

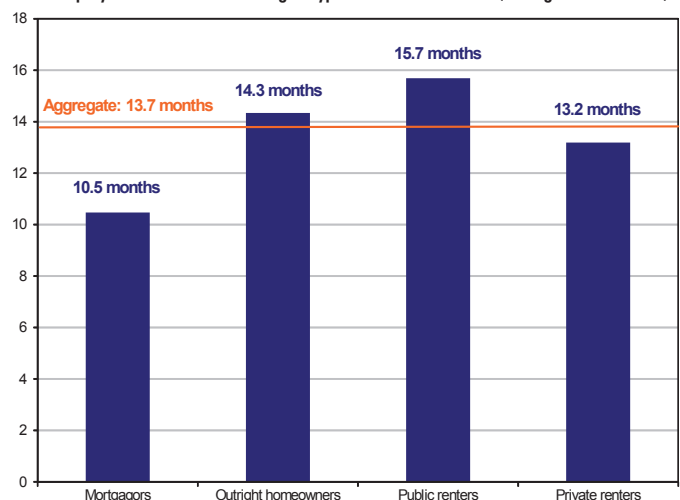
Residential mobility and labor market adjustment

- In France as in most OECD countries, the homeownership rate has been on an upward trend (58.1% of households in 2011, a 5-point rise over 1985). However, home ownership is associated with higher costs of mobility than renting. This being the case, a contraction of the rental market could have negative effects on job match quality. For example, Oswald (1996), followed by other economists, estimates that that in various countries, a 10 percentage point rise in the owner-occupation rate is associated with an increase of approximately 2 percentage points in the unemployment rate.
- However, Oswald's estimates suffer from certain weaknesses. His hypothesis has come under some criticism in the economic literature, sometimes even being contradicted by empirical data. In the particular case of France, homeowners have a lower probability of being unemployed than private renters. However, most of detailed studies regarding French situation confirm that the type of housing tenure does indeed influence professional mobility and exit from unemployment. The costs involved in relocation, which differ according to the type of residential tenure, are thought to penalise labour market matching.
- Thus, in France, all other things being equal, being a owner-occupant or a social-housing renter could limit professional mobility that require relocation. This result appears to reflect the higher costs of mobility incurred by homeowners and social renters: homeowners are confronted with high transaction costs, a major share of which in the form of "solicitor's fees," while renters of social renters run the risk of losing their access to social housing if they move.
- Also in France, all other things being equal, the average duration of unemployment is longer for homeowners who have paid off their mortgages ("outright homeowners") and for of social renters than for private renters or homeowners with an outstanding mortgage ("mortgagors"), with no significant difference between the latter two categories. These results are consistent with the negative impact that the cost of relocation has on exit from unemployment, when the financial incentive of paying off a mortgage is taken into account. Specifically, mortgagors are more willing to accept a job offer in the local labour market than are other categories of residential tenure.
- Results concerning the quality and nature of the jobs, on the other hand, are more ambiguous.
- Finally, in the United States, being a homeowner-occupant rather than a renter has no effect both in terms of professional mobility and duration of unemployment spells. In Britain, the effect on unemployment duration is very small. These results may be related to the low costs of property transactions in both countries.

Source: INSEE, *Continuous Employment Survey and Housing Survey in 2006*, calculations by Directorate General of the Treasury (DG Trésor).

This study was prepared under the authority of the Directorate General of the Treasury (DG Trésor) and does not necessarily reflect the position of the Ministry of Economy and Finance and Ministry of Foreign Trade

Unemployment duration according to type of residential tenure (average for 2003-2011)



1. Oswald's hypothesis: homeowners' costs of mobility impair the quality of labour market matching

In recent years, in France and most other OECD countries, the rate of homeownership has risen considerably, reaching 58.1% of households in 2011 (an increase of 5 percentage points since 1985).¹ This trend must be correlated with the series of public measures in support of home ownership (low-interest loans, tax-deductible mortgage interest, etc.) that have been successively put in place over the past thirty years. Over the same period, the share of renters living in social housing rose between 1985 (16.2%) and 1997 (19.5%) before declining (18.4% in 2011). Meanwhile, the share of private renters showed a steady decline (from 31% in 1985 to 23.5% in 2011). **These trends are likely to alter the functioning of the labour market by affecting the capacity of the working population to relocate for professional reasons.**

1.1 Is there a positive correlation between the unemployment rate and the rate of homeownership?

Oswald (1996)² was the first to suggest a link between home ownership and unemployment rates, postulating that the high rate of unemployment in western economies appeared to be largely due to the contraction in the private rental housing market, which went hand in hand with the rise in home ownership. Through a regression analysis of the unemployment rate versus the home ownership rate in several OECD countries (namely the United States, the United Kingdom, France, Sweden and Italy) and in different regions of a single country, he found that a 10 percentage point rise in home ownership would lead to an approximate 2 percentage point rise in the unemployment rate at both national and regional levels.

