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The Danger of High Home Ownership: Greater Unemployment

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Summary points

- Encouraging home ownership has been a major policy objective for Western governments in recent decades. However, evidence from the United States strongly suggests that high home ownership is a major reason for the high unemployment rates of the industrialized nations in the post-war era.
- Rises in a US state's home-ownership rate are associated with subsequent increases in that state's joblessness. The effects are strikingly large. In the long run, doubling home ownership in a state can lead to more than a doubling of the unemployment rate.
- Three channels – lower mobility, longer home-to-work commute times and lower rates of business formation – can all be expected to contribute to higher unemployment.
- European data provide evidence that is consistent with these findings.
- Governments should encourage more renting, as the Swiss and Germans do, and they should not give financial incentives for ownership.
- Given that for decades Western governments have intervened in housing markets to encourage home ownership, and now grapple with stubbornly high unemployment, these findings should arouse serious concern.

Introduction

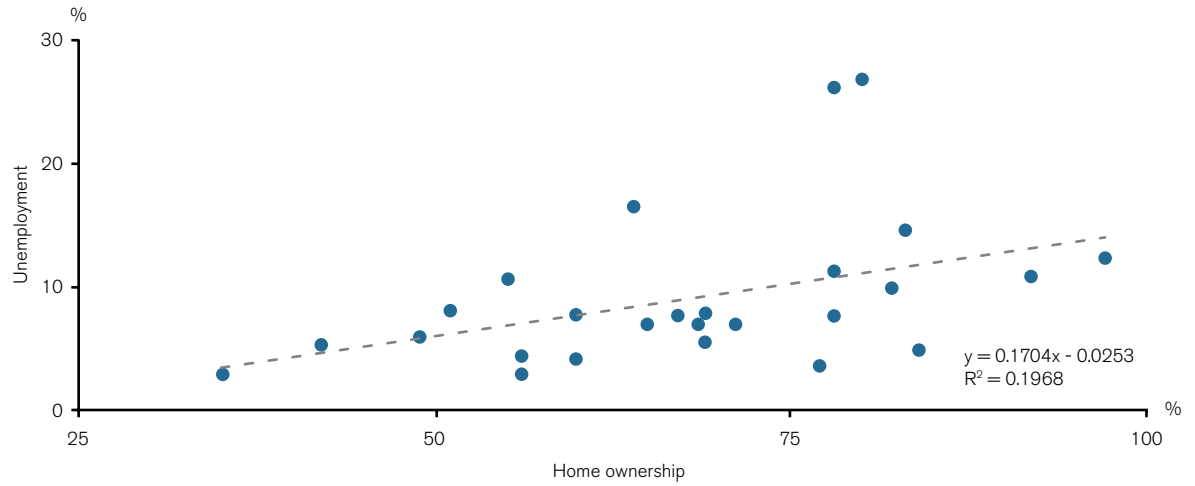
Unemployment is a major source of unhappiness, mental ill-health and lost income.[1] Yet after a century of economic research on the topic, the determinants of the rate of unemployment are still imperfectly understood, with today's jobless levels in the industrialized world at 10%, and some European nations at over 20%.[2] The historical focus of the research literature has been on which labour-market characteristics – trade unionism, unemployment benefits, job protection, etc. – are particularly influential. Recent research by Blanchflower and Oswald (2013) proposes a different way to view this subject. The results are relevant to a wide range of policy-makers, economists and researchers, and should be deeply worrying for them.

The research by Blanchflower and Oswald provides evidence that the housing market plays a fundamental role as a determinant of the rate of unemployment. For this exercise, the United States provides an excellent 'laboratory'. The researchers use modern and historical data of all US states (except Hawaii and Alaska) to estimate unemployment equations.[3] Using data on millions of randomly sampled Americans, they find equations for the number of weeks worked, the probability of a person being unemployed, the extent of labour mobility, the length of commuting times and the number of businesses.

