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SHOULD I STAY OR SHOULD I GO? HOUSING AND RESIDENTIAL MOBILITY ACROSS OECD COUNTRIES?

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ABSTRACT/RESUMÉ

Should I stay or should I go? Housing and residential mobility across OECD countries?

This paper delivers new evidence on the individual and policy drivers of residential mobility, covering a wide range of housing-related policies and conditions but also other relevant policy areas. The analysis uses household-level micro datasets allowing for an investigation of the drivers of the decision to move for a large number of OECD countries; as well for identifying differential policy effects across socio-economic groups, underscoring the distributional effect of policies. The evidence strongly supports the view that housing conditions and structural policies influence people's decisions and possibilities to move. A more responsive housing supply is associated with higher residential mobility, suggesting that reforming land-use and planning policies may facilitate moving by reducing house price differences across locations. Social cash and in-kind spending on housing are positively correlated with residential mobility. Higher housing transaction costs, including from transfer taxes, are associated with lower residential mobility, especially among younger households, which are more likely to be first time-buyers. Stricter rental regulations are associated with lower residential mobility, particularly for renters, low-educated and low-income households. Beyond housing policies, more generous cash income support to low-wage jobseekers and minimum income schemes embedded in social transfers are positively associated with residential mobility; while excessive job protection on regular contracts is negatively associated with mobility, particularly for youth, low-income and low-educated individuals.

JEL classification codes: R23; R31; R21; R38; H20.

Keywords: Housing markets; residential mobility; transaction costs; housing taxation; rental market regulations; social housing; housing allowances; social protection; job protection; inequality.

Dois-je rester ou dois-je partir? Logement et mobilité résidentielle dans les pays de l'OCDE

Cet article fournit de nouvelles évidences empiriques sur les déterminants individuels et le rôle des politiques dans les pays de l'OCDE, couvrant un large champ de politiques liées au logement mais aussi d'autres domaines. L'analyse est fondée sur des enquêtes auprès des ménages, ce qui permet de documenter les facteurs déterminant le choix de mobilité pour un grand nombre de pays de l'OCDE ; mais aussi d'identifier d'éventuels effets différenciés des politiques, en fonction du groupe socioéconomique, ce qui met en évidence les effets distributionnels. Les résultats montrent que les conditions du marché du logement et les politiques structurelles influencent fortement les possibilités et choix de mobilité. Une offre de logement moins rigide est associée à plus de mobilité, ce qui suggère que des réformes axées par exemple sur les règlements de zonage pourraient favoriser la mobilité en réduisant les différences de prix immobiliers entre régions. La dépense sociale liée au logement, à la fois sous forme d'allocations logement et de logement social, est positivement corrélée à la mobilité. Des couts de transactions immobilières plus élevés, y compris dus à la fiscalité, sont associés à de plus faibles niveau de mobilité, en particulier chez les jeunes, qui sont plus fréquemment des primo-accédant. La mobilité résidentielle est plus élevée dans les pays où le contrôle des loyers et la protection des locataires sont plus faibles, ce qui frappe davantage les locataires, mais aussi les individus peu qualifiés et les ménages à plus faible revenu. Au-delà des politiques liées au logement, des transferts sociaux plus généreux envers les chômeurs à faible salaire ainsi que les minima sociaux plus élevés sont associés à plus de mobilité. En revanche, une protection excessive des travailleurs en contrat permanent a tendance à réduire la mobilité, en particulier chez les jeunes et les peu qualifiés.

JEL classification codes: R23; R31; R21; R38; H20.

Mots clefs : Marché du logement; mobilité résidentielle; coûts de transaction; régulation du marché locataire; taxation de l'immobilier; politique social du logement; protection sociale ; protection du travail ; inégalités.

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Should I stay or should I go? Housing and residential mobility across OECD countries

By Orsetta Causa and Jacob Pichelmann[1]

Introduction and motivation

1. Moving matters. The ease of moving residence geographically has efficiency implications because it affects the job-matching process: low rates of residential mobility can be an obstacle to labour adjustment, making labour markets less efficient, with adverse effects on overall economic performance ((Oswald, 1996[1]), (Caldera Sánchez and Andrews, 2011[2]), (Blanchflower et al., 2013[3]), (World Bank, 2018[4])). The ease of moving residence geographically also has wellbeing and equity implications, because it affects individual and family opportunities to climb the socioeconomic ladder through various channels (Judge, 2019[5]); for instance, by getting higher earnings via moving to denser, more productive areas with higher paying jobs, by getting access to better education and training opportunities, and also to better neighbourhoods, especially for children and young people coming from disadvantaged backgrounds.

2. The ease of moving residence geographically also has resilience implications, because it affects the speed of adjustment to shocks, typically insofar as individuals can move from high to low unemployment areas. Of course, moving is not always good for individuals; for example, when it is forced by an eviction, nor for the economy and society as a whole, as excessive residential mobility may have adverse implications for social stability within neighbourhoods by depreciating local social capital or for the educational performance of children if they are forced to change school too often (DELSA/ELSA(2019)17, 2019[6]).

3. Residential mobility is closely tied to housing market conditions and policies. In particular, homeownership is often associated with higher cost of moving than renting so that countries' housing tenure structure affects the ease of moving residence geographically. In an influential paper (Oswald, 1996[1]) estimated that a 10 percentage point rise in the owner-occupied rate would be associated with an increase in the unemployment rate by approximately 2 percentage points. Such macro-based estimates suffer from certain weaknesses and the Oswald hypothesis went under criticism in the economic literature. However, subsequent micro-based estimates confirmed that housing tenure indeed influences residential and labour mobility along with transitions from unemployment to employment ((Barcelo, 2003[7]), (Laamanen, 2017[8]), (Blanchflower et al., 2013[3]), (Caldera Sánchez and Andrews, 2011[2])). This evidence did not corroborate any causal relationship, i.e. that owners themselves would be disproportionality unemployed or less mobile, but it strongly indicated that the housing market could give rise to externalities, in particular on the labour market. The implication is that housing conditions and policies that magnify the cost of moving are likely to affect economic efficiency and equality of opportunities.

[1] The authors thank Asa Johannsson from the OECD Economics Department for her full engagement in this project, for the valuable discussions, for her suggestions, inputs and comments from the beginning of the analysis until the drafting of the paper. They thank the OECD Chief Economist Laurence Boone, colleagues from the OECD Economics Department Christophe André, Boris Cournède, Alain de Serres, Luiz de Mello as well as participants in the Working Party No. 1 of the Economic Policy Committee for useful comments and suggestions. The authors also thank Professor John Muellbauer for his relevant insights and suggestions.

In this context, this paper analyses patterns of residential mobility across OECD countries and investigates the role of individual factors and policies, in particular housing policies, in enhancing or hampering mobility.

4. This paper investigates the individual and policy drivers of residential mobility, covering a wide range of housing and other structural policies. The analysis is based on previous work on housing and residential mobility (Caldera Sánchez and Andrews, 2011[2]), but is extended along several dimensions: i) extension of the country coverage; ii) joint analysis and comparison of actual/past versus prospective/future mobility; iii) extension of policy coverage beyond housing-related policies (e.g. taxes and transfers, labour market policies and social protection, trade); and iv) investigation of differential policy effects by socio-economic groups (e.g. by housing tenure status, education, age). In that respect, the analysis allows for not only looking at the policy drivers of mobility at the individual and country level, but also at their different effects across groups, which underscores the distributional effects of these policy levers. The analysis uses household-level micro datasets containing extensive information on household attributes, which allows for an investigation of the drivers of the decision to move for a large number of OECD countries, including all European countries, Australia and the United States. This is used in conjunction with a large array of policy indicators, covering housing-related policies and conditions but also other relevant policy areas likely to influence mobility decisions, such as labour market, social transfers and protection.

5. The evidence in this paper strongly supports the view that housing conditions and structural policies influence people's decisions and possibilities to move. Main findings can be summarised as follows:

- Residential mobility tends to be relatively high in Australia, the United States and Nordic countries, while it is much lower in Eastern and Southern European countries. Empirical country-by-country estimates of the determinants of mobility show that in all countries the probability to move decreases with age, while it increases markedly with the level of education. In contrast, the effects of income and current labour market status are more mixed when controlling for relevant socio-economic characteristics.
- Across all countries covered in this study, homeowners, whether outright owners or owners paying back mortgage debt, are much less mobile than renters, controlling for an extensive array of individual and household drivers of mobility. Residential mobility tends to be lower among households living in social or subsidised housing relative to private tenants, possibly reflecting that the latter may have to give up their below-market rents if they move. This raises important questions for the design of social housing programmes.

Some housing policy settings facilitate mobility:

- A more responsive housing supply is associated with higher residential mobility. Reducing policy-driven barriers in this area, for example reforming poorly designed land-use and planning policies, may facilitate moving by reducing house price differences across locations.
- Social cash and in-kind spending on housing are positively correlated with residential mobility. While housing allowances are in principle more favourable to mobility than direct provision of social housing, the latter can be designed to avoid lock-in effects, for example, by waiving residency or queuing requirements in the case of unemployed workers taking up a job in the region.

Other features of housing policies tend to hinder mobility:

- Stricter rental regulations, both rent control and greater security of tenure, are associated with lower residential mobility, particularly for renters, low-educated and low-income households. Rental regulations need to strike a balance between tenants' and landlords' interests, create security of tenure and encourage the supply of rental housing for all socio-economic groups.

- Higher transaction costs in buying and selling a home, in particular from transfer taxes and notary fees, are associated with lower residential mobility, especially among younger households, which are more likely to be first time-buyers.
- Tax reforms shifting housing taxation from non-recurrent (e.g. transfer) to recurrent taxes would help reducing barriers to mobility, on top of making the tax system more efficient with positive aggregate growth effects. However, this may entail a trade-off with resilience as transfer taxes can curb excessing house price volatility and speculative behaviour.

Beyond housing policies, other structural policies and settings are also found to influence mobility:

- More generous cash income support to low-wage jobseekers and minimum income schemes embedded in social transfers are found to be positively associated with residential mobility. By contrast, excessive job protection on regular contracts is found to be negatively associated with mobility, particularly for youth, low-income and low-educated individuals. This suggests that shifting protection from jobs to individuals coupled with job counselling and training may help removing barriers to mobility.
- A more dynamic business environment with higher levels of firm creation is associated with more residential mobility, possibly reflecting interactions between labour and business markets dynamism. This suggests that policies to revive business dynamism, such as product market reforms, are likely to also encourage mobility, in particular labour mobility.
- Countries more exposed to import competition in manufacturing, especially from China, are found to have higher levels of residential mobility, especially among youth, low-income and low-educated individuals. This may tentatively reflect that, at least for the countries and period considered in this study, workers exposed to trade-induced job losses may have migrated from areas more affected by job losses to less affected areas.

6. The rest of the paper is structured as follows. Section 2 motivates the analysis by delivering new evidence and stylised facts on housing and residential mobility across OECD countries. Section 3 provides a brief overview of the data and empirical approach. Section 4 moves from descriptive to econometric evidence and provides country-by-country estimates of individual and housing-related drivers of residential mobility. Section 5 goes from country-by-country to cross-country estimates in order to produce new evidence on the policy drivers of residential mobility across OECD countries. Section 6 brings this analysis a step further by going granular, that is, by shedding light on differential policy effects across socioeconomic groups. Section 7 delivers illustrative policy simulations in order to quantify relevant results. The last section draws policy implications emphasising trade-offs between various policy objectives.

Should I stay or should I go? Stylised facts on housing and residential mobility

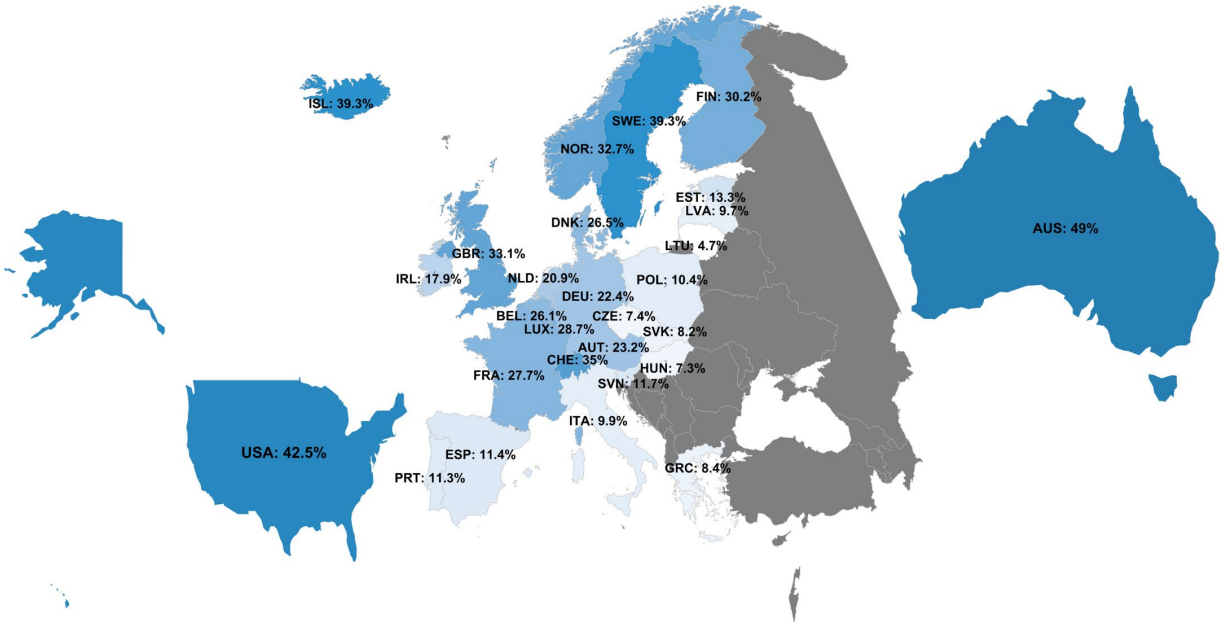
7. People's motivations for moving depend on a combination of microeconomic and macroeconomic factors that vary depending on the time period and household characteristics. Household attributes, the household course of life and job career patterns determine the propensity to move and the choice of dwelling. A vast theoretical and empirical literature, summarised in Appendix A, shows that housing factors and policies are major drivers of mobility decisions. Empirical evidence for instance suggests that homeowners tend to have longer residential spells and much lower mobility rates than renters. One explanation is that homeowners face higher search and transaction costs and, therefore, tend to spend relatively longer spells in their residence in order to spread such costs over a longer time.

8. The literature shows that government policies shape housing market outcomes and mobility, in particular in the area of rental market regulations, housing transaction costs, policy-driven housing supply responsiveness to price signals, housing-related taxation, as well as housing-related social transfers. Theory and empirical evidence suggest that mobility decisions are also influenced by non-housing policy

settings such as labour market regulations and institutions (e.g. job protection, unemployment benefits and active labour market policies). In turn, policy effects are likely to be unevenly distributed across the population, for example, the effect of rental market regulations are likely to be stronger for renters, and the effect of housing transaction costs are likely to be stronger for first-time buyers such as young households.

9. To set the scene and motivate the analysis, this section delivers stylised facts on housing and residential mobility across OECD countries. Residential mobility varies widely across OECD countries. Figure 1 shows residential mobility rates within countries defined as the percentage of individuals that changed residence within the five years preceding the survey. Mobility is highest in Australia and in the United States, where more than 40% of individuals move over a five-year-period, followed by Nordic countries, while it is low in Southern and Eastern European countries, where less than 10% of individuals move over a five-year-period. This evidence is broadly in line with previous studies ((Caldera Sánchez and Andrews, 2011[2]), (World Bank, 2018[4]) and (Causa, Woloszko and Leite, 2019[9]) for European Countries).[2] Actual and prospective residential mobility are also highly correlated across countries, except in Greece (Figure 2) - although their levels are not comparable given the different time horizon.

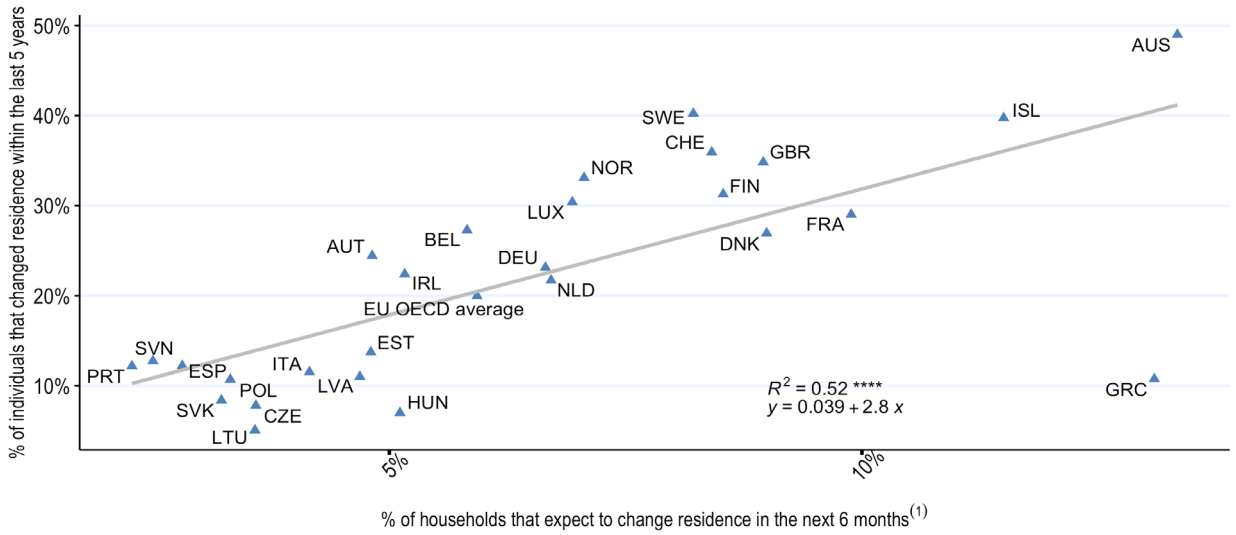
Figure 1. Patterns of residential mobility across OECD countries



Source: OECD Calculations based on 2012 EU SILC Data for EU countries, AHS 2013 for the United States, HILDA 2012 for Australia.
Note: Light blue refers to a mobility rate ranging from 5% to 20%, medium blue to a mobility rate in-between 20% and 35% and dark blue to a mobility rate of above 35%.

[2] Past mobility rates in this paper could be underestimated for Estonia, Latvia and Lithuania, due to massive emigration after the 2008 recession. However, prospective mobility rates are relatively low and the ranking of these countries change little as compared to past mobility. Overall, this suggests that the emigration process did not dramatically alter the picture of overall low mobility in these countries.

Figure 2. Prospective versus past residential mobility

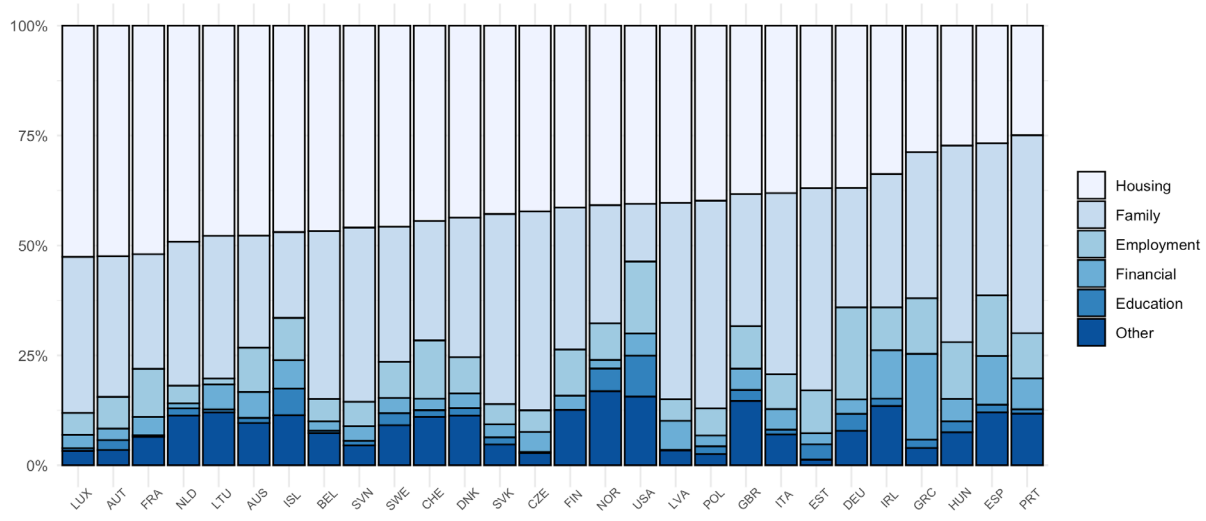


Source: OECD Calculations based on 2012 EU SILC Data for EU countries, AHS 2013 for the United States, HILDA 2012 for Australia.
Note: (1) For Australia, prospective mobility refers to the expectation to move over the next 12 months.

10. Figure 3 shows the breakdown of residential mobility by reasons for moving. It distinguishes four main reasons: housing, family, employment, education and financial.[3] By and large, housing-related reasons (41% on average) or family-related reasons (34% on average) account for the majority of moves whereas employment-related reasons account for a much smaller share, 9% on average. Even though employment does not appear to be a major reason for moving, residential mobility and residential mobility for employment-related reasons are highly correlated across countries (Figure 4). Indeed, countries with high residential mobility, for example the United States, also have high residential mobility for employment-related reasons, and vice versa. The correlation is not perfect though, as for instance Germany exhibits a particularly high mobility for employment-related reasons relative to overall mobility, while Australia exhibits the opposite pattern. One implication of the correlation between residential mobility and mobility for employment-related reasons is that analysing cross-country patterns and policy drivers of residential mobility can be considered as a good, though not perfect, way to shed light on labour mobility.

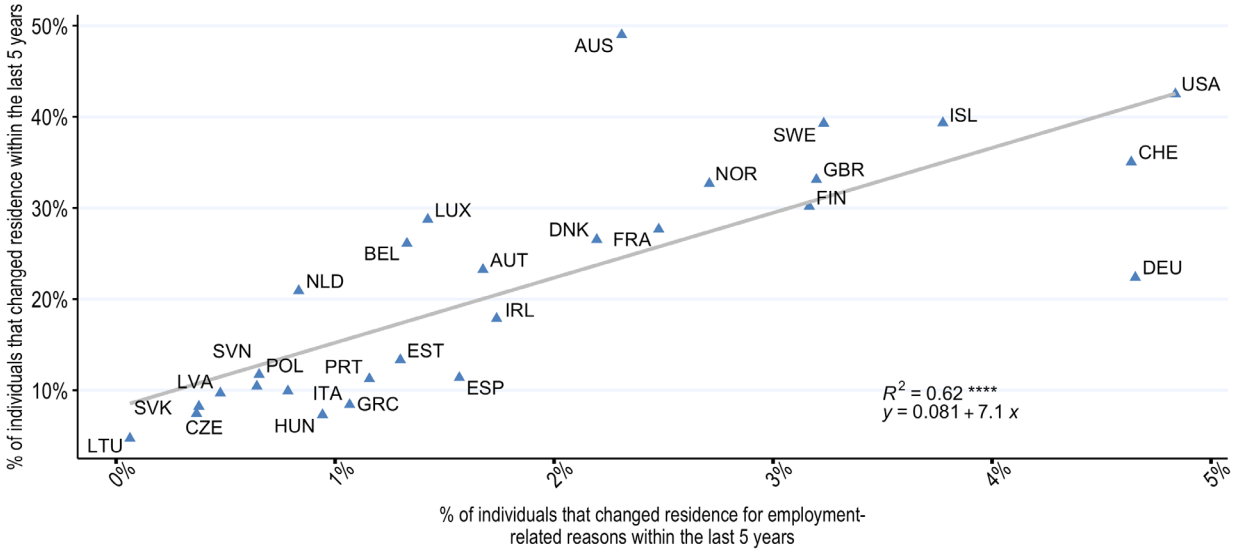
[3] Family-related reasons relates to a change in the marital or partnership status, establishing of own household, to follow partner/parents or to obtain better schooling or care facilities for children or other dependants. Job reasons include: starting a new job, transfer of existing job, looking for work, easier commuting, redundancy or retirement. Housing-related reasons include: desire to change tenure status, wanting a new or better apartment, and seeking a better neighbourhood (less crime, more facilities etc.). Financial reasons include rent or mortgage paying problems as well as the inability to cover maintenance and/or utility costs.

Figure 3. Reasons for moving across OECD countries



Source: OECD Calculations based on 2012 EU SILC Data for EU countries, AHS 2013 for the United States, HILDA 2012 for Australia.

Figure 4. Labour and residential mobility



Source: OECD Calculations based on 2012 EU SILC Data for EU countries, AHS 2013 for the United States, HILDA 2012 for Australia.