1.2 Theoretical background of Oswald's hypothesis

The mechanisms suggested to explain this outcome are primarily based on the idea that home ownership entails relatively higher costs of mobility which impede the efficiency of labour market:

- Combined with high costs of mobility, home ownership restricts the search area of a job seeker, who may refuse a job located far from his home if the gain associated with returning to work is less than the cost of relocating;
- The cost of mobility generated by home ownership can also make employed homeowners less inclined to seek opportunities that are more worthwhile or better suited to their skill set and which could therefore improve the quality of their match and thereby the productivity of the economy;
- A high rate of home ownership can also constrain the mobility of younger members of the labour force who do not necessarily have sufficient means to buy a home close to their place of work: if there is a shortage of rental housing, they will not be able to live in the vicinity of the desired job;
- Two additional mechanisms may indirectly affect labour market efficiency: (i) homeowners tend to accept longer commuting times, which aggravates congestion in transport networks, thereby undermining worker well-being; (ii) homeowners have a greater tendency than do renters to resort to collective action. This makes it easier for them to prevent the installation or expansion of a business within a residential zone.

1.3 Empirical studies muddling support the existence of a negative effect at home ownership on the labour market

Following the Oswald study, numerous authors have tested the existence of a link between the type of residential tenure and the labour market. These studies differ in terms of (i) the country or group of countries covered, (ii) the econometric approach (cross-country comparison or study of individual data), and (iii) the variable of interest (exposure to unemployment, duration of unemployment spells or more marginally, exit from unemployment, job-to-job mobility or salary level).

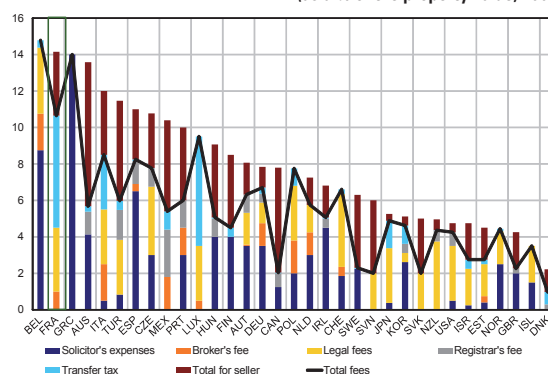
For the most part, the findings of cross-country studies confirm the existence of a positive correlation between unemployment and homeownership rates. In contrast, micro-econometric studies suggest that the link between home ownership and exposure to unemployment varies from one country to another. Specifically, there appears to be a negative correlation in the United Kingdom and the United States, as well as in Denmark and the Netherlands.

Micro-econometric studies that focus on the duration of unemployment spells rather than on the exposure to unemployment also reach different conclusions depending on the country. These studies often highlight a higher rate of outflow from unemployment on the local market for owners, as well as shorter periods of unemployment for mortgagors and private renters as compared with outright homeowners and social renters. However, results differ concerning the overall effect of home ownership on exit from unemployment.

These findings are more nuanced than Oswald's hypothesis. Nevertheless, they appear to confirm that **the costs of residential mobility impair the efficiency of the labour market, especially the outflow from unemployment.** Two hypotheses attempt to explain this:

- **Homeowners' costs of relocation vary sharply according to the country:** this hypothesis appears quite natural given the fact that a large share of the costs involved in residential mobility is determined by institutional parameters; a comparison of real estate transaction costs confirms this diversity between countries (see Chart 1);

Chart 1: Average cost of real estate transactions (as a % of the property value, 2009)



Source: OECD. These estimates do not reflect various tax breaks applicable in certain countries for certain types of housing.

(1) Source: SoeS, Housing Statistics; Reference area: the whole of France.

(2) Oswald, A.J. (1996) "A Conjecture on the Explanation for High Unemployment in the Industrialized Nations : Part I," *Warwick Economics Research Paper* 475.