The research documents a strong statistical link between high levels of home ownership in a geographical area and high subsequent levels of joblessness in that area. It shows that this result is robust across sub-periods going back to the 1980s. The lags from ownership levels to unemployment levels are long and can take up to five years to be evident. This suggests that high home ownership gradually interferes in a fundamental way with the efficient functioning of the labour market. The likely channels are that higher levels of home ownership reduce mobility, increase commuting times and reduce rates of business formation.

The data used in this paper are almost wholly from the United States, but they do have wider implications. Taken in conjunction with new work carried out by

Figure 1: Unemployment and home-ownership rates across 28 EU and OECD countries



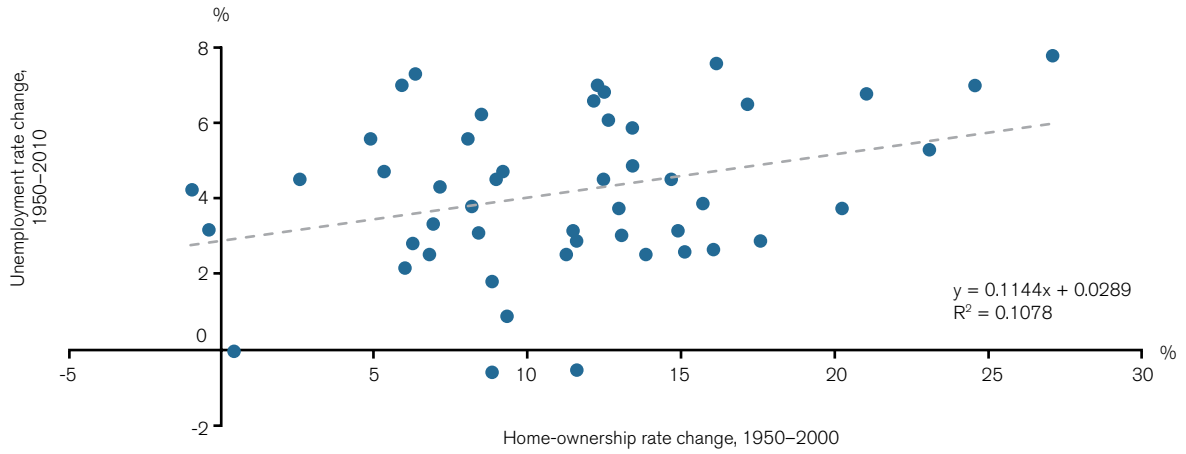
Source: Blanchflower and Oswald (2013).

1 See Linn et al. (1985), DiTella et al. (2003), Murphy and Athanasou (1999), Paul and Moser (2009) and Powdthavee (2010).

2 According to Eurostat (2012), the Euro area unemployment rate was 11.7% in December 2012, ranging from a low of 4.3% in Austria, 5.3% in Germany, and 5.8% in the Netherlands, to a high of 26.8% in Greece and 26.1% in Spain – both of which had youth unemployment rates of more than 50%. France had an unemployment rate of 10.6% and Italy 10.9%, while the UK and the US both had rates of 7.8%.

3 This work builds upon a tradition of labour-market research with state panels from the 1990s in sources such as Blanchard and Katz (1992) and Blanchflower and Oswald (1994).

Figure 2: Changes in unemployment and home-ownership rates in US states



Source: Blanchflower and Oswald (2013).

Laamanen (2013), which was done independently of this study[4] and reaches similar conclusions for Finland, the findings may go some way to explaining why other nations such as Spain (80% owners, 20+% unemployment) and Switzerland (30% owners, 3% unemployment) can have such different combinations of home ownership and joblessness. Figure 1 shows that there is a strong positive correlation across developed countries between their home-ownership rates and unemployment rates.