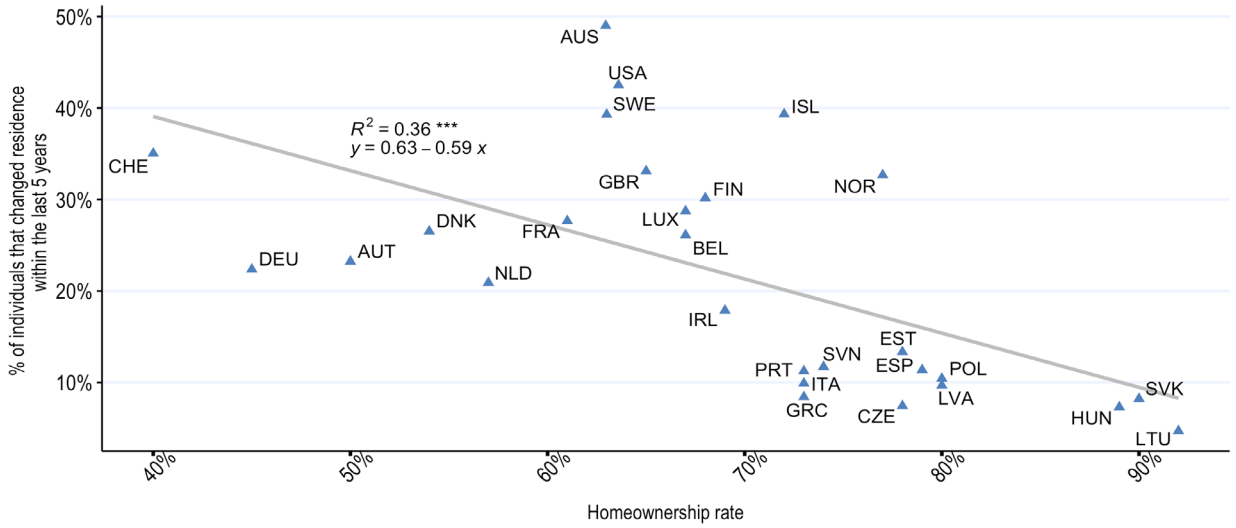
11. As an initial insight into the potential links between housing and mobility, Figure 5 reports a strong negative association between countries' homeownership rates and their mobility rates, confirming previous evidence in this area. Mobility is particularly low in Eastern European countries exhibiting very high homeownership rates for historical reasons,[4] but also in large Southern European countries like Italy and

[4] These high ownership rates stem from a rapid privatisation of publicly-owned properties in these countries through the sale of dwellings to tenants at low prices during the transition to market economies in the 1990s.

Spain. The negative cross-country association between homeownership and residential mobility is due to the fact that, by and large, in all countries covered, homeowners are much less mobile than renters. This can be seen in Figure 6, which reports residential mobility by housing tenure status. The main findings can be summarised as follows:

- Mobility is the highest among tenants renting at market price and the lowest among outright owners. Social or subsidised tenants tend to be less mobile than private tenants and owners with mortgage more mobile than outright owners (Figure 6, Panel A).
- Mobility differences by tenure status are very large in all countries: for instance on average across EU OECD countries private renters are around 5.6 times more mobile than outright owners. In Australia, the country with the highest mobility rate in this study, the gap across housing tenure status is also very large, as private renters are around 3.5 times more mobile than outright owners. Overall, owners tend to be more mobile in low relative to high-ownership countries.
- Shifting from actual to prospective mobility delivers the same qualitative picture with one notable difference: owners with mortgage are no longer markedly more mobile than outright owners, as their mobility rates are similar in almost all countries (Figure 6, Panel B). This may suggest that the observed difference in past mobility between owners with and without a mortgage reflects a timing effect, according to which owners with a mortgage are more likely to have moved recently, compared to outright owners that have paid off their mortgage.

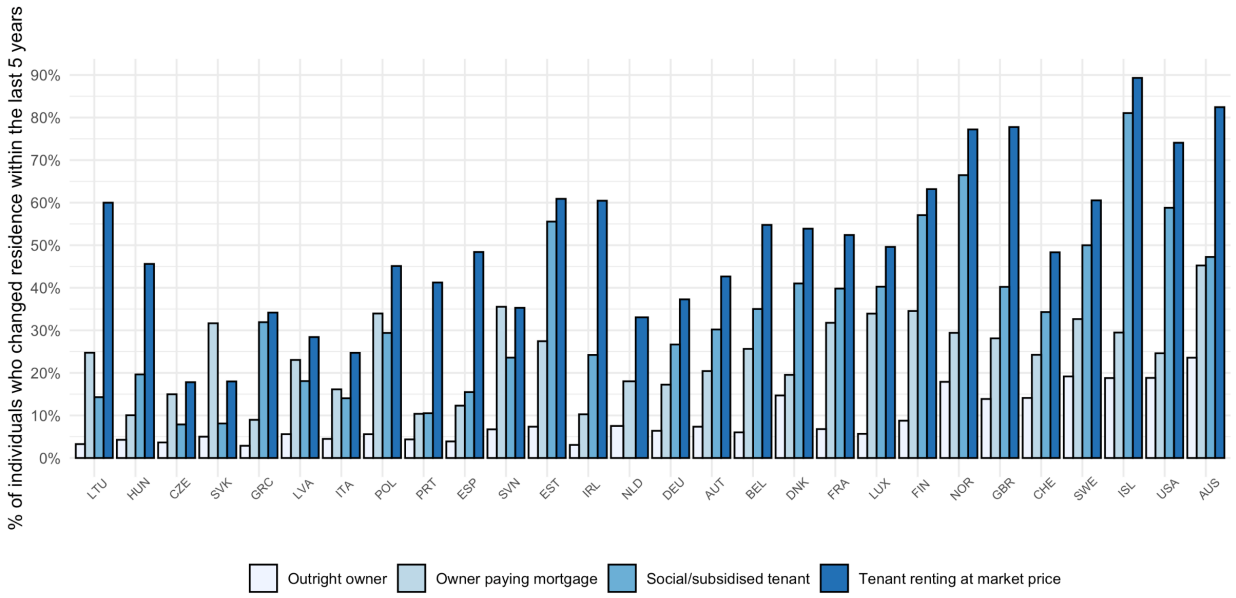
Figure 5. Homeownership and residential mobility



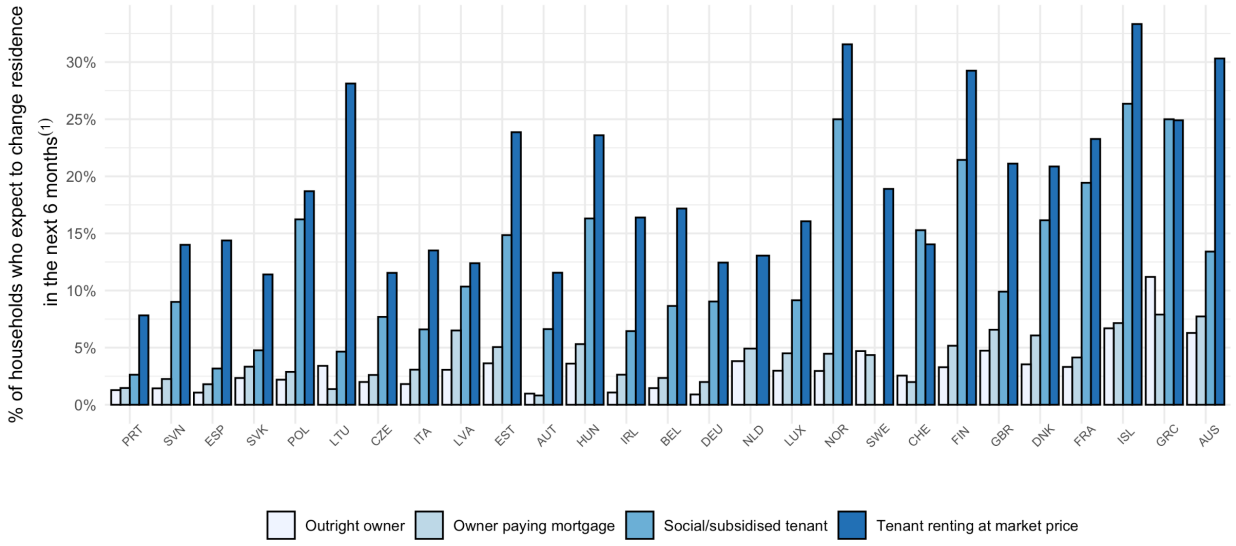
Source: OECD Calculations based on 2012 EU SILC Data for EU countries, AHS 2013 for the United States, HILDA 2012 for Australia. Homeownership rates from the OECD Affordable Housing Database.

Figure 6. Residential mobility by household tenure status

Panel A. Past/Actual Mobility



Panel B. Prospective Mobility



Source: OECD Calculations based on 2012 EU SILC Data for EU countries, AHS 2013 for the United States, HILDA 2012 for Australia. The share of social/subsided tenants cannot be computed for the Netherlands due to data availability issues.
Note: (1) For Australia, prospective mobility refers to the expectation to move over the next 12 months.

12. Mobility differences by housing tenure status are large but could simply reflect household and individual characteristics, such as age or family structure. The analysis thus moves from descriptive evidence to econometric inference with a view to isolate the potential effect of housing tenure status as well as to identify broader individual drivers of residential mobility.

Data and empirical approach

13. The analysis draws on household-level survey data for OECD EU countries, the United States and Australia. The advantage of these datasets is that they are based on representative random sampling of the population and include information on residential moves, i.e. change of dwellings, and household socio-economic characteristics, including housing tenure status, income, household composition and size, labour market information, education, as well as urbanisation of the area of residence and region. This allows for a comprehensive analysis of individual and household drivers of mobility. Household data for EU comes from the European Union Statistics on Income and Living Conditions (EU-SILC) household database. The analysis focuses on the 2012 cross-section, which in that year contained a specific module on household housing conditions, including information on change of dwelling and the reasons for doing so.[5] The module also includes information on individuals' intentions to change dwelling, which allows for a novel analysis of prospective mobility. EU SILC is the benchmark dataset used in this paper because the 2012 module is designed to measure and assess housing-related issues including residential mobility.

14. The data for European countries is complemented with household data for the United States and Australia.[6] The Australian data come from the Household, Income and Labour Dynamics in Australia (HILDA) survey, a household panel survey collecting information about economic and subjective wellbeing, labour market dynamics and family dynamics of Australian households. The American data is collected from the American Housing Survey (AHS), which collects data on housing and household characteristics, as well as recent movers. These data need to be harmonised with EU SILC benchmark data, which inevitably introduces some comparability issues: these are not problematic for the country-by-country analysis, but they can be problematic when it comes to pooling countries in the cross-country analysis, as will be discussed later. The sample used in the analysis is defined as follows: it covers individuals aged 24 to 66, it excludes those for whom accommodation is provided for free, it excludes the permanently disabled and/or unfit to work, as well as those individuals living in households with reported negative disposable income.

15. In order to investigate the factors influencing residential mobility in OECD countries, a two-step approach is adopted. First, the effects of household and individual characteristics, such as housing tenure, income and age, on residential mobility are estimated for each country as well as pooled for OECD EU countries. This key step allows for comparing the effects across countries of household's attributes on mobility. The following probit model of the decision to move is estimated:[7]

$$PR_{ihc}(M = 1 \,|H_{ic}, H_{hc}\,) = \Phi(\beta_0 + \beta_1 H_{ic} + \beta_2 H_{hc} + \gamma_r + \varepsilon_{ic}), \qquad (1)$$

where Φ is the cumulative normal distribution, i denotes individual, h denotes household, and c denotes country. P_{ihc} denotes the probability that the individual i living in household h and country c moves, H_{ic} denotes individual-level characteristics (e.g. education, labour market status, age) and H_{hc} household-level

[5] (Caldera Sánchez and Andrews, 2011[2]) also use EU SILC data, focusing on the 2007 special module on housing. The 2012 housing module contains additional variables as compared to the 2007 module, in particular regarding prospective mobility. In addition, mobility in 2012 is measured at the individual instead of at the household level, hence the analysis in this paper can go more granular and the econometric identification can build on a considerably larger sample size than the previous OECD study.

[6] Data limitations do not allow for covering additional countries on a comparable basis.

[7] The EU pooled model includes country fixed effects. Netherlands and Slovenia are excluded from the EU pooled model due to data coverage issues regarding the degree of urbanisation.

characteristics (e.g. household disposable income, household size, urbanisation of the area of residence).[8] γ_r are regional fixed effects and ε_{ic} captures individual random shocks.

16. Residential mobility is measured based on whether the individual has changed dwelling over the last five years. To complement this assessment, the analysis also draws on a question about prospective mobility, based on whether the household expects to change dwelling within the next six months. The prospective mobility question is not asked at the individual level but at the household level, meaning that it is asked only to one representative of the household, called the "household respondent". The sample size and variability is thus reduced. The analysis of prospective mobility sheds relevant complementary light to that of actual mobility, but it is not the core of this paper and it is therefore not exploited in the policy regressions.[9]

17. The explanatory variables include individual and household socioeconomic characteristics that are likely to influence mobility. These include housing tenure status (categorical variable measuring if the household is outright owner, owner with mortgage, tenant in the private sector or social/subsidised tenant)[10], age category (24-34, 35-44, 45-54, 54-66), education (categorical variable measuring if the individual has achieved low, middle or high levels of education), employment status (employed, unemployed, inactive), household disposable income quintile, gender, migration status (i.e. born in a foreign country), cohabitation status (whether single or couple), household size, household satisfaction with the dwelling (based on a categorical variable measuring whether household is very dissatisfied, sufficiently dissatisfied, satisfied or very satisfied), and the degree of urbanisation in the area where the household lives. In the case of prospective mobility, the explanatory variables also include whether the household has changed residence over the last five years and whether the household suffers from shortage of space. All variables are harmonised as best as possible in the case of the United States and Australia, as reported in Appendix C. Due to the non-linearity of the probit model, average marginal fixed effects are systematically computed and reported, to ease interpretation.

18. In a second step, the empirical approach exploits cross-country variation in policies and institutions to assess the role of policy settings in explaining residential mobility. Policies included in the analysis cover housing policies and a number of additional policies that may influence mobility:

- Rental market regulations covering both tenant-landlord regulation (rules regarding tenant eviction, tenure security and deposit requirements) and rent control (rules regarding setting of rent levels and rent increases).
- Housing transaction costs covering notarial and other legal fees, registration fees, as well as taxes imposed on the sale and purchase of real estate (i.e. transfer taxes).
- Housing supply elasticity, that is, the responsiveness of housing supply to price signals, which is partly policy-driven by e.g. land-use and planning regulations ((OECD, 2017[10]) (Cavalleri, Cournède and Özsöğüt, 2019[11]), (Andrews, Caldera Sánchez and Johansson, 2011[12])).
- Access to housing finance and credit proxied by country-level household debt and mortgage credit.
- Housing-related social transfers and housing taxation.
- Job protection and social projection (unemployment benefits, minimum income schemes).
- Trade and business dynamism proxied by various import competition measures (i.e. gross imports as a share of production and birth rate of enterprises).

[8] The advantage of this country-by-country estimation is that it allows abstracting from common macro factors affecting household decisions within a country and focusing on micro-driven determinants of the decision to move.

[9] This is because there is little variance in prospective relative to past/actual mobility, which makes it difficult to identify policy effects, and also because prospective mobility is not equal to actual mobility.

[10] The data do not allow for properly identifying people living in social housing, as explained later.

19. To the extent possible, these variables are measured over the average of the five years prior to 2012, so as to coincide with the period under consideration for the decision to move. For rental market regulations, housing transaction costs and supply elasticity the reference period is 2009 as the policy indicators are sourced from past OECD work on housing (Andrews, Caldera Sánchez and Johansson, 2011[12])). The Appendix provides details on all policy variables.

20. The following cross-country specification is estimated:

$$PR_{ihc}(M = 1 \,|H_{ic}, H_{hc}, C_c) = \Phi(\alpha + \beta P_c + \delta_1 H_{ihc} + \delta_2 H_{hc} + \Gamma C_c + e_{ihc}), \qquad (2)$$

where P denotes country-specific policies or policy-related factors that may influence the decision to move. The vector C controls for other country-specific factors that may influence residential mobility, including the degree of urbanisation, income per capita, and the overall homeownership rate.[11] The homeownership rate controls for the structure of the housing market in terms of e.g. the size of the rental market. e_{ihc} is an error term capturing shocks affecting the decision to move. The cross-country specification is subsequently amended to incorporate an interaction term between country-level policies and individual or household level characteristics like housing tenure status or educational attainment. This allows for shedding light on differential policy effects across socioeconomic groups hence on distributional aspects. Throughout the regression analysis, individual sample weights are used. In the cross-country analysis, standard errors are clustered at the country-level. Appendix C provides additional material on the data, econometrics and robustness analysis.

Individual and housing-related drivers of residential mobility: how do OECD countries compare?

21. This section delivers the empirical results of the impact of household and individual characteristics on residential mobility. **Error! Reference source not found.** reports equation (1) on country-by-country basis as well for the OECD EU countries as a whole. The estimates are reported as marginal effects and can be interpreted as percentage point changes in mobility rates. These changes are relative to the reference (omitted) group, that is: a tenant in the private market, male, aged under 35 (keeping in mind that individuals under 24 and over 66 years old are excluded), highly educated, employed, fifth income quintile, single household, non-migrant, satisfied with their dwelling, and living in a densely populated area. In the case of prospective mobility, the reference category also includes no shortage of space and that the household has not changed residence within the past five years. Regional fixed effects are always included. Pooled OECD EU estimates include country-fixed effects.

22. The first finding is that in all OECD countries, owners are less mobile than private renters. The coefficients of the homeowner dummies are negative and highly significant, indicating that relative to tenants in the private rental sector, homeowners are less mobile. This is in line with the descriptive evidence and implies that observed mobility differences between housing tenure status persist after controlling for a wide array of individual and household drivers. The differences in the level of mobility rates are large in all countries, although highly variable (Figure 7): outright owners are more than 30 percentage points less likely to move than private renters in around half of the countries covered, and even more than 40 percentage points less likely to move in some countries (e.g. Australia, Estonia, Iceland, Ireland,

[11] The degree of urbanisation of the area of residence at the household level can no longer be included as a control as these variables are not available for the Netherlands and Slovenia and they are not comparable with the equivalent metric for the United States. This may not be a major limitation since the effect of urbanisation of the area of residence is not statistically significant in the pooled EU OECD regression nor in the cross country regression including the United States. Regional fixed effects can no longer be included as controls because they are not available for a number of European countries. Due to data limitations, Island is excluded from the policy analysis. See Appendix for additional information.

Lithuania, the United Kingdom and the United States). So, for example in the case of the United States, given that the predicted probability to move of a private renter over a five-year-period is around 68 per cent, the estimates imply that outright owners are more than twice less mobile then privates renters (i.e. 61 per cent less likely to move).[12] These findings and the order of magnitudes are in line with previous micro-based evidence (see (Caldera Sánchez and Andrews, 2011[2]), (Blanchflower et al., 2013[3]), (World Bank, 2018[4]), (OECD, 2005[13]), (Barcelo, 2003[7])).[13] [14]

23. Indebted homeowners are estimated to be more mobile than homeowners without a mortgage on the basis of actual or past mobility (Figure 7, Panel A), but not on the basis of prospective mobility. In fact in some countries owners with mortgage are less likely than outright owners to expect to move (Figure 7, Panel B). This result is not driven by the sample differences between prospective and actual mobility regressions: running past mobility regressions on the sub-sample of prospective mobility regressions (i.e. only household respondents, not all respondents) delivers the same finding.[15] The higher relative mobility of indebted relative to outright owners in the past mobility regressions may reflect the fact that indebted owners are more likely to be recent movers than outright owners. This is new, as all previous papers on housing and residential mobility focused only on actual/past mobility and consistently found owners with mortgage to be more mobile. This finding was interpreted as reflecting the fact that if indebted homeowners' jobs are at risk they have greater incentives to remain employed and to become re-employed more quickly, if needed by moving elsewhere, so as to preserve the ability to repay their mortgage (Caldera Sánchez and Andrews, 2011[2]). The new results tend to downplay this incentives-based interpretation as all owners are less mobile than renters, and differences among owners partly reflect the fact that owners with and without a mortgage observed at a given moment of time are at a difference stage of their housing tenure "cycle".

[12] The calculation is as follows: private renters have a predicted probability to move of 68 per cent. According to the estimated marginal effects, outright owners are 42 percentage points less mobile, hence they have a predicted probability to move of 26 per cent, which is thus 61 per cent less than private renters.

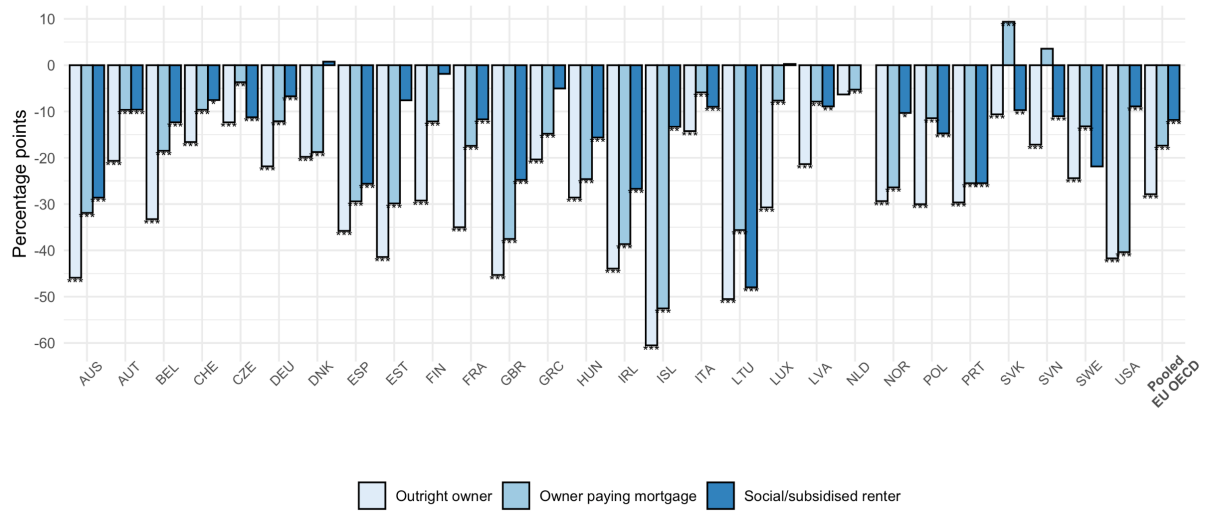
[13] This is also in line with country-specific evidence, see Table 2.5 in (OECD, 2005[13]) for earlier studies and, for more recent evidence e.g. **Invalid source specified.** for France, (Laamanen, 2017[8]) for Finland, and (Blanchflower et al., 2013[28]) and more recently **Invalid source specified.** for the United States.

[14] One note of caution in interpreting these results is due to potential selectivity biases implying that less mobile people would self-select into homeownership. However, microstudies using longitudinal data and taking into account the endogeneity of housing decisions often conclude that homeownership is associated with lower residential and labour mobility as well as longer unemployment spells (see (OECD, 2005[13]) for a discussion). One recent paper **Invalid source specified.** uses a robust instrumental variable approach to estimate the causal effect of homeownership on individuals' unemployment. The results indicate that homeownership is a significant hindrance to mobility, and homeowners have longer unemployment spells than other tenures. See also (Laamanen, 2017[8]) for experimental evidence going in the same direction.

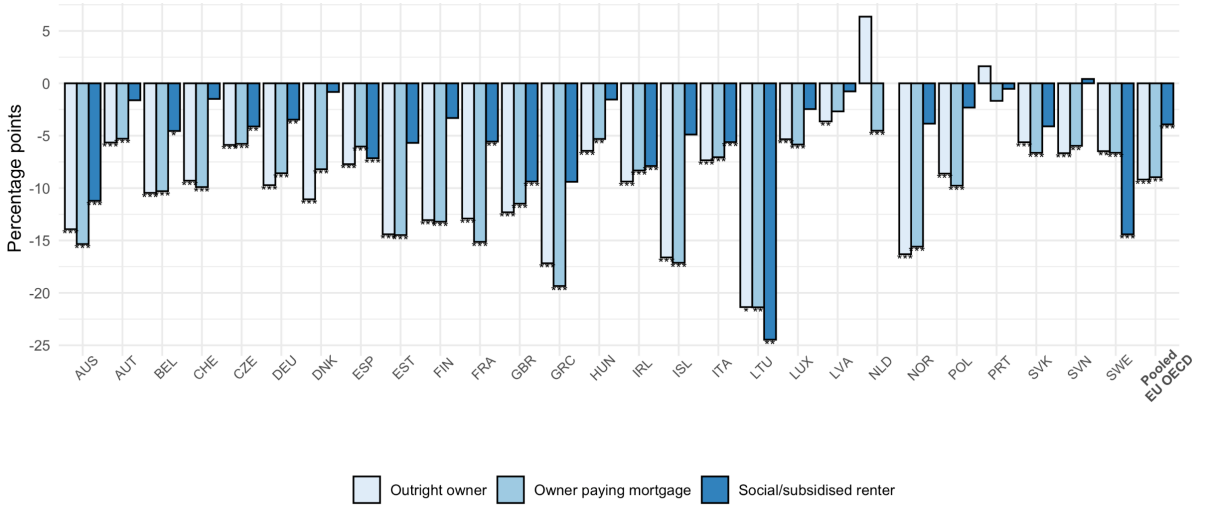
[15] This is reported among robustness tests in the Appendix.

Figure 7. Estimated differences in probability to move relative to tenant in private rental market

Panel A. Past/Actual Mobility



Panel B. Prospective Mobility



Source: OECD Calculations based on 2012 EU SILC Data for EU countries, AHS 2013 for the United States, HILDA 2012 for Australia.
Note: These values show the percentage point change in the predicted probability to move (average marginal effect estimated from a probit regression, see Appendix B) of each tenure type relative to tenants in the private rental market, controlling for an array of individual and household characteristics (e.g. age, income, education, labour market status, size of the household, cohabitation status etc.) as well as regional fixed effects. Estimates for social/subsided tenants cannot be obtained for the Netherlands due to data availability issues (se previous figure).
Reading note: In France, conditional on individual and household characteristics and regional effects, outright owners are 35 percentage points less likely to move over a 5 year period than tenants in the private rental market.
The stars denote the statistical significance of each effect. *** p<0.01, ** p<0.05, * p<0.1.

