0.563** (0.189)	-0.00244 (0.151)	0.994*** (0.173)	0.737*** (0.160)	0.896* (0.365)	1.405*** (0.186)
lives with a partner	3.589*** (0.295)	4.665*** (0.351)	3.547*** (0.265)	3.667*** (0.227)	4.940*** (0.384)	4.767*** (0.404)	5.758*** (1.020)	3.888*** (0.211)	4.179*** (0.282)	4.183*** (0.198)	5.440*** (0.463)	5.449*** (0.377)	4.922*** (0.287)	3.765*** (0.198)
constant	-9.388*** (0.789)	-10.96*** (1.128)	-5.112*** (1.159)	-10.31*** (1.281)	-8.301*** (1.125)	-11.66*** (0.892)	-10.03*** (1.186)	-5.391*** (0.825)	-5.203*** (1.031)	-4.614*** (0.766)	-10.29*** (0.823)	-9.850*** (0.826)	-6.257*** (1.507)	-9.117*** (0.954)
N	1080	985	839	1035	1099	1357	661	1285	1400	2014	1674	1815	1177	1660

Source: own elaboration on EUSILC UDB 2014 – version 2 of August 2016. Notes: Standard errors in parentheses. * p < 0.05, ** p < 0.01, *** p < 0.001

	IE	IT	LT	LU	LV	MT	NL	PL	PT	RO	SE	SI	SK	UK
LM status (ref=employed) unemployed	-0.533* (0.230)	-0.669*** (0.169)	-0.549 (0.361)	-1.019* (0.428)	-0.449 (0.256)	2.138*** (0.410)	-1.233** (0.381)	-0.397* (0.179)	-0.783*** (0.230)	-0.770* (0.339)	-1.316*** (0.309)	0.0802 (0.188)	-0.177 (0.277)	0.0678 (0.210)
age	0.233*** (0.0343)	0.225*** (0.0307)	0.190*** (0.0502)	0.365*** (0.0527)	0.137*** (0.0373)	0.147** (0.0504)	0.612*** (0.0488)	0.0980*** (0.0281)	0.0442 (0.0378)	0.129** (0.0397)	0.391*** (0.0421)	0.128*** (0.0379)	0.190*** (0.0452)	0.231*** (0.0244)
female	0.471* (0.194)	0.462** (0.148)	0.638* (0.254)	0.483 (0.256)	0.534** (0.189)	0.376 (0.326)	0.885*** (0.206)	0.361** (0.139)	0.303 (0.206)	0.793*** (0.188)	-0.104 (0.213)	0.452* (0.182)	0.323 (0.201)	0.525*** (0.137)
education (ref=low) medium	0.256 (0.381)	-0.398* (0.191)	-0.481 (0.430)	-0.625* (0.311)	-0.192 (0.261)	-0.0780 (0.399)	0.424 (0.346)	0.0370 (0.260)	-0.0217 (0.235)	-0.190 (0.236)	-0.221 (0.351)	-0.477 (0.285)	0.154 (0.390)	0.0857 (0.194)
high	0.365 (0.390)	-0.589* (0.239)	-0.665 (0.464)	-0.950* (0.373)	-0.226 (0.306)	0.0916 (0.428)	1.081** (0.342)	0.194 (0.285)	-0.126 (0.293)	-0.389 (0.291)	0.712 (0.435)	-0.273 (0.332)	-0.0425 (0.431)	0.390 (0.199)
non-citizen	1.849*** (0.332)	1.332*** (0.223)	n.a.	0.646* (0.266)	0.00991 (0.367)	1.732** (0.649)	1.401 (1.272)	n.a.	1.351** (0.503)	n.a.	0.508 (0.609)	2.058*** (0.367)	n.a.	0.908*** (0.233)
urban area	0.545** (0.194)	0.0376 (0.148)	0.736** (0.253)	0.773* (0.387)	0.698*** (0.194)	0.162 (0.570)	n.a.	1.734*** (0.166)	0.158 (0.207)	1.255*** (0.206)	0.305 (0.211)	n.a.	0.389 (0.230)	0.559*** (0.139)
lives with a partner	4.518*** (0.484)	4.811*** (0.320)	3.819*** (0.351)	4.246*** (0.313)	3.538*** (0.240)	6.770*** (0.472)	6.206*** (0.742)	4.133*** (0.158)	4.014*** (0.233)	2.701*** (0.218)	4.923*** (0.479)	3.932*** (0.172)	3.858*** (0.204)	4.129*** (0.260)
constant	-7.736*** (0.915)	-7.710*** (0.817)	-6.685*** (1.323)	-10.99*** (1.358)	-5.292*** (0.943)	-7.636*** (1.421)	-17.45*** (1.308)	-5.787*** (0.736)	-3.374*** (0.966)	-5.636*** (1.031)	-9.782*** (1.027)	-6.139*** (0.980)	-7.973*** (1.251)	-7.185*** (0.638)
	948	2467	653	797	976	1244	1365	2616	1137	1009	1068	1971	1472	1799