



# Intergenerational home ownership

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Received: 21 June 2022 / Accepted: 28 December 2022  
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## Abstract

This paper studies intergenerational links in home ownership, an increasingly important wealth marker and a measure of economic status in itself. Repeated cross sectional UK data show that home ownership rates have fallen rapidly over time, most markedly amongst younger people in more recent birth cohorts. Evidence from British birth cohorts data supplemented by the Wealth and Assets Survey show a significant rise through time in the intergenerational persistence of home ownership, as home ownership rates shrank disproportionately among those whose parents did not own their own home. Given the close connection between home ownership and wealth, these results on strengthening intergenerational persistence in home ownership are therefore also suggestive of a fall in intergenerational housing wealth mobility over time.

**Keywords** Housing · Intergenerational mobility · Wealth · Cohorts

**JEL Classification** R31 · J11 · D31 · J62

## 1 Introduction

A large body of empirical research in social science has assessed the extent to which economic and social outcomes are transmitted across generations. In the economics literature, a heavy focus has been placed on studying earnings or income mobility, and on refining methods to accurately pin down the intergenerational earnings or income elasticity, a

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measure of how sensitive earnings or income of children (as adults) are to their parents' earnings or income. Some of the more recent work studies changes over time in the intergenerational persistence of earnings or income (see the reviews in Black and Devereux 2011; Blanden 2019, or Solon 1999).

A smaller research focus to date has been on intergenerational housing, assets and wealth, even though intergenerational transmissions of these measures of economic status, and their change over time, are of considerable interest to researchers and policy makers.<sup>1</sup> First, they are key aspects of long-term living standards, and can be used to smooth consumption in the case of income shocks. Returns from housing and non-housing assets and wealth can be used to generate income flows and accumulate further wealth (Fagereng et al 2020). Second, and highly relevant in the context of this paper, they can be directly passed on to the next generation (Black et al. 2020; Laitner 2002; Fagereng et al. 2021). Third, wealth and the components of wealth are less equally distributed than income, for example with around half the population having no wealth at all (Keister and Moller 2000; Piketty 2014; Wolff 2016; Crawford et al. 2016).

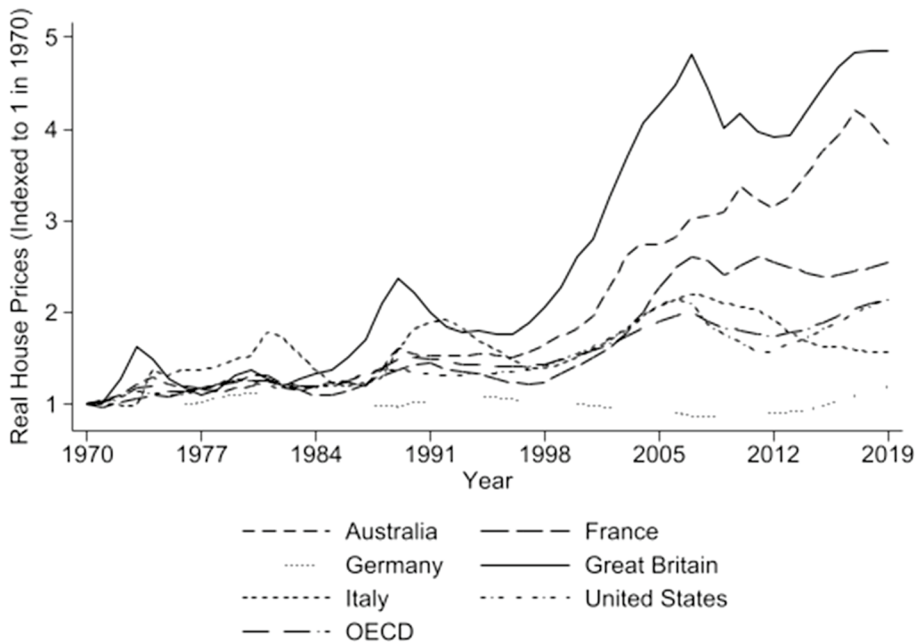
The objective of this paper is to study intergenerational transmissions of home ownership in detail. Home ownership is associated with numerous positive outcomes including financial security, political engagement, higher quality accommodation, and better outcomes for children (Dietz and Haurin 2003; Zavisca and Gerber 2016; Goodman and Mayer 2018). It is also a key marker of wealth; especially as higher house prices have made home ownership more valuable and a key marker of economic status in society. Indeed, housing equity is the largest component of overall wealth in the US (Wolff 2016), Great Britain (Crawford et al. 2016), and in continental Europe (Jantti et al. 2008).

Therefore, inequality in home ownership is potentially an important driver of economic inequality. This has received attention in the context of the black-white wealth gap in the US (Charles and Hurst 2002; Boehm and Schlottmann 2004) and growing inequalities between older and more recent cohorts in the UK (Griffith 2011; Cribb et al. 2016; Clarke et al. 2016). In addition, Aaronson (2000) and Pfeffer (2018) confirm the centrality of home ownership to the intergenerational impacts of wealth as the connection between wealth and children's educational outcomes is well-proxied by home equity and home values. Pfeffer and Killewald (2018) show that home value is an excellent proxy for net wealth when measuring the intergenerational persistence of wealth in the US.

The increased importance of home ownership is especially pertinent in the UK context where house prices have grown particularly fast by international standards, as demonstrated in Fig. 1. As returns to housing tenure have outstripped returns to other financial assets, the importance of getting onto the 'housing ladder' has increased as a determinant of wealth accumulation over the course of one's life. This has led to concerns about younger individuals struggling to get onto the ladder when compared to previous generations.

A recent narrative is that young people's initial forays into the housing market are increasingly being funded by the 'Bank of Mum and Dad' (as discussed in Wood and Clarke 2018). In the UK, the proportion of first-time buyers who report receiving direct

<sup>1</sup> Existing studies with a focus on wealth transmission are single point in time studies (see Mulligan 1997; Piketty 2000; Charles and Hurst 2003; Adermon et al. 2018; Black et al. 2020; Fagereng et al. 2021). Evidence on changes in the extent of transmission over time is virtually non-existent. The very few studies of relevance to trends in wealth transmission either tend to focus on the richest dynasties rather than the relationships found among the majority of the population (for example, Piketty 2014; Clark and Cummins 2015) or study the impact of parental wealth on child economic or social outcomes (for example, Pfeffer 2018, documents the growing importance of wealth for children's educational outcomes in the US).



Notes: Author's own calculations using OECD house price indices. Figure refers to real house price growth.

**Fig. 1** House price growth, 1970–2019

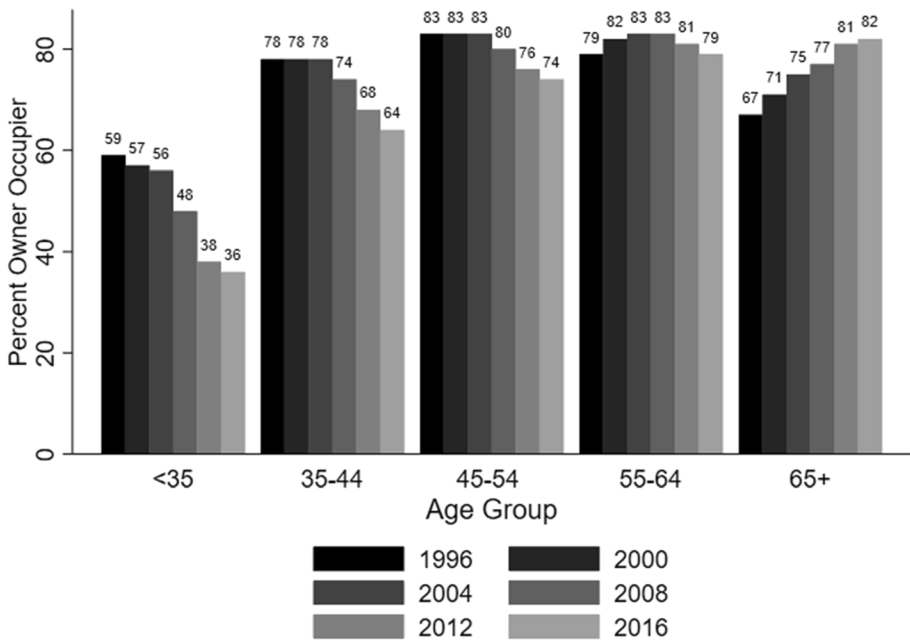
contributions from family and friends towards a deposit increased from 22 to 29% between 1996 and 2016 (Department for Communities and Local Government 2017, reporting on the English Housing Survey). An important role for parental background also emerges in the work of Lindley and McIntosh (2019) who show that, even among young people with professional and managerial occupations, those with parents from higher social classes have a higher probability of home ownership.