24. Residential mobility is lower among households receiving a subsidy or paying below-market rents as compared to private tenants in most countries, both on the basis of actual and prospective mobility (Figure 7 and Appendix). This result is in line with previous studies and is generally interpreted as evidence that compared to tenants in the private rental market, social housing tenants are more reluctant to move as not to give up their below-market rent. The negative effects on mobility are particularly pronounced in Australia, Ireland, Lithuania, Spain and the United Kingdom. This evidence does not, however, allow to

draw a conclusion on the effects of social housing on mobility as it is not possible to properly identify social tenants due to data limitations.[16]

25. Lower mobility of tenants paying below market rent may also reflect potential self-selection bias whereby less mobile people would self-select into social housing, especially in targeted systems (see (Caldera Sánchez and Andrews, 2011[2])). One implication is still that support for housing, be it cash (e.g. housing cash transfers) or in-kind (e.g. social housing) needs to be carefully designed to avoid locking-in effects, as discussed later in the policy analysis section.

26. The results identify a number of additional relevant micro drivers of residential mobility:[17]

- **Age** has a significant effect on the probability to move, quantitatively close to that of housing tenure status. Individuals aged between 54 and 66 years are more than 40 percentage points less likely to move relative to individuals aged between 25 and 35 (the omitted category) in many OECD countries, including in highly mobile countries such as the United States and the Nordics. This finding is expected, as people usually prefer residential stability as they age.[18] These results are qualitatively confirmed in the case of prospective mobility.

[16] In EU-SILC, social/subsidised tenants are tenants whose accommodation is rented at a lower than market price. It is, however, difficult to make a clear-cut distinction between social housing and non-social housing tenants based on the available data, because, for instance, in countries such as the Netherlands, households living in public housing are likely to be classified in the data as private tenants, despite the fact that public housing is social housing as it is allocated by non-market mechanisms and usually on the basis of need. This definition is harmonised for Australia and the United States as explained in the Appendix.

[17] These results are all qualitatively in line with previous studies on (past) residential mobility such as (Caldera Sánchez and Andrews, 2011[2]).

[18] See literature review in References

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- **Education** has a significant positive effect on actual and prospective mobility. High educated individuals are more mobile and more willing to move than less educated individuals. So, for example in the case of Sweden, a comparatively mobile country, the estimates imply a 10 percentage point difference in probability to move between high and low educated individuals over a five-year-period. Given that the predicted probability to move over a five-year-period of high-educated individuals is around 42 per cent, this implies that low-educated individuals are roughly a quarter less mobile then high-educated individuals (i.e. 24 per cent less likely to move).
- **Household size** has a significant negative effect on mobility in the vast majority of countries. Living in cohabitation also tends to make individuals less likely to move in a number of countries. These findings are intuitive and in line with lifecycle effects associated with household formation and

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Appendix A.

mobility ((Clark and Onaka, 1983[14]), (Coulter and Scott, 2015[15])). Gender differences in mobility are also statistically significant in a number of countries where women are less mobile than men. However, the magnitude of the estimated gender effects is relatively small.

- **Migration** status has a significant negative effect on actual mobility as migrants are much more likely to have moved than non-migrants. However, the finding of greater mobility among migrants is almost definitional. In the case of prospective mobility, migration status has a heterogeneous effect across countries. In some countries such as Germany, Spain and Portugal, migrants expect to move more often than non-migrants while in other countries such as Eastern European countries migrants expect to move less often than non-migrants.
- Current **labour market status** has mixed effects on mobility. The effect of being unemployed (relative to employed) on actual/past mobility is not significant in most countries. In cases where labour market status is significant, the sign is generally negative, with the exception of Australia, Greece and the United States.[19] The finding that current unemployed are not more likely than employed to have moved recently tells little about whether people that were unemployed before the survey were likely to have moved (and found a job). The current data do not allow to answer this relevant labour market question. One tentative way to answer this question is to look at the effects of being currently unemployed on the probability to expect to move. In this case, the estimates suggest that in a few countries (i.e. Australia, Italy and the United Kingdom), unemployed people are more likely to expect to move. Finally, the effect of being currently inactive is heterogeneous across countries, both in terms of actual and prospective mobility. This may reflect differences in the composition of inactive people (e.g. whether students or retired, despite the sample selection criteria).
- **Income** has a non-linear and heterogeneous effect across countries, and is sometimes not a significant driver of residential mobility, as can be seen by looking at marginal fixed effects by income quintile (top quintile being the omitted category). This finding could reflect the wide array of explanatory variables included in the regressions and associated with income - in particular education, which is a better proxy of lifetime income than current income. On the basis of both actual and prospective mobility, low-income people are found to be less mobile than high-income people in Australia and the United Kingdom.
- **Households living in rural areas** are found to be significantly less mobile than households living in urban areas in almost all European countries except in Spain and the United Kingdom. This is consistent with the prior that, all else equal, more densely populated areas are net recipients of population flows so that people that live today in urban centres are more likely to have moved there than people who live today in rural centres. Rural households are also less likely to expect to move in a number of European countries. The effect of urbanisation on residential mobility is found to be different in the United States and Australia than in European countries. In the United States, urban households living both inside and outside metropolitan areas are more mobile relative to urban households living in the central city of metropolitan areas (the omitted category).[20] Somewhat similar, households living in non-urban non-remote areas in Australia are more mobile than households living in urban areas. This may reflect urban sprawl, with a tendency for urban centres to spread out from major cities. However, the difference on the mobility effects of urbanisation between European and non-European countries may also reflect differences in data granularity:

[19] In the case of the United States this finding should be taken with caution as data constrains do not allow to properly identify unemployed people and those are proxied with people receiving no labour income (which is also why the effect of being inactive is not possible to estimate).

[20] Metropolitan areas are composed of counties (towns in New England) that have significant levels of commuting and contiguous urban areas in common. They may cross state lines, and usually include large amounts of rural land and farmland, provided the county or town as a whole qualifies.

more granular data on urbanisation of the area of residence for European countries may allow to identify mobility patterns associated with urban sprawl (OECD, 2018[16]).

- **Households dissatisfied with their dwelling** are found to be less likely to have moved in some European countries, but more likely to expect to move in almost all European countries and Australia.[21] Likewise, households declaring a **shortage of space** are also much more likely to expect to move in the majority of European countries.
- **Households that have changed residence in the recent past** are found to be more likely to expect to change residence again in some European countries (e.g. Italy, Hungary and Spain) as well as in Australia.

27. The baseline country-by-country analysis is extended to uncover the potential effect of some policy-relevant individual drivers of residential mobility, namely being in a temporary employment contract and receiving housing allowances. This extension is produced for a subset of European countries depending on data availability. Regression results are reported in the Appendix and can be summarised as follows:

- **Employees with temporary contracts** are found to be more mobile than employees with permanent contracts in a number of European countries such as Austria, the Czech Republic, Finland, Iceland, Italy, Norway, Poland and the United Kingdom. The effects are more significant for actual/past mobility than for prospective mobility, which may reflect that people have moved to get a temporary job (but also that the sample is relatively small for prospective mobility regressions so that identification is more difficult).
- **Individuals living in households receiving cash housing allowances** are found to be relatively more mobile than households not receiving allowances in some European countries namely Ireland, Italy, Spain and Sweden. In the data, such allowances are defined to include means-tested rent benefits granted to tenants, temporarily or on a long-term basis to help with rent costs, and means-tested benefits granted to owner-occupiers to alleviate their current housing costs (in practice often help with paying mortgages and/or interest payments). Social housing and tax benefits are excluded.

28. These results should be taken with care as causality is difficult to infer at the micro-level, due to potential self-selection and endogeneity biases. Taking this caveat into account, the estimates suggest that: i) holding a permanent job may reduce incentives to move, including eventually to move for a better job, which may contribute to labour market mismatch, and ii) means-tested cash housing allowances do not seem to reduce incentives to move.[22] Focusing on policies measured at the country level is key to overcome some of the potential biases that may rise at the individual level. The effect of micro characteristics (such as being homeowner) on mobility may reflect unobserved characteristics that are correlated to both tenure and mobility choices (such as preference for housing stability), whereas the effect of country-level characteristics and policies can be considered as exogenous with respect to micro-level decisions.

Policy drivers of residential mobility

29. This section reports the cross-country results of the effects of policy-related factors on residential mobility based on the estimation of Equation (2). Data on policy indicators come from past OECD work on housing, i.e. indicators constructed based on the 2010 housing questionnaires (Andrews, Caldera Sánchez and Johansson, 2011[12]), and from additional OECD sources including the Tax database, the Social

[21] This aspect cannot be covered for the United States and only partially for Australia because of data limitations.

[22] Interacting housing tenure status with receiving housing allowances does not deliver significant results, which probably reflects identification issues associated with a relatively low number of observations.

Expenditure database, the Job protection database and the Trade in value added database (see Appendix). The regressions exclude Australia due to data comparability and harmonisation issues. The Appendix reports results with Australia included as one robustness test, which suggests that the policy findings are broadly robust. Each column of Table 1 reports alternative specifications where policy indicators enter sequentially, starting with housing-related policies and regulations (Panels A and B), then housing-related taxes and transfers (Panel C), followed by non-housing policies i.e. job and social protection (Panel D) and, finally product market regulation, business dynamism and trade exposure (Panel E). The different specifications control for a similar set of household characteristics as those included in the country-by country estimation and for country characteristics that may influence the degree of residential mobility within countries, including income per capita, the degree of urbanisation and the overall rate of homeownership.

30. Table 1 reports only policy-related estimates, while the Appendix reports complete regression tables. To the extent that some of the policy related variables are correlated among themselves, these variables are included one at a time so as to avoid multicollinearity problems. The results are, however, broadly robust to including several uncorrelated variables at a time, as reported in the Appendix.

Rental market regulations and housing transaction costs

31. Starting with effects of rental market regulations, the first two columns of Table 1, Panel A, show that both rent control, measured by the rent control index, and tenant-landlord regulation, measured by the index of tenant protection, are associated with lower residential mobility. One reason for this is that tenants in rent-controlled dwellings may be reluctant to move and give up their below-market rents. These findings are in line with previous evidence e.g. (World Bank, 2018[4]), (Caldera Sánchez and Andrews, 2011[2]).[23] The literature has shown that excessive or ill-designed regulations can have undesirable effects, beyond that of discouraging mobility. For example, strong de-linking of rents from housing market conditions may curtail the size of rental markets by reducing supply (Cavalleri, Cournède and Özsöğüt, 2019[11]) with potential negative repercussions for affordability. In addition, excessive protection of tenants sometimes implies that people with precarious contracts, such as young people, find it difficult to access the rental market as landlords have stringent requirements to ensure the security of rent payments. Overall, this suggests that improving the design of rental market regulations may increase residential mobility in countries where rent controls are very strict and cover a large segment of rental markets, with potential positive repercussions on affordability.

32. Considering the effects of the various components of housing transaction costs on residential mobility, Table 1, Panel A shows that higher notary fees and higher transfer taxes have a negative and significant effect on mobility while legal, registration and agent fees have no significant effect (columns 3 to 7). These results are also in line with previous evidence, including country-specific for e.g. the Netherlands (van Leuvensteijn and Koning, 2004[17]) and, more recently, the United Kingdom (Hilber and Lyytikäinen, 2017[18]).[24]

Elasticity of housing supply and household access to credit

33. Turning to the role of housing supply, a more responsive supply has a positive and significant effect on residential mobility (first column of Panel B in Table 1), as found in (Caldera Sánchez and

[23] See also recent evidence going in the same direction with a causal identification strategy based on a large-scale reform for Germany (Mense, Michelsen and Kholodilin, 2019[39]) and (Diamond, McQuade and Qian, 2018[40]) based on an experimental setting exploiting the 1994 rent regulation reform in San Francisco.

[24] (Hilber and Lyytikäinen, 2017[18]) show that the UK Stamp Duty Land Tax – a transfer tax on the purchase price of property or land – has a strong negative impact on housing-related moves but does not adversely affect job-related moves.

Andrews, 2011[2]). The responsiveness of housing supply depends on geographical characteristics and also on policies, in particular on land-use regulations which influence the allocation of land and housing between different uses ((OECD, 2017[10]), (Cavalleri, Cournède and Özsöğüt, 2019[11]), (Andrews, Caldera Sánchez and Johansson, 2011[12])). This implies that policies that reduce the responsiveness of housing supply to price changes can hinder residential mobility, for instance if restrictive regulations give rise to large price differentials across regions and prevent households from moving from lower-priced areas to higher-priced areas (the latter being typically characterised by better job or training opportunities). This situation has the potential to undermine both allocative efficiency and social mobility.

34. The results also suggest that easier access to credit (as proxied by the level of household debt) is associated with higher residential mobility, in line with (Caldera Sánchez and Andrews, 2011[2]). Indeed, the effect of household debt is positive and statistically significant (column 2, Panel B in Table 1). The effect of mortgage credit is not statistically significant though (column 3, Panel B in Table 1). This may reflect that the positive effect of relaxing liquidity constraints is offset by the negative channel whereby in case of falling house prices households may end up in negative equity positions and cannot refinance their loan or raise sufficient capital in order to sell and move to another dwelling.[25] Moving from *de facto* measures of access to housing debt to *de jure* measures in terms of borrower-based macro prudential measures, does not deliver any statistically significant result (not reported).[26]

35. Finally, the direct effect of housing affordability in terms of house prices and rents (both in levels and in changes between 2007 and 2012) has been tested but no significant results were found.[27] This is likely to reflect the fact that mobility decisions are based on an assessment of the relative housing affordability between origin and destination.[28] Addressing this question would require: i) house prices and rents at a more granular level e.g. regional; and ii) information about origin and destination of the mover. This is left for potential future research on inter-regional mobility.

Housing-related social transfers and taxation

36. Housing taxes and transfers related to housing are also likely to influence household mobility decisions. Panel C in Table 1 provides some insights on such effects. Public spending on housing allowances and total social spending on housing are found to be significantly positively associated with mobility (columns 1 and 2). Public spending on housing allowances covers spending on cash transfers to help both tenants and owners with their housing costs. It is sourced from the OECD Housing Affordability database and available for a subset of countries. Total social spending on housing covers all social spending on housing including both cash and in-kind transfers (e.g. social housing provision), and it is sourced from the OECD Social Expenditure database.[29] This may suggest that public support for low-income households, both cash and in-kind, encourages mobility by making moving more affordable.

37. Housing taxation can affect mobility by making it more costly to move, in particular when selling/buying a property implies paying high taxes. The results confirm this hypothesis as non-recurrent

[25] This is tentatively confirmed by the finding that the effect of the share of households holding a mortgage suggests a significant positive effect across European countries, whereas the effect is not statistically significant when the United States is included in the sample. This could reflect that the “lock-in” channel took mainly place in the United States.

[26] Based on the only variable available for a sufficient number of OECD countries over the period under consideration, i.e. loan-to-value ratio from the IMF Macro prudential Policy Survey database.

[27] Not reported, results available upon request. The analysis relied on the OECD Analytical House Price Database and a recently-published dataset on differences in house price levels across countries **Invalid source specified.**.

[28] This may also reflect the specific time period under consideration i.e. 2007-2012, characterised by the 2008 financial crisis, which coincided in some countries with the bust of a housing bubble.

[29] http://www.oecd.org/social/soc/SOCX_Manuel_2019.pdf

taxes on immovable property are found to reduce mobility (Table 1, Panel C, column 3). The tax indicator used to assess the share of non-recurrent taxes in total housing tax revenues is an imperfect proxy because it includes all taxes on financial and capital transactions, not only housing-related. However, this result is in line with the one based on the indicator of housing transfer taxes in Panel A. Going further, the estimates suggest that when housing taxation is skewed towards non-recurrent as opposed to recurrent housing taxation, residential mobility is lower. This can be inferred by estimating the effect of non-recurrent housing taxation (proxied by taxes on financial and capital transactions) *conditional* on the tax revenue share of total housing taxation (proxied by the sum of taxes on financial and capital transactions and recurrent taxes on immovable property) (Table 1, Panel C, column 4). The interpretation is that shifting housing taxation from non-recurrent to recurrent taxes is associated with higher residential mobility.

Table 1. Policy drivers of residential mobility: the results

Panel A. Rental market regulations and housing transaction costs

	Landlord-tenant regulation	Rent control	Notary fees	Legal fees	Registration fees	Agent fees	Transfer taxes
Policy-related factors	-0.031***	-0.039***	-0.050***	-0.030	0.003	-0.001	-0.015***
	(0.009)	(0.013)	(0.014)	(0.035)	(0.007)	(0.014)	(0.004)
Observations	247413	256255	250284	255864	250284	255864	262602
Countries	22	23	22	23	22	23	24

Panel B. Elasticity of housing supply of and access to housing credit

	Elasticity of housing supply	Household debt (% of GDP)	Mortgage credit (% of GDP)
Policy-related factors	0.061**	0.001**	0.000
	(0.027)	(0.001)	(0.001)
Observations	193764	239782	210089
Countries	16	21	17

Panel C. Housing-related social transfers and taxation

	Public spending on housing allowances (% of GDP)	Social expenditure on housing (% of GDP)	Taxes on financial and capital transactions (% of taxation)	Taxes on financial and capital transactions (*) (% of taxation)
Policy-related factors	0.078***	0.073***	-0.035**	-0.035***
	(0.016)	(0.011)	(0.015)	(0.011)
Observations	206596	275999	275999	275999
Countries	19	26	26	26

Panel D. Job and social protection

	Job protection on regular contracts	Job protection on temporary contracts	Unemployment benefits replacement rate	Adequacy of minimum income benefits
Policy-related factors	-0.072***	-0.015	0.002***	0.002***
	(0.020)	(0.023)	(0.001)	(0.001)
Observations	275999	275999	275999	275999
Countries	26	26	26	26

Panel E. Business dynamism and trade exposure

	Birth rate of enterprises	Administrative burdens on start-ups	Import competition	Import competition in manufacturing	Import competition in manufacturing from China
Policy-related factors	0.019***	-0.014	-0.107	0.397***	2.884***
	(0.005)	(0.043)	(0.248)	(0.082)	(0.686)
Observations	217216	262602	275999	275999	275999
Countries	23	24	26	26	26

Source: OECD calculations based EU SILC 2012 module on housing for European countries, AHS 2013 for the United States.
Note: Estimates from probit regression. Values are marginal effects. The coefficients correspond to the impact of a one unit increase in the explanatory variable on the average estimated probability to move. Regressions include similar sample selection criteria and controls as in country-level regressions, plus country-level controls i.e. income per capita, the degree of urbanisation and the overall rate of homeownership. The Appendix reports complete regression tables. The estimates are weighted by the inverse of the individual sampling probability. Robust standard errors clustered at the country-level are reported in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Job and social protection

38. More stringent job protection on regular contracts is associated with less residential mobility, with a highly significant effect (Table 1, Panel D, first column). This result is consistent with the literature on labour mobility (Appendix A) and with the stylised fact that residential and labour mobility are strongly correlated. The effect of job protection on temporary contracts is not statistically significant. When excessive protection of permanent contracts is associated with labour market duality, it may hinder social mobility by reducing chances of getting a higher paid job (see (Gangl, 2013[19]) for evidence for a number of European countries).

39. Moving to social protection, the second column of Panel D in Table 1 suggests that more generous unemployment benefit replacement rates are associated with an increase in residential mobility. The underlying indicator includes housing benefits (where available) and refers to 12 months unemployment spell (see Appendix for details). This result is in line with (World Bank, 2018[4]) and (Caldera Sánchez and Andrews, 2011[2]). It suggests that by relieving liquidity constraints, unemployment benefits may help finance jobseekers' moving and search costs and that this positive channel would, at least on average across OECD countries under the period under consideration, outweigh the negative channel whereby unemployment benefits may on the contrary reduce incentives to move for a job. A broader measure of the social safety net, going beyond unemployment benefits, delivers a similar result: when income adequacy guaranteed by minimum-income safety net benefits is higher, residential mobility is higher (column 3 in Panel D, Table 1).[30] Overall, combining the results on social and job protection suggests that shifting protection from jobs to individuals can encourage residential mobility, with potential positive effects on the functioning of the labour market.

40. Testing the effect on mobility of several spending indicators in the area of active labour market policies does not deliver any significant results (including in interaction with unemployment benefits, not reported). This may be due to limitations of spending data as a proxy measure for activation policy and because of the interplay between positive channels through mobility support and negative ones through locking-in effects. Despite the lack of quantitative evidence in this paper, qualitative work in this area suggests that labour market policies that help the unemployed finding good jobs, including job-counselling

[30] The indicator measuring the income of jobless families is defined as the minimum-income safety-net benefits as a percentage of the median disposable income in the population. This measure can be compared with a poverty line defined as a fixed percentage of median income.

and well-designed training and requalification programs, are deemed to support change and avoid lock-in effects (e.g. editions of the *OECD Employment Outlook* such as (OECD, 2005[13]) and (OECD, 2015[20])).[31]

Business dynamism and trade exposure

41. Analysing the effects of product market conditions and institutions suggests a positive link between business dynamism, defined as the birth rate of enterprises, and residential mobility (Panel E, Table 1, first column). This result is consistent with the evidence of a strong link between business and labour market dynamism. In contrast with the strong significant effect found for the birth rate of enterprises, no statistically significant effect is found for some of the policies affecting business dynamism, namely product market regulation (Panel E, column 2).[32]

42. Trade integration, especially import competition from emerging economies, may push displaced or at-risk-of displacement workers away from the local areas affected by such trade shocks, towards less affected areas. The results in Table 1, Panel E corroborates this prior. Import competition[33] in manufacturing is found to spur residential mobility with a highly significant effect while no such effect is found for overall import competition. This finding is consistent with evidence that trade-induced localised displacement effects primarily affected manufacturing industries because such industries are mostly tradable, directly exposed to import competition, and labour intensive. The estimates tentatively identify a "China shock", whereby more import competition in manufacturing from China is associated with more residential mobility (Panel E, last column). Overall, these results are qualitatively consistent with recent cross-country inter-regional migration analysis (IMF, 2019[21]).

Going granular: the effects of policies on the mobility of different socioeconomic groups

43. This section investigates whether and how policy-related factors influence mobility across different socio-economic groups. This is policy-relevant for two reasons. First, going granular allows better understanding and interpreting the mechanisms of policy transmission that underlie "overall" policy effects. Second, identifying differential policy effects by socio-economic groups allows fine-tuning evidence-based policy implications. Distributional evidence helps the design of public policies including their eventual targeting to specific socio-economic groups. However, the results need be interpreted with caution as econometric identification is technically challenging in this exercise and, as has been already discussed, causality cannot be properly inferred due to potential self-selection biases. Given these caveats, the analysis focuses on a selected set of regressions, based on theory and existing evidence (see literature review reported in **Error! Reference source not found.**).

44. For the purpose of this exercise, the cross-country specification is augmented with an interaction term between the policy of interest and a discrete categorical variable identifying a given socio-economic

[31] See also OECD activation webpage: https://www.oecd.org/employment/activation.htm.

[32] The table only reports the effect of administrative burdens on start-ups from the OECD product market regulation indicators historical dataset, but other relevant components are also not statistically significant (not reported).

[33] Import competition is defined as gross imports divided by gross output based on the OECD Trade in Value Added Database. The data is averaged over the five years prior to 2012, as for other country-level variables (see Appendix).

group as defined by housing tenure status, age, income and education.[34] [35] Throughout the paper, policy estimates are reported as marginal fixed effects, but these effects are now calculated for each socioeconomic group, if the interaction term is statistically significant.

45. Table 2 reports the results in a synthetic way and can be read as follows. The first column reports the overall marginal effect of each policy, which is close to the one reported in the overall policy analysis.[36] If the interaction term is statistically significant, then the marginal effect is calculated for each group and reported along with its statistical significance in the subsequent corresponding column (for example the effect landlord tenant regulation on different housing tenure status groups). If the interaction term between the policy and the variable identifying a given socio-economic group is not statistically significant, then the overall marginal effect is estimated to be the same across groups, which can be visualised as "=" in the subsequent corresponding column (for example the effect of landlord tenant regulation on different age groups).

[34] In this analysis, housing tenure status does not distinguish between owners with and without mortgage, because of the above-finding that their differential mobility rates largely reflect timing and lifecycle effects. In addition, while a distinction is still made between tenants in the private rental market and social or subsidised tenants, the focus of the discussion is on tenants in the private rental market, due to the data-related difficulty in properly interpreting the social or subsidised tenant category. Therefore, the discussion on the differential effects of policies by tenure status largely focuses on owners as opposed to renters.

[35] Age and education refer to the household respondent as in the previous regressions.

[36] This number is not technically exactly the same as the one reported in the overall analysis, due to the different specification, but it is very close in theory and in practice.

