

Home Ownership and Social Mobility

Jo Blanden

School of Economics, University of Surrey

with Stephen Machin and Andrew Eyles, London School of
Economics

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Introduction

Wealth has always been seen as a crucial factor underlying permanent welfare.

Recently inequalities and intergenerational transmissions in wealth are attracting even more interest, with Piketty asserting that wealth inequality and inheritance will grow in importance.

However, intergenerational data that includes good wealth information is generally hard to come by and there is little work on changes over time and comparisons across countries.

This paper seeks to begin to fill this gap, by comparing the persistence of home ownership and using this to comment on intergenerational wealth persistence.

We use data from two British cohorts and the PSID.

Context

Discussion of problems of low social mobility in Britain are commonplace.

The issue has magnified in several ways more recently:

- 1). The documented fall in intergenerational income mobility in economic status that earlier research has highlighted.
- 2). Evidence that absolute mobility is harder to achieve as real wages and living standards are squeezed for younger cohorts.
- 3). 1) and 2) have implications for wealth mobility across the generations. Concerns are magnified by recent changes in the housing market.

Do the same issues apply elsewhere?

Structure

- 1). Context: Home ownership and inequalities in wealth.
- 2). Intergenerational patterns of home ownership in the UK
- 3). Mechanisms
- 4). Implications
- 5). Comparisons with the US
- 6). Conclusions

Home Ownership and Wealth in the UK

Much has been written about the importance of housing for wealth in the UK.

Changes in house price and labour market returns have led to large changes in cohorts' abilities to buy a home.

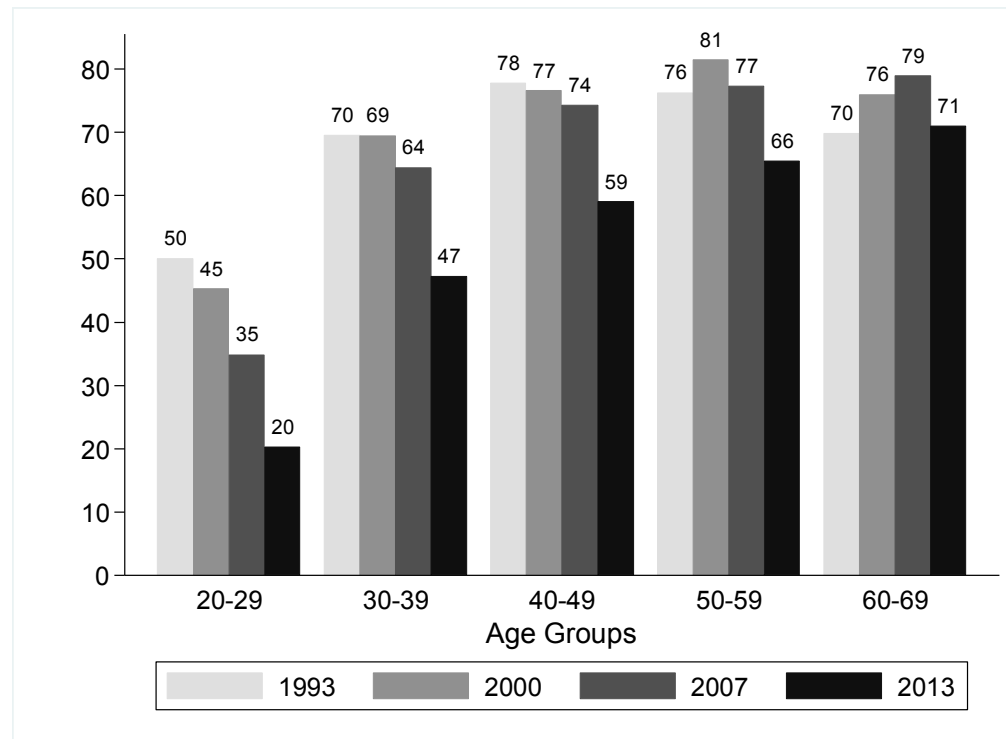
Subsequent house price changes have then led to important wind-fall benefits for those that have this asset.

In 2000 12% of home owners had homes that earned more than their labour income, this declined by 2008 because of financial crisis but is likely to have recovered since.

Changes in housing wealth have been the most important driver of reductions in total wealth among cohorts.