Such a chart is open to the sensible criticism that the scatter might be a fluke or an illusion caused by other characteristics of particular countries that are unmeasured. However, that objection cannot be raised about Figure 2, which is for a single country, the United States. It plots very long changes (over approximately a half-century) in home ownership and unemployment rates across all US states – except Alaska and Hawaii – and generates a similar result. It plots the 50-year change in home-ownership rates (1950–2000) against a 60-year change in unemployment rates (1950–2010).

The Blanchflower and Oswald (2013) findings are robust against a number of potential criticisms: they do not depend on data from the special period of the 2007 US house-price crash;[5] they do not rely on the idea that homeowners are themselves disproportionately unemployed (there is a considerable body of literature that suggests such a claim is false, or, at best, weak); and they do not imply that home values are higher where amenities are lower, which would contradict spatial compensating differentials theory. Their spirit is not Keynesian.[6] And, finally, they do not depend on the idea of 'house-lock' in a housing downturn (see, for example, Ferreira et al. 2010; Valletta 2012).

What is the debate about?

In his presidential address to the American Economic Association, Milton Friedman (1968) famously argued that the natural rate of unemployment can be expected to depend upon the degree of labour mobility in the economy. The functioning of the labour market will thus be shaped

4 In April 2013, Laamanen (2013) and Blanchflower and Oswald (2013) discovered they had equivalent empirical findings, though done in different ways, for Finland and the US respectively.

5 Repercussions from the worldwide house-price bubble are discussed in greater detail in Bell and Blanchflower (2010) and Dickens and Triest (2012).

6 The authors would like to acknowledge valuable discussions with Ian McDonald on this issue. One reason why our effect does not appear to be consistent with a Keynesian argument is that we find the lags from home ownership are long, and that is inconsistent with the idea that our estimated unemployment effect in time t is the result of aggregate demand in time t.

not just by long-studied factors such as the generosity of unemployment benefits and the strength of trade unions,[7] but also by the nature, inherent flexibility and dynamism of the housing market. However, on that topic, there has been relatively little empirical research.

One important early line of work stemmed from scholars such as McCormick (1983) and Hughes and McCormick (1981). This found evidence that in certain types of UK public-sector housing the degree of labour mobility was low and the associated joblessness was high.[8] That research tradition still continues – as in Dujardin and Goffette-Nagot (2009). A broader literature at the border between labour and urban economics has considered whether there might be fundamental differences in the labour-market impact of renting rather than owning. Some of this work was triggered by the suggestion in public lectures by Oswald (1996, 1997) that, especially in Europe, at the aggregate level, a higher proportion of home ownership (or 'owner-occupation') seems to be associated empirically with a larger amount of unemployment. Oswald's data were mainly for Western nations and for US states. He presented no formal regression equations. Green and Hendershott (2001) subsequently reported US econometric results that were somewhat, though not entirely, supportive.

One theoretical interpretation of these early patterns was that home ownership might raise unemployment by slowing the ability of jobless owners to move to new opportunities. In response to this idea, a number of researchers later examined micro data. The ensuing literature concluded that the bulk of the evidence runs counter to the view that home-owning individuals are unemployed more than renters. Hence – though the empirical debate continues – a number of authors concluded that Oswald's general idea must be incorrect and the cross-country pattern must be illusory.[9]

An alternative possibility that has not been fully explored empirically is the hypothesis that the housing market might create externalities. There are a number of ways in which such spillovers might operate. For example, Serafinelli (2012) shows that in the US labour market there appear to be beneficial informational externalities upon workers' productivity from a high degree of labour mobility. Although the author does not pursue the implication, it raises the possibility that any housing market structure that led to immobility could, therefore, produce negative externalities on workers and firms.