Table 2. The differential effects of policies on the mobility of different socioeconomic groups

	Overall marginal effect	Owner	Tenant renting at market price	Social/subsidised tenant	24-35	35-44	45-54	54-66	Low income	Middle income	High income	Low education	Middle education	High education	Obs.	Coun-tries
Landlord-tenant regulation	-0.031***	-0.013	-0.083***	-0.054***	=	=	=	=	-0.052***	-0.031***	-0.020*	-0.031***	-0.036***	-0.025**	256255	23
	(0.009)	(0.010)	(0.011)	(0.015)					(0.010)	(0.009)	(0.011)	(0.010)	(0.008)	(0.011)		
Rent control	-0.039***	-0.015	-0.095***	-0.073***	=	=	=	=	-0.067***	-0.040***	-0.022	-0.041***	-0.045***	-0.035**	247413	22
	(0.013)	(0.015)	(0.016)	(0.016)					(0.010)	(0.012)	(0.016)	(0.014)	(0.012)	(0.015)		
Transfer taxes	-0.015***	=	=	=	-0.025***	-0.014***	-0.012***	0.010**	=	=	=	=	=	=	262602	24
	(0.004)				(0.007)	(0.005)	(0.004)	(0.004)								
Taxes on financial and capital transactions	-0.035**	=	=	=	-0.077**	-0.024	-0.010	-0.007	-0.053***	-0.035**	-0.017	-0.050***	-0.037**	-0.025	275999	26
	(0.015)				(0.032)	(0.024)	(0.015)	(0.013)	(0.019)	(0.014)	(0.020)	(0.011)	(0.015)	(0.019)		
Social expenditure on housing	0.073***	0.071**	0.101***	0.062**	=	=	=	=	=	=	=	=	=	=	275999	26
	(0.011)	(0.013)	(0.050)	(0.034)												
Job protection of regular contracts	-0.072***	-0.041**	-0.162***	-0.137***	-0.126***	0.075***	-0.060***	0.051***	-0.116***	-0.077***	-0.054**	-0.087***	-0.083***	-0.064***	275999	26
	(0.020)	(0.019)	(0.025)	(0.027)	(0.030)	(0.023)	(0.016)	(0.014)	(0.018)	(0.019)	(0.021)	(0.015)	(0.019)	(0.022)		
Unempl. ben. repl. rate	0.002***	=	=	=	0.003***	0.002***	0.001**	0.000	=	=	=	=	=	=	275999	26
	(0.001)				(0.001)	(0.001)	(0.000)	(0.000)								
Birth rate of enterprises	0.019***	0.013*	0.040***	0.026***	=	=	=	=	0.008	0.018***	0.028***	=	=	=	217216	23
	(0.005)	(0.005)	(0.012)	(0.006)					(0.006)	(0.006)	(0.003)					
Import comp. in manuf. from China	2.884***	1.441*	7.030***	5.357***	4.881***	2.797***	2.299***	2.009***	4.095***	2.919***	2.135**	3.340***	3.132**	2.493***	275999	26
	(0.069)	(0.808)	(1.038)	(1.453)	(1.145)	(0.866)	(0.619)	(0.571)	(0.019)	(0.688)	(0.875)	(0.607)	(0.679)	(0.842)		

Source: OECD calculations based EU SILC 2012 module on housing for European countries, AHS for the United States.
Note: Calculations based on probit regression. Values are marginal effects. The coefficients correspond to the impact of a one unit increase in the explanatory variable on the average estimated probability to move. Regressions include similar sample selection criteria and controls as in Table 1. The Appendix reports complete regression tables. The estimates are weighted by the inverse of the individual sampling probability. Robust standard errors clustered at the country-level are reported in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

46. Housing-related policies and conditions are found to have significant differential effects on different socioeconomic groups. Main findings can be summarised as follows:

- Rental market regulations are found to reduce residential mobility among renters, not among owners. This finding applies to both rent control and tenant protection measures. This result suggests that the negative overall effect found is driven by renters. In addition, rent control and tenant protection measures affect disproportionately low-income households as well as low and middle educated ones. Those are the least mobile categories to start with, which implies that too restrictive rental market regulations may unintendedly constitute an additional barrier to the mobility of the least mobile groups.
- Housing transfer taxes are found to disproportionately affect younger households. This finding is in line with (Caldera Sánchez and Andrews, 2011[2]) and the prior that housing transaction costs are likely to be more binding for first-time buyers. Corroborating this finding, higher reliance on non-recurrent housing taxation is found to discourage mobility relatively more among younger households as well as low-income and low-educated households.
- Social spending on housing is found to encourage disproportionately the mobility of renters, consistent with the idea that cash and in-kind housing transfers in most countries tend to benefit renters relatively more than owners, a likely reflection of their targeting, even though no statistically differential effect can be detected across income groups.

47. Residential mobility is also influenced by policies beyond housing, in particular labour and social protection policies, the effects of which are found to vary across socioeconomic groups:

- More stringent protection on regular contracts is found to discourage mobility among all socioeconomic groups, but relatively more so among low-income, low-educated, younger households and renters. These socio-economic groups are more likely to be outsiders in the labour market (i.e. those under temporary contracts or out of work), hence to have less opportunities to move for jobs or better jobs when labour markets are segmented and labour market dynamism is weak.
- More generous unemployment benefits are found to benefit disproportionately mobility among younger households, in line with (Caldera Sánchez and Andrews, 2011[2]). This result is consistent with the idea that more generous social transfers alleviate the cost of moving for liquidity-constrained households.

48. Finally, business dynamism and trade exposure are also found to have differential mobility effects across socio-economic groups:

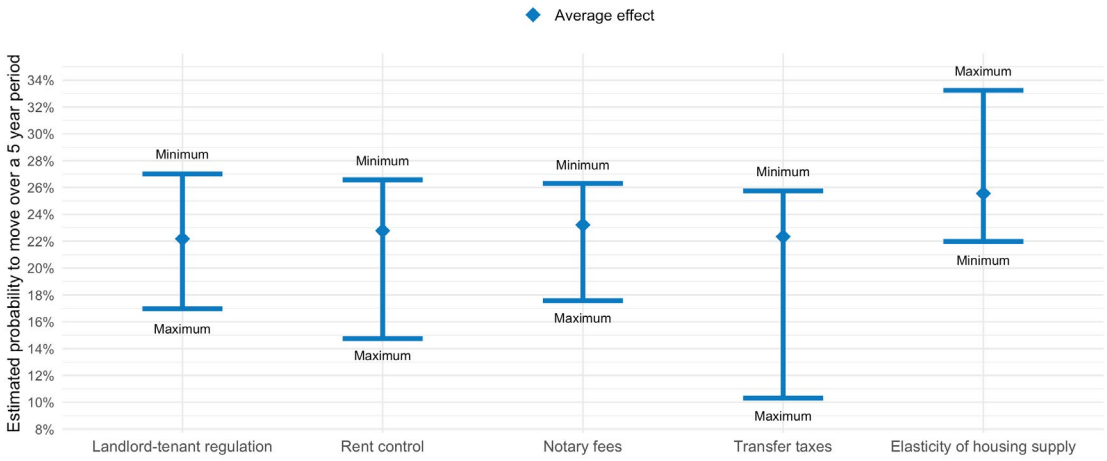
- The positive link between business dynamism and residential mobility is stronger for high-income households and for tenants relative to owners. Those are the most mobile groups to start with, which may reflect a virtuous circle of labour and business dynamism, with potential positive repercussions for productivity. The spatial nature of this phenomenon would deserve more granular inspection than what is currently allowed with the data-at-hand. Still, one cautions implication is that policies to encourage efficient labour allocation through residential mobility need to go hand-by-hand with policies to encourage efficient capital allocation through firm entry and exit in the area of e.g. product market regulation, competition and bankruptcy procedures.
- Import competition in manufacturing from China is associated with more residential mobility, especially among low-educated, low-income, younger age groups and renters. This would corroborate the view that, on average across countries and for the period considered, China competition acted as a pull factor for the most at risk workers.

Illustrative policy simulations

49. In order to provide some magnitude of the estimated policy effects, the empirical results are used to run some illustrative policy simulations. The direction of the policy change is chosen so that the mobility effect is positive. The simulations are reported in various figures showing how different policy scenarios influence mobility based on the estimates in Table 1. Each dot is the average probability to move evaluated at policy average and average household characteristics. The distance between the cross-country minimum/maximum and the average is the change in probability associated with a policy change from average to "best/worst practice".[37] The policy indicators used in the simulation exercise correspond to those entered in the regressions so they refer to the sample estimation period (around 2012), hence not necessarily to current policy settings. This illustrative quantification exercise delivers the following results:

- Making the rules governing tenant landlord relations more landlord-friendly, by easing them from the level in the most restrictive country to the average, could increase residential mobility by about 5 percentage points. Reducing rent control along the same simulation scenario would have a slightly larger effect, of about 8 percentage points (Figure 8). Reforms in this area would be particularly beneficial for renters, who are directly affected, but also for low-income and low-educated households, who tend to be the least mobile. Over the last decade, based on the comparison between the 2010 and the 2019 Housing questionnaires (the recent questionnaire is called Questionnaire for Affordable and Social Housing (QUASH) 2019), the majority of OECD countries for which data are available have relaxed landlord-tenant regulations, in particular Austria and Finland. However, this has been generally accompanied by an increase in rent control, with few exceptions such as the Czech Republic, the United Kingdom and the United States where rent control has been eased. According to the empirical findings in this paper, the concomitant reduction in tenant protection and increase in rent control has offsetting effects on the propensity to move.

Figure 8. Relaxing rental market regulations, making housing supply more elastic and reducing housing transaction costs



Note: OECD calculations based on estimates from Table 1. The dot is the average estimated probability to move evaluated at average policy and household characteristics. The distance between the Min/Max and the average is the change in the estimated probability associated with a policy change. The reported probabilities may have a different mean insofar as some specifications are estimated on a reduced sample of countries due to data constraints.

[37] The reported probabilities are computed at the mean, max or min of the policy variables and at the mean of the rest of explanatory variables.

- Reducing notary fees associated with housing transactions from the highest to the average level could increase residential mobility by about 5.6 percentage points (Figure 8). Reforms to partially liberalise the notary profession have been recently implemented in few OECD countries, such as France in 2015, by easing barriers to entry into the profession and reducing notary fees for low-valued housing transactions.[38]
- Reducing housing transfer taxes (e.g. taxes related to transferring the ownership of the property) from the highest to the average level would increase residential mobility by about 12 percentage points (Figure 8). This would represent a very large policy change though, equivalent to 3.6 standard deviations, which is probably unrealistic. A more moderate change, equivalent to roughly 1 cross-country standard deviation decline, would increase residential mobility by around 4.3 percentage points. The effect would be particularly strong for first-time buyers such as young households. Reforms to reduce housing transaction taxes have been recently implemented in few countries. For example, in 2017 the United Kingdom abolished the Stamp Duty (transfer tax) for first-time home buyers in England and Wales when purchasing homes up to £300,000. Overall, there is scope in OECD countries to reduce housing transfer taxes and more generally housing transaction costs. Indeed, according to recent data collected through the 2019 QUASH questionnaire, transfer taxes are often levied at rates around 5% of the property value, although in some countries they are as high as 10% of the property value.
- Making housing supply more responsive to demand would increase residential mobility: moving from the minimum to the average country responsiveness level would be associated with an increase in residential mobility by about 3.6 percentage points (Figure 8). Reforms to enhance housing supply have been recently implemented in some OECD countries. In 2018 the Netherlands simplified the approval procedure and removed constraints for housing corporations which want to rent on the private market and is progressively allowing municipalities to have more control over zoning and the planning of the private rental market. The United Kingdom introduced in 2017 the Housing Infrastructure Fund to deliver 100 000 new homes in areas of high demand, and an additional 40 000 affordable homes, with the stated objective to boost labour mobility.39 Steps in this direction were also taken by Sweden in 2016, where the government presented legislative measures to make the planning system more efficient and introduced support to municipalities based on the number of dwellings permitted.40 The results of this paper suggest that such types of reform are likely to remove some barriers to mobility and increase housing affordability.
- Increasing social spending on housing, including cash (e.g. housing allowances) and in-kind transfers (e.g. social housing), from the average to the highest observed level would increase mobility by around 12 percentage points. Like the notary fees scenario, this would represent a very large policy change, equivalent to 3.5 standard deviations. A reform scenario equivalent to 1 cross-country standard deviation increase would boost residential mobility by around 3 percentage points. Increasing spending on housing allowances from the average to the highest observed level (considering that this policy variable is only available 19 OECD countries, see Appendix) would be associated with a 9 percentage points increase in residential mobility. Social spending on housing is comparatively low (compared to other categories of social spending such as old-age spending) and it has declined over the recent period, according to the OECD Social Expenditure Dataset.41

[38] However, during the same period, the real estate transfer tax has been rising in France, which has caused a decline in housing transactions in the short term **Invalid source specified.** and tends to increase housing transaction costs, in contrast with the potential effect of the 2015 notaries' reform.

[39] See **Invalid source specified.**.

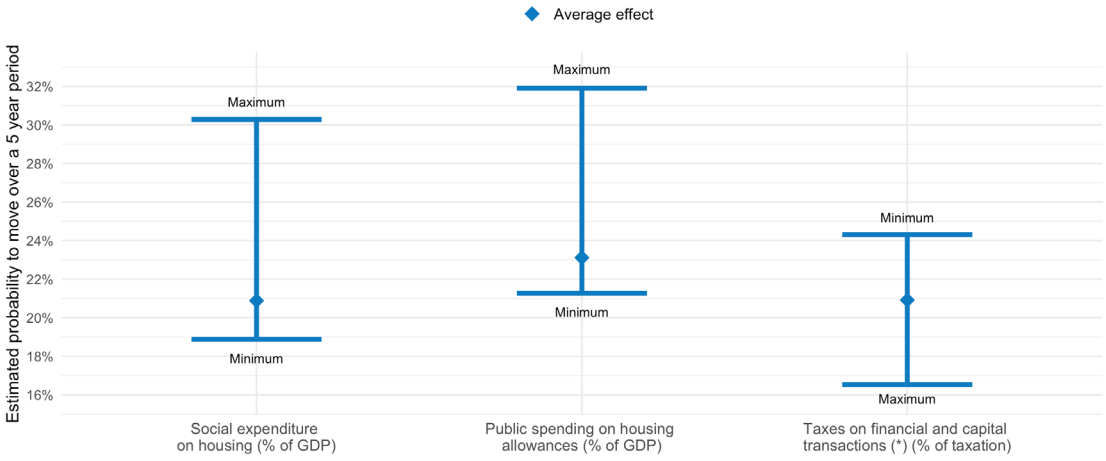
[40] **Invalid source specified.**.

[41] The most recent observation is 2015. According to the data, social spending on housing is around 0.35% of GDP on average across the OECD, ranging from 1.6% in the United Kingdom to around 0.01% in e.g. Hungary.

However, countries such as Belgium, Canada, Luxembourg and New Zealand have recently taken measures to increase the supply or to renovate social housing.42 Provided eligibility rules are designed to avoid lock-in effects, such reforms may address housing affordability issues and at the same time make it easier to relocate for disadvantaged households.

- On the tax side, shifting housing taxation from the highest reliance on non-recurrent taxes to average reliance would increase mobility by roughly 4.3 percentage points (Figure 9), qualitatively in line with the transfer tax simulation. This can be considered in the context of efficiency and equity-enhancing tax reforms to shift housing taxation from non-recurrent to recurrent taxation levied progressively. Australia took steps in this direction as part of a 2014 reform whereby the Capital Territory reduced transfer duties on conveyances and abolished insurance taxes while increasing land taxes.[43]

Figure 9. Increasing social spending on housing, reducing the reliance on non-recurrent housing taxation



Note: OECD calculations based on estimates from Table 1. The dot is the average estimated probability to move evaluated at average policy and household characteristics. The distance between the Min/Max and the average is the change in the estimated probability associated with a policy change. The reported probabilities may have a different mean insofar as some specifications are estimated on a reduced sample of countries due to data constraints.

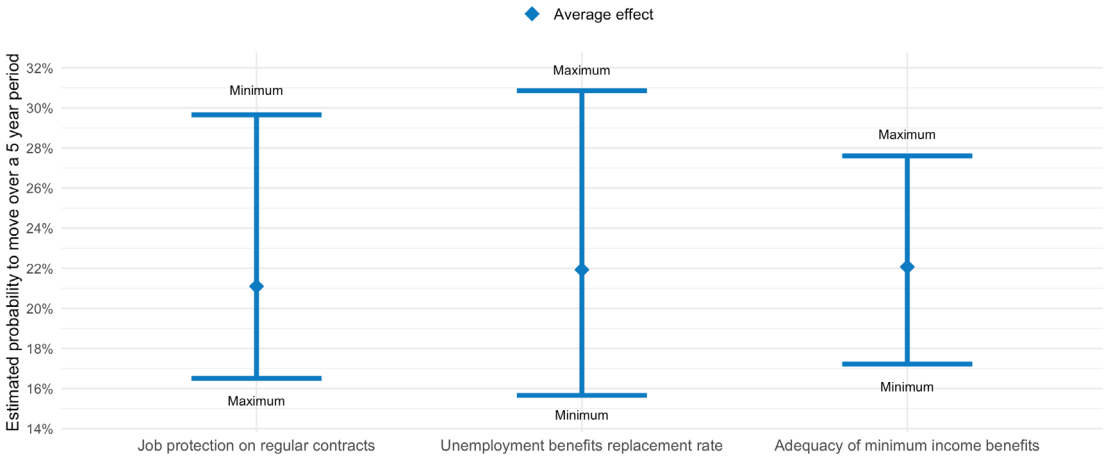
- Reducing the level of job protection on regular contracts from its maximum to the average country level would increase residential mobility by around 4.5 percentage points, with higher effects among low-income and low-educated individuals as well as younger people. Conversely, increasing the generosity of unemployment benefits from its minimum to the average country level would increase residential mobility by around 6.3 percentage points while increasing the adequacy of minimum income benefits would increase mobility by around 4.8 percentage points (Figure 10). Reforms to reduce job protection on regular contracts while increasing the generosity of unemployment benefits have been implemented in some OECD countries to address labour market duality. For example, Italy implemented as part of the 2015 Jobs Act Reform a new single open-ended contract with increasing levels of protection with job tenure, aiming principally at tackling labour market duality. Greece recently took steps to enhance the adequacy of minimum income

[42] **Invalid source specified.**.

[43] **Invalid source specified.**.

transfers and linking it with participation in active labour market programmes (2017/2018).[44] The results of this paper suggest that such reforms may contribute to address labour market duality and poverty as well as support residential mobility (Figure 1).

Figure 10. Reducing job protection on regular contracts and increasing income adequacy provided by unemployment-related and other targeted cash transfers



Note: OECD calculations based on estimates from Table 1. The dot is the average estimated probability to move evaluated at average policy and household characteristics. The distance between the Min/Max and the average is the change in the estimated probability associated with a policy change. The reported probabilities may have a different mean insofar as some specifications are estimated on a reduced sample of countries due to data constraints.

Housing and residential mobility: policy implications and trade-offs

50. Promoting residential mobility is not an end in itself, still it is an important policy issue, especially in countries where regional disparities are pronounced and in countries characterised by skills mismatch on the labour market. Beyond the labour market and efficiency considerations, the ease of moving residence geographically can also contribute to better opportunities and social mobility, especially for children and young people coming from disadvantaged backgrounds.

51. This paper has delivered evidence that housing conditions and policies influence people's decisions and possibilities to move. In this respect, consideration should be given to removing policy-driven obstacles to mobility, in particular related to housing. Reforms in this area raise salient policy issues and trade-offs. **To start with, there is a tension between encouraging people to move from less to more productive areas and avoiding the emergence of left-behind areas. This raises the question of whether and how place-based policies should be implemented.**

52. This paper has shown that homeowners are much less mobile than renters. Yet many countries tend to encourage and support owning over renting to promote homeownership as stable tenure. This is achieved in particular by favourable tax treatment of owner-occupied housing (e.g. mortgage interest deductibility, non-taxation of imputed rents and capital gains (OECD, 2018[22])). **Yet tax-favouring of owner-occupied housing is distortive, including because it tends to discourage residential**

[44] **Invalid source specified.**.

mobility, and it is regressive as it tends to benefit high-income people relatively more (Fatica and Prammer, 2017[23]).

53. The results suggest that transfer taxes discourage mobility, and that reforms to shift housing taxation away from such taxes towards recurrent taxes on housing would reduce barriers to mobility. Such reforms would also make the tax system more efficient with positive aggregate growth effects (Akgun, Cournède and Fournier, 2017[24]) (Brys et al., 2016[25]). However, **reducing transfer taxes may entail a trade-off with the resilience as such taxes can help avoid excessive volatility and speculative behaviour, especially during housing booms.**

54. Reducing excessively rigid rental market regulations is found to encourage mobility. Too stringent rental regulations can also discourage new construction and maintenance by capping the price of rentals. Yet such regulations are motivated by the legitimate goal of counteracting the asymmetric bargaining power between landlords and tenants. **As a result, reforming rental market regulations requires achieving a balance between protecting tenants while ensuring a sufficient supply of rental housing.**

55. The results in this paper on the effects of access to finance are not conclusive, yet the literature has shown that easier access to credit can relax financial constraints for credit constrained households and reduce barriers to residential mobility. At the same time, excessive housing-related leverage exposes individual to liquidity and solvency risks in the case of house price declines or income losses, with potential repercussions for the economy as a whole. **To address such trade-offs, mortgage market reforms which ease access to housing finance should be coupled with borrower-based macro prudential policies.**

56. Policy reforms affecting the level and design of cash and in-kind housing transfers have the potential to significantly impact residential mobility, especially among renters and low-income groups. Overall, results in this paper suggest that both housing allowances and social housing are associated with higher mobility. At the same time, the evidence also suggest that social housing tenants are less mobile than private renters. Governments have progressively shifted housing support away from direct supply of housing towards housing allowances (DELSA/ELSA(2019)17, 2019[6]), (OECD, 2005[13]). This may pose some issues and trade-offs:

- **Housing allowances support mobility but they can increase rents and house prices**, especially in areas with a shortage of housing supply.[45] One possible option is to use a ceiling or norm for the allowance, which could take into account regional cost differences.
- **Social housing provides affordable housing. However, to avoid lock-in effects,** the design of social housing could, for instance, waive the residency or queuing requirements in the case of unemployed workers taking up a job in the region.[46]

57. Labour market institutions also influence mobility as suggested by the literature on labour mobility and by the empirical results in this paper. Excessive job protection on regular contracts can reduce both incentives and opportunities to move. More adequate income support to the low-wage unemployed tends to increase residential mobility by helping to finance jobseekers' moving and search costs. Shifting protection from jobs to individuals and reducing labour market segmentation from excessive protection of regular contracts would be good for labour mobility. Reforms in this area raise some policy challenges:

[45] See (Cavalleri, Cournède and Özsöğüt, 2019[11]) for very recent evidence on the effects of housing allowances on house prices.

[46] Building social housing also directly expands supply, by contrast with allowances, which do so only if land-use and other regulations allow supply to respond flexibly enough.

- **Income-replacement benefits should be designed to support job-search and support mobility**. In most OECD countries, eligibility criteria for unemployment benefits include requirements on geographic mobility, which may partly underlie the findings of this paper, although it is difficult to assess how these requirements are implemented in practice.
- **Favouring mobility with adequate income replacement benefits needs to go hand-in-hand with active labour market programs that support job change**. The design of such programmes is key insofar as the risk is that program participation entails lock-in effects on job search behaviour and mobility.[47]
- **Job protection reforms may not benefit all workers and their design and implementation should consider potential losers**. For instance, evidence suggests reducing job protection on regular contracts increases employment losses in countries with intermediate levels of wage bargaining (Cournède et al., 2016[26]).

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Appendix A: Individual and policy drivers of residential mobility: literature overview

58. People's motivations for moving depend on a combination of microeconomic and macroeconomic factors that vary depending on the time period and household characteristics. Household attributes, the household course of life and job career patterns determine the propensity to move and the choice of dwelling ((Dieleman, 2001[27]), (Coulter and Scott, 2015[15])). In addition, household mobility is strongly related to housing market conditions and economic circumstances at the local and national level ((OECD, 2005[13]), (Caldera Sánchez and Andrews, 2011[2]), (World Bank, 2018[4]), (Blanchflower et al., 2013[28]) (Baker et al., 2016[29]), (Bayoumi and Barkema, 2019[30])).

59. Economic theory predicts that the decision to move depends on the fixed costs of moving, compared to the net present value of the gains in the alternative location (e.g. (Sjaastad, 1978[31]), (Mincer, 1978[32]), (Bartel, 1979[33]), (Oswald and Paris, 2019[34])). The costs of moving include pecuniary and non-pecuniary costs. Pecuniary costs include the out-of-pocket expenditure involved in moving, such as searching for a new dwelling and a job in the new location and the transaction costs involved in the process of moving. Non-pecuniary costs include the costs of changing one's environment, such as the costs of uprooting school-age children or of giving up the returns on location-specific investments.

60. Mobility studies condition the decision to move on households' characteristics influencing the gains and costs of moving. The decision to move has been shown to be closely tied to events in a person's life, such as family formation, dissolution of marriage and job changes. Earlier research has shown that changing jobs over a long distance naturally requires a residential move and that the decision to change jobs is closely tied to moving decisions (e.g. (Coulter and Scott, 2015[15])). In this sense, household characteristics influencing potential earnings in a different location, such as education, affect the discounted net return from moving.

61. Other household characteristics, such as size, marital status and age, also determine the decision to move. For example, households with more than one member in the labour force should have higher costs of moving than independent households comprising a single person (e.g. (Mincer, 1978[32]), (Bartel, 1979[33])). Similarly, households with school-age children should have lower net return from migration because of the costs of uprooting school-age children. In the same vein, younger households are most likely to move because they have fewer location-specific investments that tie them down to a location and have longer time horizons in which to amortise the costs of moving; therefore, relatively small gains in earnings may make them move. Indeed, existing evidence confirms that in most countries, young adults between the ages of 20 and 35 are by far the most mobile segments of the population (e.g. (Dieleman, 2001[27]), (OECD, 2005[13]), (Caldera Sánchez and Andrews, 2011[2]), (World Bank, 2018[4]).