Cross Cohort Changes in Home Ownership 1

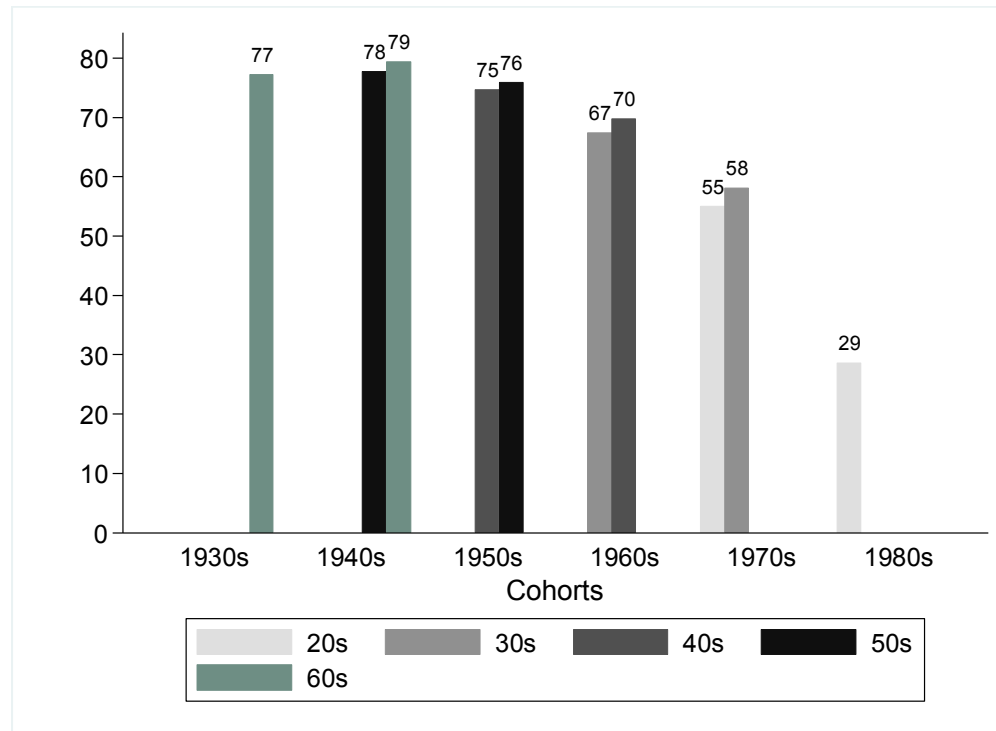
Percent owner occupiers by age group and year



Source: Survey of English Housing/English Housing Survey

Cross Cohort Changes in Home Ownership 2

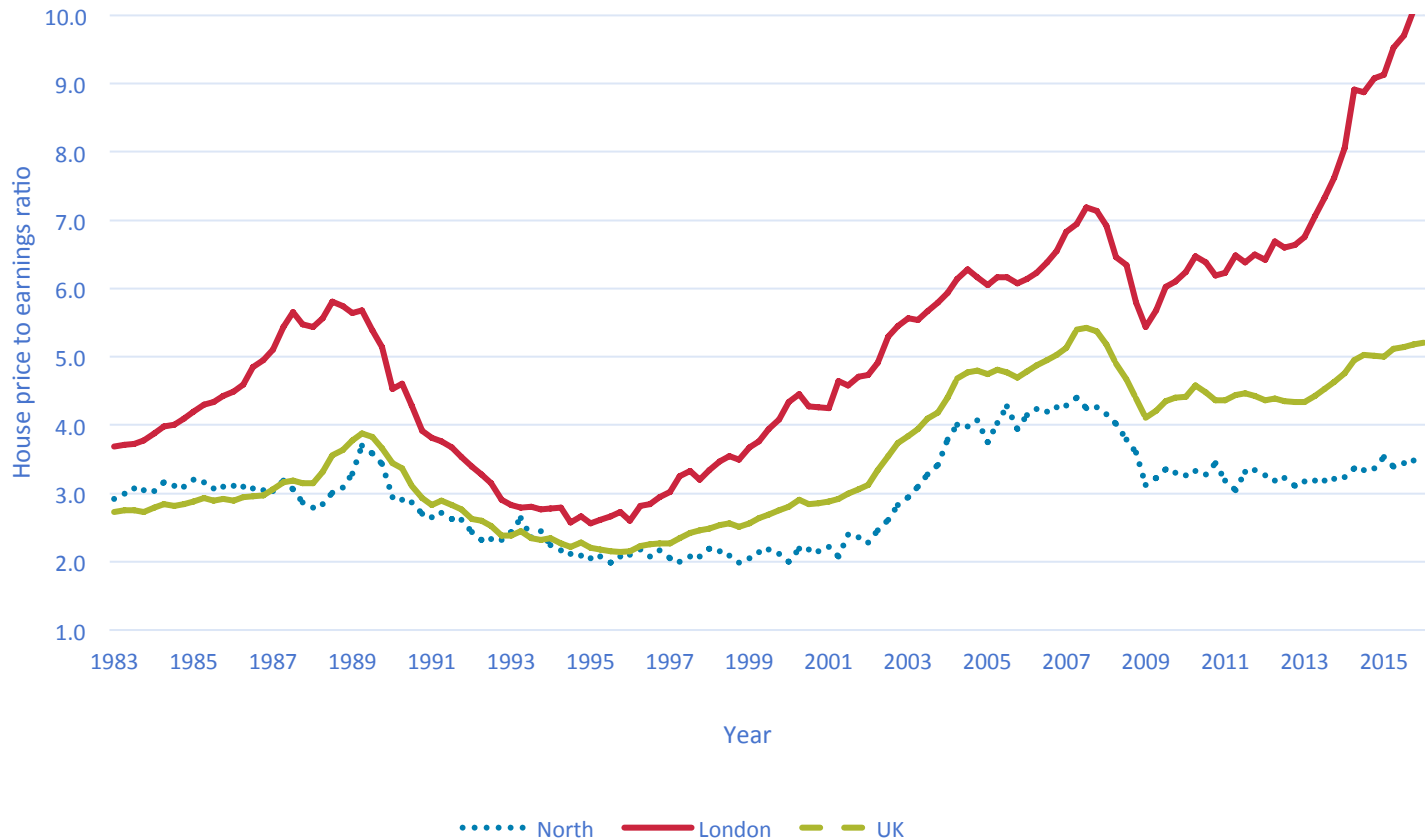
Percent owner occupiers by age and cohort of birth