> 'Literature at the border between labour and urban economics has considered whether there might be fundamental differences in the labour-market impact of renting rather than owning'

Oswald (1999) suggests another possible channel. Homeowners might act to hold back development in their area (through zoning restrictions) in a way that could be detrimental to new jobs and entrepreneurial ventures. This would be NIMBY – not in my backyard – pressures in action. Another possibility is that in regions with high home ownership it might be difficult to attract migrant workers (who may require the flexibility of rental accommodation). And, lastly, a formal model in the literature by Dohmen (2005) predicts that high ownership can be associated with high unemployment. The reason, within Dohmen's framework, is one linked not to an externality

7 See, for example, OECD (1994) and Layard et al. (1991).

8 McCormick (1983) makes the interesting point that economists should not work on the assumption that low mobility is always undesirable. If home ownership facilitates the accumulation of wealth, and wealth has a negative effect on migration rates, then a migration cost arises which will and should influence migration and hence unemployment rates, without necessarily doing 'bad things'.

9 Recent literature includes Battu et al. (2008), Coulson and Fisher (2002, 2009), Dohmen (2005), Head and Lloyd-Ellis (2012), Van Leuvensteijn and Koning (2004), Munch et al. (2006), Rouwendal and Nijkamp (2010), Smith and Zenou (2003) and Zabel (2012).

but to the fact that the composition of the unemployed pool is endogenous to the structure of the housing market. In other words, the kind of person who is unemployed alters when the home-ownership rate goes up. None of these mechanisms requires the homeowners themselves to be disproportionately unemployed (as in the critique of Munch et al. 2006).

Most unemployment researchers work in the tradition of neoclassical economics and take as a starting point the idea that there is some underlying equation, defined over preferences and technology, which explains the structural or long-run rates of unemployment and employment. Whether from the modern matching tradition due especially to researchers such as Mortensen and Pissarides (1994), the 1990s macro-labour literature associated primarily with Layard et al. (1991), or the classical literature that goes back at least to Pigou (1914), a huge body of empirical work in economics has searched for labour-market characteristics – such as the degree of trade unionism – that might enter that unemployment equation.

The authors wish to remain open-minded about the 'true' model of the labour market. This is achieved by representing a region's natural unemployment rate as the product of history (in other words, past unemployment in the region), as well as depending on a number of independent variables (including the rate of home ownership in an area). A fuller specification would be as follows.

The unemployment rate in a region in a time period is a function of (or depends on):

- *The unemployment rate* in the same region in the previous period;
- *Labour-market characteristics* of the region;
- *Housing-market characteristics* of the region;
- *People's demographic and educational characteristics* in the region;
- *Other characteristics* of the region;
- *Year dummies.*

For some countries it would be ideal to allow for a division of the housing market into three broad segments: owners, private renters and public-sector renters. In the empirical work, however, data are from the US, where public renting is sufficiently rare that it can be largely neglected.

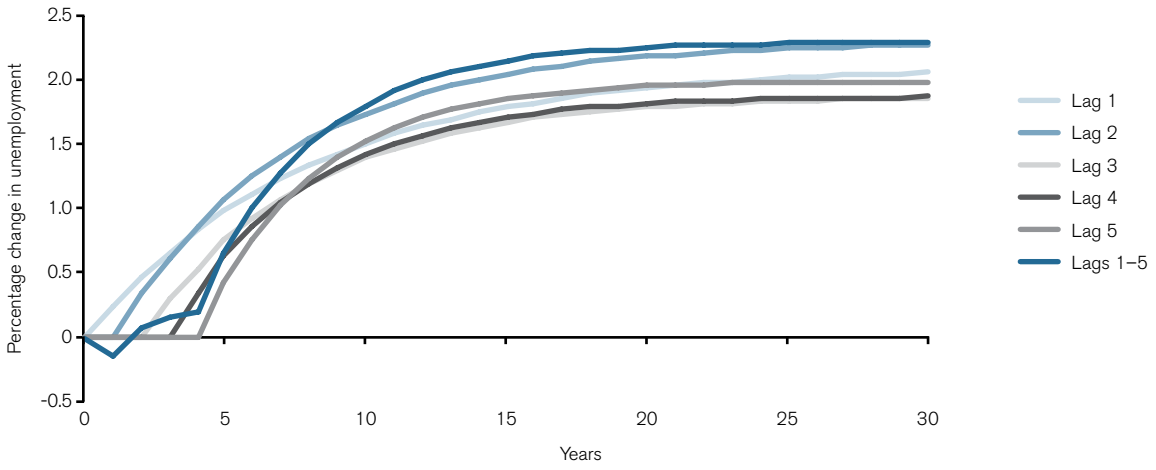
What does the evidence show?