Figure 2 shows trends in home ownership over time from the UK Labour Force Survey between 1996 and 2016. These data reveal a dramatic fall in homeownership rates among the young (aged < 35), which accelerated after the 2007 financial crisis as rates fell from 59 percent in 1996 to 54 percent in 2004, through to 46 percent in 2008 reaching a low of 34 percent in 2016. Falls among those aged 35–44 began later (only after 2007), but are also striking, falling from 78 percent in 1996 to 68 percent by 2016.<sup>2</sup>

Figure 2 is suggestive that trends in home ownership differ markedly by cohort, with successive cohorts becoming less likely to buy. To show this more clearly, Fig. 3 presents coefficients on year of birth from three descriptive regression models of home ownership containing cohort, age and time effects. To identify cohort effects separately from age and year effects, the coefficient on the 1958 birth cohort is normalised to be zero (1958 is the first birth cohort used in the empirical analysis in this paper).

Coefficients from the first model, shown by the solid line in the Figure, do not account for any differences in factors that might predict home ownership, other than age and year.

<sup>2</sup> The focus in this Figure is on people who are the head of their household (or the head's partner) so changes in home ownership rates among younger groups will be influenced by the age at which young people form independent households.



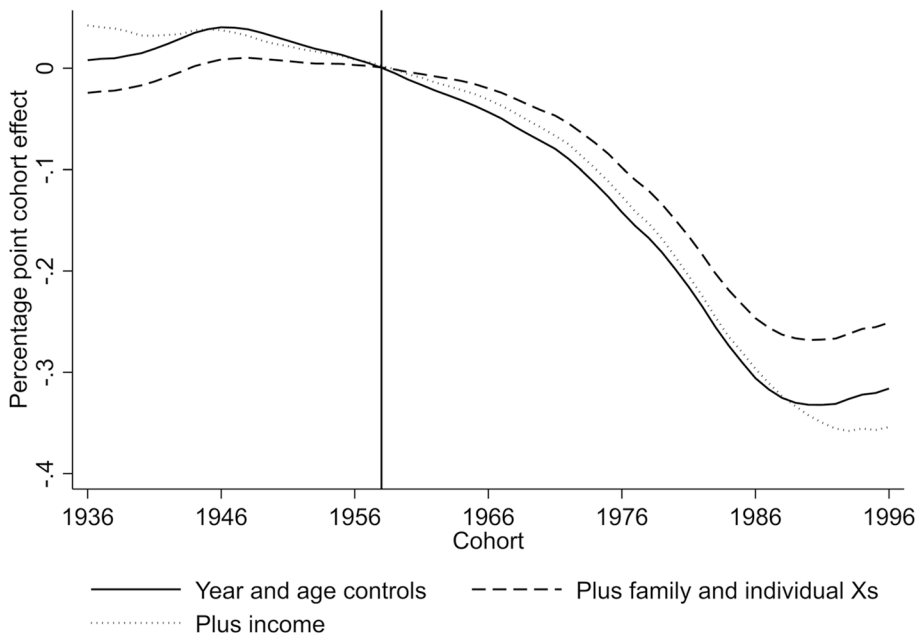
Notes: Labour Force Survey data from 1996 to 2016. The sample of observations is limited to household reference persons. Data are weighted using person weights provided by the LFS.

**Fig. 2** Patterns of home ownership in the UK across time and age group

They show that home ownership rates differed little for the older, 1936 to 1956, birth cohorts. This markedly contrasts with the sharp decline in ownership seen for those born later. The observed sharp decline in ownership rates by cohort is strikingly seen in the Figure, as those born in the early 1990s are a huge 33 percentage points less likely to own a home than those born in 1958. The peak to trough differential – between birth cohorts 1946 and 1990 – is even larger at 37 percentage points. These large cohort effects show a negative secular trend in home ownership for successive birth cohorts that only begins to plateau around 1990. Importantly, as shown by the other two set of cohort coefficient estimates in the Figure, which partition out the effects of family structure and income on ownership, these changes do not appear to be accounted for by changing family structure and/or the income distribution of the population.

These descriptive statistics make clear the increasing difficulties that young people have been facing in accessing the housing market. The key focus and contribution of this paper is to hone in on the intergenerational dimension of this by asking to what extent buying has become especially difficult for those whose parents did not own their own home when they were growing up. It is perhaps surprising that this question has not received much attention in social mobility research to date. This is all more the case as many data sources do contain housing tenure data for children and parents at different points in time, permitting analysis of trends in intergenerational correlations in home ownership.<sup>3</sup> This paper presents evidence on this from a variety of UK data

<sup>3</sup> A notable exception is Jenkins and Maynard (1983) who investigate this issue using data from the Rowntree Study of families in York, with the second generation observed in the late 1970s.



Notes: Labour Force Survey data from 1996 to 2016. The sample of observations is limited to household reference persons aged 20-69. Individual controls are gender, marital status, number of dependent children, ethnicity and, in the case of the dashed line, gross weekly income entered as a percentile in the annual wage distribution. Percentiles are calculated using LFS income weights. All three lines are based on coefficients from the common sample of individuals with full data on characteristics and income. In order to separately identify the effect of cohort from age and year, we normalise the cohort effect to be 0 for individuals aged 42 in the year 2000 (those born in 1958 as indicated by the vertical line in the Figure). Coefficients are smoothed over a using a 5 year rolling window.

**Fig. 3** Cohort effects on home ownership from the labour force survey

sources over time. For different cohorts, an individual's home ownership status is related to that of their parents when they were young. A consistent picture emerges – those that reside in owner occupied housing as children are much more likely to themselves be home owners in middle age.

As just noted, and importantly, it is possible to study trends. The analysis finds strong evidence of a significant rise in the intergenerational persistence of home ownership, in particular between 2000 and 2010, the period when younger people were finding it increasingly difficult to get into the housing market. By extending this cross-time analysis, beginning with wealth differences between home owners and renters, and studying empirical connections between home ownership, home value and wealth, we conclude that the results for intergenerational home ownership imply that the UK has likely also experienced a fall in intergenerational housing wealth mobility over time.<sup>4</sup>

<sup>4</sup> This aspect of the paper has some cross-over with a recent working paper by Gregg and Kanabar (2021) who use two sample two stage least squares based on parental age, home ownership and education level to impute parental wealth and calculate the intergenerational transmission of wealth for the UK. Their estimate of the rank correlation of wealth based on the Wealth and Assets Survey is slightly lower than ours but their results confirm that intergenerational wealth persistence has risen, albeit over a much shorter period than the one considered here.

## 2 Data and methods

### 2.1 British birth cohort studies

The earliest data we have available to study intergenerational home ownership comes from the British birth cohorts – the National Child Development Study (NCDS), a cohort born in 1958, and the British Cohort Study (BCS), a cohort born in 1970. The target sample for each cohort consisted of all babies born in a single week, with around 18,000 included at the start. They have been followed up regularly from birth, throughout childhood and into adulthood with the most recent surveys occurring at around age 62 for the NCDS (but not yet released) and age 46 (in 2016) for the BCS. These data have been extensively used to examine intergenerational mobility in income (Dearden et al. 1997; Blanden et al. 2004; Gregg et al. 2017) and in social class (Erikson and Goldthorpe 2010).