62. A vast literature shows that housing factors are major drivers of mobility decisions ((Dieleman, 2001[27]), (OECD, 2005[13]), (Caldera Sánchez and Andrews, 2011[2]), (Blanchflower et al., 2013[3]) (World Bank, 2018[4]) (Baker et al., 2016[29]), (Bayoumi and Barkema, 2019[30]), (Ben-Shahar, Gabriel and Golan, 2018[35])). These include the price, tenure of the dwelling and its location with respect to workplaces and services. House prices and rents, as long as they influence the cost of living, will influence the household's decision to move. Empirical evidence suggests that homeowners tend to have longer residential spells and much lower mobility rates than renters.[48] One explanation is that homeowners face higher search and transaction costs (for instance housing transfer taxes, which can make transaction costs very onerous) and, therefore, tend to spend relatively longer spells in their residence in order to spread such costs over a longer time period (e.g. (Coulson and Fisher, 2009[36])). A complementary explanation of this finding is that housing is an illiquid asset and in cyclical downturns higher real interest rates and falling house prices

[48] This finding is based on a wide array of studies including (OECD, 2005[13]), (Caldera Sánchez and Andrews, 2011[2]), (World Bank, 2018[4]), (Blanchflower et al., 2013[3]).

may lock-in homeowners ((Ferreira, Gyourko and Tracy, 2010[37]), (Bricker and Bucks, 2016[38])). Evidence further suggests that the quality of services close to the dwelling influences the mobility decision. For instance, parents may move to make sure that their children attend a good school and, as a consequence, this search for high quality schools increases the price of housing close to them.[49]

63. Government policies shape housing market outcomes and mobility. Theoretical and empirical literature suggests the following links between housing-related policies and mobility:

- Favourable tax treatment of owner-occupancy relative to other housing tenures, which influences the opportunity cost of housing investment (OECD, 2018[22]), may reduce mobility by tilting consumption towards owner-occupancy and thus squeezing the rental sector (Causa, Woloszko and Leite, 2019[9]).
- Housing transactions costs (e.g. taxes and fees to be paid to intermediaries such as notaries) may have negative effects on residential and job mobility by increasing the cost of buying and selling ((Caldera Sánchez and Andrews, 2011[2]), (Blanchflower et al., 2013[28]) (Hilber and Lyytikäinen, 2017[18]). Such effects are likely to be stronger for first-time buyers, such as younger households.[50]
- Too stringent rental market regulations, such as rent control, rules concerning the duration and termination of contracts and tenant protection, have been found to reduce residential mobility (e.g. (Caldera Sánchez and Andrews, 2011[2]), (World Bank, 2018[4]), (Mense, Michelsen and Kholodilin, 2019[39]) and (Diamond, McQuade and Qian, 2018[40])) and increase spatial misallocation (Chapelle, Wasmer and Bono, 2019[41]). For instance, if rents in rent-regulated dwellings are set, or vary differently from nonregulated dwellings, rent regulation may limit residential mobility as sitting tenants in rent-controlled dwellings will be reluctant to move and give up their below-market rents. Strict rental regulations can discourage residential construction and coupled with reduced mobility of incumbent tenants may lead to lower entry into and exit from the rent-regulated rental sector, leading to lower residential mobility. Too stringent regulations may also affect the mobility of owners by discouraging housing supply and thus reducing affordability (Cavalleri, Cournède and Özsöğüt, 2019[11]).
- Housing subsidies may lock-in tenants if households who have a subsidy in their present accommodation are less mobile due to additional moving costs associated with losing their subsidy. A number of empirical studies have found that social housing tenants are indeed significantly less mobile than tenants in the private market ((OECD, 2005[13]), (Caldera Sánchez and Andrews, 2011[2]), (World Bank, 2018[4])). However, causality here is not established because of endogeneity and self-selection biases, e.g. social housing is generally associated with individual characteristics that may generate lower mobility, for example low education. By contrast, housing allowances are in principle more mobility-friendly than direct provision of social housing and have been found to increase residential mobility in for instance Norway (Nordvik, 2015[42]).
- Housing policy interventions that limit the supply of housing and its responsiveness to changes in demand, such as restrictive land-use regulations, can hinder household mobility (Andrews, Caldera Sánchez and Johansson, 2011[12]). Differences in supply responsiveness between areas can drive a wedge in prices and have a negative impact on household location decisions if, for instance, homeowners living in highly-priced supply constrained areas are reluctant to move to lower-priced areas for fear of being priced out the market (see (Ciani, David and de Blasio, 2019[43]) for a recent analysis based on Italy).

[49] See **Invalid source specified.** for a recent comprehensive assessment of the theoretical and empirical literature in this area.

[50] (Caldera Sánchez and Andrews, 2011[2]) find stronger effects for young households.

64. To the extent that housing markets have multiple interactions with the rest of the economy, policies and institutions affecting other markets can indirectly affect residential mobility in a number of ways:

- Financial and mortgage markets may affect household mobility through their effect on borrowing costs. Given that owner-occupied housing generally requires debt financing, the existence of liquidity constraints may force some households to remain involuntary in the rental market. Relaxing borrowing constraints may facilitate the transition from rental to owner occupation for credit-constrained households and lead to higher residential mobility. This is consistent with (Caldera Sánchez and Andrews, 2011[2]) who find a positive link between private credit to GDP and residential mobility. However, a number of papers have found that households in negative equity (i.e. where the market value of their home is lower than their outstanding mortgage debt) are less willing to sell their home and move, especially following the housing bust that took place after 2008.[51]
- Labour market institutions and policies can influence labour and residential mobility. Too stringent job protection may reduce workers' incentives to move, with potential detrimental effects on labour reallocation and productivity (for theoretical studies, see (Mortensen and Pissarides, 1999[44]); (Blanchard and Wolfers, 2001[45]); for empirical evidence, see (Bassanini, Nunziata and Venn, 2008[46])) and (Bassanini and Garnero, 2013[47]). The degree of coordination of collective wage bargaining can also influence mobility by affecting the dispersion of wages across locations.[52] The effects of social transfers and unemployment benefits on mobility is a priori ambiguous. One the one hand, more generous benefits may increase mobility by relaxing financial constraints and providing insurance against unexpected income losses. This is consistent with, inter alia, (Caldera Sánchez and Andrews, 2011[2]) and (World Bank, 2018[4]) who find a positive link between the generosity of unemployment benefits and residential mobility. On the other hand, unemployment benefits may deter mobility because, given that mobility is costly, agents who are well insured against the unemployment risk will have lower incentives to move in order to regain employment (e.g. (Hassler et al., 2005[48]) and (Carone et al., 2003[49])). The effect of unemployment benefits are likely to be stronger for liquidity-constrained such as young and low-qualified households.[53] Effective active labour market policies can stimulate job search and may encourage mobility, for instance by providing support to assist unemployed people to move for job-related reasons. At the same time, program participation may entail locking-in effects on individual search behaviour and mobility, and this has been shown empirically in the case of participation in demand-oriented programs such as public works.[54]
- Product market regulation, competition and bankruptcy policies can affect mobility via influencing business dynamism, and thereby the degree of geographical labour market turnover and availability of jobs. Although empirical evidence on the link between business dynamism and residential mobility is not available, evidence on the virtuous link between business and labour market dynamism would tend to suggest a potential positive effect on mobility.[55]
- Trade integration also likely influence mobility. For instance, in advanced economies import competition from low-wage emerging-market countries may increase the propensity to relocate from areas exposed to job losses from trade to less exposed areas. The empirical literature has provided some evidence of this channel, in particular looking at import competition from China on

[51] (Ferreira, Gyourko and Tracy, 2010[37]), (Bricker and Bucks, 2016[38])), *inter alia*.

[52] (Ciani, David and de Blasio, 2019[43]) recently documented the impact of wage bargaining for labour mobility in Italy.

[53] (Caldera Sánchez and Andrews, 2011[2]) find stronger effects for young households.

[54] See (OECD, 2005[13]).

[55] See various the OECD Growth for Growth publication for a list of references. http://www.oecd.org/economy/going-for-growth/

low or middle-skilled workers (Autor, Dorn and Hanson, 2013[50]), (Greenland, Lopresti and McHenry, 2019[51]), (Dauth, Findeisen and Suedekum, 2014[52]), (IMF, 2019[21]). The evidence on out-migration differs between studies and between countries so it cannot be argued that workers would systematically leave places most affected by import competition. In fact, such decisions are likely to be shaped by housing conditions and policies (e.g. passive and active labour market support and policies influencing business dynamism).

Appendix B: Country-by-country baseline estimates

Table B1. The effects of individual and household characteristics on the probability to move: country-by-country baseline estimates

Panel A. Past/Actual Mobility

	AUS	AUT	BEL	CHE	CZE	DEU	DNK	ESP	EST	FIN	FRA	GBR	GRC	HUN	IRL	ISL	ITA	LTU	LUX	LVA	NLD	NOR	POL	PRT	SVK	SVN	SWE	USA	Pooled EU OECD
Outright owne	-0.459***	-0.207***	-0.333***	-0.166***	-0.124***	-0.218***	-0.198***	-0.358***	-0.414***	-0.292***	-0.350***	-0.453***	-0.204***	-0.286***	-0.439***	-0.605***	-0.142***	-0.505***	-0.307***	-0.214***	-0.063	-0.294***	-0.300***	-0.297***	-0.106***	-0.172***	-0.244***	-0.418***	-0.279***
	(0.016)	(0.021)	(0.024)	(0.037)	(0.016)	(0.013)	(0.041)	(0.026)	(0.054)	(0.033)	(0.018)	(0.026)	(0.028)	(0.033)	(0.031)	(0.042)	(0.012)	(0.113)	(0.028)	(0.028)	(0.044)	(0.044)	(0.027)	(0.026)	(0.020)	(0.027)	(0.038)	(0.007)	(0.027)
Owner paying mortgage	-0.319***	-0.097***	-0.185***	-0.096***	-0.037***	-0.121***	-0.187***	-0.294***	-0.299***	-0.122***	-0.174***	-0.375***	-0.148***	-0.246***	-0.387***	-0.525***	-0.059***	-0.356***	-0.076***	-0.079***	-0.053***	-0.264***	-0.114***	-0.255***	0.094***	0.036	-0.132***	-0.407***	-0.174***
	(0.015)	(0.024)	(0.025)	(0.016)	(0.018)	(0.013)	(0.032)	(0.025)	(0.056)	(0.031)	(0.017)	(0.023)	(0.032)	(0.034)	(0.032)	(0.033)	(0.014)	(0.115)	(0.029)	(0.036)	(0.020)	(0.039)	(0.031)	(0.028)	(0.030)	(0.035)	(0.022)	(0.006)	(0.034)
Social/subsidi d tenant	-0.286***	-0.096***	-0.123***	-0.075*	-0.113***	-0.067***	0.008	-0.256***	-0.076	-0.019	-0.117***	-0.248***	-0.050	-0.156***	-0.267***	-0.133***	-0.090***	-0.480***	0.002	-0.089***		-0.103*	-0.147***	-0.255***	-0.097***	-0.110***	-0.219	-0.125***	-0.118***
	(0.032)	(0.021)	(0.034)	(0.041)	(0.021)	(0.020)	(0.045)	(0.036)	(0.073)	(0.036)	(0.019)	(0.027)	(0.081)	(0.040)	(0.038)	(0.053)	(0.019)	(0.116)	(0.065)	(0.039)		(0.055)	(0.040)	(0.033)	(0.047)	(0.038)	(0.187)	(0.010)	(0.024)
35-44	-0.164***	-0.188***	-0.223***	-0.171***	-0.064***	-0.215***	-0.229***	-0.055***	-0.135***	-0.292***	-0.219***	-0.179***	-0.052***	-0.056***	-0.045***	-0.184***	-0.063***	-0.078***	-0.179***	-0.075***	-0.254***	-0.269***	-0.127***	-0.124***	-0.071***	-0.056***	-0.268***	-0.207***	-0.147***
	(0.016)	(0.020)	(0.019)	(0.020)	(0.012)	(0.014)	(0.035)	(0.013)	(0.023)	(0.024)	(0.015)	(0.018)	(0.019)	(0.010)	(0.018)	(0.035)	(0.010)	(0.024)	(0.023)	(0.015)	(0.026)	(0.027)	(0.011)	(0.020)	(0.014)	(0.020)	(0.026)	(0.007)	(0.015)
45-54	-0.330***	-0.302***	-0.304***	-0.367***	-0.091***	-0.347***	-0.366***	-0.113***	-0.237***	-0.410***	-0.332***	-0.319***	-0.085***	-0.090***	-0.127***	-0.286***	-0.093***	-0.106***	-0.294***	-0.099***	-0.395***	-0.386***	-0.182***	-0.168***	-0.129***	-0.129***	-0.425***	-0.333***	-0.241***
	(0.016)	(0.020)	(0.019)	(0.019)	(0.012)	(0.014)	(0.034)	(0.013)	(0.025)	(0.024)	(0.016)	(0.018)	(0.021)	(0.011)	(0.018)	(0.036)	(0.010)	(0.026)	(0.023)	(0.015)	(0.023)	(0.027)	(0.011)	(0.021)	(0.013)	(0.020)	(0.026)	(0.007)	(0.020)
54-66	-0.397***	-0.342***	-0.363***	-0.479***	-0.127***	-0.392***	-0.464***	-0.135***	-0.256***	-0.464***	-0.382***	-0.369***	-0.100***	-0.115***	-0.162***	-0.345***	-0.121***	-0.108***	-0.340***	-0.119***	-0.460***	-0.472***	-0.191***	-0.201***	-0.145***	-0.138***	-0.514***	-0.409***	-0.282***
	(0.017)	(0.021)	(0.020)	(0.019)	(0.011)	(0.014)	(0.033)	(0.016)	(0.025)	(0.025)	(0.017)	(0.019)	(0.023)	(0.010)	(0.018)	(0.040)	(0.010)	(0.027)	(0.026)	(0.015)	(0.023)	(0.027)	(0.011)	(0.021)	(0.014)	(0.023)	(0.025)	(0.007)	(0.020)
Low educatior	-0.056***	-0.081***	-0.032*	-0.138***	-0.007	-0.038***	-0.052	-0.043***	-0.039*	-0.039*	-0.080***	-0.090***	-0.041***	-0.005	-0.038***	-0.106***	-0.035***	-0.014	-0.026	-0.013	-0.093***	-0.121***	-0.037***	-0.015	-0.036***	-0.057***	-0.102***	-0.041***	-0.054***
	(0.013)	(0.018)	(0.017)	(0.025)	(0.015)	(0.016)	(0.032)	(0.010)	(0.020)	(0.023)	(0.014)	(0.018)	(0.016)	(0.009)	(0.014)	(0.026)	(0.009)	(0.015)	(0.022)	(0.015)	(0.022)	(0.026)	(0.013)	(0.016)	(0.016)	(0.017)	(0.031)	(0.007)	(0.007)
Middle education	-0.030***	-0.073***	-0.034***	-0.083***	-0.014*	-0.046***	-0.051***	-0.028***	-0.027***	-0.012	-0.063***	-0.061***	-0.042***	-0.012*	-0.031***	-0.011	-0.027***	0.001	-0.027	-0.004	-0.069***	-0.051***	-0.024***	-0.023	-0.008	-0.031***	-0.063***	-0.027***	-0.043***
	(0.012)	(0.012)	(0.013)	(0.013)	(0.008)	(0.008)	(0.023)	(0.010)	(0.013)	(0.016)	(0.010)	(0.012)	(0.014)	(0.007)	(0.013)	(0.024)	(0.007)	(0.010)	(0.020)	(0.009)	(0.017)	(0.017)	(0.007)	(0.015)	(0.009)	(0.014)	(0.017)	(0.004)	(0.003)
Inactive	0.064***	0.027*	0.012	-0.007	0.011	0.015	0.029	-0.012	-0.000	0.019	0.003	0.048***	-0.024*	0.013*	-0.008	0.067**	-0.030***	0.002	-0.016	0.024*	-0.012	0.040	-0.004	-0.017	0.014	-0.052**	0.042		0.006
	(0.015)	(0.016)	(0.018)	(0.016)	(0.009)	(0.011)	(0.032)	(0.011)	(0.016)	(0.022)	(0.013)	(0.017)	(0.012)	(0.008)	(0.014)	(0.033)	(0.006)	(0.016)	(0.020)	(0.014)	(0.025)	(0.033)	(0.009)	(0.015)	(0.011)	(0.017)	(0.027)		(0.010)
Unemployed/N labour income (US)	0.060*	0.014	-0.009	-0.033	0.003	-0.028*	-0.079*	0.009	0.011	0.029	0.011	0.023	0.024*	-0.016**	0.008	0.028	-0.013	-0.029**	0.047	-0.018*	-0.028	0.032	-0.011	0.020	0.003	-0.028*	-0.055	0.013**	-0.004
	(0.031)	(0.021)	(0.022)	(0.041)	(0.013)	(0.017)	(0.044)	(0.009)	(0.020)	(0.028)	(0.016)	(0.023)	(0.014)	(0.007)	(0.015)	(0.052)	(0.009)	(0.011)	(0.037)	(0.010)	(0.042)	(0.056)	(0.009)	(0.013)	(0.012)	(0.016)	(0.042)	(0.005)	(0.008)
Income quintil #1	-0.063**	0.126***	0.019	-0.010	0.029*	0.017	-0.029	0.004	-0.010	-0.020	-0.039*	-0.045*	0.002	0.015	-0.030	-0.061	0.023*	0.039	0.038	0.041*	0.003	-0.102**	0.020	-0.017	0.043**	0.034	-0.066**	0.006	-0.002
	(0.020)	(0.025)	(0.027)	(0.026)	(0.016)	(0.017)	(0.040)	(0.018)	(0.025)	(0.029)	(0.020)	(0.023)	(0.022)	(0.012)	(0.022)	(0.037)	(0.012)	(0.028)	(0.036)	(0.021)	(0.031)	(0.030)	(0.013)	(0.023)	(0.018)	(0.022)	(0.031)	(0.009)	(0.010)
Income quintil #2	-0.023	0.067***	0.048*	-0.027	-0.004	-0.012	0.005	0.009	-0.047**	-0.008	-0.025	-0.032*	0.044*	0.003	-0.026	-0.014	0.016	0.010	0.054	0.036**	-0.047**	-0.065**	-0.006	-0.018	0.001	0.014	-0.029	-0.003	-0.006
	(0.016)	(0.022)	(0.025)	(0.022)	(0.012)	(0.015)	(0.032)	(0.018)	(0.023)	(0.025)	(0.018)	(0.019)	(0.024)	(0.011)	(0.020)	(0.033)	(0.011)	(0.024)	(0.034)	(0.017)	(0.023)	(0.027)	(0.011)	(0.021)	(0.013)	(0.019)	(0.027)	(0.007)	(0.006)
Income quintil #3	-0.033**	0.055***	0.057***	-0.010	0.004	0.014	0.011	0.014	-0.030	-0.020	-0.017	-0.021	0.020	-0.006	-0.033*	0.023	0.006	0.011	-0.006	0.001	-0.011	-0.071**	-0.004	-0.007	0.016	0.011	-0.035	-0.006	0.003
	(0.016)	(0.021)	(0.021)	(0.021)	(0.011)	(0.015)	(0.028)	(0.016)	(0.020)	(0.023)	(0.017)	(0.018)	(0.021)	(0.010)	(0.020)	(0.032)	(0.010)	(0.020)	(0.029)	(0.014)	(0.022)	(0.024)	(0.010)	(0.020)	(0.012)	(0.017)	(0.025)	(0.006)	(0.005)

Income quintile #4	-0.017	0.029	0.055***	-0.017	0.007	0.009	-0.020	-0.008	-0.007	-0.024	-0.005	-0.025	0.003	0.003	-0.030	-0.027	0.014	-0.018	-0.023	0.019	-0.012	-0.079**	-0.003	-0.017	0.016	-0.000	-0.043*	-0.010*	-0.003
	(0.014)	(0.019)	(0.019)	(0.020)	(0.011)	(0.014)	(0.028)	(0.015)	(0.020)	(0.022)	(0.016)	(0.019)	(0.021)	(0.010)	(0.021)	(0.033)	(0.011)	(0.018)	(0.029)	(0.014)	(0.020)	(0.023)	(0.010)	(0.018)	(0.012)	(0.016)	(0.023)	(0.006)	(0.005)
Living in cohabitation	0.022	-0.023	-0.026*	0.008	-0.015*	-0.039**	-0.031	-0.016	-0.005	-0.012	-0.037**	-0.028**	0.068***	-0.022**	-0.040**	-0.085**	0.018**	0.032**	-0.008	-0.003	0.002	-0.112**	0.042***	0.002	0.026***	0.012	-0.122**	-0.018**	-0.009
	(0.015)	(0.015)	(0.014)	(0.017)	(0.009)	(0.012)	(0.024)	(0.012)	(0.016)	(0.016)	(0.011)	(0.014)	(0.018)	(0.007)	(0.014)	(0.023)	(0.008)	(0.014)	(0.020)	(0.011)	(0.017)	(0.018)	(0.008)	(0.015)	(0.010)	(0.013)	(0.017)	(0.005)	(0.008)
Female	-0.011	-0.012*	-0.016**	0.012	-0.000	-0.004	0.034*	0.003	0.002	0.022	-0.011*	-0.011	-0.000	-0.002	0.015	-0.026	-0.008*	-0.003	-0.010	-0.004	0.002	0.017	-0.010**	0.002	0.003	0.022**	0.024	-0.009**	-0.006**
	(0.010)	(0.007)	(0.008)	(0.009)	(0.004)	(0.006)	(0.020)	(0.005)	(0.009)	(0.014)	(0.006)	(0.007)	(0.007)	(0.004)	(0.009)	(0.020)	(0.004)	(0.006)	(0.010)	(0.006)	(0.015)	(0.016)	(0.004)	(0.006)	(0.004)	(0.011)	(0.016)	(0.004)	(0.002)
Household siz	-0.043**	-0.022**	-0.027**	-0.060**	-0.016**	-0.005	-0.034**	-0.021**	-0.015**	-0.023**	-0.027**	-0.040**	-0.024**	-0.006**	-0.024**	0.001	-0.022**	-0.009	-0.014	-0.009*	-0.029**	-0.014*	-0.021**	-0.024**	-0.013**	-0.008	-0.013	-0.018**	-0.024**
	(0.004)	(0.007)	(0.006)	(0.007)	(0.004)	(0.006)	(0.011)	(0.005)	(0.006)	(0.006)	(0.005)	(0.006)	(0.008)	(0.003)	(0.005)	(0.009)	(0.003)	(0.006)	(0.009)	(0.005)	(0.008)	(0.008)	(0.004)	(0.007)	(0.004)	(0.006)	(0.008)	(0.002)	(0.004)
Migrant	0.312***	0.079***	0.084***	0.084***	0.061***	0.065***	-0.000	0.071***	0.034*	0.008	0.040***	0.008	0.051***	0.045*	0.003	0.061*	0.044***	0.002	0.060***	-0.023*	0.033	0.070***	0.066	0.069***	0.046*	0.056***	0.037	0.013**	0.057***
	(0.087)	(0.016)	(0.016)	(0.015)	(0.015)	(0.015)	(0.037)	(0.015)	(0.019)	(0.044)	(0.015)	(0.022)	(0.019)	(0.024)	(0.016)	(0.037)	(0.010)	(0.019)	(0.017)	(0.013)	(0.028)	(0.027)	(0.066)	(0.015)	(0.026)	(0.015)	(0.023)	(0.005)	(0.015)
Not satisfied with dwelling	-0.027	-0.011	0.021	-0.021	-0.001	-0.000	0.029	0.005	-0.028*	-0.038	-0.061**	-0.061**	-0.022	-0.000	-0.019	-0.119**	-0.002	0.002	0.003	0.002	0.015	0.092*	-0.001	-0.028*	-0.001	0.023	-0.040		-0.014*
	(0.026)	(0.022)	(0.024)	(0.029)	(0.011)	(0.013)	(0.022)	(0.014)	(0.017)	(0.029)	(0.018)	(0.026)	(0.017)	(0.008)	(0.020)	(0.048)	(0.010)	(0.017)	(0.032)	(0.013)	(0.045)	(0.056)	(0.010)	(0.016)	(0.014)	(0.024)	(0.035)		(0.008)
Intermediate area		0.019	-0.010	0.006	-0.038**	-0.014	0.072***	0.012		0.060**	0.020	0.019	0.001	0.021**	-0.028*		-0.002	0.018	-0.025			-0.045**	0.010	0.001	-0.020*		-0.057**		0.010
		(0.017)	(0.017)	(0.017)	(0.011)	(0.010)	(0.027)	(0.013)		(0.028)	(0.013)	(0.014)	(0.023)	(0.009)	(0.016)		(0.007)	(0.018)	(0.029)			(0.022)	(0.009)	(0.015)	(0.011)		(0.027)		(0.007)
Thinly populat area		0.001	-0.023	0.033*	-0.027**	-0.039**	0.037	0.027**	-0.003	-0.007	0.008	0.044**	-0.023	-0.014*	-0.014	0.003	-0.041**	0.009	-0.015	-0.022**		-0.013	-0.001	-0.028**	-0.024**		-0.019		0.002
		(0.019)	(0.021)	(0.019)	(0.011)	(0.013)	(0.023)	(0.013)	(0.014)	(0.023)	(0.012)	(0.018)	(0.015)	(0.008)	(0.016)	(0.021)	(0.008)	(0.012)	(0.030)	(0.010)		(0.019)	(0.009)	(0.014)	(0.011)		(0.022)		(0.013)
Inside MSA, urban																												0.028***	
																												(0.005)	
Inside MSA, rural																												0.009	
																												(0.007)	
Outside MSA, urban																												0.029***	
																												(0.008)	
Outside MSA, rural																												-0.003	
																												(0.007)	
Non-urban are (AUS)	0.059***																												
	(0.011)																												
Remote area (AUS)	0.050																												
	(0.041)																												
Observations	10146	7500	7000	8373	10852	14978	3365	16706	6344	6138	14342	10402	6738	14501	5340	1939	24231	6179	8607	7218	7070	3796	16773	7342	8838	5580	3971	43670	221473