As Figure 2 demonstrates, home ownership in the US has grown strongly since 1900, when it stood at approximately 46%. It peaked at 69% in 2004–05, a few years before the start of the housing crash. By 2012 it had fallen back to approximately 65%. In 2010, the US states with the highest levels of home ownership were Minnesota, Michigan, Delaware and Iowa. Ownership levels were lowest in California and New York (and in the District of Columbia).

The Appendix reports estimated unemployment equations, based on annual data from a panel of US states. The data cover a quarter of a century of consecutive years and are drawn from the Merged Outgoing Rotation Groups of the Current Population Survey. The exact period is 1985–2011, which gives an effective sample size of 1,377 observations (that is, the number of states multiplied by years). The dependent variable is the natural logarithm of the state unemployment rate. The coefficients of interest show the estimated responsiveness of unemployment to home ownership in previous years.

Figure 3 shows implications of the findings reported in the Appendix. The vertical axis measures the estimated change in unemployment associated with a 1% change in home ownership in some previous year or years. The horizontal axis shows the years over which the effects are felt; as can be seen, almost all the effects are within 30 years. The estimates are dynamic; that is, they take into account that an increase in unemployment in one year will not stop there, but will also raise unemployment the following year, and so on. The line labelled Lag 1 shows the estimated response of unemployment to a change in home ownership the previous year, Lag 2 two years previously, and so on; the line for Lags 1–5 shows the response of unemployment to a change in home ownership in each of the previous five years.

Figure 3: The estimated response of US unemployment to a 1% increase in home ownership



Source: Calculated from Appendix Table A1.

The figure shows a consistent picture. After just one year (Lag 1), an increase in home ownership has a small, immediate effect on unemployment. Because that small increase in unemployment also affects unemployment in future years, the long-run effect is much larger. Thirty years later, the effect of a 1% increase in home ownership the following year is estimated at a 1.7% increase in unemployment. In this context, it is a surprisingly large number, suggesting profound connections between the US housing and labour market.

As the number of lags is increased from 1 to 5, the sensitivity of home ownership to unemployment strengthens. The greatest impact is found when changes in home ownership in each of the previous five years are taken together (Lags 1–5). Now, the long-run effect of a 1% increase in home ownership is estimated at a 2.2% increase in unemployment.

Movements upward in home ownership thus seem to lead to large upward movements in the unemployment rate. Is this pattern believable and robust? Further experiments suggest that it is. First, it is conceivable that unemployment and home ownership simply both follow a state-level business cycle, but with different lagged timing. One way to probe for this is to replace the state and year dummies with state time trends; it turns out that the results are then essentially unchanged.[10] Splitting the data into two sub-periods also shows the result to be robust. This is equally true across different geographical areas within the US. Such a check is important because southern states had particularly large rises in their home-ownership rate over this period, and the estimated home-ownership effect might, in principle, be driven in an illusory way solely by that part of the country. Further research, however, shows that this is not the case.

Some economists might prefer to focus on the level of employment as a key variable rather than on the rate of joblessness itself. For that reason, the authors have replicated the same general finding using data for the employment rate in place of unemployment.