The analysis focusses on household tenancy which is collected at various points during childhood. We use the measure obtained at age 16, as that is more comparable with the other data used in the paper. The main outcome measure for the cohort members is a measure of owner occupancy at age 42, in 2000 for the NCDS and 2012 for the BCS, supplemented with data collected at age 50 and 55 in the NCDS and at age 46 in the BCS. We combine outright ownership and buying with a mortgage into the category ‘owner occupation’.

In addition to information on housing tenure, we make use of information on wealth assets held in several types of savings and investments for NCDS cohort members in 1991 (at age 33). These include bank accounts, stocks and shares and property aside from the main residence. The British Cohort Study at age 42 also asks about home value, mortgage outstanding and the value of savings and debt. This allows us to generate a simple measure of wealth. However, the distribution of this variable compares poorly with the wealth data from the WAS in 2011 so we do not use it in our main analysis. However, results obtained based on the individual’s percentile in this wealth distribution are broadly comparable with those from the WAS in 2011.

In forming our samples, we select all cohort members with information on the variables of interest, this is most commonly home ownership for the cohort members and their parents. We might be concerned about attrition given that the cohorts have been followed from birth and require information on their housing tenure at age 42. Table 11 gives information about initial and final sample sizes in both cohorts, detailing where observations are lost. The patterns in the two cohorts are somewhat different, with the NCDS experiencing a large sample loss up to age 11, and the BCS samples continuing to fall to age 16. It is notable that the final samples in the two cohorts are much larger than those used to measure intergenerational income mobility in, for example, Blanden et al. (2013). The Appendix of Blanden et al. (2013) examines the attrition in the income samples and concludes that it is unlikely to be responsible for the increase in income persistence that is found, we are therefore confident that attrition is not driving the direction of travel found using these larger samples.

### 2.2 The Wealth and Assets Survey (WAS)

The WAS is a household survey that aims to provide a comprehensive overview of the total assets and liabilities of households in Great Britain. 30,959 households were sampled at the initial wave and these households were followed up in subsequent waves. Our analysis makes use of data from Waves 1–5. Each wave covers two years with wave 1 covering

2006–2008 and Wave 5 covering 2014–2016. The WAS collects extensive information on wealth and its sources, including housing tenure, so that owner-occupancy can be defined in the same way as in the cohort studies.

The WAS can be used for intergenerational analysis because it collects retrospective information, for those aged over 25, about economic conditions as a teenager. We use the information about the tenancy status of one's parents at age 14 to estimate the intergenerational home ownership transmission for the individuals in the WAS.

The samples used in the WAS are motivated by the need to be comparable with the ages when the cohort members were surveyed. We select individuals who are 40–44 to be comparable with the age 42 data and age 32–36 to be comparable with the age 33/34 data that we use to investigate wealth as an outcome. Our analysis focuses on the household reference person. The focus on the household reference person leads to a slight oversampling of men. In our age 42 samples in 2011 (wave 3) and 2015 (wave 5), 60% of our sample are male. This compares with 51% of the NCDS sample and 54% of the BCS. Nevertheless, controlling for gender in our basic specifications does little to alter our results.

As is common in data sets focused on wealth, there is substantial attrition in the WAS, but this is addressed by the use of top-up surveys in later waves. WAS oversamples those living in the wealthiest areas. This is motivated by the fact that total wealth is highly concentrated amongst the wealthiest in society and oversampling this group is necessary to get a comprehensive overview of the nation's total asset holdings. We adjust for this by using cross sectional weights to calculate wealth percentiles. We do not use weights when computing our intergenerational estimates, as nationally representative weights are unsuitable when considering particular age groups as we do here. However, our results are largely unchanged when weights are applied.

### 2.3 British Household Panel Study (BHPS)

Beginning in 1991 the BHPS covered a representative sample of 5,500 UK households and 10,300 adults aged 16 and above. Since then, data covering original sample respondents, and the individuals who reside with them, have been collected on an annual basis. The sample is augmented when original members (including children) leave to form a different household or individuals move in with the original sample members. In 2008, Understanding Society – a larger and more comprehensive study—replaced the BHPS, incorporating the original sample.

While we report ownership correlations using the BHPS, our primary motivation for using the data is that it also collects self-reported data on the value of one's main property for both children and parents. This allows us to calculate the rank-rank relationship between child and parental house values. It is particularly advantageous to measure house values for both the parents and the offspring due to the strong link between wealth and the value of the main residence discussed in the introduction. In principle, one can also measure wealth in the BHPS. Previous work has used the wealth modules in the BHPS to paint a picture of how wealth is distributed in the UK (Crossley and O'Dea 2010). Using the same data for intergenerational analysis is somewhat problematic. Once individuals are matched to their parents and non-missing or non-conflicting wealth data are removed, the resulting sample sizes are very small. Karagiannaki (2017) considers the impact of parental wealth on educational outcomes using the BHPS, but this requires data on wealth for only one generation.

The BHPS samples consists of those aged 32–36 (age 34 sample) and those aged 41–43 (age 42 sample) in 2015/2016/2017. We also estimate models for 32–36 year olds

in 2010/2011/2012. Rather than average outcomes over the multiple years, we retain the 2011 and 2016 records when possible and the earliest record when not (so an individual observed in 2015 and 2017, but not 2016 would have the 2015 record retained). In each case we match with parental records in 1991/1992/1993. We retain parental variables from the earliest of the three years. As individuals must reside with their parents in at least one wave in order to be linked with their parents, our final sample consists of individuals who, at some point during the BHPS data collection, lived with their parents.

As we want to focus on those who match with their parents during childhood and their teenage years, we focus on the offspring of those in the original BHPS 1991 sample. These individuals are between the ages of 12 and 18 in 1991. We then look at the subsample of these aged 32–36 in 2011 (2010/2012 for those that are not observed in 2011) and 2016 (2015/2017 for those that are not observed in 2016) alongside those aged 41–43 in 2016 (2015/2017 for those that are not observed 2016). Our final samples are selected based on comparability with the BCS and NCDS samples (in terms of the age at which we measure outcomes), sample size,<sup>5</sup> and the need to match with parents. Amongst those of the relevant age group who match with a parental record, we retain individuals who are household reference persons (or the partners of household reference persons). We also consider only those for whom one of their parents is a household reference person in the years when the parental variables are measured.

As we look at rank-rank slopes when assessing the relationship between parental housing wealth and child housing wealth, we need to assign individuals to a percentile of the distribution of house prices. In doing so, we set house values to zero for those who do not own before calculating percentiles on a wave-by-wave basis using the full BHPS sample. Following Chetty et al. (2014), we set the rank of those with zero reported housing wealth to one half of the fraction of the sample reporting zero, i.e. if 20% have no housing wealth this 20% of the sample all have a rank of ten. We do not use household weights when doing this due to BHPS household weights are undefined for large portions of the sample. As will be discussed later, applying weights when calculating percentiles does not affect our results.

## 2.4 Descriptive statistics

The initial intergenerational analysis studies individuals at age 42 and relates their home ownership status to that of their parents when they were growing up. Given home ownership-age profiles, this is a good age at which to study this, as people of earlier ages (certainly in their 20s, but probably also in their 30s) may not have aged enough for home buying opportunities to have yet arisen. A second rationale comes from intergenerational studies which show that age 42 income at this stage of the life cycle is a good measure of permanent income (see, for example, Haider and Solon 2006), and it is a key point of observation in two of our datasets.

The specific years when we can observe 42 year olds and their parents are as follows:

- a) In 2000 from the National Child Development Study (NCDS), a cohort born in a week of March 1958, with parental home ownership measured at cohort member age 16 in 1974.
- b) In 2012 from the British Cohort Study (BCS), a cohort born in a week of April 1970, with parental home ownership measured at cohort member age 16 in 1986.

<sup>5</sup> Focusing on a single age at measurement i.e. looking at only 42 years olds results in very small samples in the BHPS.