- **The type of residential tenure may influence the rate of outflow from unemployment for reasons other than the costs of relocating**, particularly via an "income effect." The incentive to return to work may be stronger for a mortgagor (who is subject to the financial constraints of paying off the mortgage) and, to a lesser extent, for a private renter (financially constrained by the cost of the rent) than for a renter of social housing (who has the benefit of a more modest rent) and especially for an

outright owner (who has already finished paying off his mortgage).

In light of the diversity of results according to the country, this survey focuses on the case of France and considers the effects of the type of residential tenure on unemployment, on the exit from unemployment, on professional mobility and on the quality of labour market matching.

2. Costs of relocation vary according to the type of residential tenure, but are high in all cases and constitute an impediment to mobility

2.1 In France, homeowners are confronted with real estate transaction costs that are relatively higher than those prevailing in other OECD countries

Both sellers and buyers must bear various costs in connection with a real estate transaction. The buyer must pay:

- "solicitor's expenses": (i) **transfer taxes** make up the largest share of these expenses. These are duties and taxes collected by the solicitor, on behalf of the state and local governments, for each real estate transaction. For a dwelling more than five years old, these expenses amount to 5.09% of the selling price (0.715% for recent dwellings); (ii) **solicitor's fees**: set according to an official scale and proportional to the selling price, these fees cover compensation for the solicitor's services and the material and administrative formalities completed in connection with the transaction; (iii) **disbursements**: these are amounts paid by the solicitor on behalf of his client to compensate the parties in charge of producing the documents required for the change of ownership (mortgage status report, land register extract, etc.) and any non-routine expenditure;
- **Brokerage fees**: in two-thirds of all cases, the seller commissions a broker to find potential buyers and complete the transaction. When the broker is a real estate agent (the case of more than 60% of transactions for main residences), the commission is generally a decreasing percentage of the selling price (ranging from 4 to 8% of the price inclusive of all taxes). When the broker is a *notaire-négociateur* (a solicitor who also acts as a property agent, the case of 7% of transactions), the commission is set according to the national scale.

The seller must bear the costs of:

- The **technical inspection**: mandatory since 1 November 2007, the inspection report is attached to the preliminary sales contract or, if no preliminary agreement is executed, to the notarised deed of sale.

Other factors can also influence residential mobility. Price fluctuations in the property market can create an obstacle to resale. For example, Neley (1998) showed that the decrease in property values in the United Kingdom in the 1990s had a negative impact on residential mobility. The impact could be even more significant if declining property values lead to negative equity in the event of a resale of the property.

Finally, the possible need for a homeowner to purchase a new property before he has sold the first one - such as in the event of a sudden job change - may force him to take out a bridging loan, which would create additional costs and a risk of insolvency if the value of the property for sale is overstated (particularly in the event of a reversal in the market).

To avoid such risks and their associated costs, a homeowner may consider renting a new home while at the same time renting out his initial property. However, this arrangement is ill-advised in terms of taxation: the homeowner will have to pay tax on the rental income he collects as a landlord. This means that even if the rent he pays as a tenant in his new home is equivalent to the rent he receives as a landlord, his disposable income will decline.

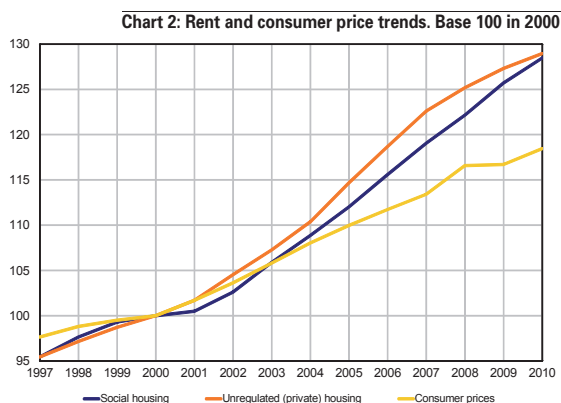
2.2 Residential mobility may lead to loss of social housing

Residential mobility may also prove to be a disadvantage to renters of social housing. Because the rental cost for this type of housing is considerably below market price and its availability limited, the waiting list is long. The renter therefore cannot count on quickly being assigned a new social housing unit. Moreover, access to social housing is subject to income level. Thus, although a renter is entitled to stay in the unit he currently occupies, he may not be eligible for another social housing unit if his income level has increased since he first became eligible for public housing.