***p < 0.01, **p < 0.05, *p < 0.1

Panel B. Prospective Mobility

	AUS	AUT	BEL	CHE	CZE	DEU	DNK	ESP	EST	FIN	FRA	GBR	GRC	HUN	IRL	ISL	ITA	LTU	LUX	LVA	NLD	NOR	POL	PRT	SVK	SVN	SWE	Pooled EU OECD
Outright owner	-0.139***	-0.056**	-0.105**	-0.093**	-0.059**	-0.097**	-0.111**	-0.077**	-0.144**	-0.131**	-0.129**	-0.123**	-0.172**	-0.064**	-0.094**	-0.166**	-0.073**	-0.214*	-0.053**	-0.036**	0.064	-0.163**	-0.086**	0.016	-0.056**	-0.067**	-0.065**	-0.091**
	(0.015)	(0.010)	(0.018)	(0.018)	(0.012)	(0.008)	(0.030)	(0.018)	(0.055)	(0.030)	(0.024)	(0.021)	(0.039)	(0.022)	(0.022)	(0.043)	(0.010)	(0.120)	(0.020)	(0.016)	(0.066)	(0.033)	(0.019)	(0.020)	(0.014)	(0.023)	(0.030)	(0.005)
Owners paying mortgage	-0.153***	-0.053**	-0.103**	-0.099**	-0.058**	-0.086**	-0.082**	-0.060**	-0.145**	-0.132**	-0.151**	-0.115**	-0.193**	-0.053**	-0.083**	-0.171**	-0.071**	-0.214**	-0.058**	-0.027	-0.045**	-0.156**	-0.098**	-0.017	-0.066**	-0.060**	-0.066**	-0.089**
	(0.013)	(0.010)	(0.018)	(0.010)	(0.013)	(0.008)	(0.024)	(0.018)	(0.055)	(0.028)	(0.020)	(0.019)	(0.043)	(0.022)	(0.020)	(0.035)	(0.010)	(0.106)	(0.015)	(0.020)	(0.016)	(0.031)	(0.019)	(0.015)	(0.015)	(0.027)	(0.016)	(0.004)
Social/subsidis tenant	-0.112***	-0.016	-0.045*	-0.015	-0.041**	-0.035**	-0.008	-0.071**	-0.057	-0.033	-0.056**	-0.094**	-0.094	-0.015	-0.079**	-0.049	-0.056**	-0.245**	-0.025	-0.008		-0.038	-0.023	-0.005	-0.041	0.004	-0.144**	-0.039**
	(0.022)	(0.013)	(0.025)	(0.030)	(0.019)	(0.014)	(0.035)	(0.021)	(0.070)	(0.031)	(0.025)	(0.021)	(0.085)	(0.027)	(0.022)	(0.051)	(0.013)	(0.118)	(0.041)	(0.023)		(0.039)	(0.030)	(0.022)	(0.045)	(0.037)	(0.012)	(0.012)
35-44	-0.073***	-0.032**	-0.029*	-0.018	-0.026**	-0.042**	-0.037	-0.008	-0.030	-0.062**	-0.013	-0.022	-0.004	-0.013	-0.006	-0.038	-0.006	0.008	-0.013	-0.025	-0.055**	-0.050**	-0.002	-0.014	0.009	-0.002	-0.044**	-0.025**
	(0.013)	(0.012)	(0.016)	(0.016)	(0.011)	(0.012)	(0.026)	(0.012)	(0.020)	(0.021)	(0.026)	(0.014)	(0.028)	(0.011)	(0.011)	(0.025)	(0.009)	(0.026)	(0.019)	(0.015)	(0.024)	(0.017)	(0.010)	(0.023)	(0.014)	(0.017)	(0.020)	(0.005)
45-54	-0.089***	-0.030**	-0.045**	-0.041**	-0.028**	-0.070**	-0.071**	0.003	-0.053**	-0.050**	-0.081**	-0.030**	0.046	-0.016	-0.033**	-0.016	-0.018**	0.000	-0.029	-0.026*	-0.068**	-0.053**	-0.024**	-0.019	-0.026**	-0.029*	-0.087**	-0.043**
	(0.013)	(0.012)	(0.015)	(0.015)	(0.012)	(0.011)	(0.026)	(0.012)	(0.019)	(0.022)	(0.026)	(0.015)	(0.031)	(0.012)	(0.012)	(0.030)	(0.009)	(0.019)	(0.019)	(0.015)	(0.024)	(0.019)	(0.009)	(0.024)	(0.012)	(0.017)	(0.021)	(0.009)
54-66	-0.117***	-0.044**	-0.063**	-0.055**	-0.043**	-0.089**	-0.064**	-0.019	-0.040*	-0.077**	-0.112**	-0.060**	0.053	-0.032**	-0.021	-0.042	-0.030**	-0.003	-0.077**	-0.039**	-0.097**	-0.094**	-0.031**	-0.029	-0.032**	-0.041**	-0.100**	-0.060**
	(0.013)	(0.015)	(0.017)	(0.016)	(0.012)	(0.011)	(0.031)	(0.013)	(0.022)	(0.024)	(0.027)	(0.016)	(0.035)	(0.011)	(0.016)	(0.030)	(0.009)	(0.021)	(0.019)	(0.015)	(0.024)	(0.017)	(0.009)	(0.030)	(0.012)	(0.019)	(0.020)	(0.009)
Low education	-0.036***	-0.020	-0.022	-0.038**	-0.008	-0.027**	-0.062**	0.005	-0.005	-0.030	-0.038*	-0.021	-0.047*	-0.000	0.012	-0.023	-0.012	-0.007	0.009	-0.020	-0.035*	-0.048**	-0.011	-0.010	0.012	-0.011	-0.035*	-0.019**
	(0.011)	(0.012)	(0.013)	(0.016)	(0.014)	(0.012)	(0.022)	(0.012)	(0.027)	(0.023)	(0.020)	(0.016)	(0.025)	(0.011)	(0.013)	(0.024)	(0.008)	(0.027)	(0.017)	(0.013)	(0.021)	(0.014)	(0.010)	(0.022)	(0.016)	(0.014)	(0.020)	(0.002)
Middle educatic	-0.017*	-0.021**	-0.028**	-0.022**	-0.003	-0.025**	-0.015	-0.008	-0.003	-0.002	-0.011	-0.025**	0.026	-0.002	-0.013	-0.035*	-0.007	-0.014	-0.011	-0.023**	-0.037**	-0.015	-0.011*	-0.006	0.001	-0.010	-0.024*	-0.014**
	(0.010)	(0.009)	(0.010)	(0.011)	(0.008)	(0.007)	(0.019)	(0.010)	(0.012)	(0.015)	(0.019)	(0.010)	(0.030)	(0.008)	(0.008)	(0.020)	(0.007)	(0.013)	(0.014)	(0.009)	(0.017)	(0.012)	(0.006)	(0.022)	(0.007)	(0.011)	(0.014)	(0.003)
Inactive	0.002	0.003	0.005	0.015	0.000	0.030***	-0.006	0.002	-0.015	0.007	0.027	0.018	-0.012	0.007	0.014	-0.000	0.018**	-0.007	-0.019	0.004	0.037	-0.005	0.018**	0.005	0.003	-0.002	0.030	0.015***
	(0.011)	(0.012)	(0.017)	(0.015)	(0.009)	(0.012)	(0.027)	(0.012)	(0.014)	(0.021)	(0.022)	(0.016)	(0.024)	(0.009)	(0.013)	(0.026)	(0.009)	(0.017)	(0.018)	(0.012)	(0.023)	(0.019)	(0.008)	(0.017)	(0.011)	(0.016)	(0.022)	(0.005)
Unemployed	0.072**	0.009	0.014	0.014	-0.002	0.003	-0.006	0.001	0.012	0.008	0.038	0.057**	0.024	-0.004	0.016	0.022	0.024**	-0.002	0.026	0.003	0.077	-0.046**	-0.007	0.005	-0.024***	0.012	0.039	0.009**
	(0.029)	(0.016)	(0.017)	(0.029)	(0.013)	(0.012)	(0.032)	(0.011)	(0.026)	(0.025)	(0.025)	(0.027)	(0.030)	(0.010)	(0.014)	(0.048)	(0.011)	(0.022)	(0.027)	(0.013)	(0.057)	(0.020)	(0.008)	(0.013)	(0.006)	(0.020)	(0.031)	(0.004)
Income quintile #1	-0.046***	0.005	0.007	0.019	-0.013	-0.007	-0.003	0.025	-0.047**	-0.048*	-0.028	-0.041**	-0.007	0.024*	0.005	0.017	-0.002	0.052	-0.059**	-0.004	0.018	-0.015	-0.001	0.007	-0.001	0.002	0.019	-0.009*
	(0.016)	(0.016)	(0.020)	(0.021)	(0.015)	(0.015)	(0.035)	(0.020)	(0.020)	(0.029)	(0.029)	(0.018)	(0.038)	(0.014)	(0.018)	(0.037)	(0.010)	(0.037)	(0.027)	(0.015)	(0.028)	(0.023)	(0.011)	(0.022)	(0.013)	(0.021)	(0.026)	(0.005)
Income quintile #2	-0.018	-0.004	0.006	0.012	-0.018	-0.016	0.022	-0.015	-0.042**	-0.019	-0.040	-0.014	-0.021	0.010	0.002	-0.027	-0.020**	0.031*	-0.038	0.017	0.019	-0.004	-0.013	-0.002	-0.011	-0.004	0.020	-0.014**
	(0.016)	(0.014)	(0.019)	(0.017)	(0.013)	(0.013)	(0.030)	(0.014)	(0.019)	(0.026)	(0.028)	(0.018)	(0.036)	(0.011)	(0.015)	(0.029)	(0.009)	(0.018)	(0.025)	(0.016)	(0.028)	(0.019)	(0.008)	(0.020)	(0.009)	(0.016)	(0.023)	(0.003)
Income quintile #3	-0.023*	0.014	0.023	-0.011	-0.018*	-0.005	0.010	-0.009	-0.044**	0.016	-0.042*	-0.024	0.018	0.008	-0.001	0.010	-0.008	0.029*	-0.026	-0.003	0.021	0.002	-0.010	-0.011	-0.003	-0.017	-0.003	-0.010**
	(0.013)	(0.013)	(0.017)	(0.015)	(0.011)	(0.013)	(0.025)	(0.014)	(0.019)	(0.024)	(0.024)	(0.015)	(0.036)	(0.010)	(0.013)	(0.028)	(0.009)	(0.016)	(0.025)	(0.013)	(0.019)	(0.018)	(0.008)	(0.019)	(0.009)	(0.014)	(0.019)	(0.004)
Income quintile #4	-0.015	0.005	0.006	-0.024*	-0.013	-0.011	0.017	-0.014	-0.018	0.008	-0.027	-0.009	-0.008	-0.000	-0.015	-0.038	-0.008	0.028*	-0.021	-0.001	-0.006	0.001	-0.006	-0.007	-0.005	-0.020	-0.005	-0.013**
	(0.013)	(0.014)	(0.014)	(0.015)	(0.009)	(0.011)	(0.021)	(0.013)	(0.019)	(0.022)	(0.022)	(0.014)	(0.032)	(0.009)	(0.010)	(0.025)	(0.009)	(0.017)	(0.025)	(0.011)	(0.017)	(0.015)	(0.008)	(0.017)	(0.009)	(0.013)	(0.018)	(0.002)
Living in cohabitation	-0.046***	-0.012	-0.005	-0.008	-0.007	-0.011	-0.025	-0.022**	-0.029**	-0.043**	0.053***	0.012	-0.026	-0.009	-0.008	-0.020	-0.007	0.017	-0.001	-0.020**	-0.008	-0.029**	-0.013**	-0.017	-0.009	0.000	0.023*	-0.003
	(0.011)	(0.009)	(0.011)	(0.014)	(0.009)	(0.009)	(0.019)	(0.010)	(0.013)	(0.017)	(0.017)	(0.012)	(0.026)	(0.007)	(0.010)	(0.021)	(0.006)	(0.013)	(0.013)	(0.009)	(0.016)	(0.012)	(0.006)	(0.012)	(0.006)	(0.009)	(0.013)	(0.006)
Female	-0.014*	0.008	-0.014	-0.013	0.004	0.010	-0.029*	-0.013	0.011	0.000	-0.024	-0.018*	-0.020	-0.001	-0.010	-0.025	-0.013**	-0.007	0.003	-0.010	-0.002	-0.008	-0.016**	0.001	-0.007	-0.008	-0.002	-0.007
	(0.008)	(0.007)	(0.009)	(0.010)	(0.007)	(0.007)	(0.016)	(0.008)	(0.013)	(0.014)	(0.015)	(0.010)	(0.020)	(0.008)	(0.010)	(0.018)	(0.005)	(0.013)	(0.012)	(0.010)	(0.014)	(0.010)	(0.007)	(0.010)	(0.007)	(0.009)	(0.012)	(0.004)
Household size	0.000	-0.004	-0.010**	-0.001	-0.005	-0.009**	-0.008	0.002	-0.007	-0.013*	-0.028**	-0.013**	0.012	0.001	-0.006	0.001	-0.008**	-0.002	-0.014**	-0.000	-0.008	-0.006	-0.005*	0.002	-0.001	-0.005	-0.017**	-0.009**
	(0.003)	(0.004)	(0.005)	(0.007)	(0.004)	(0.004)	(0.010)	(0.004)	(0.006)	(0.007)	(0.007)	(0.005)	(0.011)	(0.003)	(0.004)	(0.008)	(0.002)	(0.005)	(0.006)	(0.004)	(0.009)	(0.006)	(0.003)	(0.006)	(0.003)	(0.005)	(0.007)	(0.002)
Migrant	0.030	0.017*	0.014	0.013	-0.053***	0.030**	0.017	0.029**	0.030*	0.008	0.023	-0.011	-0.008	0.020	0.007	0.008	0.003	0.003	0.007	0.013	0.066***	-0.008	-0.270***	0.033**	-0.275***	0.011	0.003	0.016**
	(0.047)	(0.009)	(0.013)	(0.012)	(0.018)	(0.012)	(0.033)	(0.013)	(0.016)	(0.035)	(0.020)	(0.016)	(0.043)	(0.025)	(0.010)	(0.032)	(0.007)	(0.022)	(0.013)	(0.011)	(0.025)	(0.016)	(0.022)	(0.016)	(0.029)	(0.011)	(0.016)	(0.008)

Not satisfied with dwelling	0.185***	0.120***	0.079***	0.115***	0.094***	0.084***	0.028	0.071***	0.057***	0.190***	0.165***	0.132***	0.164***	0.058***	0.059***	0.075	0.070***	0.046**	0.092***	0.048***	0.249***	0.082**	0.040***	0.024	0.028**	0.070**	0.105***	0.087***
	(0.026)	(0.021)	(0.023)	(0.023)	(0.014)	(0.012)	(0.019)	(0.016)	(0.019)	(0.036)	(0.032)	(0.031)	(0.034)	(0.011)	(0.018)	(0.051)	(0.012)	(0.023)	(0.029)	(0.014)	(0.052)	(0.035)	(0.009)	(0.022)	(0.013)	(0.029)	(0.037)	(0.008)
Shortage of space		0.021**	0.053***	0.121***	0.028**	0.069***	0.111***	-0.007	0.028	0.078***	0.142***	0.061***	-0.038	0.015	0.047***	0.070**	0.027***	0.011	0.089***	0.042***	0.099***	0.095***	0.034***	0.011	0.025**	0.036***	0.130***	0.059***
		(0.010)	(0.016)	(0.020)	(0.012)	(0.011)	(0.029)	(0.009)	(0.019)	(0.025)	(0.026)	(0.017)	(0.027)	(0.010)	(0.015)	(0.032)	(0.010)	(0.019)	(0.023)	(0.012)	(0.023)	(0.020)	(0.009)	(0.014)	(0.010)	(0.013)	(0.022)	(0.008)
Household has changed residence within the pa 5 years	0.046***	0.012	-0.004	0.002	0.021*	-0.002	0.025	0.026**	0.007	0.017	0.021	-0.007	0.007	0.062***	0.010	0.039*	0.040***	0.043	0.011	0.048***	0.012	0.007	0.011	0.014	0.005	-0.004	0.014	0.015**
	(0.009)	(0.009)	(0.011)	(0.011)	(0.011)	(0.007)	(0.021)	(0.012)	(0.015)	(0.016)	(0.017)	(0.011)	(0.031)	(0.018)	(0.010)	(0.021)	(0.010)	(0.035)	(0.013)	(0.016)	(0.018)	(0.012)	(0.008)	(0.022)	(0.010)	(0.011)	(0.015)	(0.006)
Intermediate area		0.022**	-0.019	0.001	-0.009	0.015*	0.009	0.016		-0.068***	0.008	-0.010	0.088**	-0.003	0.006		-0.002	-0.054***	-0.011			-0.002	-0.015**	0.018	-0.021**		0.003	0.002
		(0.009)	(0.012)	(0.011)	(0.009)	(0.007)	(0.023)	(0.012)		(0.026)	(0.021)	(0.011)	(0.035)	(0.009)	(0.010)		(0.005)	(0.014)	(0.019)			(0.015)	(0.007)	(0.016)	(0.008)		(0.018)	(0.003)
Thinly populated area		0.006	-0.027*	0.010	-0.007	0.019**	-0.008	0.023	0.023	-0.053**	-0.016	-0.009	-0.010	-0.029***	-0.003	0.020	-0.007	-0.044**	-0.034*	-0.023***		-0.005	-0.018***	-0.017	-0.017**		0.015	-0.004
		(0.010)	(0.015)	(0.015)	(0.010)	(0.010)	(0.019)	(0.016)	(0.014)	(0.024)	(0.023)	(0.014)	(0.020)	(0.008)	(0.009)	(0.019)	(0.007)	(0.015)	(0.018)	(0.008)		(0.012)	(0.006)	(0.012)	(0.008)		(0.015)	(0.005)
Non-urban area (AUS)	0.012																											
	(0.009)																											
Remote area (AUS)	0.049																											
	(0.043)																											
Observation	10144	4147	3807	5053	5034	8318	3081	4459	2584	3622	2519	4815	2815	6469	2925	1815	10347	2780	4120	3066	4836	3619	7518	1627	3680	3791	3413	122138
Prospective Movers	1353	209	233	432	203	583	339	225	152	608	784	477	403	376	157	237	488	113	316	176	506	282	269	82	125	154	322	8251

***p < 0.01, **p < 0.05, *p < 0.1

Appendix C: Additional material on data sources and robustness analysis

Data sources and definitions

This section presents the data used in the paper and the procedures applied to harmonise European and non-European household survey data sources.

Household survey data

The analysis builds on three household surveys: 1) the special module on Housing conditions run in 2012 in the context of the EU Statistics on Income and Living Conditions (EU-SILC); 2) the American Household Survey (AHS); and 3) the Household, Income and Labour Dynamics in Australia (HILDA) Survey. EU-SILC is used as the reference dataset given its focus on housing conditions in the 2012 special module and its cross-country nature. US and Australian data are harmonised in accordance with Eurostat guidelines.

Table C1 provides an overview of the data availability and sample size for each country. This is followed by a discussion on the cross-country harmonisation procedures and related caveats.

Table C1. Household survey data – EU SILC 2012

Country	Responsible Institution	Sample Size	Regions	Measurement for degree of urbanisation
Australia	Melbourne Institute of Applied Economic and Social Research	23182	States	X*
Austria	Statistics Austria	11477	NUTS 03	X
Belgium	Statistics Belgium	11192	NUTS 03	X
Czech Republic	Czech Statistical Office	17310	NUTS 03	X
Denmark	Statistics Denmark	10868	NUTS 08 (only one region)	X
Estonia	Statistics Estonia	11902	NUTS 03 (only one region)	X
Finland	Statistics Finland	20481	NUTS 03	X
France	INSEE – National Institute for Statistics and Economic Studies	22742	NUTS 03	X
Germany	Federal Statistical Office of Germany	23587	n.a	X
Great Britain	Office for National Statistics	18336	NUTS 03	X
Greece	Hellenic Statistical Authority	11698	NUTS 03	X

Hungary	Hungarian Central Statistical Office	23846	NUTS 03	X
Iceland	Statistics Iceland	6994	NUTS 03 (only one region)	X
Ireland	Central Statistics Office (CSO)	8799	NUTS 03 (only one region)	X
Italy	Italian National Institute of Statistics	40287	NUTS 03	X
Latvia	Central Statistical Bureau of Latvia	12964	NUTS 03 (only one region)	X
Lithuania	Statistics Lithuania	11224	NUTS 03 (only one region)	X
Luxembourg	STATEC	12579	NUTS 03 (only one region)	X
Netherlands	Statistics Netherlands	19529	n.a	
Norway	Statistics Norway	12177	NUTS 03 (only one region)	X
Poland	Central Statistical Office of Poland	30755	NUTS 03	X
Portugal	Statistics Portugal	13584	n.a	X
Slovakia	The Statistical Office of the Slovak Republic	13602	NUTS 08 (only one region)	X
Slovenia	The Statistical Office of the Republic of Slovenia	24003	n.a	
Spain	National Statistics Institute (INE-Spain)	28210	NUTS 03	X
Sweden	Statistics Sweden	13307	NUTS 08	X
Switzerland		14383	NUTS 08 (only one region)	X
United States	U.S. Census Bureau	84356	Census regions	X*

Note: The star (*) denotes instances where the urbanisation measurement differs from the EU SILC density definitions. See the discussion below for details.

Data harmonisation for household surveys

Key variables obtained from the AHS and the HILDA surveys need to be harmonised to the EU SILC survey in several dimensions to allow for a comparable analysis (Table C2 and Table C3).

1. **Dependent binary variable on residential mobility**. In the EU-SILC 2012 special module on housing, individuals are asked whether or not they have changed dwelling in the last five years. Neither AHS nor HILDA offer the exact same measure. AHS records the year in which the individual moved in, which allows calculating whether this has happened within the last five years. HILDA data does not allow for a measurement yielding the same level of precision. Given the limitations of the dataset, the proxy mobility measure is based on a variable counting the years at

an individual's current address. Years at current address is constructed based on several variables of administrative nature:

- Date of the interview
- Type of the interview
- Years at the current address at the previous interview
- Change of address since last interview
- The month in which the individual moved to the current address
- The year in which the individual moved to the current address.

Given the fact that this variable is not based on individuals' responses, it also counts new people entering the panel survey and hence yields a likely upwards biased measure of mobility. This implies that this proxy measure of mobility has to be taken with caution.[56] As a result, in order to minimise bias and ensure cross-country comparability, Australia is excluded from the cross country analysis. However, the inclusion of Australia in the cross-country analysis is part of the battery of robustness tests regarding the policy results. Robustness tests are reported later in this Appendix.

Housing tenure status. EU-SILC distinguishes five types of tenure statuses, as discussed in the main paper: outright owners, owners with a mortgage, private tenants paying rent at market price, tenants paying rent lower than market price and tenants living for free. AHS and HILDA do not provide equivalent measures but allow for constructing of similar categories. Table C2 and Table C3 below illustrate the harmonisation procedure.

[56] Still, the magnitude of the resulting mobility rates is roughly in line with the literature**Invalid source specified.**.

Table C2. Harmonising the housing tenure status variable to EU SILC definition: Australia (HILDA)

Condition I	Condition II	Final category	Variable names in HILDA
Own/currently paying off mortgage **OR** Involved in a rent-buy scheme	Loan paid off	Outright owner	HSTENR, HSMGPD
Own/currently paying off mortgage **OR** Involved in a rent-buy scheme	No institutional loan	Outright owner	HSTENR, HSMGUSE
Own/currently paying off mortgage **OR** Involved in a rent-buy scheme	Loan not paid off	Owner with a mortgage	HSTENR, HSMGPD
Rent (or pay board)	No government housing authority **OR** co-operative housing	Private tenant paying rent at market price	HSTENR, HSLLORD
Rent (or pay board)	Government housing authority **OR** co-operative housing	Tenant paying rent lower than market price	HSTENR, HSLLORD
Live here rent free/Life Tenure		Tenant living for free	HSTENR

Table C3. Harmonising the housing tenure status variable to EU SILC definition: United States (AHS)

Condition I	Condition II	Final category	Variable names in AHS
Owned or being bought by someone in your household	Number of mortgages < 1	Outright owner	TENURE, MCNT
Owned or being bought by someone in your household	Number of mortgages >= 1	Owner with mortgage	TENURE, MCNT
Rented	Government does not subsidise rent	Private tenant paying rent at market price	TENURE, SUBRNT
Rented	Government subsidises rent for this unit	Tenant paying rent lower than market price	TENURE, SUBRNT
Occupied without payment of rent		Tenant living for free	TENURE

2. **Labour market status variable**. The variables in AHS do not allow for a clear identification of the individual's labour market status which implies finding a proxy measure for the United States. An individual is then considered as unemployed based on whether she/he reports to have received labour income in the 12 months prior to the survey (2013).
3. **The definition of urbanisation of the area of residence**. EU-SILC follows the DEGURBA classification which defines the following categories:
    - Densely populated area: Contiguous grid cells of 1km^2 with a density of at least 1500 inhabitants per km^2 and a minimum population of 50000.

- Intermediate area: Clusters of contiguous grid cells of 1km^2 with a density of at least 300 inhabitants per km^2 and a minimum population of 5000.
- Thinly-populated area: Grid cells outside urban clusters.

The Australian dataset allows to distinguish between urban, non-urban and remote areas, based on the Accessibility/Remoteness Index of Australia (ARIA) scores from the 2001 Census. However, this is not a measurement of density and is therefore separately reported in the country by country regressions. Similarly, AHS records if the household is situated inside or outside a metropolitan statistical area (MSA), which denotes a geographical region with a relatively high population density at its core and close economic ties throughout the area. These areas are defined and regularly updated by official sources. The micro level urbanisation rate does not enter the cross country regressions in order to pre-empt comparability issues. In addition, it is also found to be insignificant when regressing on the pooled sample.