Source: Survey of English Housing/English Housing Survey

Rapid increases in house prices, most particularly since late 1990s

FTBs gross house price to earnings ratio



House price growth in the UK is particularly steep

Global house price index

Q1 1980 = 100

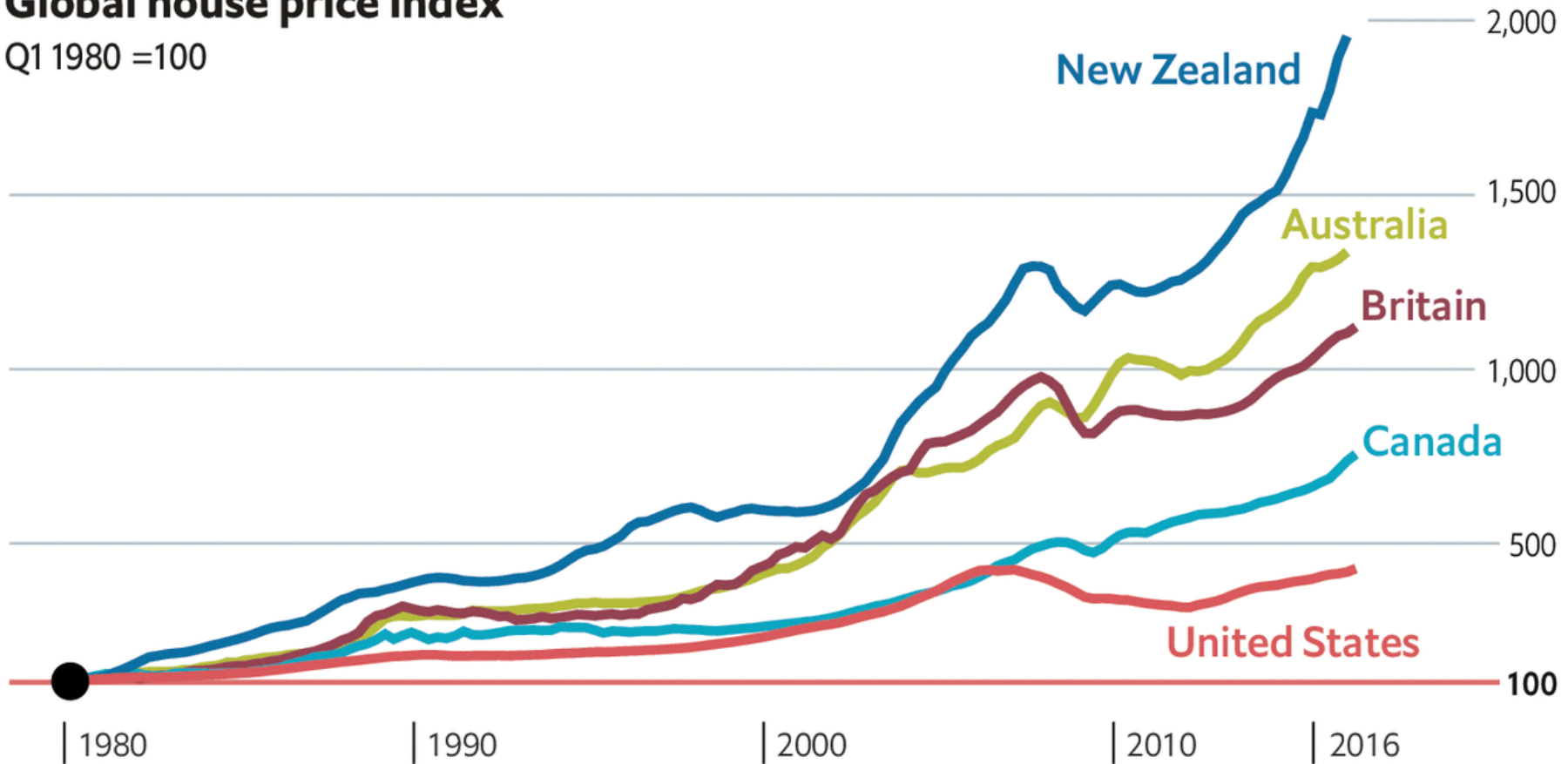
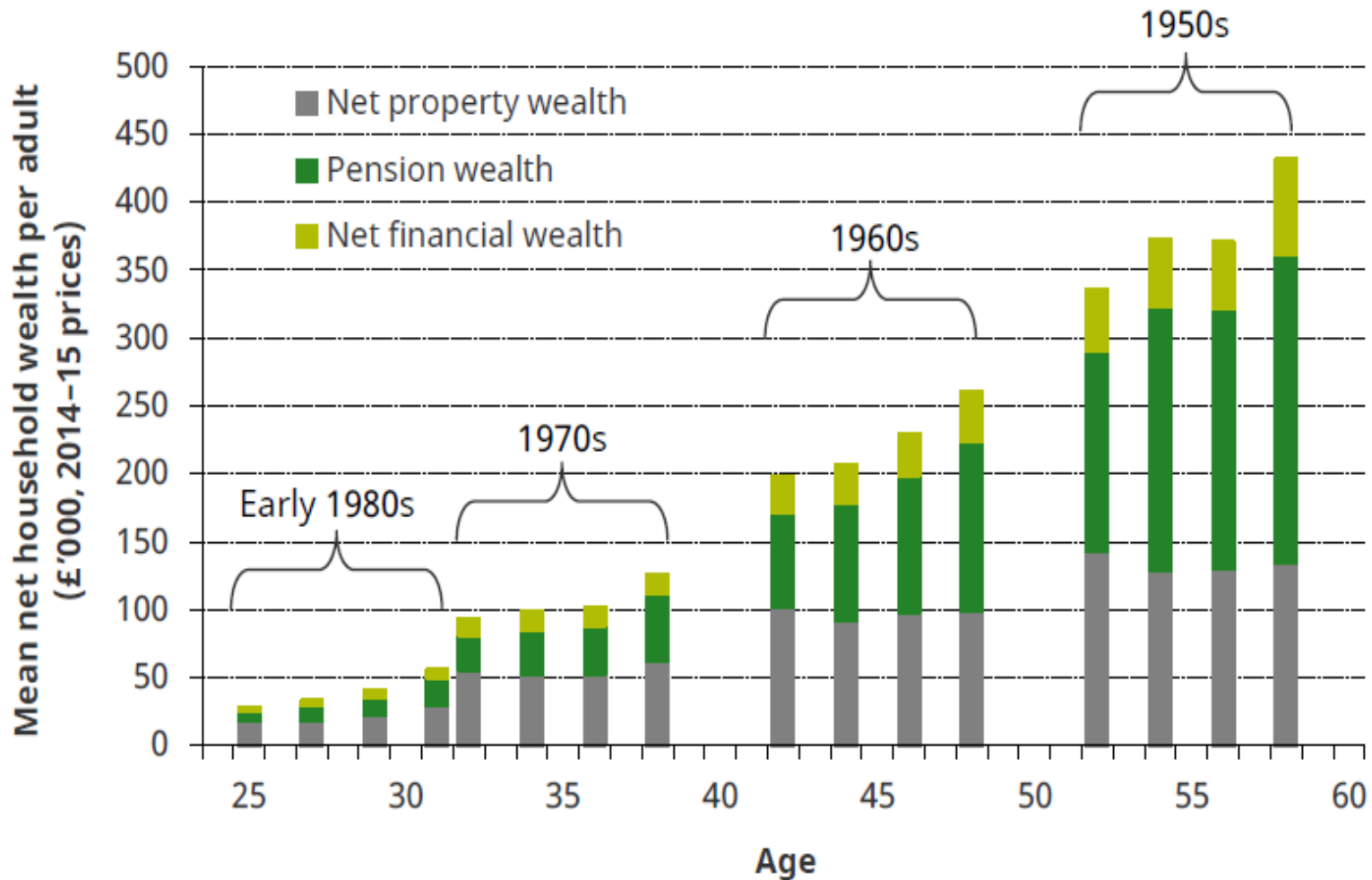