**Table 1** Data to study trends in intergenerational home ownership, descriptive statistics

	NCDS (1)	WAS (2)	BCS (3)	WAS (4)
% Home owner	81.0	71.1	75.4	68.6
% Parent home owner	51.3	72.8	76.5	74.1
% Home owner if parent home owner	87.9	77.1	80.5	75.5
% Home owner if parent not home owner	73.7	55.1	58.8	48.9
Percentage point gap	14.2 (0.9)	22.0 (2.6)	21.7 (1.4)	26.6 (3.1)
Home ownership year	2000	2011	2012	2015
Parent home ownership year	1974	1983	1986	1987
Sample Size	8352	1771	6181	1271

Notes: The NCDS and BCS are single year birth cohorts matching cohort members at age 42 to parents at age 16. The WAS are multiple year birth cohorts matching individuals aged 40–44 (with centred age 42) to parents at age 14. Standard errors are reported in parentheses

- c) In 2011 and 2015 from two waves of the Wealth and Assets Survey (WAS) that permit the matching of individuals aged around 42 (40–44) years with their parents' home ownership status recalled from when they were age 14; around 1983 to 1987.<sup>6</sup>

We strive for comparability in terms of the samples and variables used across the datasets, but we are constrained in this because the purpose and design of the datasets is fundamentally different. However we are confident that cross-cohort NCDS and BCS 2000–2012 comparisons and the within-WAS 2011–2015 comparisons are consistent. And, as will be shown below, the estimated intergenerational correlations from 2012 in the BCS and 2011 in WAS are remarkably similar.

Table 1 shows descriptive statistics for these main samples. The first two rows shows a fall in the owner-occupancy rate of 42 year olds between 2000 and 2015 from 81 to 69 percent.<sup>7</sup> The pattern for the cohort members' parents is notably different with a rise in owner-occupancy from just over 50 percent to over 70 percent between the NCDS observed in 1974 and the first WAS observation that is centred on 1983. It is notable that the statistics for the first WAS survey from 2011 and the BCS in 2012 are extremely similar,<sup>8</sup> giving us confidence that we can extend the trends observed in the NCDS and BCS cohort datasets with estimates based on the Wealth and Assets Survey.

The second block of numbers give an early indication of the extent of intergenerational links by presenting the home ownership rates of 42 year olds by parental home ownership status. In all cases, there is a substantial and statistically significant gap between the home ownership rates of those with parents who are home owners and those who did not own their own home. This rose substantially from 2000 (the NCDS) and 2011/12 (the BCS and WAS) increasing from a gap of 14 percentage points to 22

<sup>6</sup> Although we refer to the WAS data as being drawn from 2011 and 2015, the two waves cover multiple years, with the '2011' wave spanning 2010–2012 and the '2015' wave spanning 2014–2016.

<sup>7</sup> This is in line with estimates derived from the Labour Force Survey that show an owner occupancy rate of 81% for 40–44 year olds in 2000 falling to 68% in 2015.

<sup>8</sup> This similarity is despite the oversampling of wealthy areas. This may be driven by high house prices in these areas driving slightly lower home ownership rates than might be expected based on wealth and income.

**Table 2** Descriptive statistics for older samples

	<b>Wealth and Assets Survey</b>			
	<i>Ages 40–44</i>	<i>Ages 45–49</i>	<i>Ages 50–55</i>	<i>Ages 55–59</i>
Wave 1: 2006–2008				
% Home owner	75.8	79.0	79.5	82.1
% Parent home owner	65.7	61.8	53.8	47.5
Wave 2: 2008–2010				
% Home owner	73.1	75.8	78.8	81.2
% Parent home owner	70.1	63.0	56.2	49.7
Wave 3: 2010–2012				
% Home owner	71.1	73.9	78.5	78.6
% Parent home owner	72.8	65.4	59.9	52.1
Wave 4: 2012–2014				
% Home owner	69.7	74.3	75.5	78.9
% Parent home owner	73.1	68.9	62.5	54.5
Wave 5: 2014–2016				
% Home owner	68.6	74.2	73.7	79.8
% Parent home owner	74.1	71.8	64.6	57.0
	<b>Cohort Studies</b>			
NCDS	Age 42	Age 50	Age 55	
% Home owner	81.0	83.8	77.4	
BCS	Age 42	Age 46		
% Home owner	75.3	77.6		

percentage points. The data from the 2015 WAS shows a gap of almost 27 percentage points, indicating a further increase in more recent years.

In order to probe the sensitivity of our results to the age of observation we estimate the intergenerational home ownership association at older ages. In the cohort studies we can explore additional information at ages 50 and 55 for the 1958 National Child Development Survey and at age 46 for the 1970 British Cohort Study. As the Wealth and Assets Survey covers the full population we estimate the intergenerational associations in that data up to age 59. Tables 2, 3 shows descriptive statistics for these samples, confirming that the patterns in home ownership over cohorts and time in these datasets are broadly in line with those observed in Fig. 2 from the Labour Force Survey.

Some of the same, plus additional, data sources can be used to hone in on the changing relationship between home ownership and wealth. The best source of wealth data is the WAS, which asks detailed information on a comprehensive list of wealth components. The information obtained from the existing five waves of the WAS is largely consistent with the information obtained from administrative data (Blanden et al. 2021).

The cohort studies also feature rudimentary information on wealth components, but these are collected sporadically and their quality is variable. We make use of information on the wealth held in several types of savings and investments for NCDS cohort members in 1991 (at age 33). We are also able to examine information on housing wealth for both parents and children for some cohorts in the BHPS, although sample sizes are small.

Table 4 shows descriptive statistics for these wealth measures. Columns 1 and 2 provide information on individuals aged 42 in the 2011 and 2015 WAS data. These show mean net wealth of £324k in 2012 prices in 2011, rising to £380k in 2015, with the average value of

**Table 3** Data to study links between wealth and home ownership, descriptive statistics

	WAS (1)	WAS (2)	NCDS (3)	WAS (4)	WAS (5)	WAS (6)
Mean net wealth (2012 prices)	£323,745	£380,285	Not available	£221,785	£157,501	£176,950
Mean value of main residence, for home owners (2012 prices)	£255,393	£275,764	Not available	£238,275	£203,808	£190,765
Saving and investment (2012 prices)	£42,069	£43,380	£11,929	£27,940	£19,651	£19,899
Sample Size	2011	2015	1991	1269	1159	898
Year	1771	1271	6774	2007	2011	2015
Age	40–44	40–44	33	33/34	33/34	33/34
	BHPS	BHPS	BHPS			
	(7)	(8)	(9)			
Mean value of main residence, for home owners (2012 prices)	£267,540	£229,689	£214,695			
Sample Size	168	334	211			
Year	2016	2011	2016			
Age	42	34	34			

Notes: The NCDS is a single year birth cohort matching cohort members at age 33 to parents at age 16. The WAS are multiple year birth cohorts matching individuals aged 33/34 and 40–44 (with centred age 42) to parents at age 14. The BHPS data are multiple years (2015–2017 in columns (7) and (9) and 2010–2012 in column (8)) centred around age 42 (41–43 year olds) and age 34 (32–36 year olds). House value ranks come from self-reported values for the main residence. All wealth measures refer to housing wealth and the total value of savings less nonmortgage related debt. The exception if the 1986 that does not collect debt – mortgage or otherwise. Robust standard errors are reported in parentheses

**Table 4** Trends in intergenerational home ownership transmission

	NCDS 2000 (1)	WAS 2011 (2)	BCS 2012 (3)	WAS 2015 (4)	Change (4)-(1) (5)
<b>A. Basic Intergenerational</b>					
Parent home owner	0.141 (0.009)	0.220 (0.026)	0.217 (0.014)	0.265 (0.031)	0.124 (0.032)
<b>B. Compositional Controls</b>					
Parent home owner	0.135 (0.008)	0.186 (0.025)	0.188 (0.014)	0.231 (0.031)	0.096 (0.034)
Home ownership year	2000	2011	2012	2015	
Age when observed	42	42	42	40–44	
Parent home ownership year	1974	1983	1986	1987	
Sample size	8352	1771	6181	1271	

Notes: Panel (B) adds controls for age, age squared, average age of parents, the square of this, gender, the presence of a father during childhood, and the presence of a partner. All parental variables in the WAS are retrospectively asked and individuals are prompted to report values as they were at age 14. For this reason, parental age at observation is unobserved. For obvious reasons, we do not control for age in the two cohort regressions (Columns (1) and (3)). Robust standard errors are reported in parentheses

the main residence and the value of savings and investments also rising (albeit by a smaller amount) over this period. Panels 3–6 provide information on wealth for 33/34 year olds across the four years when we can observe this group. As we have data from 2007 and 2011 we can observe the decline in household wealth associated with the financial crisis. This is quite steep with mean net wealth declining from £220k in 2007 to £157k in 2011. After 2011 average wealth, home value, and the value of saving and investments stay constant. Panels 7–10 gives the information on housing wealth in the BHPS samples that we make use of, and reassuringly the data on housing values is comparable with the information available from the WAS for the same age groups and years.