2.3 Private renters who relocate may also be confronted with specific costs tied to their type of residential tenure, although such costs are likely to be lower on average

Private renters run the risk of higher rent when they move. In the case of a new lease (in connection with a change of renter or a home being rented for the first time), the rent is generally agreed freely between landlord and renter. However, rent increases during the term of the lease are controlled: the increase cannot exceed the quarterly rent reference index (*Indice de référence des loyers*, or IRL) published by INSEE, which corresponds to the mean consumer price index (*Indice des prix à la consommation* or IPC) excluding tobacco and rent, over the previous twelve months. The key aim of this rent control measure is to protect renters against sudden variations in their housing costs. However, one consequence of this control is a segmentation of the rental market. Indeed, the adjustment mechanism in effect during the lease term does not allow for passing on any variations in market price, and adjusting the rental at the time of lease renewal is complex.³ Therefore, in periods when rents rise faster than the quarterly rent reference index (IRL) as has been observed in recent years (see Chart 2), this indexation mechanism may prompt landlords to offset the limited increments in rent during the lease term with a sharp upward adjustment at the time of a change of renter. So it is not in renters' best interest to relocate because they may find themselves having to pay a significantly higher rent. In this sense, rent control may create a hindrance to renters' mobility during their lease period, particularly for those who are meant to relocate for professional reasons.

(3) Article 17c of French Law no. 89-462 of 6 July 1989.



Reference area: Metropolitan France, aggregate of main residences rented unfurnished
 Source: INSEE, Rents and Charges Survey.

To limit these "catch-up" effects and their impact on the mobility of households, the determination of re-leasing rents (i.e., when changing rental occupants) is now controlled in some urban areas where rental markets are characterised by a high level of tension.⁴ However, even in these metropolitan areas, new housing, furnished rentals and properties being rented for the first time are excluded from the scope of application of the controls: their rents are therefore set freely by the landlords.

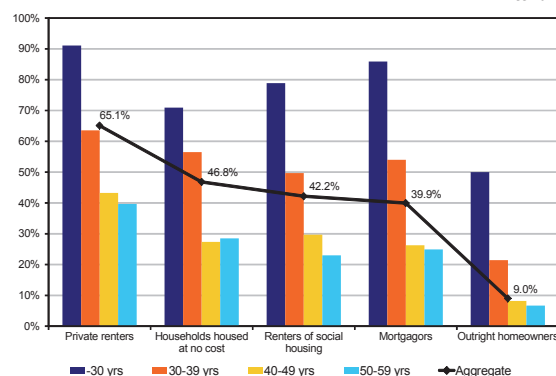
2.4 Homeowners and renters of social housing are less mobile than renters of private housing, all other things being equal

An examination of the rate of relocation for each type of residential tenure confirms that differences in the cost of this mobility affect behaviour. For example, according to the Housing Survey in 2006, only 9% of outright homeowners had moved at least once in the preceding four years, versus 40% for mortgagors, 42% for renters of social housing and 65% for renters of private housing.

However, it is important to check whether this correlation actually reflects causality between the type of residential tenure and the rate of relocation. In particular, the correlation could be explained by determinants common to both variables ("unobserved heterogeneity bias"). For example, increasing

age is likely to increase both the propensity for geographic stability and the outright ownership of one's home. Nevertheless, a breakdown according to age bracket shows that the type of residential tenure indeed appears to have an impact, because the hierarchy of mobility rates is confirmed regardless of the age of the reference person (see Chart 3).

Chart 3: Rate of residential mobility according to age and type of housing tenure



Source: INSEE, Housing Survey in 2006, calculations by the Directorate General of the Treasury (DG Trésor).

*Percentage of households which moved at least once in the four years preceding the survey.

These findings are unchanged when considering more detailed investigation⁵ that incorporates additional explanatory variables (type of residential tenure, age, number of children, level of education, socio-professional category, income, characteristics of the housing unit): between 2002 and 2006, all other things being equal, **outright homeowners are the least mobile**; they are ten times less likely to relocate than private renters. They are **followed by mortgagors and renters of social housing** who are half as likely to move as are private renters.

The effect of the type of residential tenure on professional mobility is therefore a means of gaining indirect understanding of how impediments to residential mobility affect job-match quality.

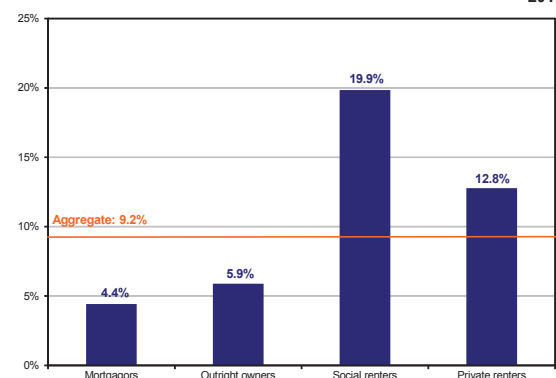
3. Home ownership reduces the probability of being unemployed but increases the duration of jobless spells. The same is true of renting social housing.