Many labour economists who look at these equations will wonder about a possible role for the housing market's structure, and any consequences for the degree of labour

10 Results available on request. Another possibility, suggested privately by Barry McCormick, is that both unemployment and home ownership are driven by a common state-level business cycle with different lag structures. Our correlation might then be illusory. We tested for this by estimating a series of state-level home-ownership equations, which included long lags on both the log of the home-ownership rate (5 lags) and the log of the unemployment rate (7 lags). There was no evidence of any effect from long lagged unemployment rates, which suggests that home ownership here is not driven by local business cycles.

mobility in the US. The calculations imply that the rate of movement in a state is nearly 18 percentage points lower in a place with double the home-ownership rate of another area. These results are broadly consistent with an earlier study by Hamalainen and Bockerman (2004) who find that, other things being equal, net migration to regions within Finland appears to be depressed by higher regional home ownership.

It is possible that the links between high home ownership and subsequent high unemployment have nothing to do with the degree of labour mobility. Should that be the case, what other processes might be at work? To probe possible mechanisms, further research examined whether there is a connection between home-ownership levels in an area and the ease with which individuals can get to their workplace. Any model with a neoclassical flavour would suggest that the cost of travelling to work should act as an impediment to the rate of employment (because it raises the opportunity cost of a job). The findings show that high home ownership is associated with longer commuting times, which is consistent with the idea that moving for an owner-occupier is expensive, and that consequently the places with high home ownership will see more workers staying put physically, but working further from their family home. Because roads, in particular, are semi-public goods in which individuals can create congestion problems for others, this pattern in the data is consistent with the existence of unpriced externalities.

A final possibility is that – for NIMBY or other reasons – a high degree of home ownership in an area might be associated with less tolerance for new businesses. Indeed, there is evidence for that; the effects of home ownership on (lower) business formation are large. This suggests that, without politicians being aware of it, high home ownership may slowly erode a country's industrial base.

Conclusion

With the intention of promoting home ownership, Western governments have tenaciously intervened in housing markets in varied ingenious ways. Measures commonly adopted include:

- House-building subsidies;
- Home-loan subsidies and guarantees, often directed particularly to first-time buyers;
- Rewards to home-loan providers for lending to first-time home buyers with poor credit records;
- Tax allowances against home-loan interest payments; and
- Zero taxation of imputed home rents.

Such interventions have been effective in their aim of widening the circle of home ownership, and this is often presented to the public as a creditable achievement of government.

> "The evidence is that high home ownership weakens the vitality of the labour market and slowly grinds out greater rates of joblessness"

The results of this research, however, raise the following question: what is the price paid by society for the widening of home ownership? The research suggests that policies have led to an unknowing impairment of the markets for labour and enterprise. The evidence is that high home ownership weakens the vitality of the labour market and slowly grinds out greater rates of joblessness. Given the emphasis that most post-war governments in the West have put on the promotion of home ownership (one exception is Switzerland, which taxes homeowners' imputed rents), and the tremendous exchequer cost in tax breaks of having done so, these statistical results should be deeply worrying for policy-makers.

A likely reason why these patterns have attracted so little attention either from researchers or among the public at large is that the time lags are long. High levels of home ownership do not destroy jobs in the short term; they tend

to do so, according to our estimates, a number of years later. Unless these long linkages are properly understood by politicians and other policy-makers, the deleterious consequences of high levels of home ownership cannot be appreciated.

What mechanisms lie behind these findings? It is not possible to say with certainty. This contribution should be seen as a statistical one, of documenting patterns of potential interest to economists and social scientists, and especially to labour economists, macroeconomists, economic geographers and urban economists.

The authors, nevertheless, have made an attempt to look below the underlying link between current home ownership and subsequent joblessness. In doing so, they have found evidence that high home ownership in US states is associated with

1. lower labour mobility;
2. longer commutes; and
3. fewer new firms and establishments.

It should be emphasized that this is after controlling for a wide range of possible confounding influences, and the results also are consistent with the recent conclusions of an independent European study by Laamanen (2013).

This paper does not claim that homeowners are unemployed more than renters (very probably they are not). Nor does it attempt to build on the idea that homeowners are less mobile than renters (though they probably are). Instead, because the statistical estimates can control for whether individuals are themselves renters or owners, the patterns documented here are consistent with the possibility that the housing market generates important negative externalities upon the labour market.