In our discussion section we conclude our analysis with a discussion of plausible values for wealth mobility, informed by our results to that point. This exercise requires knowledge of the relationship between total wealth and housing values, for both parents and children. To understand the relationship for the parents of older cohorts we additionally make use of the small samples available in the BHPS data from the 1995 and a one off collection of the English Housing Condition Survey (EHCS) from 1986.<sup>9</sup> Using all the datasets available, we are able to measure the extent to which total wealth and housing wealth correlate for intermittent years between 1986 and 2015.

## 2.5 Methods

In the first, core set of analyses the home ownership status of 42-year-olds in the four survey years between 2000 and 2015 is related to the home ownership status of their parents when they were a teenager. We use linear probability models of the determinants of home ownership ( $HO^{42}$ ) for individual  $i$  in the cohort aged 42 in year  $t$ .

<sup>9</sup> The EHCS is a precursor to the English Housing Survey.

$$HO_{it}^{42} = \alpha_t + \beta_t HO_{it}^{parent} + u_{it}^{42} \tag{1}$$

where  $HO_{it}^{42}$  is a dummy that equals 1 if individual  $i$  is a home owner at age 42 in year  $t$ , each cohort is defined by this year.  $HO_{it}^{parent}$  is the home ownership status of individual  $i$ 's in cohort  $t$ 's parents when  $i$  was a teenager. The cohort specific intergenerational estimate in Eq. (1) is given by  $\beta_t = Pr[HO_{it}^{42} = 1 | HO_{it}^{parent} = 1]$ . The temporal change in intergenerational transmission between  $t$  and  $t'$  is  $\Delta\beta_{t-t'} = \beta_{t'} - \beta_t$ .

Initially we follow the standard approach in the intergenerational literature and do not include any additional controls. We are not attempting to capture the causal effect of parental home ownership on own home ownership, but rather estimating an omnibus statistic that captures the consequence of all the mechanisms that lead to a link between the two, these could include associations in human capital, direct financial transfers and preferences. It is not a goal of this paper to separate out the influence of these transmission mechanisms. However, we also estimate the slightly expanded Eq. (2) which accounts for basic factors that we know are strongly related to home ownership,

$$HO_{it}^{42} = \alpha_t + \beta_t HO_{it}^{parent} + \sum_{j=1}^J \gamma_{j,t} X_{it}^{42} + \sum_{j=1}^J \varphi_{j,t} X_{it}^{parent} + u_{it}^{42} \tag{2}$$

where  $X_{it}^{42}$  are a set of basic controls related to family structure at age 42 and  $X_{it}^{parent}$  considers comparable information for the parents during the child's teenage years. These compositional controls include the sex of the individual, whether they have a partner, whether the father lived with them when they were a teenager, each parent's age, and the square of these. While the choice of controls is to some extent arbitrary, we aim to control for secular changes in family structure that are related to homeownership and are likely to be correlated across generations. Our choice of controls strikes a balance between purging our estimates of the independent effect that changing household composition has played on homeownership and keeping the usual descriptive interpretation of intergenerational estimates. In order to check the robustness of the estimates to lifecycle concerns we also present estimates of (1) for the older observations available in the Cohort Studies and perform a more comprehensive assessment of their sensitivity to age in the WAS as the data structure is less restrictive.

The focus of the paper is on intergenerational mobility in home ownership and the data we have does not enable us to also fully study trends in intergenerational wealth mobility. This is largely because we do not have much information on parents' wealth. However, the data sources used can enable some connections to be made to wealth. First, as already noted, the National Child Development Study and the Wealth and Assets Survey provide some direct information about accumulated wealth for the individuals in the second generation. And second, both the BHPS and the WAS also contains some information on housing values.

These enable the study of three related issues that connect our intergenerational home ownership analysis to wealth:

- i) The first supplements and further contextualises the intergenerational home ownership analysis with models which relate wealth in the early 30s (because this is the age when the data is available for the NCDS cohort members) to parental home ownership. Wealth is measured by rank within the distribution of wealth in the sample, and the analysis relates child wealth to parental home ownership as follows:

$$W_{it}^{30s} = \delta_{0t} + \delta_{1t} HO_{it}^{parent} + u_{it}^{30s} \tag{3}$$

- ii) The second estimates point in time BHPS intergenerational home value transmission parameters,  $\eta_1$ , as:

$$HV_i^{42} = \eta_0 + \eta_1 HV_i^{parent} + u_i^{42} \quad (4)$$

- iii) The third uses data from several sources to relate housing value data (HV) to wealth rank for both generations by estimating the following measurement equations for age 42 individuals, and their parents, in their respective generations, as:

$$HV_i^k = \pi_0^k + \pi_1^k W_i^k + \omega_i^k \quad \{k = \text{parent}, 42\} \quad (5)$$

These can be combined with the estimate of  $\eta_1$  to provide an indication of the level of intergenerational wealth mobility,  $\theta_1 = \frac{\pi_1^{42}}{\pi_1^{parent}} \eta_1$ , where  $W_i^{42} = \theta_0 + \theta_1 W_i^{parent} + e_i^{42}$  bearing in mind that such estimates can only be approximate and are likely to be affected by measurement error in home value.

The estimates of  $\delta_{1t}$ ,  $\pi_1$  and  $\eta_1$  in Eqs. (3) to (5) allow us to use a patchwork of data to end the paper with a suggestive picture of the intergenerational transmission of housing wealth and its trend over time. We do this with the caveat that more research with better data on parental wealth for multiple generations is needed to shed more light on the temporal evolution of  $\theta_1$ , offering an important challenge for future research.

### 3 Trends in intergenerational home ownership

Table 4 reports trends in the intergenerational persistence in home ownership by presenting estimates of  $\beta_t$  at or around age 42 from Eqs. (1) and (2) for four years ( $t=2000, 2011, 2012$  and  $2015$ ) and of  $\Delta\beta_{t,t}$  between 2000 and 2015. Panel A shows estimates of the basic unconditional intergenerational transmission. Panel B adds a set of composition variables measuring characteristics of individuals and their parents. The first four columns of Panel A show the extent of intergenerational transmission of home ownership. For the earliest cohort of 42 years olds – the 1958 birth cohort observed in the year 2000 – home ownership is around 14 percentage points higher for those whose parents owned their own property in 1974.<sup>10</sup> This increases to 22 percentage points in both 2011 and 2012 and even further to 27 percentage points by 2015.<sup>11</sup> Column (5) indicates that by 2015, the dependency between the home ownership status of 42 year olds and that of their parents is much stronger than it was in 2000.<sup>12</sup>

<sup>10</sup> When parental home ownership at age 10 is the main explanatory variable the coefficients are 0.120 and 0.200 for the NCDS and BCS respectively, the change is almost identical to the results based on measures at 16. It is notable that associations are slightly stronger for ownership at 16 as owner occupation in the teenager years is available for the majority of our datasets.