3.1 Homeowners have a lower probability of being unemployed

In France, the unemployment rate among homeowners is much lower than that among private renters (5.2% versus 12.8% in 2011, see Chart 4).

This result holds true if we correct for individual characteristics that might be correlated with the type of residential tenure ("unobserved heterogeneity bias").⁶ All other things being equal, homeowners (mortgagors and outright owners) have a lesser probability of being unemployed than do private renters, whereas social housing renters have the highest probability of being unemployed.

Chart 4: Unemployment rate according to the type of residential tenure in 2011



Source: INSEE, Employment survey, calculations by Directorate General of the Treasury (DG Trésor).

(4) French decree No. 2012-894 of July 20, 2012 concerning the adjustment of certain rents.

(5) Estimation by the authors of a *logit* model of probability of having relocated at least once.

(6) Using a *probit* model estimated by the authors based on Employment Surveys from 2003 to 2011.

Box 1: The job search model^a

Within the theoretical framework of a job search model, a job-seeker's optimal strategy is defined by his choice of his reservation wage, i.e., the lowest wage offer he is prepared to accept. This wage is determined by comparing his intertemporal well-being according to whether or not he accepts a job offer.

The reservation wage increases with the amount of unemployment benefits and with the arrival rate of new job offers; it also rises with the disutility of labour. It declines with the discount rate and the probability of losing one's job.

a. Reference article: Stigler, G. J., (1962), "Information in the Labor Market", *Journal of Political Economy*, 70, 94-104.

3.2 However, being an outright homeowner or a social renter increases the duration of jobless periods

A job search model (see Box 1) distinguishing homeowner households from renter households in two regions shows that **the rate of outflow from unemployment of homeowners is lower on the national market** (where relocation may be required) **but higher on the local market**. On the national market, the higher cost of residential mobility indeed constrains homeowners to raise their reservation wage,⁷ thus making it higher than that of renters. Given that, few jobs outside the local market are acceptable for a homeowner, he will refocus his search efforts on the local market, where he will lower his reservation wage, thereby undercutting that of renters. **Overall, the rate of outflow from unemployment is lower for homeowners than for renters.**

However, this analysis ignores the fact that **incentives to return to work may differ significantly according to the type of residential tenure**. For example, contrary to renters, outright homeowners have no rent to pay. And contrary to mortgagors, they have no loans to pay off. Renters of social housing, for their part, pay lower rents than do private renters. The job search model thus highlights the fact that regardless of the type of residential tenure, a high purchasing power during unemployment (which includes the benefit of housing at low cost) diminishes the rate of outflow from unemployment. **This would suggest that all other things being equal, outright homeowners should experience longer periods of joblessness than do mortgagors or private renters.** Social-housing renters should also remain unemployed longer than private renters. On the other hand, the effect of the type of residential tenure is ambiguous when comparing mortgagors and renters.

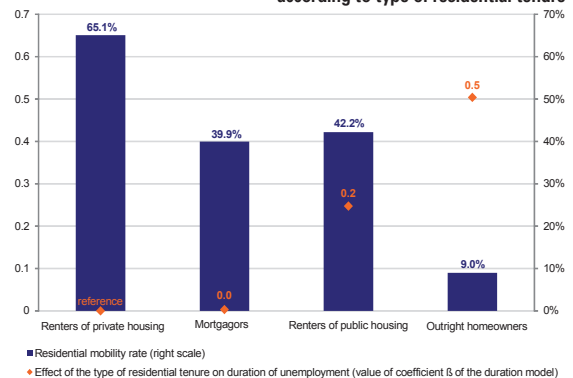
In France, **these insights are supported by descriptive statistics**. For example, between 2003 and 2011, the average duration of jobless periods is 13.7 months. This average masks disparities according to the type of residential tenure (see Chart 1, page 1): mortgagors have the shortest jobless periods (10.5 months) ahead of private renters (13.2 months), outright homeowners (14.3 months) and public renters (15.7 months).

Nonetheless, these descriptive statistics do not eliminate endogeneity biases. These could be due to the presence of unobserved individual heterogeneities: for example, seniors, who are more often homeowners, will be less inclined to be mobile when they are unemployed not because they are homeowners, but because of their intrinsic preference for stability. Endogeneity can also arise from the existence of a reverse causality: a prolonged period of unemployment may, for example, force a mortgagor to sell his home and become a renter if he cannot meet his financial obligations.