Figure 6. The composition of mean net household wealth per adult by age, for people born in different decades



Source: Institute for Fiscal Studies

Intergenerational correlations of wealth – existing literature

Large Literature on intergenerational persistence in outcomes, particularly income (Black and Devereux; 2011).

On wealth:

Charles and Hurst (2003) find 0.37 elasticity in US look at those aged 25-65 in 1999.

Arrondel (2013) finds 0.22 elasticity for France for those 35-55 in 2002.

Clark and Cummins (2015) match parents and children, who died between 1858 and 2012 in England and Wales, using rare surnames. Stable elasticity of 0.41-051

Black et al. (2015) 0.35 rank-rank correlation for parents and biological children, and 0.27 between adoptive parents and adoptees in Sweden in 2006.

Fagereng et al. (2015) look at Korean adoptees in Norway. They find rank correlation of 0.18.

Intergenerational Patterns of Home Ownership in the UK

Cohort data for those born in 1958 and 1970 provides information on both parents' and children's home ownership as well as more standard variables.

We have previously shown that intergenerational income correlations strengthened between these cohorts.

National Child Development Study (babies born in a week in 1958).

British Cohort Study (babies born in a week in 1970).

Started with around 18,000 observations each. Followed up periodically.

Mobility literature has concentrated on social class at 11/10 and family income at 16 and related these to adult measures.

We now add information on housing tenure.