<sup>11</sup> The log odds ratios for the upper panel are 0.946 (0.059), 1.011 (0.113), 1.063 (0.065), and 1.167 (0.134).

<sup>12</sup> Using longitudinal weights in the WAS 2011 sample (which adjust for attrition between waves 1 and 3) inflates our estimate of homeownership persistence to 0.236 (0.037). Cross sectional weights applied to the same sample shift the coefficient to 0.230 (0.030). Looking at wave 5, applying weights leads to two estimates that sandwich our unweighted coefficient—longitudinal weights increase our estimate to 0.300 (0.061), while cross sectional weights shrink the coefficient to 0.243 (0.035). Even in the latter case, there remain a large discrepancy between the intergenerational relationship measured in 2000 using the NCDS and the relationship measured 15 years later in WAS.

**Table 5** Trends in intergenerational home ownership transmission at older ages, wealth and assets survey

		Ages 40–44 (1)	Ages 45–49 (2)	Ages 50–54 (3)	Ages 55–59 (4)
Wave 1: 2006–2008	Parent home owner	0.205 (0.023)	0.132 (0.022)	0.156 (0.020)	0.117 (0.018)
	Sample size	1665	1583	1569	1779
Wave 2: 2008–2010	Parent home owner	0.206 (0.024)	0.180 (0.022)	0.154 (0.020)	0.134 (0.019)
	Sample size	1832	1795	1666	1723
Wave 3: 2010–2012	Parent home owner	0.220 (0.025)	0.221 (0.023)	0.207 (0.021)	0.139 (0.020)
	Sample size	1771	1786	1783	1737
Wave 4: 2012–2014	Parent home owner	0.266 (0.028)	0.184 (0.024)	0.182 (0.022)	0.176 (0.020)
	Sample size	1492	1728	1698	1651
Wave 5: 2014–2016	Parent home owner	0.265 (0.031)	0.187 (0.026)	0.223 (0.024)	0.167 (0.021)
	Sample size	1271	1554	1697	1543

Robust standard errors are in parentheses

Panel B confirms that these patterns are robust to the inclusion of basic composition controls. The change over time between both 2000 and 2011/12 and from 2011/12 to 2015 reduces slightly on their inclusion, but the overall increase in intergenerational persistence is still strongly significant.<sup>13</sup>

Table 5 reports information based on a wider sample of the WAS, to check trends for robustness across age groups. The columns report results in four five-year age bands from 40–44 to 55–59 with the rows reporting estimates of the unconditional persistence in home ownership for each waves 1–5. The pattern over time is extremely consistent with the results shown in Table 4, revealing a rise in the intergenerational association in home ownership for all age groups observed in 2014–16 compared to 2006–2008. Owing to fairly small sample sizes the change over time is only significant at the 95% level for the 50–54 age group where it rises from 0.156 (0.020) to 0.223 (0.024) over the (approximately) eight year period of observation. Overall, the estimated coefficients decline as we look at older groups.

Table 6 reports the supplementary information available from the NCDS and BCS for older ages. Whilst the sparser data points available means that it is not possible to compare these cohorts at the same age beyond age 42, the evidence we have supports the finding of a substantial rise in intergenerational persistence between these cohorts. In the cohort data, there is little evidence of a decline in the intergenerational association of home ownership as individuals' age. Results from both Table 5 (decline with age) and Table 6 (no change) contrast with patterns by age in results for intergenerational income mobility which show a clear rise in persistence as individuals move into their late 40s and 50s (Gregg et al. 2017). This difference might be a consequence of our measurement's limitations as a binary variable; as home ownership is more prevalent

<sup>13</sup> The slight reduction in the change in coefficients is driven by the inclusion of the individual's partnership status. Those with parents who are owner occupiers are more likely to be in a partnership at age 42, and those with partners are more likely to own their own home.

**Table 6** Trends in intergenerational home ownership transmission at older ages, cohort studies

		Age 42 (2000) (1)	Age 50 (2008) (2)	Age 55 (2013) (3)
National Child Development Study	Parent home owner	0.141 (0.008)	0.103 (0.009)	0.140 (0.013)
	Sample size	8352	7203	4146
British Cohort Study		Age 42 (2012) (1)	Age 46 (2016) (2)	
	Parent home owner	0.217 (0.014)	0.212 (0.013)	
	Sample size	6181	5537	

Notes: Models contain no control variables. Robust standard errors are in parentheses

among older groups it is more difficult for it to pick up more nuanced measures of economic wellbeing as people age.

## 4 Home ownership and wealth

The British cohort studies only contain limited information on wealth and asset values. Therefore, to comment on the implications of intergenerational associations in home ownership for mobility we must look to a broader set of data. Links between wealth and home ownership are studied primarily using the Wealth and Assets Survey. Several aspects are considered, beginning with wealth differences between home owners and renters, before considering the relationship between wealth and housing value. We also use the WAS to consider changes in the relationship between wealth and parental home ownership over time and are able to supplement our findings with partial information on wealth for an earlier cohort, which again can be related to parental home ownership. Using the BHPS we use information on home value to get close to estimating the intergenerational transmission in wealth, before considering the implications our findings for trends in wealth mobility.

### 4.1 Home owners and renters

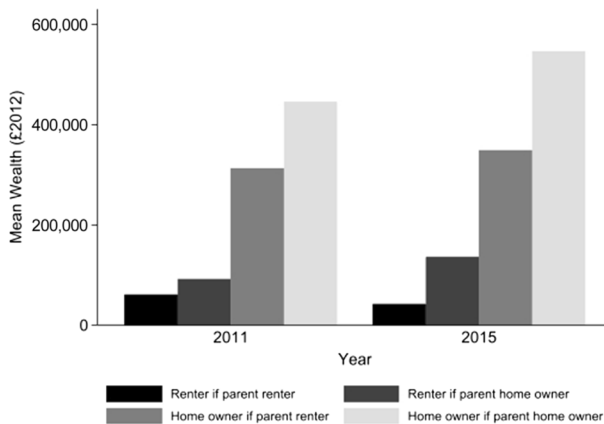
First consider differences in wealth between home owners and renters.<sup>14</sup> Figure 4 draws on 2011 and 2015 WAS data to show real (2012 prices) levels of household wealth across the four possible combinations of individual and parental home ownership status. The Figure shows that home owners whose parents also owned their home have the highest mean wealth levels in both years and that, if anything, there are bigger wealth gaps connected to intergenerational home ownership in 2015.

### 4.2 Housing wealth

Figure 5 considers connections between wealth and more detailed measures of housing wealth – the value of the main residence (home value) and the same value less any

<sup>14</sup> In practice, those who do not own a home could live rent free, squat, or report ‘other’ as a form of housing tenure. For simplicity, this group is referred to as renters as renting is by far the largest form of tenure amongst those who do not own their own home.