Policy-makers currently lack a full understanding of the interplay between the housing and labour markets. Much remains to be discovered. Nevertheless, it seems likely that high home ownership is a major reason for the high unemployment rates of the industrialized nations in the post-war era.

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Appendix

Table A1: Unemployment equations

	1985–2011	1986–2011	1987–2011	1988–2011	1989–2011	1989–2011
Log unemployment rate $_{t-1}$	0.8482 (50.67)	0.8536 (50.86)	0.8442 (51.37)	0.8173 (49.08)	0.7840 (45.77)	0.7860 (45.24)
Log home ownership rate $_{t-1}$	0.2488 (2.73)					-0.1460 (1.01)
Log home ownership rate $_{t-2}$		0.3359 (3.69)				0.3303 (1.73)
Log home ownership rate $_{t-3}$			0.2927 (3.26)			-0.0837 (0.44)
Log home ownership rate $_{t-4}$				0.3429 (3.79)		-0.0171 (0.09)
Log home ownership rate $_{t-5}$					0.4302 (4.47)	0.4081 (2.97)
Union density	-0.1619 (0.71)	-0.1041 (0.61)	-0.1066 (0.47)	-0.1109 (0.48)	-0.1693 (0.70)	-0.1402 (0.60)
Year dummies	25	24	23	22	21	21
State dummies	50	50	50	50	50	50
Education dummies	18	18	18	18	18	18
Personal controls	4	4	4	4	4	4
N	1377	1326	1275	1224	1173	1173
Adjusted R^2	0.9283	0.9292	0.9330	0.9349	0.9323	0.9371

Notes: The dependent variable in this table is the log of the state unemployment rate in year t.
The personal controls here are age, gender, 18 level-of-education variables and two race dummies.
T-statistics are in parentheses. Adding in a variable for the generosity of state unemployment benefits makes no substantive difference to these results.
If the equation of column 1 is re-estimated with contemporaneous home ownership, then home ownership has a t-statistic less than 2; the exact result for the right-hand side of that equation is as follows (with t-statistics in parentheses): *0.8447 (50.52) Logun $_{t-1}$ + 0.1154 (1.26) log home - 0.1407 (0.64) union density.*
Source: Calculated from the Merged Outgoing Rotation Group (MORG) files of the US Current Population Survey, 1985–2011.

The table shows the importance of lags. In the first column, for the entire period through to 2011, a lagged dependent variable has a coefficient of 0.8482 (with a t-statistic of approximately 50). Column 1 includes a set of year dummies; a set of state dummies; 18 education dummy variables for different levels, in the underlying micro data; and controls for personal characteristics, such as the average age of people in the state. The unemployment rate in this form of panel is a slow-adjusting variable, and that holds true despite the inclusion of state fixed effects. In this first column the coefficient on lagged home ownership is 0.2488. Here the lag is only a single year. The t-statistic on this coefficient is 2.73, so the null hypothesis of a zero coefficient can be rejected at conventional levels of confidence. The coefficient on union density has the wrong sign to be a signal of any deleterious effect on joblessness; it is negative, with a t-statistic of only 0.71.[11] These estimates allow for adjustment for clustered standard errors.

Interestingly, the size of the coefficient strengthens as one goes further back. Column 2 introduces a further lag on the home-ownership rate variable, namely, for ownership in year t-2. It enters with a coefficient of 0.3359. The null hypothesis of zero can again be rejected; the t-statistic is 3.69.

In columns 3, 4, and 5 respectively, further and further lags on home ownership are included. In the fifth column, for example, the lagged dependent variable has a coefficient of 0.7840 and a coefficient on home ownership in t-5 of 0.4302.

The final column gives the fullest kind of specification where all home-ownership rates are included from t-1 to t-5. The sum of these coefficients is approximately 0.49.

11 The authors have examined the impact of state unemployment benefits but can find no effect.

About CAGE

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