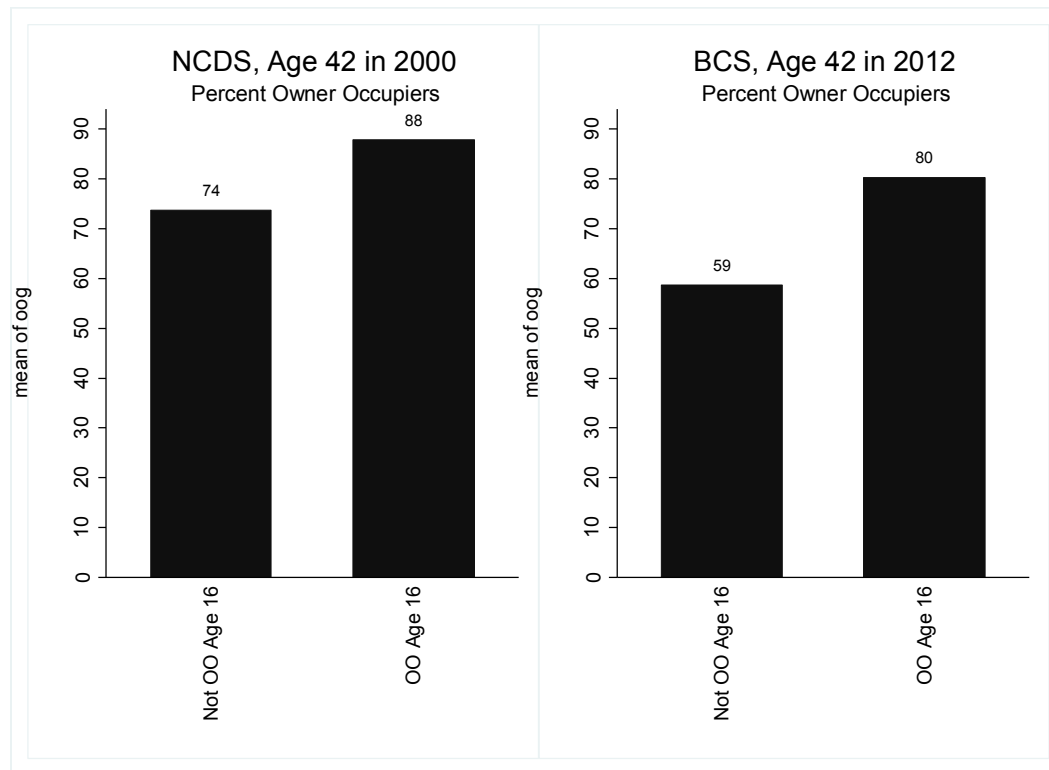
Outcomes are measured at 42, in 2012 for most recent cohort.

Home ownership in the cohorts

| National Child Development Study (born in 1958) | | British Cohort Study (born in 1970) | |
|--|-------------------------------|--|----------------------------|
| | Percent Owner Occupiers | | Percent Owner Occupiers |
| Parents' status | | | |
| Age 11 in 1969 | 45.7 | Age 10 in 1980 | 61.3 |
| Age 16 in 1974 | 49.9 | Age 16 in 1986 | 73.6 |
| Age 11 or 16 | 61.7 | Age 10 or 16 | 83.4 |
| Cohort members' status | | | |
| Age 42 in 2000 | 80.6 | Age 42 in 2012 | 73.4 |

Intergenerational Patterns of Home Ownership 2

Owner occupancy at age 42 by parents' owner occupancy at age 11/10



Intergenerational Patterns of Home Ownership

Intergenerational models of owner occupation

| | NCDS, Age 42 in 2000 | BCS, Age 42 in 2012 | Cross Cohort Change |
|-----------------------------------|----------------------|---------------------|---------------------|
| Home ownership at 42 and 16 | 0.140 (0.008) | 0.211 (0.013) | 0.071 (0.015) |
| Sample size | 8375 | 6227 | |
| Home ownership at 42 and 10 | 0.120 (0.009) | 0.189 (0.011) | 0.128 (0.017) |
| Sample size | 7388 | 8402 | |
| Home ownership at 42 and 16 or 10 | 0.136 (0.009) | 0.223 (0.015) | 0.099 (0.017) |
| Sample size | 7838 | 7795 | |

Notes: All models control for gender, parental age, and whether the child lived with their natural/adoptive father at 11/10. Standard errors in parentheses.

Intergenerational Patterns of Home Ownership 2

Variations over the lifecycle

| National Child Development Study (1958) | | | British Cohort Study (1970) | | |
|---|--------------------------------|-------------------------------|-----------------------------|--------------------------------|-------------------------------|
| Home ownership measured at: | Percentage owner occupiers [N] | Regression coeff for OO at 16 | Home ownership measured at: | Percentage owner occupiers [N] | Regression coeff for OO at 16 |
| Age 23 | 29.9 [9113] | 0.055 (0.011) | Age 26 | 42.9 [8875] | 0.125 (0.018) |
| | | | Age 30 | 63.8 [11129] | 0.196 (0.015) |
| Age 33 | 79.6 [7714] | 0.179 (0.009) | Age 34 | 74.6 [9602] | 0.189 (0.014) |
| | | | Age 38 | 77.93 [8827] | 0.173 (0.014) |
| Age 42 | 80.97 [8375] | 0.140 (0.008) | Age 42 | 73.4 [9754] | 0.211 (0.130) |
| Age 50 | 83.85 [7224] | 0.095 (0.009) | | | |
| Common Samples | | | | | |
| Age 33 | 83.05 [5607] | 0.163 (0.010) | Age 34 | 78.25 [6970] | 0.173 (0.015) |
| | | | Age 38 | 80.76 [6970] | 0.164 (0.0139) |
| Age 42 | 86.5 [5607] | 0.107 (0.009) | Age 42 | 79.23 [6970] | 0.167 (0.014) |
| Age 50 | 87.6 [5607] | 0.092 (0.009) | | | |

In the NCDS parental home ownership was important in the mid-30s but became less so as individuals age.

The Importance of Parental Home Ownership for the Cross Cohort Changes 1

Those with parents who did not own their own homes have failed to catch up as they age in the more recent cohort leading to an important rise in the intergenerational persistence of home ownership

In regression models of home ownership including family background variables, parental home ownership is a more important determinant of home ownership than having parents from a professional or high income background.

Potential Mechanisms

1) Human capital transmissions

Is this the same as the income mobility result?