Notes: Figure 4 uses total net wealth data provided by waves 3 and 5 of the Wealth and Asset Survey. Age and ownership are measured with respect to the household reference person. Results are averaged over ages 40–44 to avoid small sample sizes. Total wealth is in 2012 prices

**Fig. 4** Wealth and parental home ownership

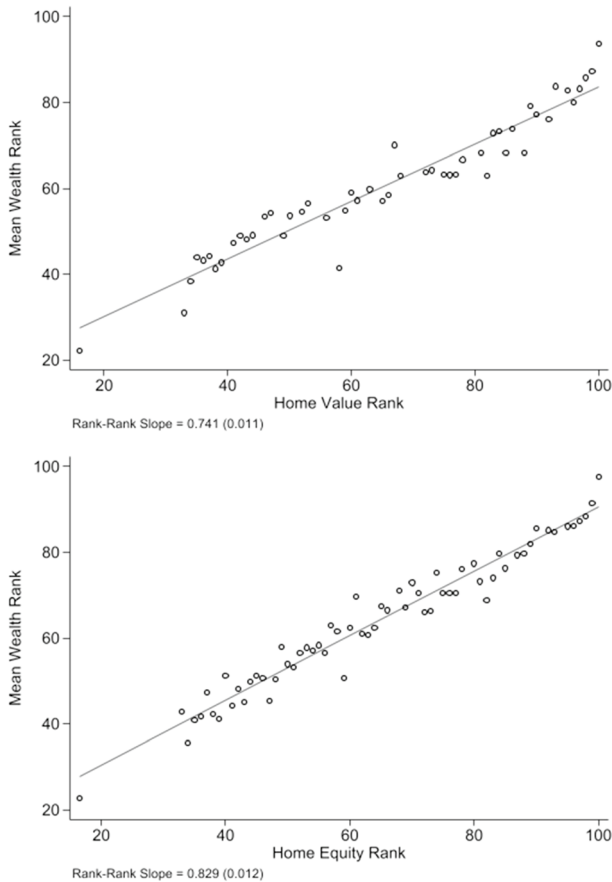
outstanding mortgage on the property (home equity) – showing mean wealth percentile rank plotted against home value or equity percentile rank. There are strong associations, and, whilst home equity has the strongest relationship with a rank-rank slope of 0.829, there is also a strong relationship between the value of one's main residence and wealth. Moving up ten percentiles in the distribution of house values moves a household, on average, 7.4 percentiles up the wealth distribution. The relationship is shown as strongly linear, offering support for our measurement framework which focuses on linear relationships between wealth ranks and rank in home value.

### 4.3 Wealth and parental home ownership

The strength of these contemporaneous relationships between housing tenure, housing wealth, and total wealth suggests that trends in the intergenerational associations between parental and child housing variables may be indicative of trends in wealth mobility. Ideally, we would have wealth data for multiple cohorts of individuals matched to the wealth of their parents. This does not exist, but the Wealth and Assets Survey does allow us to look at the relationship between the percentile rank of an individual in the wealth distribution and their parents' home ownership status.<sup>15</sup>

The results shown in Table 7 focus on 42 year olds in 2011 and 2015 and extend the intergenerational model to look at the relationship between wealth and parental home ownership. The upper Panel A of Table 7 reproduces the home ownership results, while Panel B considers the relationship between wealth percentiles and parental home ownership. Whilst it comes as no surprise that those whose parents owned their home are significantly wealthier, it is also shown that the association between wealth

<sup>15</sup> Strictly speaking the WAS asks about owner occupancy of parents during teenage years but prompts individuals to use age 14 as a benchmark.



Notes: Figure 5 plots the average percentile of wealth within each percentile bin of home equity and home values using data from the 2015 WAS. Bins are not of equal size because percentiles are calculated using all ages and household weights. As a result of this, we remove bins with fewer than five observations. Rank-rank slopes are calculated from the underlying microdata.

**Fig. 5** Wealth and home value or home equity

percentile rank and parental home ownership rises across the two years: going from 15 to 19 percentile points.<sup>16</sup>

The data sources other than the WAS are more limited in the data they contain on wealth. The NCDS does contain information on the value of investments and savings, but only collects this in the 1991 wave at age 33 (rather than age 42,—the primary age of interest in this paper). Despite this, the information is useful as it can be used to generate a further cross-time

<sup>16</sup> A similar result holds if we consider the logarithm of total wealth. Unlike housing values, there are less concerns about individuals with zero wealth meaning that partial elasticities, with log of wealth as the dependent variable, are less problematic than elasticities that focus on housing wealth alone. Nevertheless, we focus on ranks so that our results are comparable across our various specifications. Results using the Log of total wealth are available in the notes to Table 4.

**Table 7** Wealth and Parental Home Ownership, Wealth and Asset Survey

	WAS 2011 (1)	WAS 2015 (2)	Change (2)-(1) (3)
<b>A. Home Owner</b>			
Parent home owner	0.220 (0.026)	0.265 (0.031)	0.045 (0.040)
Sample size	1771	1271	
<b>B. Wealth Percentile</b>			
Parent home owner	0.151 (0.013)	0.194 (0.012)	0.043 (0.010)
Sample size	1771	1271	

Notes: Total wealth is the percentile in the total weighted wealth distribution and includes financial wealth, property wealth, and pension assets. Robust standard errors are reported in parentheses. Comparable estimates with the log of total wealth as the dependent variable are 0.813 (0.083), and 1.143 (0.105) with a statistically significant change across the waves of 0.330 (0.134)

comparison point prior to the WAS. Results for 33/34 year olds are shown in Table 8. As the main analysis reported earlier was presented only for the 42 year olds, the upper Panel shows the intergenerational home ownership transmission trends for this younger age group. A similar finding arises, with there being a sizeable increase in intergenerational home ownership persistence over time. In the NCDS in 1991, there is an 18 percentage point gap in ownership between the two groups, which rises to 32 percentage points by 2007 and further to 35 by 2015. In general, the intergenerational associations are slightly stronger among this younger group, indicating that as individuals get older those who do not come from home-owning families catch up slightly (in terms of home ownership) with those who do.

Panel B of Table 8 considers the relationship between savings and investments and parental ownership. In 1991 savings and investments were 13 percentile points higher for NCDS cohort members whose parents were home-owners, and this rises to 17 percentile points higher in the 2015 WAS. The 4 percentile point rise shown in column (5) is on the

**Table 8** Wealth and Parental Ownership, Age 33/34

	NCDS 1991 (1)	WAS 2007 (2)	WAS 2011 (3)	WAS 2015 (4)	Change (4)-(1) (5)
<b>A. Home Owner</b>					
Parent home owner	0.181 (0.009)	0.317 (0.031)	0.341 (0.033)	0.345 (0.037)	0.164 (0.038)
Sample size	6774	1269	1159	898	
<b>B. Saving and Investment Percentile</b>					
Parent home owner	0.125 (0.079)	0.152 (0.016)	0.168 (0.015)	0.166 (0.016)	0.041 (0.026)
Sample size	6774	1269	1159	898	

Notes: Robust standard errors are reported in parentheses. Our measures of savings and investments exclude investment in property and refer to gross financial wealth and savings. The measure therefore includes formal investments, such as bank or building society current or saving accounts, investment vehicles such as Individual Savings Accounts, stocks and shares, and informal savings

**Table 9** Intergenerational house value transmission, british household panel survey

	BHPS 2016, Age 42	BHPS 2011, Age 34	BHPS 2016, Age 34
<b>A. Home Owner</b>			
Parental home owner	0.267 (0.118)	0.319 (0.070)	0.369 (0.076)
Sample size	168	334	211
<b>B. House Value Rank</b>			
Parental home owner	0.246 (0.074)	0.284 (0.042)	0.265 (0.045)
Sample size	168	334	211
<b>C. House Value Rank</b>			
Parental house value rank	0.415 (0.081)	0.363 (0.052)	0.390 (0.060)
Sample size	168	334	211

Notes: House value ranks come from self-reported values for the main residence. These are ranked in the BHPS sample. Robust standard errors are reported in parentheses

margins of statistical significance (with low precision due to small WAS sample sizes), but in line with the results of Tables 4, 5 and 6 is suggestive of a strengthening relation between wealth and parental home ownership.

#### 4.4 Intergenerational wealth and asset correlations

The results so far show an increase in the intergenerational transmission of home ownership and, at the same time, a strengthening empirical association between wealth and parental home ownership. Figure 5 showed an almost one-to-one relationship between housing values and net wealth. There is one UK data source—the British Household Panel Survey (BHPS)—where it is possible to look directly at intergenerational correlations in housing values to study housing wealth correlations. Although there are clear limitations owing to limited sample size, this is potentially informative about overall wealth persistence.

As previously discussed, the BHPS began in 1991 and allows intergenerational matching between original sample members and their offspring from then onwards. Table 9 shows results from the BHPS for a sample focused around age 42 in 2016 (i.e. people born in 1974 who would be aged 17 in 1991 and who are intergenerationally matchable as they would still be living in the parental BHPS household) and for those around age 34 in 2011 and 2016.