In eliminating these various biases, we update the "unemployment duration" model (see Chart 2) by Brunet *et al.* (2007) with the Employment Survey from 2003 to 2011, and we further develop it by distinguishing between four different types of residential tenure (outright ownership, mortgage-holding, and private and social rentals). **There does not appear to be any**

significant effect of being a mortgagor versus a private renter on the duration of unemployment. Compared to these two types of residential tenure, being a renter of social housing results in a significantly longer period of joblessness. Finally, outright home ownership also results in a significantly longer period of unemployment, even compared to social-housing renters (see Chart 5).

Chart 5: Residential mobility and duration of unemployment spells according to type of residential tenure



Reference area: Metropolitan France

Source: INSEE, *Employment Survey and Housing Survey in 2006*, calculations by the Directorate General of the Treasury (DG Trésor). Note on reading the chart: Compared to private renters (the type of residential tenure used as the reference), outright ownership significantly increases the duration of joblessness (see Box 2). The residential mobility rate (defined as the percentage of households that relocated at least once during the previous four years) for this category of homeowners is 9.0%.

Barceló (2006)⁸ proposes a similar study focusing on five countries (France, Germany, Italy, Spain and Britain) using data from the European Community Household Panel (ECHP), for the period from 1994-1998. Contrary to our estimations, the results of this study draw a distinction between exits from unemployment toward the local versus the non-local market. **In the local market, relative to private renters, the rate of outflow from unemployment is higher for homeowners (considered as an aggregate), all other things being equal, and to a lesser extent, social-housing renters. In contrast, social-housing renters and, even more so, homeowners, have lower rates of exit from unemployment than private renters when residential mobility is required.** Compared to outright homeowners, holding a mortgage raises the rate of outflow from unemployment toward work in the local market and, conversely, diminishes it in the non-local market (although this latter result is not significant).

On the whole, therefore, the classification that results from these analyses is consistent with the theoretical results highlighted above, namely:

- Mortgagors have major financial constraints and therefore have an especially strong incentive to find a new job. Conversely, their more limited mobility impedes their exit from

(7) See Box 1.

(8) Barceló, C. (2006), "Housing tenure and labour mobility : a comparison across European countries," Banco de España, *Working Paper* no. 0603.

- unemployment. Private renters bear a comparatively lighter financial burden but are more mobile; their ranking with respect to mortgagors is thus ambiguous in terms of the duration of jobless periods.
- The ambiguity disappears when a distinction is drawn between local and non-local jobs: mortgagors find new jobs less quickly when doing so would require a residential change.
- Outright homeowners are less mobile than renters of private housing, and are less financially constrained: these two characteristics translate to longer periods of unemployment.
- Finally, renters of social housing are less mobile than private renters and experience longer periods of joblessness. Their exit from unemployment takes longer in the non-local market but is quicker in the local market.

Box 2: Unemployment duration model

Duration models allow quantitative analyses of the time an individual spends in a given state - in this case, joblessness. D is the notation for the unemployment duration variable (it is by definition strictly positive).

To eliminate selection and endogeneity biases, a two-step econometric estimation method (Heckman and Robb, 1985) is applied. Initially, the type of residential tenure is determined using a multinomial logit type selection equation, which makes the choice of the type of residential tenure conditional upon various individual characteristics. The estimated probability is then introduced into the final estimation of the unemployment duration model.

1) Selection equation

This equation makes the choice of the type of residential tenure (latent variable Y^*) conditional upon a number of characteristics:

- Individual characteristics: gender, age, marital status, number of children, socio-professional category of the reference person (income proxy), socio-professional category of that person's father (as an indication of social origin), spouse's occupation, nationality;
- Characteristics relating to the place of residence: urban zoning, housing location in a difficult urban neighbourhood.