2) Transmissions of preferences

Not very good data, but can consider family formation

3) House price rises enabling parents to transfer capital to children

We can explore this by matching in house price data

Measures of changing ‘social’ mobility

| | NCDS, Age 42 in 2000 | BCS, Age 42 in 2012 | Cross Cohort Change |
|--|----------------------|---------------------|---------------------|
| Home ownership at 42 and 16 | 0.140 (0.008) | 0.211 (0.013) | 0.071 (0.015) |
| Sample size | 8375 | 6227 | |
| Social class at 42 and 11/10 | 0.072 (0.005) | 0.067 (0.006) | -0.004 (0.008) |
| Sample size | 7926 | 6394 | |
| Log(Earnings at 42) and Log(Income at 16) | 0.266 (0.029) | 0.354 (0.026) | 0.088 (0.039) |
| Sample size | 4340 | 3389 | |

Income mobility: is it the same mechanism?

| Home ownership at 42 and 16 | NCDS, Age 42 in 2000 | BCS, Age 42 in 2012 | Cross Cohort Change |
|---|----------------------|---------------------|---------------------|
| Basic Model | 0.140 (0.008) | 0.211 (0.013) | 0.071 (0.015) |
| Sample size | 8375 | 6227 | |
| Including log parental income at 16 and family income at 42 | 0.103 (0.011) | 0.152 (0.019) | 0.049 (0.019) |
| Sample size | 5666 | 3686 | |
| Including parental income at 16 and average family income in early middle age | 0.096 (0.010) | 0.130 (0.017) | 0.038 (0.018) |
| Sample size | 6030 | 4360 | |
| Including test scores, highest qualification and incomes for both generations | 0.062 (0.001) | 0.104 (0.017) | 0.040 (0.020) |
| Sample size | 6030 | 4360 | |

Family Formation

| Home ownership at 42 and 16 | NCDS, Age 42 in 2000 | BCS, Age 42 in 2012 | Cross Cohort Change |
|---|----------------------|---------------------|---------------------|
| Basic Model | 0.140 (0.008) | 0.211 (0.013) | 0.071 (0.015) |
| Sample size | 8375 | 6267 | |
| Including number of children and partnership status in early middle age | 0.129 (0.009) | 0.151 (0.014) | 0.027 (0.018) |
| Sample size | 7346 | 5581 | |

House price changes

House prices are relevant for our story in three ways.

1. If parents experience a strong house price growth home owners will be better placed to support their children.
2. If children face high house prices then they are less likely to be able to buy without parental support.

We therefore match in house prices to the areas where children grew up and see how they change over the next 20 years. 70 areas available at the moment.

We expect that home ownership will matter more in areas where price changes are large.

3. House price growth after children purchase will strengthen the relationship between home ownership and wealth.

House price changes 2

| Home ownership at 42 and 16 | NCDS, Age 42 in 2000 | BCS, Age 42 in 2012 | Cohort change |
|---|-------------------------|------------------------|------------------|
| Bottom quintile price change* Owner occupancy at 16 | 0.158 (0.020) | 0.195 (0.031) | 0.037 (0.037) |
| Middle three quintiles price change* Owner occupancy at 16 | 0.124 (0.012) | 0.225 (0.020) | 0.101 (0.023) |
| Top quintile price change* Owner occupancy at 16 | 0.140 (0.022) | 0.287 (0.041) | 0.147 (0.047) |
| Sample size | 7402 | 5685 | |

Note: standard deviation of growth was £11,000 in first cohort and £48,000 in second.

Implications for the intergenerational correlation of wealth

Does parental home ownership correlate with other measures of wealth, how does this change over time?

In the second cohort individuals do provide wealth estimates, this enables us to directly assess the link between middle-age wealth and home ownership in the two generations.

Alternative Measures of Wealth

Comparison of intergenerational models of wealth proxies, (2)

| Maximum samples | NCDS, Age 42 in 2000 | BCS, Age 42 in 2012 | Cross Cohort Change |
|---|-------------------------|------------------------|------------------------|
| Having savings/investments at 33 on: | | | |
| Parental home ownership at 16 | 0.132 (0.011) | 0.176 (0.016) | 0.044 (0.019) |
| Sample size | 7028 | 5296 | |
| Log(Parental Income at 16) | 0.108 (0.016) | 0.182 (0.016) | 0.074 (0.022) |
| Sample size | 5413 | 4059 | |
| Owing a business at 42 on: | | | |
| Parental home ownership at 16 | 0.024 (0.005) | 0.016 (0.005) | -0.009 (0.005) |
| Sample size | 7206 | 6282 | |
| Log(Parental Income at 16) | 0.027 (0.007) | 0.013 (0.005) | -0.014 (0.007) |
| Sample size | 5542 | 4827 | |

Notes: All models control for gender, parental age, and whether the child lived with their natural/adoptive father at 11/10. Standard errors in parentheses.