4. AHS does not allow to control for satisfaction with the dwelling.
5. AHS data does not allow for identifying prospective movers, i.e. individuals who expect to change their dwelling. In the case of HILDA the time horizon of prospective movers differs to the OECD EU country sample (6 months for EU countries, 12 months for Australia).

Policy-related data

Table C4 provides an overview of the sources of all policy variables covered in the econometric analysis. Whenever possible, the average of the period in which an individual's decision to move has taken place (2007-2012) is calculated, but this differs depending on data availability.

Table C4. Policy-related data

Policy	Source	Timespan	Description
Landlord-tenant regulation	Andrews, D., Sánchez, A. C., & Johansson, Å. (2011). Housing markets and structural policies in OECD countries.	2009	This measure captures the difficulty associated with tenant eviction as well as tenure security and deposit requirements. Higher values correspond to stricter landlord-tenant regulation.
Rent control	Andrews, D., Sánchez, A. C., & Johansson, Å. (2011). Housing markets and structural policies in OECD countries.	2009	This indicator measures if initial rent levels can be freely negotiated between the landlord and the tenant, which criteria apply when setting those levels and how easily rent can be increased and if so under which rules. Higher values correspond to stricter rent control.
Notary fees	Andrews, D., Sánchez, A. C., & Johansson, Å. (2011). Housing markets and structural policies in OECD countries.	2009	Notarial and other legal fees are fees linked to property transaction. The indicator's value is based on the member countries' replies to the 2010 OECD Housing Market Questionnaire.
Legal fees	Andrews, D., Sánchez, A. C., & Johansson, Å. (2011). Housing markets and structural policies in OECD countries.	2009	Notarial and other legal fees are fees linked to property transaction. The indicator's value is based on the member countries' replies to the 2010 OECD Housing Market Questionnaire.
Registration fees	Andrews, D., Sánchez, A. C., & Johansson, Å. (2011). Housing markets and structural policies in OECD countries.	2009	Registration fees are fees and taxes incurred in registering the property. The indicator's value is based on the member countries' replies to the 2010 OECD Housing Market Questionnaire.
Agent fees	Andrews, D., Sánchez, A. C., & Johansson, Å. (2011). Housing markets and structural policies in OECD countries.	2009	Typical real estate agency fees are fees linked to real estate agents who act as intermediaries in property purchases. These fees are occasionally influenced by regulations such as minimum tariffs or entry restrictions. The indicator's value is based on the member countries' replies to the 2010 OECD Housing Market Questionnaire.
Transfer taxes	Andrews, D., Sánchez, A. C., & Johansson, Å. (2011). Housing markets and structural policies in OECD countries.	2009	Transfer taxes are taxes imposed on the sale and purchase of real estate. These include, for instance, stamp duties. The indicator's value is based on the member countries' replies to the 2010 OECD Housing Market Questionnaire.

Elasticity of housing supply	Caldera Sánchez, A. and Å. Johansson (2011), "The Price Responsiveness of Housing Supply in OECD Countries", OECD Economics Department Working Papers, No. 837, OECD Publishing, Paris.	2009	Measures the extent to which housing supply responds to price changes in the housing market. Estimates are based on a stock flow model of the housing market. Higher values denote a more elastic supply.
Household debt	OECD Resilience Database	Avg. 2007-2012	Liabilities less financial derivatives, and shares and other equity; in per cent of GDP. Based on consolidated data for most countries.
Mortgage credit	OECD Resilience Database	Avg. 2007-2012	Loans for house purchasing, in per cent of GDP.
Public spending on housing allowances	OECD Affordable Housing Database	2013	This indicator measures public spending on housing allowances, where housing allowances denote means- and/or income-tested income transfers to households directed at supporting households in meeting their housing costs.
Social expenditure on housing	OECD Social Expenditure Database	2010	Public expenditure on housing (both cash transfers and in-kind) as percentage of GDP.
Taxes on financial and capital transactions (% of Total Tax revenue)	OECD Revenue Statistics	Avg. 2007-2012	This sub-heading comprises, inter alia, taxes on the issue, transfer, purchase and sale of securities, taxes on cheques, and taxes levied on specific legal transactions such as validation of contracts and the sale of immovable property.
Job protection on regular contracts	LFS – Strictness of EPL Database	Avg. 2008-2012	The OECD indicators of employment protection legislation measure the procedures and costs involved in dismissing individuals or groups of workers and the procedures involved in hiring workers on fixed-term or temporary work agency contracts. The indicators have been compiled using the Secretariat's own reading of statutory laws, collective bargaining agreements and case law as well as contributions from officials from OECD member countries and advice from country experts.
Job protection on temporary contracts	LFS – Strictness of EPL Database	Avg. 2008-2012	The OECD indicators of employment protection legislation measure the procedures and costs involved in dismissing individuals or groups of workers and the procedures involved in hiring workers on fixed-term or temporary work agency contracts. The indicators have been compiled using the Secretariat's own reading of statutory laws, collective bargaining agreements and case law as well as contributions from officials from OECD member countries and advice from country experts.

Unemployment benefits replacement rate	OECD Social Protection and Well-being database	Avg. 2007-2012	Measure of the proportion of previous in-work income that is maintained for a single person without children after 12 months of unemployment, formerly earning 67% of the average wage, housing benefits included.
Adequacy of minimum income benefits	OECD Social Protection and Well-being database	Avg. 2007-2012	This indicator measures the income of jobless single parents with 2 children relying on minimum-income safety-net benefits as a percentage of the median disposable income in the population.
Spending on active labour market policy	OECD Labour Market Programmes database	Avg. 2007-2012	Public spending on active labour market policy as percentage of GDP.
Spending on training under active labour market policy	OECD Labour Market Programmes database	Avg. 2007-2012	Public spending on training under active labour market policy as percentage of GDP.
Spending on supported employment and rehabilitation under active labour market policy	OECD Labour Market Programmes database	Avg. 2007-2012	Public spending on supported employment and rehabilitation under active labour market policy as percentage of GDP.
Spending on PES and administration	OECD Labour Market Programmes database	Avg. 2007-2012	Public spending on public employment services and administration as percentage of GDP.
Birth rate of enterprises	SDBS Business Demography Indicators database	Avg. 2008-2012	Birth rate: number of enterprise births in the reference period (t) divided by the number of enterprises active in t.
Administrative burdens on start-ups	OECD Product Market Regulation database	Avg. 2008 and 2013	
Import competition	Trade in Value Added Database	Avg. 2008-2012	Import competition is defined as the share of gross imports of gross output (production, all industries). These measures are based on the OECD Inter-Country Input-Output Database.
Import competition in manufacturing	Trade in Value Added Dataset	Avg. 2008-2012	Import competition in manufacturing is defined as the share of gross imports of gross output (production) in manufacturing industries. These measures are based on the OECD Inter-Country Input-Output Database.
Import competition in manufacturing from China	Trade in Value Added Dataset	Avg. 2008-2012	Import competition in manufacturing from China is defined as the share of gross imports from China of total gross output (production) in manufacturing industries. These measures are based on the OECD Inter-Country Input-Output Database.

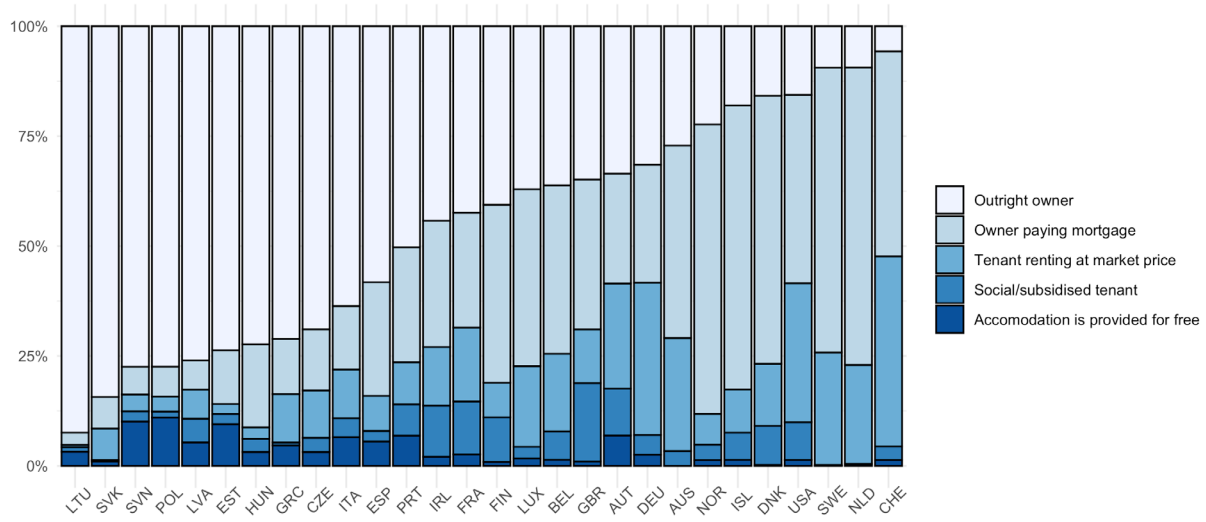
Additional material

This section presents additional material complementing the main paper.

First, the housing tenure mix in 2012 and 2017 (last available year) is provided (Figure C1 and C2). Even though data is only available for a subset of European countries in 2017, the overall picture and ranking stays the same between the two periods.

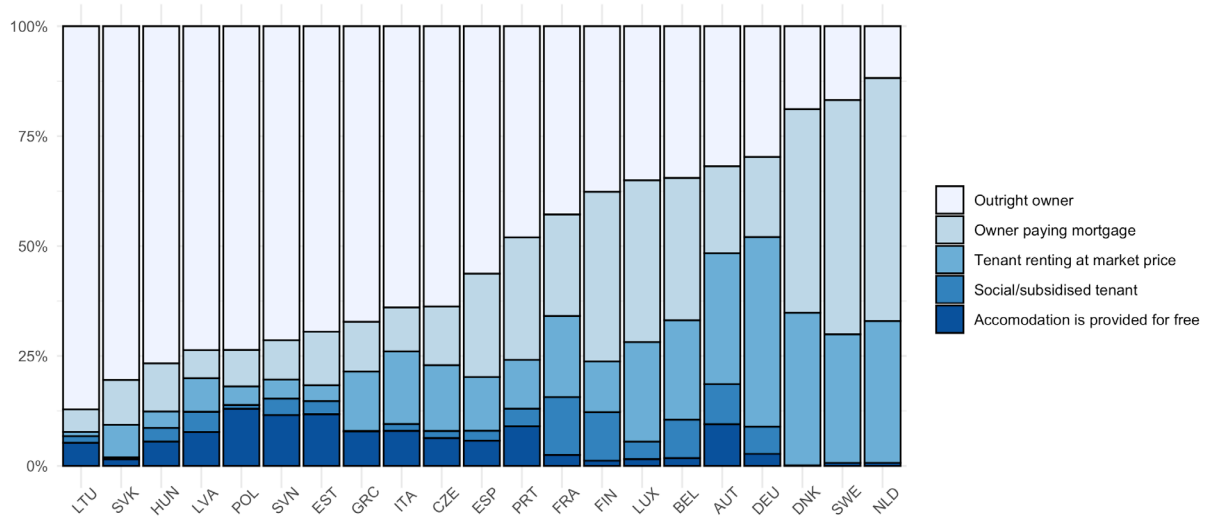
Secondly, supplementary regression tables are shown which provide additional information to the analysis in the main paper.

Figure C1. Housing tenure mix in 2012



Source: OECD calculations based on 2012 EU-SILC for European countries, 2012 HILDA for Australia and 2013 AHS for United States.

Figure C2. Housing tenure mix in 2017



Note: Data for 2017 is only available for a subset of European countries.
Source: OECD calculations based on 2017 EU-SILC.

Table C5 presents past mobility regressions run on the sub-sample of prospective mobility regressions, i.e. only household respondents, to check whether estimated differences between past and prospective mobility are not driven by different samples. This exercise validates the robustness of the results to the different samples.

Table C5. The effects of individual and household characteristics on the probability to move: country-by-country baseline estimates for household respondents

	AUT	BEL	CHE	CZE	DEU	DNK	ESP	EST	FIN	FRA	GBR	GRC	HUN	IRL	ISL	ITA	LTU	LUX	LVA	NLD	NOR	POL	PRT	SVK	SVN	SWE
Outright owner	-0.220***	-0.303***	-0.169***	-0.121***	-0.208***	-0.199***	-0.379***	-0.386***	-0.287***	-0.326***	-0.448***	-0.202***	-0.225***	-0.480***	-0.604***	-0.149***	-0.533***	-0.312***	-0.227***	-0.055	-0.303***	-0.286***	-0.281***	-0.111***	-0.161***	-0.249***
	(0.020)	(0.027)	(0.044)	(0.016)	(0.014)	(0.041)	(0.029)	(0.060)	(0.034)	(0.019)	(0.029)	(0.028)	(0.032)	(0.036)	(0.043)	(0.013)	(0.117)	(0.030)	(0.027)	(0.053)	(0.044)	(0.026)	(0.027)	(0.021)	(0.030)	(0.038)
Owner paying mortgage	-0.104***	-0.171***	-0.095***	-0.046***	-0.116***	-0.190***	-0.319***	-0.301***	-0.126***	-0.176***	-0.403***	-0.150***	-0.187***	-0.436***	-0.526***	-0.062***	-0.379***	-0.076***	-0.106***	-0.061***	-0.276***	-0.109***	-0.258***	0.054*	0.024	-0.135***
	(0.022)	(0.025)	(0.017)	(0.018)	(0.014)	(0.032)	(0.026)	(0.061)	(0.032)	(0.018)	(0.024)	(0.033)	(0.032)	(0.034)	(0.034)	(0.015)	(0.119)	(0.029)	(0.035)	(0.023)	(0.039)	(0.030)	(0.027)	(0.030)	(0.038)	(0.022)
Social/subsidised tenant	-0.107***	-0.120***	-0.086**	-0.113***	-0.065***	0.010	-0.262***	-0.061	-0.022	-0.130***	-0.274***	-0.040	-0.106***	-0.313***	-0.133**	-0.079***	-0.482***	-0.024	-0.079**		-0.107**	-0.127***	-0.237***	-0.170***	-0.108**	-0.215
	(0.021)	(0.035)	(0.039)	(0.022)	(0.021)	(0.045)	(0.040)	(0.079)	(0.037)	(0.019)	(0.030)	(0.088)	(0.039)	(0.041)	(0.053)	(0.021)	(0.124)	(0.071)	(0.039)		(0.054)	(0.041)	(0.037)	(0.020)	(0.042)	(0.191)
35-44	-0.239***	-0.292***	-0.197***	-0.094***	-0.247***	-0.235***	-0.112***	-0.156***	-0.303***	-0.278***	-0.233***	-0.116***	-0.077***	-0.101***	-0.183***	-0.113***	-0.105***	-0.221***	-0.103***	-0.265***	-0.268***	-0.142***	-0.219***	-0.153***	-0.078***	-0.265***
	(0.024)	(0.025)	(0.025)	(0.015)	(0.018)	(0.035)	(0.019)	(0.031)	(0.026)	(0.019)	(0.023)	(0.032)	(0.015)	(0.025)	(0.034)	(0.016)	(0.033)	(0.030)	(0.022)	(0.030)	(0.027)	(0.016)	(0.031)	(0.024)	(0.025)	(0.026)
45-54	-0.356***	-0.370***	-0.396***	-0.116***	-0.370***	-0.373***	-0.166***	-0.283***	-0.420***	-0.377***	-0.374***	-0.154***	-0.114***	-0.216***	-0.284***	-0.150***	-0.119***	-0.324***	-0.138***	-0.416***	-0.386***	-0.218***	-0.276***	-0.210***	-0.158***	-0.423***
	(0.024)	(0.025)	(0.023)	(0.016)	(0.017)	(0.034)	(0.019)	(0.031)	(0.025)	(0.019)	(0.022)	(0.033)	(0.015)	(0.025)	(0.036)	(0.016)	(0.033)	(0.030)	(0.022)	(0.027)	(0.027)	(0.015)	(0.031)	(0.023)	(0.025)	(0.026)
54-66	-0.404***	-0.432***	-0.505***	-0.152***	-0.411***	-0.473***	-0.194***	-0.297***	-0.476***	-0.443***	-0.422***	-0.185***	-0.142***	-0.258***	-0.342***	-0.183***	-0.122***	-0.388***	-0.163***	-0.470***	-0.476***	-0.224***	-0.327***	-0.227***	-0.167***	-0.512***
	(0.025)	(0.028)	(0.022)	(0.015)	(0.017)	(0.033)	(0.020)	(0.031)	(0.026)	(0.021)	(0.026)	(0.033)	(0.014)	(0.026)	(0.040)	(0.016)	(0.035)	(0.036)	(0.022)	(0.027)	(0.028)	(0.016)	(0.033)	(0.024)	(0.029)	(0.025)
Low education	-0.083***	-0.037*	-0.118***	-0.010	-0.017	-0.046	-0.058***	-0.066**	-0.024	-0.061***	-0.076***	-0.046**	-0.002	-0.024	-0.107***	-0.040***	-0.014	-0.006	-0.002	-0.088***	-0.111***	-0.050***	-0.040**	-0.037	-0.045**	-0.101***
	(0.022)	(0.021)	(0.029)	(0.020)	(0.021)	(0.032)	(0.014)	(0.027)	(0.024)	(0.017)	(0.023)	(0.022)	(0.012)	(0.018)	(0.026)	(0.011)	(0.019)	(0.028)	(0.021)	(0.027)	(0.026)	(0.015)	(0.020)	(0.023)	(0.020)	(0.031)
Middle education	-0.070***	-0.039**	-0.082***	-0.023**	-0.039***	-0.049**	-0.035**	-0.032*	-0.009	-0.055***	-0.057***	-0.058***	-0.013	-0.014	-0.013	-0.028***	0.012	-0.031	0.002	-0.069***	-0.050***	-0.019**	-0.037*	-0.020*	-0.025	-0.063***
	(0.014)	(0.016)	(0.015)	(0.011)	(0.010)	(0.023)	(0.014)	(0.017)	(0.017)	(0.012)	(0.015)	(0.020)	(0.009)	(0.017)	(0.024)	(0.010)	(0.015)	(0.025)	(0.012)	(0.019)	(0.017)	(0.009)	(0.022)	(0.011)	(0.016)	(0.017)
Inactive	0.041**	0.005	-0.008	0.011	0.004	0.039	0.005	-0.008	0.025	0.006	0.062**	-0.016	0.020*	-0.002	0.069**	-0.031***	0.013	0.010	0.032	-0.001	0.049	0.002	0.019	0.025	-0.056***	0.043
	(0.020)	(0.026)	(0.021)	(0.013)	(0.015)	(0.032)	(0.016)	(0.023)	(0.023)	(0.017)	(0.025)	(0.021)	(0.011)	(0.020)	(0.033)	(0.010)	(0.027)	(0.030)	(0.019)	(0.028)	(0.034)	(0.012)	(0.025)	(0.016)	(0.021)	(0.028)
Unemployed	0.052*	0.006	-0.058	0.013	-0.041**	-0.071	0.012	0.037	0.038	0.028	0.072**	0.039	-0.008	0.019	0.027	0.021	-0.025	0.070	-0.001	-0.054	0.027	0.002	0.021	0.018	-0.024	-0.053
	(0.029)	(0.029)	(0.050)	(0.018)	(0.019)	(0.044)	(0.015)	(0.031)	(0.030)	(0.021)	(0.034)	(0.027)	(0.011)	(0.022)	(0.053)	(0.016)	(0.016)	(0.049)	(0.017)	(0.046)	(0.058)	(0.015)	(0.020)	(0.020)	(0.020)	(0.042)
Quintile #1	0.083***	0.014	-0.015	0.016	0.002	-0.060	0.003	-0.018	-0.046	-0.051**	-0.083***	-0.011	0.007	-0.060*	-0.035	-0.013	0.044	-0.014	-0.014	-0.036	-0.106***	0.003	-0.016	-0.006	0.039	-0.068**
	(0.028)	(0.032)	(0.029)	(0.022)	(0.020)	(0.043)	(0.021)	(0.034)	(0.034)	(0.022)	(0.030)	(0.026)	(0.015)	(0.031)	(0.041)	(0.015)	(0.032)	(0.038)	(0.022)	(0.035)	(0.032)	(0.014)	(0.026)	(0.019)	(0.028)	(0.034)

Quintile #2	0.043*	0.027	-0.053**	-0.008	-0.005	-0.001	0.003	-0.030	-0.025	-0.042**	-0.079***	0.064**	-0.003	-0.045*	-0.006	0.009	0.013	0.018	-0.003	-0.037	-0.055*	0.005	-0.010	-0.002	0.037	-0.058**
	(0.024)	(0.028)	(0.024)	(0.014)	(0.018)	(0.034)	(0.020)	(0.027)	(0.027)	(0.019)	(0.023)	(0.028)	(0.012)	(0.024)	(0.033)	(0.013)	(0.027)	(0.035)	(0.021)	(0.032)	(0.028)	(0.013)	(0.024)	(0.017)	(0.023)	(0.028)
Quintile #3	0.037*	0.058**	-0.023	-0.012	-0.024	0.009	0.004	-0.058**	-0.024	-0.048***	-0.037*	0.034	-0.004	-0.055**	0.007	0.001	-0.020	-0.006	-0.003	-0.054**	-0.036	0.001	-0.009	-0.006	0.020	-0.000
	(0.020)	(0.023)	(0.021)	(0.013)	(0.016)	(0.028)	(0.018)	(0.023)	(0.024)	(0.017)	(0.020)	(0.025)	(0.011)	(0.022)	(0.030)	(0.012)	(0.022)	(0.030)	(0.017)	(0.024)	(0.023)	(0.011)	(0.021)	(0.014)	(0.019)	(0.024)
Quintile #4	0.037*	0.031	-0.024	-0.007	-0.020	0.003	0.007	-0.008	-0.049**	-0.005	-0.050***	0.023	0.001	-0.035*	0.031	-0.011	0.000	-0.033	-0.002	-0.032	-0.036*	0.012	-0.025	-0.003	0.020	-0.048**
	(0.019)	(0.019)	(0.019)	(0.011)	(0.014)	(0.025)	(0.016)	(0.021)	(0.021)	(0.016)	(0.018)	(0.023)	(0.010)	(0.021)	(0.028)	(0.011)	(0.020)	(0.028)	(0.016)	(0.022)	(0.021)	(0.011)	(0.018)	(0.014)	(0.017)	(0.021)
Living in cohabitation	-0.055***	-0.038**	-0.002	-0.023**	-0.051***	-0.038	-0.037***	-0.004	-0.021	-0.051***	-0.048***	0.002	-0.028***	-0.063***	-0.083***	-0.004	0.011	-0.049**	-0.028**	-0.025	-0.116***	-0.004	-0.031**	-0.009	0.005	-0.125***
	(0.018)	(0.017)	(0.019)	(0.011)	(0.014)	(0.024)	(0.013)	(0.018)	(0.017)	(0.012)	(0.016)	(0.023)	(0.008)	(0.017)	(0.023)	(0.010)	(0.018)	(0.023)	(0.013)	(0.021)	(0.018)	(0.010)	(0.015)	(0.012)	(0.015)	(0.017)
Female	-0.014	-0.014	0.009	0.007	-0.003	0.031	-0.012	0.011	0.027*	-0.023**	-0.031**	0.005	0.009	-0.007	-0.027	-0.004	0.004	-0.023	0.004	0.000	0.019	-0.017*	-0.013	0.003	0.017	0.023
	(0.013)	(0.014)	(0.014)	(0.008)	(0.010)	(0.020)	(0.011)	(0.017)	(0.015)	(0.011)	(0.014)	(0.017)	(0.008)	(0.017)	(0.020)	(0.008)	(0.016)	(0.020)	(0.012)	(0.017)	(0.016)	(0.009)	(0.013)	(0.010)	(0.013)	(0.016)
Household size	-0.018**	-0.016**	-0.054***	-0.014***	0.002	-0.037***	-0.013**	-0.018**	-0.022***	-0.020***	-0.029***	-0.003	-0.012***	-0.020***	0.004	-0.017***	-0.003	-0.011	-0.015***	-0.025***	-0.016**	-0.025***	-0.013*	-0.013***	-0.006	-0.015*
	(0.007)	(0.007)	(0.008)	(0.005)	(0.006)	(0.011)	(0.006)	(0.008)	(0.007)	(0.005)	(0.007)	(0.010)	(0.004)	(0.006)	(0.010)	(0.004)	(0.006)	(0.010)	(0.005)	(0.009)	(0.008)	(0.004)	(0.007)	(0.005)	(0.007)	(0.008)
Migrant	0.073***	0.069***	0.089***	0.046**	0.059***	0.003	0.042**	-0.001	-0.013	0.041**	-0.017	0.037	0.030	0.000	0.059	0.022*	0.015	0.049**	-0.016	0.034	0.066**	0.034	0.041**	0.003	0.059***	0.039*
	(0.018)	(0.020)	(0.017)	(0.018)	(0.019)	(0.038)	(0.019)	(0.029)	(0.051)	(0.019)	(0.029)	(0.024)	(0.026)	(0.019)	(0.037)	(0.012)	(0.022)	(0.020)	(0.017)	(0.033)	(0.027)	(0.066)	(0.021)	(0.036)	(0.017)	(0.023)
Satisfied with dwelling	-0.008	0.027	0.003	-0.010	-0.016	0.028	0.004	-0.016	-0.030	-0.042**	-0.078***	-0.030	-0.001	-0.031	-0.119**	0.007	-0.016	0.035	-0.008	0.005	0.099*	-0.001	-0.038**	-0.008	0.020	-0.041
	(0.023)	(0.025)	(0.030)	(0.011)	(0.014)	(0.022)	(0.015)	(0.021)	(0.030)	(0.020)	(0.028)	(0.019)	(0.009)	(0.023)	(0.047)	(0.012)	(0.017)	(0.035)	(0.015)	(0.052)	(0.056)	(0.011)	(0.018)	(0.014)	(0.028)	(0.035)
Intermediate area	0.026	-0.015	0.026	-0.033***	-0.001	0.075***	0.013		0.064**	0.032**	0.005	0.005	0.020**	-0.019		0.004	0.019	-0.012			-0.044**	0.021**	-0.008	-0.020		-0.059**
	(0.017)	(0.018)	(0.017)	(0.011)	(0.011)	(0.027)	(0.013)		(0.030)	(0.014)	(0.016)	(0.027)	(0.009)	(0.018)		(0.008)	(0.020)	(0.031)			(0.022)	(0.010)	(0.015)	(0.012)		(0.027)
Thinly populated area	0.022	-0.016	0.053**	-0.030***	-0.023*	0.039	0.038**	-0.010	-0.000	0.006	0.065***	-0.026	-0.015*	-0.011	0.006	-0.038***	0.010	0.011	-0.023**		-0.013	-0.001	-0.035**	-0.012		-0.020
	(0.019)	(0.024)	(0.021)	(0.012)	(0.014)	(0.023)	(0.015)	(0.015)	(0.024)	(0.013)	(0.020)	(0.018)	(0.009)	(0.017)	(0.021)	(0.009)	(0.013)	(0.031)	(0.012)		(0.019)	(0.010)	(0.016)	(0.012)		(0.022)
Observations	4347	3973	5190	5656	8714	3357	7853	3168	5516	8049	4955	3066	7352	2959	1938	11700	3158	4518	3753	5791	3707	8110	3432	3873	4229	3971

Note: Estimates from probit regression. Values are marginal effects. The coefficients correspond to the average impact of a marginal/categorical change in the explanatory variable on the probability to move. The sample excludes atypical occupational statuses and is limited to household respondents aged 24 to 66. The estimates are weighted by the household sampling probability and standard errors are clustered by household id. The regressions include region dummies for the following countries for which the data was available: Austria, Belgium, Czech Republic, Finland, France, Greece, Hungary, Italy, Poland, Spain, Sweden and the United Kingdom.
*** p<0.01, **p<0.05, *p<0.1.
Source: OECD calculations based EU SILC 2012 module on housing.