Let Y be the non-ordered polytomous variable representing the choice of residential tenure type:

$$Y = \begin{cases} 1 & \text{if the subject is a mortgagor} \\ 2 & \text{if the subject is an outright homeowner} \\ 3 & \text{if the subject is a renter of public housing} \\ 4 & \text{if the subject is a renter of private housing} \end{cases}$$

For each modality k of Y , we assign a utility that depends on the various characteristics (Z):

$$Y_k^* = Z_k \lambda_k + \varepsilon_k \text{ where } k = 1, 2, 3 \text{ or } 4$$

The individual then chooses the modality that maximises his utility:

$$Y = \arg \max_{k \in \{1, \dots, k\}} Y_k^*$$

2) Duration model

The estimated probabilities \hat{Y} are then introduced into the final estimation of the duration model. According to this model, the actual duration (D) is also a function of variables of interest (X) not controlled by the selection equation. These variables are the level of education, the amount of unemployment benefits received, as well as various indicative variables that control job search intensity.

$$D_i = \alpha X_i + \beta Y_i + u_i$$

Introducing these probabilities \hat{Y} rather than directly entering the type of residential tenure Y aims to correct for endogeneity bias (the type of residential tenure is then termed "instrumented" by the explanatory variables defined for the selection equation).

Both steps apply maximum-likelihood estimation.

Thus, coefficients β measure the effect of the type of residential tenure on the duration of unemployment, all other things being equal. These coefficients are significant (except for the variance between mortgagors and private renters). They are shown in the chart on page 1.

4. In France, all other things being equal, homeowners have less professional mobility than renters of private housing

Based on recent studies concerning France,⁹ **home ownership and social housing appear to impede professional mobility for people in jobs, at least when it comes to jobs that would require a residential change.**

Based on the ECHP from 1995 to 2001, Brunet (2009) showed that **the outright home ownership exerts a significantly negative influence on changing jobs (-18%) and on the risk of unemployment (-45%).** The magnitude of the effect

on job-to-job transitions increases substantially when transitions are confined to jobs that require relocation, whereas home ownership has no significant effect on mobility toward a local job.

The lesser job-to-job mobility is consistent with the costs of residential change: these costs are higher for homeowners and thus reduce the scope of their job search. Nevertheless, job stability can also have beneficial effects (human capital, access

(9) See Brunet, C. (2009), "Employment stability and residential status," *GATE Working Paper* No. 09-11, and Brunet, C., Goette-Nagot, F., Havet, N., Herbin, C., Lacroix, G., Lesueur, J.-Y., Penot, A. and Roche, A. (2010), "Final report in response to the DARES call for research projects concerning choice of residential tenure and labour market mobility."

to in-service training, social networks, motivation linked to a long-term commitment to one's company), which might

explain why homeowners also experience a lower rate of inflow to unemployment.

5. Underemployment and salaries do not appear to reflect a negative effect of homeownership

On the whole, the above analyses confirm the probable existence of a negative effect of restricted geographic mobility on flows in the labour market and therefore on job-match quality. The negative effect on job-match quality can perhaps be identified more directly by studying the wages negotiated by employees or their perceptions of being underemployed or undervalued. Apparently, however, the effects are ambiguous in both of these areas, given that job stability can also have its own benefits.

5.1 All other things being equal, home ownership appears to be associated with higher wages

As an obstacle to professional mobility, home ownership may affect salary levels, but the expected theoretical effects are ambiguous.

- Homeowners accept lower salaries than renters in order to remain in their local market; conversely, they demand higher salaries for jobs that require a residential change. The net effect is ambiguous.
- Moreover, the positive effects of job stability (investments in human capital, firm-specific training, social networks, motivation tied to the longer-term prospects in the company) could drive up homeowner salaries.

However, it is important not to overlook the existence of a reverse causality: having a higher salary can facilitate access to home ownership.

Based on the empirical data available for France, **home ownership appears to have an overall positive effect on salary levels.** Thus, Brunet *et al.* (2010)¹⁰ show that in France, **all other things being equal, homeowners appear to earn higher salaries than renters.**

5.2 Home ownership could heighten the risk of being underemployed, in terms of both salary and employee perception

An overall positive effect on salaries does not necessarily mean that situations of underemployment will not arise: it is possible that home ownership leads to higher salary levels on average

but paradoxically increases the likelihood of being underemployed.

The influence of the type of residential tenure on underemployment looks ambiguous:

- Homeowners may be prepared to accept a job below their qualifications at time of hiring because their priority is to avoid the need to relocate; moreover, with time, they may be less inclined to undertake a new job search, depriving themselves of opportunities more in line with their capacities;
- However, as homeowners have a lower propensity to change jobs, they should benefit from representing a greater specific human capital for the company, which will give them more advancement within the company.

The outcomes of studies on this subject appear rather fragile and provide contradictory conclusions.