Wealth and the persistence of home ownership

| Net wealth level at 42 (2012 £) | | | | |
|--------------------------------------|----------------------|-----------------------|---------------------|----------------------|
| Parents' owner occupiers at 16 | 88361.5 (13134.2) | 46211.7 (13308.2) | | |
| Owner occupier at 42 | | 167028.1 (12689.5) | 177753 (12324.9) | 93285.0 (12037.3) |
| Weekly family income at 42 | | | | 221.49 (9.19) |
| N=3987 | | | | |
| Log wealth at 42 | | | | |
| Parents' owner occupiers at 16 | 0.784 (0.085) | 0.526 (0.092) | | |
| Owner occupier at 42 | | 3.046 (0.083) | 3.107 (0.083) | 2.744 (0.082) |
| Log weekly family income at 42 | | | | 0.724 (0.042) |
| N=3199 | | | | |
| Percentile of net wealth level at 42 | | | | |
| Parents' owner occupiers at 16 | 17.66 (1.018) | 8.146 (0.846) | | |
| Owner occupier at 42 | | 37.50 (0.807) | 39.38 (0.791) | 32.77 (0.834) |
| Log weekly family income at 42 | | | | 9.900 (0.052) |
| N=3987 | | | | |

Summary of UK findings

There has been an important increase in the persistence of home ownership.

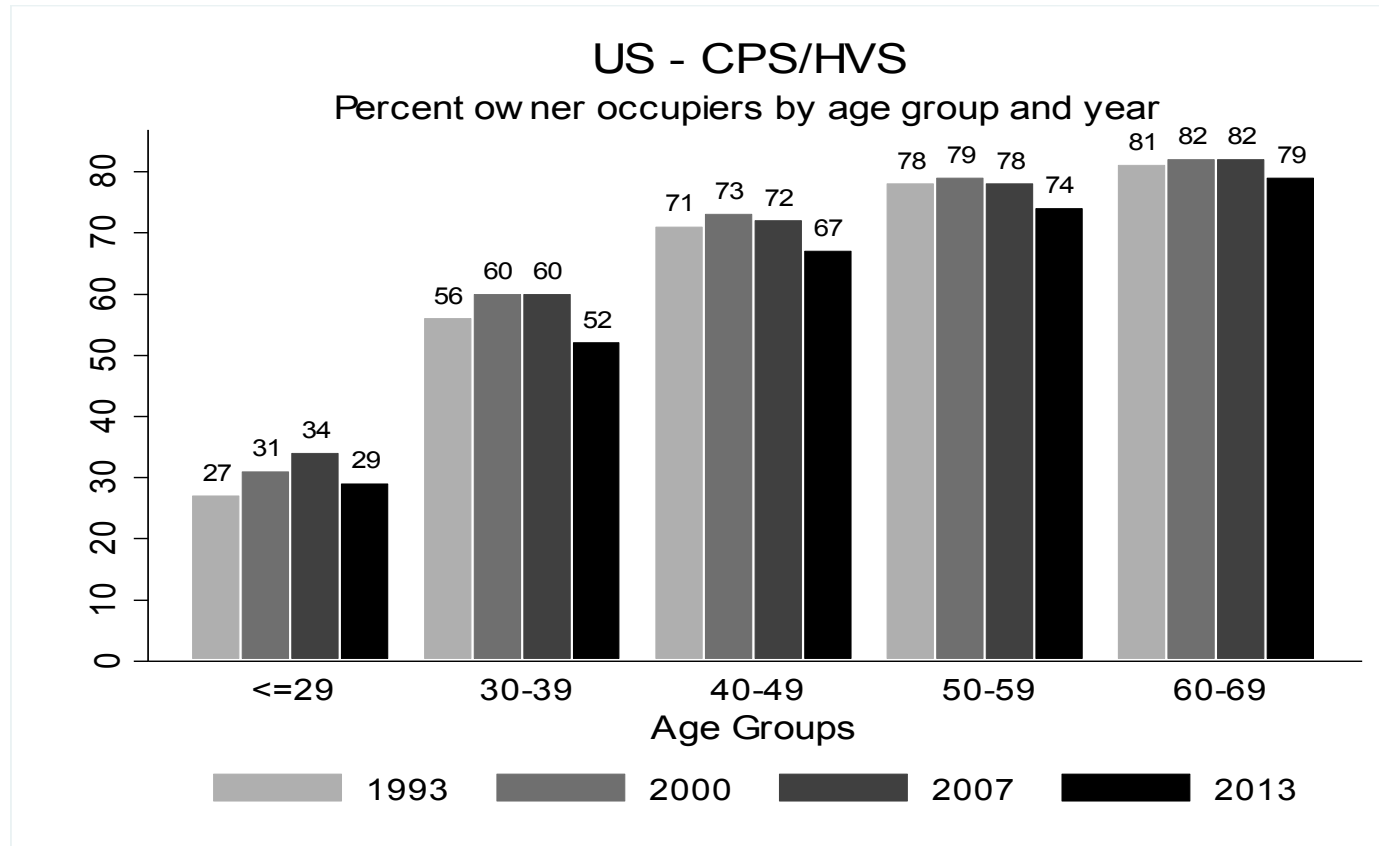
This is partly related to the decline in income mobility between these cohorts, but also seems to be associated with increases in house prices.

There is also a stronger relationship between parental home ownership and financial wealth.

Taken together it seems likely that wealth persistence has increased across these cohorts.

Direct evidence confirms a relationship between parental home ownership and the child's wealth that is mediated through their own home ownership.

US comparison – Home ownership rates across cohorts



Between cohort changes in home ownership much less stark than in UK.