The baseline country-by-country analysis is extended to uncover the potential effect of some policy-relevant individual drivers of residential mobility, namely being in a temporary employment contract and receiving housing allowances. Tables C6 and C7 and present the results for the subset of European countries for which data are available.

Table C6. Baseline adding individual labour contract status

	AUT	BEL	CHE	CZE	DEU	DNK	ESP	EST	FIN	FRA	GBR	GRC	HUN	IRL
Temporary contract	0.044**	-0.008	-0.011	0.038***	0.004	-0.046	-0.002	-0.002	0.061**	0.004	0.090**	0.009	0.003	-0.004
	(0.022)	(0.018)	(0.025)	(0.011)	(0.012)	(0.052)	(0.011)	(0.027)	(0.025)	(0.014)	(0.035)	(0.015)	(0.008)	(0.017)
Observations	7485	6868	8087	10846	14978	3264	16334	6282	6005	12428	8260	6175	14000	5135
***p < 0.01, **p < 0.05, *p < 0.1														
	ISL	ITA	LTU	LUX	LVA	NLD	NOR	POL	PRT	SVK	SVN	SWE	Pooled EU OECD	
Temporary contract	0.083**	0.014*	-0.000	-0.001	0.006	-0.062***	0.088**	0.024***	0.003	0.009	0.024	0.026	0.014***	
	(0.037)	(0.008)	(0.015)	(0.027)	(0.015)	(0.023)	(0.038)	(0.007)	(0.013)	(0.011)	(0.016)	(0.028)	(0.005)	
Observations	1936	24231	6156	8463	7155	6990	3613	16768	6905	8808	5564	3956	214138	
***p < 0.01, **p < 0.05, *p < 0.1														

Note: Estimates from probit regression. Values are marginal effects. The coefficients correspond to the average impact of a marginal/categorical change in the explanatory variable on the probability to move. The sample excludes atypical occupational statuses and is limited to individuals aged 24 to 66. The estimates are weighted by the individual sampling probability and standard errors are clustered by household id. The regressions include region dummies for the following countries for which the data was available: Austria, Belgium, Czech Republic, Finland, France, Greece, Hungary, Italy, Poland, Spain, Sweden and the United Kingdom.
*** p<0.01, **p<0.05, *p<0.1.
Source: OECD calculations based EU SILC 2012 module on housing

Table C7. Baseline adding household reception of housing allowances

	AUT	CZE	DEU	ESP	EST	FRA	GRC	IRL	ITA	LUX	LVA	POL	PRT	SVN	SWE
Household receives housing allowances	0.050	0.015	-0.010	0.086***	-0.075	0.012	-0.156**	0.038***	0.050***	-0.013	0.004	-0.004	-0.088***	-0.005	0.085**
	(0.032)	(0.026)	(0.018)	(0.026)	(0.053)	(0.013)	(0.078)	(0.015)	(0.018)	(0.024)	(0.018)	(0.028)	(0.025)	(0.049)	(0.041)
Observations	7500	10852	14978	16706	6344	14342	6738	5340	24231	8607	7218	16773	7342	5580	3971
***p < 0.01, **p < 0.05, *p < 0.1															

Note: Estimates from probit regression. Values are marginal effects. The coefficients correspond to the average impact of a marginal/categorical change in the explanatory variable on the probability to move. The sample excludes atypical occupational statuses and is limited to individuals aged 24 to 66. The estimates are weighted by the individual sampling probability and standard errors are clustered by household id. The regressions include region dummies for the following countries for which the data was available: Austria, Belgium, Czech Republic, Finland, France, Greece, Hungary, Italy, Poland, Spain, Sweden and the United Kingdom.
*** p<0.01, **p<0.05, *p<0.1.

Table C8 presents the full cross-country regression estimates on the effects of policy-related factors on residential mobility policy.

Table C8. Policy regression results (full tables)

	Landlord-tenant regulation	Rent control	Notary fees	Legal fees	Registration fees	Agent fees	Transfer taxes	Elasticity of housing supply
Policy-related factors	-0.039***	-0.031***	-0.050***	-0.030*	0.003	-0.001	-0.015***	0.061**
	(0.013)	(0.009)	(0.014)	(0.035)	(0.007)	(0.014)	(0.004)	(0.027)
Owner	-0.270***	-0.267***	-0.261***	-0.259***	-0.260***	-0.259***	-0.262***	-0.272***
	(0.041)	(0.041)	(0.043)	(0.045)	(0.045)	(0.044)	(0.043)	(0.044)
Social/subsidised tenant	-0.107***	-0.098***	-0.100***	-0.100***	-0.100***	-0.096***	-0.110***	-0.091***
	(0.022)	(0.024)	(0.024)	(0.025)	(0.023)	(0.023)	(0.024)	(0.024)
35-44	-0.169***	-0.168***	-0.173***	-0.176***	-0.176***	-0.175***	-0.172***	-0.178***
	(0.016)	(0.016)	(0.016)	(0.015)	(0.016)	(0.016)	(0.015)	(0.017)
45-54	-0.290***	-0.289***	-0.295***	-0.297***	-0.297***	-0.296***	-0.291***	-0.305***
	(0.020)	(0.020)	(0.020)	(0.021)	(0.021)	(0.021)	(0.019)	(0.022)
54-66	-0.345***	-0.344***	-0.350***	-0.350***	-0.350***	-0.349***	-0.346***	-0.361***
	(0.020)	(0.020)	(0.020)	(0.022)	(0.022)	(0.022)	(0.020)	(0.022)
Low education	-0.058***	-0.052***	-0.057***	-0.068***	-0.070***	-0.068***	-0.066***	-0.064***
	(0.010)	(0.009)	(0.012)	(0.013)	(0.013)	(0.013)	(0.013)	(0.014)
Middle education	-0.036***	-0.033***	-0.037***	-0.040***	-0.039***	-0.038***	-0.042***	-0.034***
	(0.008)	(0.007)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.008)
Inactive	-0.015*	-0.013*	-0.017*	-0.027**	-0.026*	-0.025*	-0.024*	-0.016*
	(0.015)	(0.013)	(0.014)	(0.015)	(0.016)	(0.016)	(0.017)	(0.013)
Unemployed	-0.006*	-0.006	-0.007*	-0.005	-0.007*	-0.007*	-0.002	-0.009*
	(0.008)	(0.009)	(0.009)	(0.007)	(0.008)	(0.009)	(0.006)	(0.011)
Income quintile #1	-0.005	-0.012	0.010	0.023*	0.021*	0.017*	0.020*	-0.006
	(0.018)	(0.018)	(0.021)	(0.018)	(0.020)	(0.021)	(0.018)	(0.017)
Income quintile #2	-0.012*	-0.016*	-0.003	0.005	0.002	-0.000	0.003	-0.016*
	(0.013)	(0.013)	(0.015)	(0.013)	(0.016)	(0.016)	(0.014)	(0.011)
Income quintile #3	-0.012*	-0.015*	-0.006	-0.004	-0.006	-0.007*	-0.005	-0.016**
	(0.009)	(0.009)	(0.009)	(0.008)	(0.010)	(0.010)	(0.009)	(0.009)
Income quintile #4	-0.003	-0.004*	-0.000	-0.002	-0.003	-0.003	-0.002	-0.007*
	(0.006)	(0.005)	(0.005)	(0.005)	(0.006)	(0.006)	(0.005)	(0.006)
Living in cohabitation	-0.011*	-0.011*	-0.010*	-0.008*	-0.008*	-0.009*	-0.005	-0.013*

	(0.010)	(0.010)	(0.011)	(0.011)	(0.010)	(0.011)	(0.011)	(0.011)
Female	-0.000	-0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Household size	-0.022***	-0.022***	-0.020***	-0.019***	-0.019***	-0.019***	-0.020***	-0.021***
	(0.005)	(0.005)	(0.005)	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)
Migrant	0.043***	0.045***	0.042***	0.043***	0.043***	0.043***	0.046***	0.045***
	(0.015)	(0.015)	(0.015)	(0.016)	(0.015)	(0.015)	(0.017)	(0.016)
Country level household income	0.000	0.000*	0.000**	0.000**	0.000**	0.000**	0.000**	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Country level urbanisation rate	0.006**	0.004***	0.004***	0.004*	0.004**	0.004**	0.006***	0.005**
	(0.002)	(0.001)	(0.001)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)
Country level homeownership rate	-0.003*	-0.002*	-0.001	0.001	0.001	0.001	0.001	-0.000
	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.002)	(0.003)
Observations	247413	256255	250284	255864	250284	255864	262602	193764
Number of countries	22	23	22	23	22	23	24	16
***p < 0.01, **p < 0.1, *p < 0.5								

	Household debt (% of GDP)	Mortgage credit (% of GDP)	Public spending on housing allowances (% of GDP)	Social expenditure on housing	Recurrent taxes on immovable property (% of taxation)	Taxes on financial and capital transactions	Job protection on regular contracts	Job protection on temporary contracts
Policy-related factors	0.001**	0.000	0.078***	0.073***	0.014***	-0.035**	-0.074***	-0.015
	(0.001)	(0.001)	(0.016)	(0.011)	(0.003)	(0.015)	(0.019)	(0.022)
Owner	-0.260***	-0.249***	-0.277***	-0.257***	-0.272***	-0.263***	-0.268***	-0.259***
	(0.044)	(0.050)	(0.046)	(0.043)	(0.039)	(0.042)	(0.040)	(0.044)
Social/subsidised tenant	-0.097***	-0.084***	-0.124***	-0.113***	-0.112***	-0.090***	-0.096***	-0.090***
	(0.026)	(0.024)	(0.029)	(0.026)	(0.023)	(0.022)	(0.024)	(0.023)
35-44	-0.173***	-0.173***	-0.184***	-0.171***	-0.166***	-0.170***	-0.166***	-0.171***
	(0.016)	(0.018)	(0.015)	(0.015)	(0.015)	(0.015)	(0.016)	(0.016)
45-54	-0.292***	-0.292***	-0.314***	-0.291***	-0.286***	-0.290***	-0.287***	-0.291***
	(0.021)	(0.024)	(0.017)	(0.020)	(0.018)	(0.019)	(0.019)	(0.021)
54-66	-0.345***	-0.344***	-0.371***	-0.344***	-0.343***	-0.345***	-0.343***	-0.343***
	(0.021)	(0.023)	(0.017)	(0.020)	(0.018)	(0.019)	(0.019)	(0.021)
Low education	-0.064***	-0.061***	-0.059***	-0.061***	-0.053***	-0.054***	-0.048***	-0.060***

	(0.012)	(0.012)	(0.012)	(0.012)	(0.009)	(0.011)	(0.008)	(0.012)
Middle education	-0.035***	-0.036***	-0.037***	-0.038***	-0.034***	-0.034***	-0.033***	-0.036***
	(0.008)	(0.009)	(0.008)	(0.008)	(0.007)	(0.007)	(0.007)	(0.008)
Inactive	-0.023*	-0.033**	-0.012*	-0.026**	-0.010*	-0.016*	-0.010*	-0.022*
	(0.015)	(0.017)	(0.013)	(0.015)	(0.013)	(0.011)	(0.013)	(0.015)
Unemployed	-0.008*	-0.006*	-0.000	-0.004	-0.004	-0.004	-0.005	-0.006*
	(0.009)	(0.008)	(0.007)	(0.006)	(0.008)	(0.008)	(0.008)	(0.008)
Income quintile #1	0.019*	0.034*	0.025*	0.027*	-0.015*	-0.013*	-0.019*	0.005
	(0.020)	(0.022)	(0.016)	(0.019)	(0.017)	(0.017)	(0.019)	(0.020)
Income quintile #2	0.002	0.015*	0.004	0.008	-0.020*	-0.018*	-0.019*	-0.007
	(0.015)	(0.019)	(0.012)	(0.014)	(0.012)	(0.013)	(0.013)	(0.016)
Income quintile #3	-0.005	0.001	-0.004	-0.004	-0.018**	-0.016*	-0.015*	-0.010*
	(0.010)	(0.012)	(0.007)	(0.009)	(0.010)	(0.010)	(0.009)	(0.010)
Income quintile #4	-0.000	0.003	-0.002	-0.003	-0.007*	-0.005*	-0.003	-0.003
	(0.006)	(0.006)	(0.005)	(0.006)	(0.006)	(0.006)	(0.005)	(0.005)
Living in cohabitation	-0.008	-0.008	-0.013*	-0.007	-0.011*	-0.010*	-0.012*	-0.010*
	(0.012)	(0.014)	(0.011)	(0.011)	(0.009)	(0.010)	(0.010)	(0.010)
Female	0.001	0.001	0.001*	0.001	-0.000	-0.001	-0.000	0.000
	(0.002)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Household size	-0.019***	-0.016***	-0.018***	-0.019***	-0.023***	-0.021***	-0.022***	-0.020***
	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)	(0.005)	(0.005)	(0.005)
Migrant	0.042***	0.045**	0.040**	0.044***	0.046***	0.048***	0.044***	0.044***
	(0.015)	(0.019)	(0.016)	(0.016)	(0.016)	(0.017)	(0.015)	(0.015)
Country level household income	0.000*	0.000**	0.000***	0.000***	-0.000	0.000**	0.000	0.000**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Country level urbanisation rate	0.003**	0.004*	-0.002	0.002*	0.004***	0.005**	0.005***	0.004**
	(0.001)	(0.004)	(0.002)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)
Country level homeownership rate	-0.001	-0.001	0.005***	0.002*	-0.002*	0.003*	-0.002*	0.001
	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.003)
Observations	239782	210089	206596	275999	275999	275999	275999	275999
Number of countries	21	17	19	26	26	26	26	26
***p < 0.01, **p < 0.1, *p < 0.5								

	Unemployment benefits replacement rate	Adequacy of minimum income benefits	Birth rate of enterprises	Administrative burden on start-ups	Import competition	Import competition in manufacturing	Import competition in manufacturing from China	
Policy-related factors	0.002***	0.001***	0.017***	-0.015	-0.107	0.397***	2.884***	
	(0.001)	(0.000)	(0.006)	(0.043)	(0.248)	(0.082)	(0.686)	
Owner	-0.255***	-0.261***	-0.205***	-0.257***	-0.259***	-0.260***	-0.268***	
	(0.043)	(0.041)	(0.027)	(0.043)	(0.043)	(0.041)	(0.040)	
Social/subsidised tenant	-0.103***	-0.095***	-0.087***	-0.093***	-0.093***	-0.113***	-0.105***	
	(0.028)	(0.021)	(0.025)	(0.024)	(0.023)	(0.025)	(0.024)	
35-44	-0.171***	-0.170***	-0.155***	-0.173***	-0.172***	-0.170***	-0.167***	
	(0.016)	(0.015)	(0.017)	(0.016)	(0.015)	(0.015)	(0.015)	
45-54	-0.291***	-0.289***	-0.268***	-0.293***	-0.291***	-0.290***	-0.288***	
	(0.020)	(0.019)	(0.023)	(0.021)	(0.021)	(0.018)	(0.018)	
54-66	-0.343***	-0.342***	-0.317***	-0.345***	-0.343***	-0.344***	-0.343***	
	(0.019)	(0.020)	(0.023)	(0.021)	(0.021)	(0.018)	(0.018)	
Low education	-0.060***	-0.065***	-0.055***	-0.065***	-0.066***	-0.059***	-0.050***	
	(0.011)	(0.012)	(0.007)	(0.013)	(0.013)	(0.011)	(0.008)	
Middle education	-0.037***	-0.034***	-0.040***	-0.038***	-0.037***	-0.039***	-0.035***	
	(0.008)	(0.007)	(0.005)	(0.008)	(0.008)	(0.009)	(0.007)	
Inactive	-0.025**	-0.017*	-0.006	-0.025*	-0.024*	-0.021*	-0.012*	
	(0.015)	(0.012)	(0.012)	(0.015)	(0.016)	(0.015)	(0.013)	
Unemployed	-0.005*	-0.010*	-0.013**	-0.007*	-0.008*	-0.002	-0.003	
	(0.007)	(0.010)	(0.005)	(0.008)	(0.008)	(0.006)	(0.007)	
Income quintile #1	0.024*	0.010	-0.037**	0.016*	0.012	0.020*	-0.015*	
	(0.021)	(0.019)	(0.015)	(0.021)	(0.022)	(0.019)	(0.018)	
Income quintile #2	0.007	-0.005	-0.028**	-0.000	-0.004	0.007	-0.019*	
	(0.015)	(0.014)	(0.012)	(0.016)	(0.017)	(0.014)	(0.013)	
Income quintile #3	-0.003	-0.009*	-0.021***	-0.008*	-0.010*	0.001	-0.016**	
	(0.009)	(0.010)	(0.007)	(0.010)	(0.011)	(0.009)	(0.009)	
Income quintile #4	-0.001	-0.002	-0.006*	-0.003	-0.004*	0.003	-0.005*	
	(0.005)	(0.006)	(0.007)	(0.005)	(0.006)	(0.006)	(0.006)	
Living in cohabitation	-0.007	-0.008*	-0.005	-0.008*	-0.008*	-0.006	-0.011*	
	(0.012)	(0.011)	(0.012)	(0.012)	(0.011)	(0.011)	(0.010)	

Female	0.001	0.000	0.005***	0.000	-0.000	0.000	-0.000	
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	
Household size	-0.018***	-0.020***	-0.026***	-0.019***	-0.020***	-0.020***	-0.022***	
	(0.004)	(0.005)	(0.005)	(0.004)	(0.005)	(0.004)	(0.005)	
Migrant	0.043***	0.042***	0.063***	0.044***	0.044***	0.041***	0.047***	
	(0.015)	(0.014)	(0.016)	(0.015)	(0.015)	(0.016)	(0.017)	
Country level household income	0.000***	0.000***	0.000*	0.000**	0.000**	0.000***	0.000*	
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	
Country level urbanisation rate	0.001*	0.002*	0.004***	0.004**	0.004**	0.002**	0.003***	
	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)	(0.001)	(0.001)	
Country level homeownership rate	0.003*	0.003*	-0.000	0.001	0.001	0.000	-0.001	
	(0.003)	(0.002)	(0.002)	(0.003)	(0.003)	(0.001)	(0.002)	
Observations	275999	275999	217216	262602	275999	275999	275999	
Number of countries	26	26	23	24	26	26	26	
***p < 0.01, **p < 0.1, *p < 0.5								

Note: Estimates from probit regression. Values are marginal effects. The coefficients correspond to the average impact of a marginal/categorical change in the explanatory variable on the probability to move. The sample excludes atypical occupational statuses and is limited to individuals aged 24 to 66. The estimates are weighted by the individual sampling probability and standard errors are clustered by country.
*** p<0.01, **p<0.05, *p<0.1.
Source: OECD calculations based EU SILC 2012 module on housing for European countries, AHS 2013 for the United States.

Robustness analysis

This section presents robustness analysis of the main findings reported in the paper, e.g. the regressions on the effects of policy-related factors on residential mobility. Table C9 provides a synthetic overview of the robustness of each policy-related effect to the each of the robustness test. To save space, only results from multivariate regressions are reported (Table C10). The following tests are performed:

1. A weighting framework is applied to control for the differential sample sizes across countries in order to check if the results are driven by countries with larger samples. To assess whether such an effect is at play, the individual sampling weights are divided by the number of observations in the country each individual observation belongs to. This results in giving a higher weight to observations stemming from smaller countries.
2. Australia is included in the cross-country sample. As explained, the country has been excluded from the cross-country analysis due to poor comparability of the data and potential measurement error in mobility estimates.
3. The level of the unemployment rate is added as an explanatory variable in order to control for labour market conditions. Column (3) in Table C9 shows the results when controlling for the average unemployment rate between 2007 and 2011. Different lagged periods yield equivalent results.
4. Several policy variables are introduced simultaneously, the selection being based on the correlation among them along with their joint availability.

Overall, this exercise indicates the robustness of the findings reported in the paper, bringing a good degree of confidence in the policy implications – while acknowledging the need to avoid any causal interpretation effect.

Table C9. Robustness Analysis: Synthesis Table

Policy-related effect	(1) Robust when correcting weights for country size	(2) Robust when including AUS in the sample	(3) Robust when controlling for labour market conditions	(4) Robust when introducing multiple policy variables at a time
Landlord-tenant regulation	✓	✓	✓	✓
Rent control	✓	✓	✓	✓*
Notary fees	✓	✓	✓	✓
Transfer taxes	✓	✓	✓	✓
Elasticity of housing supply	✓		✓	✓
Household debt (% of GDP)	✓	✓	✓	✓
Public spending on housing allowances (% of GDP)	✓	✓	✓	✓
Social expenditure on housing	✓	✓	✓	✓
Taxes on financial and capital transactions (% of taxation)	✓		✓	✓
Job protection on regular contracts	✓	✓	✓	✓
Unemployment benefits replacement rate	✓		✓	✓*
Adequacy of minimum income benefits	✓	✓	✓	✓
Birth rate of enterprises	✓	✓	✓	✓
Import competition in manufacturing	✓	✓	✓	✓
Import competition in manufacturing from China	✓	✓	✓	✓

Note: The star (*) denotes instances where the policy is not significant in all multivariate regression specifications, see Table C10 for details.

Table C10. Multivariate policy regressions

	Multivariate V1	Multivariate V2	Multivariate V3	Multivariate V4	Multivariate V5	Multivariate V6	Multivariate V7	Multivariate V8	Multivariate V9	Multivariate V10	Multivariate V11
Transfer taxes	-0.011***			-0.014***		-0.012***	-0.013***	-0.011***		-0.011***	
	(0.003)			(0.004)		(0.005)	(0.004)	(0.003)		(0.003)	
Adequacy of minimum income benefits	0.001**		0.002***			0.001**				0.001**	
	(0.001)		(0.000)			(0.001)				(0.001)	
Import competition in manufacturing from China	1.970***									1.970***	
	(0.704)									(0.704)	
Unemployment benefits replacement rate		0.001**		0.001***	0.000						
		(0.000)		(0.000)	(0.000)						
Birth rate of enterprises		0.009*									
		(0.006)									
Job protection on regular contracts		-0.065***									
		(0.020)									
Rent control			-0.037***						-0.000		-0.025***
			(0.009)						(0.017)		(0.009)
Taxes on financial and capital transactions (% of tax revenue)			-0.029**								-0.046**
			(0.012)								(0.023)
Landlord-tenant regulation				-0.021***		-0.021**					
				(0.007)		(0.009)					
Elasticity of					0.074***						

housing supply											
					(0.012)						
Import competition in manufacturing					0.546***			0.310***			
					(0.037)			(0.071)			
Household debt (% of GDP)							0.001**				
							(0.001)				
Social expenditure on housing							0.081**	0.043*			
							(0.037)	(0.024)			
Notary fees									-0.025*		
									(0.014)		
Public spending on housing allowances (% of GDP)											0.083***
											(0.017)
Observations	262602	217216	247413	256255	193764	256255	232564	262602	235095	262602	186852
Number of countries	24	23	22	23	16	23	20	24	20	24	16
***p < 0.01, **p < 0.05, *p < 0.1											

Estimates from probit regression. Values are marginal effects. The coefficients correspond to the average impact of a marginal/categorical change in the explanatory variable on the probability to move. The sample excludes atypical occupational statuses and is limited to individuals aged 24 to 66. The estimates are weighted by the individual sampling probability and standard errors are clustered by country. Each column corresponds to a choice of three policy variables introduced simultaneously, depending on their correlation. Controls are equivalent to the ones reported in table 8.
*** p<0.01, **p<0.05, *p<0.1.