For these samples, panel A of Table 9 shows what happens when we reproduce the earlier intergenerational home ownership regressions. Despite the small sample sizes, the results for the BHPS are strikingly consistent with the results presented earlier from the other datasets. The estimates are numerically extremely close. And, as with the earlier analysis, the coefficient from the linear probability regression of home ownership on parental home ownership is larger for those observed in their 30 s as compared to those observed in their 40 s. Moreover, there is again evidence of increasing persistence from 2011 to 2016 but, with sample sizes of 330 in 2011 and 211 in 2016 this increase is very imprecisely determined.

The strong similarity of the intergenerational home ownership transmission here and in other data gives us confidence to look more closely at the BHPS asset value data in these

**Table 10** Estimates of  $\pi_{1t}$ , WAS, BHPS and EHCS

	EHCS	BHPS	WAS				
	1986	1995	2007	2009	2011	2013	2015
		(1)	(2)	(3)	(4)	(5)	(6)
House Value – Wealth rank slope ( $\pi_{1t}^k$ )	1.084 (0.014)	0.949 (0.040)	0.975 (0.012)	1.009 (0.017)	1.033 (0.016)	1.070 (0.018)	1.041 (0.018)
Age	40–44	40–44	40–44	40–44	40–44	40–44	40–44
Sample size	343	403	2,987	1,898	1,931	1,637	1,361

Note: Robust standard errors are in parentheses

samples. Results in Panel B show the relationship between parental home ownership and individuals' home value. Those whose parents owned their own home are 25–30 percentiles higher in the distribution of housing value in early middle age than those whose parents rented. Results for 42 year olds are broadly comparable with and corroborate the WAS estimate in Table 7. Finally, the results in Panel C measure the intergenerational association in home values between the two generations. The results show a rank correlation in a range of 0.36 to 0.42 between housing value across generations.<sup>17</sup>

In the methods section above we showed that  $\theta = \frac{\pi_1^{42}}{\pi_1^{parent}} \eta$  where  $\theta$  is the intergenerational wealth correlation,  $\eta$  is the intergenerational correlation in housing value and the  $\pi$ s project house value onto wealth in each generation. Table 10 reports estimates of  $\pi_{1t}$  from the WAS and two earlier sources, the EHCS in 1986 and the earliest data at which wealth data is collected in the BHPS—1995. The WAS provides the most reliable estimates of  $\pi_1^{42}$  (i.e. the projection from wealth to housing value for the adult children) and suggests that there was little change in  $\pi_1^{42}$  in the 2010s. In order to gauge  $\pi_1^{parent}$  we need to go further back in time, and make use of data with smaller sample sizes and therefore less reliability. The EHCS data from 1986 and the BHPS data from 1995<sup>18</sup> provide alternative but similar estimates of  $\pi_1^{parent}$  for those aged 42 years old in 2016.<sup>19</sup> The 1995 BHPS gives an estimate of  $\pi_1^{parent}$  for those who were in their 30s in the 2010s. Looking across the whole of Table 10 the results indicate no substantive difference between  $\pi_1^{42}$  and  $\pi_1^{parent}$  implying (in the absence of differential measurement error) that the level of the intergenerational transmission of housing wealth is a good indicator of the level of the intergenerational persistence of total wealth; in the range of 0.36 to 0.42 as shown in Table 9.

These results indicate that the point in time intergenerational housing wealth persistence is higher than comparable estimates of intergenerational income persistence in the UK (Blanden et al. 2013; Gregg et al. 2017; Rohenkohl 2020 suggest that income rank

<sup>17</sup> As noted in the data section, household weights are frequently undefined in the BHPS. However, applying weights when calculating percentiles leads to an identical point estimate for the rank slope for 42 year olds despite the sample size falling from 168 to 116.

<sup>18</sup> The BHPS measure of wealth excludes pension wealth, but includes savings, investment assets such as ISAs, debt outstanding and home equity. We do not use BHPS wealth data in our main sample due to the low sample size once individuals are matched to their parents. Longitudinal matching on wealth data is made difficult in the BHPS as wealth data is only collected sporadically. The earliest collection is 1995 and the latest is in wave 12 (2016/17). Once individuals are matched and those with non-missing wealth observations are retained, sample sizes become too small for meaningful analysis.

<sup>19</sup> This cohort would have been 12 in 1986 and 21 in 1995.

persistence is around 0.30–0.35).<sup>20</sup> It is notable that this pattern is in line with results in Charles and Hurst (2003) for the US.

Finally, in the light of the findings so far, what about trends in intergenerational wealth mobility? The discussion in the earlier methods sub-section of the paper made it clear that we are limited as we do not have data on multiple child-parent wealth over time. However, we can say something in the spirit of the patchwork discussion about wealth presented earlier in the paper.

First of all, the evidence in Table 10 showed the relationship between home value and wealth to be steady over the sample period studied, i.e.  $\frac{\pi_{1t}^{42}}{\pi_{1t}^{parent}}$ . Under the admittedly strong assumption that the relationship between home ownership and wealth has also remained constant over this period, it is possible to say something about trends in the intergenerational transmission of wealth.

Therefore, because the results for  $\beta_t$  in Tables 4, 5 and 6 show there to have been a clear and marked increase in the extent to which parental home ownership determines children's home ownership in midlife, this implies that if we had data on child and parent wealth for similar cohorts, it too would reveal a rise in the persistence of intergenerational wealth (unless something else that we have not considered here is going on to offset this direction of travel). However, at this juncture this can only be taken as suggestive. We clearly need more research on this question to better validate this conclusion.

## 5 Conclusion

This paper focuses on an understudied area of social mobility and inequality research by studying intergenerational home ownership. Using UK data on home ownership of parents and children, it uncovers a strong intergenerational persistence that has become stronger over time. Indeed, the intergenerational persistence of home ownership status increased substantially between 2000 and 2016, as UK house prices rose sharply and young people's position in the labour market weakened (Costa and Machin 2017). These made getting on the housing ladder much more difficult for people from more recent birth cohorts whose parents did not own their own home. Given the close connection between home ownership and wealth, these results on strengthening intergenerational home ownership are therefore also suggestive of a fall in intergenerational housing wealth mobility over time, though this latter question should be firmly on the agenda for future research to further probe and assess.

House value ranks come from self-reported values for the main residence. All wealth measures refer to housing wealth and the total value of savings less nonmortgage related debt. The exception is the 1986 that does not collect debt – mortgage or otherwise. Robust standard errors are reported in parentheses.

<sup>20</sup> Estimates from our own age 42 sample, in the 2016 BHPS, accord closely with a coefficient and associated standard error of 0.317 (0.085).

## Appendix

**Table 11** Sample Selection in the NCDS and BCS

	Number of Observations	
	National Child Development Study	British Cohort Study
In the first sweep	18,558	17,196
In at age 11/10	10,934	14,875
In at age 16	11,661	11,615
With housing information at age 16	11,624	9,378
In at age 33/34	8,472	9,665
With housing information at 33/34	7,714	9,602
With housing information at 16 and 33/34	7,687	6,392
In at age 42	8,433	9,841
With housing information at 42	8,375	9,754
With housing information at 16 and 42	8,352	6,267

**Acknowledgements** We would like to thank Paul Gregg, Lindsey Macmillan and conference participations in Mexico City, Jerusalem, Montreal, the Royal Economics Society Conference in Bristol and the NORFACE DIAL mid-term conference in Turku for a number of helpful comments and suggestions. This paper is a heavily revised, further developed version of Blanden and Machin (2017) Home Ownership and Social Mobility, Centre for Economic Performance Discussion Paper No. 1466. We have benefited enormously from comments from the editors and two anonymous referees.

**Data availability** The raw datasets are available from the UK Data Service. The code to generate the analysis used here from publicly available data is available from the corresponding author on reasonable request.

Partial finance support for this project was received through the NORFACE DIAL project Politics, Populism and Inequality. The authors have no competing interests to declare that are relevant to the content of this article.

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