PSID Sample

PSID (1999 Cross Section Matched to
1984 Data)

PSID (2015 Cross Section Matched to
1999 Data)

Parents' status

| | | | |
|----------------|-------|----------------|-------|
| Age | 46.16 | Age | 51.95 |
| Owner Occupier | 84% | Owner Occupier | 85% |

Cohort members' status

| | | | |
|----------------|-------|----------------|-------|
| Age | 37.39 | Age | 36.22 |
| Owner Occupier | 64% | Owner Occupier | 59% |
| No Obs. | 1766 | No Obs. | 1721 |

Notes: Sample consists of those aged 25-55 in the core sample of the PSID, with at least one parent alive in the year of observation

Intergenerational relationships

| | PSID, Age 25-55 in 1999 | PSID, Age 25-55 in 2015 | Cross Cohort Change |
|------------------------------------|----------------------------|----------------------------|------------------------|
| Log income-log income | 0.205 (0.025) 1453 | 0.198 (0.025) 1330 | -0.006 (0.036) |
| Wealth-Wealth (percentiles) | 0.341 (0.025) 1761 | 0.306 (0.024) 1722 | -0.035 (0.035) |
| Home ownership - home ownership | 0.175 (0.030) | 0.201 (0.032) | 0.026 (0.043) |
| Sample size | 1761 | 1722 | |

Intergenerational relationships broadly unchanged (Lee and Solon, 2009, Chetty et al).

Persistence of home ownership in the US: No evidence of change

| Home ownership at Ages 25-55 | PSID, 1999 Cross Section | PSID, 2015 Cross Section | Cross Cohort Change |
|------------------------------|-----------------------------|-----------------------------|------------------------|
| Basic Model | 0.175 (0.030) | 0.201 (0.032) | 0.026 (0.043) |
| Coefficient on Age<35 | 0.137 (0.042) | 0.173 (0.043) | 0.046 (0.060) |
| Coefficient on Age 35-44 | 0.291 (0.057) | 0.276 (0.057) | -0.014 (0.080) |
| Coefficient on Age 45-55 | 0.078 (0.063) | 0.134 (0.093) | 0.056 (0.108) |
| Sample size | 1761 | 1722 | |

Note: Wealth is in 2015 dollars. All Specifications control for age in observation year and parental age 15/16 years prior.

Note: Age patterns are robust to controlling for cohort trends.

Alternative Measures of Wealth - PSID

| | PSID, 1999 matched to 1984. | PSID, 2015 matched to 1999. | Cross Cohort Change |
|---------------------------------------|--------------------------------|--------------------------------|---------------------|
| Having savings/investments on: | | | |
| Parental home ownership | 0.110 (0.021) | 0.236 (0.025) | 0.126 (0.032) |
| Owing a business on: | | | |
| Parental home ownership | 0.041 (0.023) | 0.050 (0.021) | 0.008 (0.031) |
| Sample size | 1761 | 1722 | |

Home ownership matters less for wealth in US

Net wealth level at 25-55

| | | | | |
|---|---------------------|-----------------------|-----------------------|-----------------------|
| Parents' owner occupiers 15 years prior | 100263.5 (20632) | 59812.6 (19701.7) | | |
| Owner occupier at 25-55 | | 233835.5 (17787.6) | 239971.5 (18071.9) | 154259.4 (24366.3) |
| Weekly family income at 25-55 | | | | 181.574 (45.879) |

N=7122

Log wealth at 25-55

| | | | | |
|---|------------------|------------------|------------------|------------------|
| Parents' owner occupiers 15 years prior | 0.695 (0.082) | 0.438 (0.068) | | |
| Owner occupier at 25-55 | | 1.975 (0.064) | 2.009 (0.064) | 1.635 (0.06) |
| Log (family income at 25-55) | | | | 0.582 (0.036) |

N=5920

Percentile of net wealth level at 25-55

| | | | | |
|---|-------------------|------------------|-------------------|-------------------|
| Parents' owner occupiers 15 years prior | 10.304 (1.026) | 5.341 (0.827) | | |
| Owner occupier at 25-55 | | 28.69 (0.687) | 29.238 (0.684) | 23.899 (0.732) |
| Log Weekly family income at 25-55 | | | | 7.421 (0.426) |

N=7122

Note: Wealth is in 2015 dollars. All Specifications control for own age, parental age and cohort. Standard errors are clustered at the individual level

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| | | | | |
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| Parents' owner occupiers 15 years prior | 0.695 (0.082) | 0.438 (0.068) | 2.009 (0.064) | 3 in UK |
| Owner occupier at 25-55 | | 1.975 (0.064) | | 1.635 (0.06) |
| Log (family income at 25-55) | | | | 0.582 (0.036) |

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Percentile of net wealth level at 25-55

| | | | | |
|---|-------------------|------------------|-------------------|-------------------|
| Parents' owner occupiers 15 years prior | 10.304 (1.026) | 5.341 (0.827) | 29.238 (0.684) | 40 in UK |
| Owner occupier at 25-55 | | 28.69 (0.687) | | 23.899 (0.732) |
| Log Weekly family income at 25-55 | | | | 7.421 (0.426) |

N=7122

Note: Wealth is in 2015 dollars. All Specifications control for own age, parental age and cohort. Standard errors are clustered at the individual level

Conclusions

We argue that intergenerational persistence of home ownership provides a useful indicator of the intergenerational persistence of wealth.

In the UK this appears to have fallen when comparing a cohort born in 1970 with one born in 1958. This is partly due to a change in overall mobility and partly a consequence of house price changes.

Evidence from the US suggests no change and that UK has shifted to US level of persistence, this is true both for income and wealth mobility.

Home ownership is more tightly correlated with wealth in the UK making the problem even more severe.