¹¹ Brunet and Havet (2009) used the European Community Household Panel from 1995 to 2001 to build both a statistical measurement of underemployment and a subjective measurement.¹² They then estimated a recursive bivariate probit model which tests simultaneously the probability of being a homeowner and its influence on the probability of being underemployed. The results suggest that, all other things being equal, homeowners are more likely to be underemployed in terms of salary and may have a greater perception of being undervalued than would renters. However, with slight differences in the explanatory variables selected, Brunet and Havet (2011) obtained the reverse effect, although in the same study, but using a more robust method, the authors show that the negative effect of home ownership on subjective perception of underemployment is not significant, provided there is a correction for the selection bias of being in employment. Even so, it appears that some homeowners are intrinsically characterised by a greater probability than renters of feeling undervalued. And a sense of being undervalued can lead to a lower level of satisfaction at work and hence have a negative impact on productivity. In this sense, home ownership may be detrimental to job-match quality.

6. In contrast with the French case, home ownership has little effect on labour market flows in Britain and the United States, two countries with lower costs of residential mobility for homeowners

The effect of the type of residential tenure on unemployment duration is analysed jointly in France and either Britain or the United States in two separate studies. Both conclude that **home ownership significantly increases the duration of joblessness in France but has little effect in the other country (Britain/US).**

For example, according to Brunet *et al.* (2007),¹³ **in France, outright home ownership leads to a significantly lower rate of exit from unemployment relative to renting**

private housing, whereas the effect is only slightly significant in the United Kingdom. On the other hand, the positive effect on exit from unemployment for mortgagors and the negative effect for renters of social (as opposed to private) housing are both slightly significant and similar in both countries.

Likewise, by applying the same method of analysis for France and the United States, Brunet *et al.* (2013)¹⁴ show that **in France, compared to the status of private renter, home**

(10) Carole Brunet, Nathalie Havet and Jean-Yves Lesueur, (2010), "Home ownership and salary curves: what lessons can be learned by comparing France and the United States?" *Working Paper* No. 1011, GATE, May.

(11) Brunet, C. and Havet, N. (2009), "Home ownership and job dequalification," *Revue Française d'Économie*, 24 (1) and Brunet, C. and Havet, N., (2011), "Home ownership and job-match quality in France," *Working Paper* 1131, GATE.

(12) The statistical measurement considers that an individual is underemployed if more than half of the working population holding the degree immediately below his earns a higher salary than the individual. The subjective measurement is based on the individual's affirmative answer to the question, "In your opinion, do you have a qualification or aptitudes that would enable you to hold a higher-level position?"

(13) Brunet, C., Clark, A., and Lesueur, J.-Y., (2007) "Residential tenure status and duration of unemployment in France and Britain," *Revue Française d'Économie* 22(2), 165-190.

(14) Carole Brunet, Nathalie Havet and Jean-Yves Lesueur (2013) « La propriété immobilière est-elle un obstacle pour sortir du chômage ? », to be published in *Économie et Prévision*.

ownership (with no distinction between mortgagors and outright owners) significantly reduces the rate of outflow from unemployment. In contrast, there is no significant effect in the United States.

Brunet *et al.* (2010)¹⁵ also examined the effect of home ownership on the transition rates from job-to-job and from job to unemployment, in both countries. There appears to be no negative effect in the United States, whereas in France, home ownership (as mortgagor or outright owner) significantly reduces both transition rates relative to renters of private housing.

These differences between France on the one hand and the United States or Britain on the other can be tied to differences in the financial costs of residential mobility for homeowners. These costs are particularly high in France, while they are modest in both Britain and the United States (see Chart 1).

These comparisons between France and either Britain or the United States therefore support the conclusion that the transaction costs have a major effect on professional mobility in France.

Finally, a recent article¹⁶ focusing on the United States shows that rates of home ownership have a delayed effect on increasing the unemployment rate in each State (the effect grows with time). Comparing this macroeconomic outcome with the microeconomic conclusions suggests that Oswald's hypothesis could be better explained by externalities of home ownership rather than by direct effects on professional mobilities. Are the mechanisms already discussed (congestion of transportation networks, opposition of homeowners to the establishment of businesses in the vicinity of their homes) sufficient to explain this? It appears that economic research has not yet fully explored these issues.

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- (15) Brunet, C., Havet, N. and Lesueur, J.-Y., (2010) « La propriété immobilière est-elle un obstacle pour sortir du chômage ? », *Working Paper* 1007, GATE.
- (16) Blanchflower, D.G., and Oswald, A.J., (2013) "Does High Home ownership Impair the Labor Market?", *Working Paper* 13-3, Peterson Institute for International Economics.

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