The Impact of Property Ownership on Voting Behaviour. Evidence from Right to Buy.

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Contents

Abstract

This study investigates the impact of housing tenure on local political behaviour. The paper exploits local variation in the extent of significant national housing reforms in England. In 1980 the administration of Margaret Thatcher introduced sweeping national changes to public housing policy. All tenants of public housing were given a statutory right to buy their property while central government funding for new public housing construction was ended. During the post-war period, levels of public house-building had varied extensively by geography with the proportion of public housing sold also varying. Using this variation in house sales it is possible to employ a difference in difference specification with a continuous variable and compare electoral trends across local authority districts based on the intensity of treatment. Further analysis is done through the format of an event study and heterogeneous treatment effects. It is found that, consistent with existing literature, the marginal political effect of increases in homeownership is to increase the council share of the right wing Conservative party at, primarily, the expense of the left wing Labour Party. The most reliable specification suggests an impact of a 0.94 per cent increase in Conservative council share for every one per cent decrease in the share of social housing in a district. This implies a difference in council share of 11.5% between the lower and upper quartiles of the treatment more than one decade after it began. It is suggested that this value is best explained through a partial shift in the Conservative platform and support base from more affluent areas to poorer areas with more council house sales.

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"The chief object of Government, in England at least, is the protection of property" - Marquess of Salisbury 1864.

"If a Tory does not believe that private property is one of the main bulwarks of individual freedom, then he had better become a socialist and have done with it." - Margaret Thatcher 1975.

1   Introduction

It is difficult to overstate the centrality of property ownership to politics. Classical and Enlightenment philosophers from Aristotle to Condorcet believed that wealth was synonymous with political power (Waldron 2004 [1]). Industrialization, urbanization and the development of a mass franchise may have changed the types of property and dispersed its holdings. A tiny elite which dominated agricultural land has been transformed into a large mass of property-owning individuals. In modern developed democracies the most important form of property is housing. Not only is the most significant form of wealth and consumption, but it also has a special political role as homeowners are a powerful engaged voting bloc that comprises a majority of the electorate.

This work attempts to answer two major questions regarding homeownership in modern democracies. Firstly, it empirically tests whether increases in the rates of homeownership directly shift political outcomes. Secondly, it attempts to examine and investigate why this is case.

The study exploits regional variation in tenure changes due to the cessation of public housebuilding and the large-scale sales of public housing initiated by the Thatcher administration. From 1980 onwards, a statutory right was introduced for tenants renting from a local authority to purchase the property they inhabited at a discount of 40% of the property's value. Within this setting, I will test whether shifts in the housing tenure of an area affected voting behaviour in English councils over the period from 1975 to 1999.

The paper is organised as follows. There is a literature review and the historical context is further explained. Following this, both the data set and empirical strategies are explained in detail. This is necessary due to the continuous nature of the treatment which measures differences in intensity rather than creating treated and untreated groups. As a result, it is necessary to establish under which parameters and assumptions the local impact of these policies can be considered a form of natural experiment that produces reliable results of the political impact of a shift in tenure patterns.

The results of both specifications, a general difference in difference and event study for separate time periods, are presented. The difference in difference tests whether there is an overall effect in shifts in housing tenure upon voting behaviour. The event study attempts to clarify the mechanisms, if any, through which this occurs by examining the variation in the strength of the correlation with shifts in the political positions of parties over time. This paper then concludes with a general analysis of the results and a discussion into further research within the context of contemporary trends within British politics.

2 Literature Review

An individuals ownership of property is a legal right wholly dependent upon the ability of the state to enforce it. Under what conditions those with power, legislators, judges or lawyers, are prepared to guarantee this right has been a fundamental political issue throughout history. The arrangement reached in modern liberal democracies is that the central government upholds property rights but in return property owners must make tax contributions to the state. As the Utilitarian philosopher Jeremy Bentham summarised; "wealth ... must pay for its own protection" (Bentham 1843 [2]).

The right of ownership may be absolute but the price paid for this is negotiable. In the democratic societies of the contemporary developed world, where homeowners comprise more than half of households, the logic of the median voter theorem is sufficient to allow them to drive a very hard bargain. As for the majority of homeowners, their home is their single greatest asset and expense, so any policies affecting the value of their home or the cost of home-ownership has the potential to change their vote. Therefore, at a national level any politician that wishes to be elected must treat homeowners generously. The predictable equilibrium result of this is the cross-party support for generous benefits such as exemptions from capital gains tax or tax relief on mortgage interest that occurs in modern democracies.

Yet convergence on home-ownership policy at a national level, does not neuter the effect of home-ownership on political behavior. On a national level theoretical political economy work has shown that the expansion of home-ownership can favor right-wing economic policies even when both parties have converged to implement subsidies for homeownership. This is because these subsidies increase the income of the median voter (Biasis and Perotti 2002 [3]) and improve their information on the dead weight losses of redistributive taxation via exposure to the mortgage market (Prato 2016 [4]).

Yet above all it is politics at a local level that in which the politics of home-ownership dominates. As William Fischel has argued the results of local politics have two significant direct impacts on the value of local property. Firstly local administrations use a tax on local property to contribute to local services such as infrastructure and education. Secondly the regulations governing what can be built nearby are administered by the local government.

Fischel's central argument is that homeowners have a strong incentive to pay attention to local politics and vote to maximize their house value. Homeowners will support a level of tax at which the marginal decrease in home values from taxation will equal the marginal increase from public good provision. This predicts that homeowners will only vote for public goods, such as local schools, which are capitalized into housing prices. Homeowners will also use tight zoning rules to maximize the value of their property. This is through both prohibiting development with high levels of externalities and ensuring the development of low income housing is curbed to restrict new inhabitants to high-earning taxpayers who pay significant tax and put little pressure on public services (Fischel 2001 [5]).

This theoretical prediction is supported by a large and growing body of empirical political science research in some areas. Survey data suggests that, at least on a national level, homeowners

are more likely to oppose local development (Hankinson 2018 [6]). They are more likely to participate in local politics in general and to a greater extent when issues regarding zoning are decided (Hall and Yoder 2022 [7]).

An economic analysis of local taxation also implies that renters and homeowners should have divergent preferences on taxation rates. As a property tax is only partially incident on the rent paid then the marginal cost of an increase in tax is less for a private renter than a homeowner (Tsoodle and Turner 2008 [8]). Assuming the provision of a local public good with uniform marginal benefits for homeowners and renters then the optimal taxation rate is higher for renters than homeowners. However, there is significantly less empirical evidence for the impact of home ownership on levels of local taxation and expenditure.

This paper attempts to explore this gap in the literature by investigating the impact of shifts on tenure on voting patterns in a political environment where parties offer different options on levels of taxation and public spending. It also attempts to contextualise any shift in behaviour in a wider political environment where parties compete on cultural as well as economic questions. In particular, this paper investigates whether shifting the economic preferences of socially conservative but economically left-wing voters it makes them more likely to vote for socially conservative but economically right-wing parties rather than socially liberal but economically left-wing parties. Has the spread of homeownership amongst socially conservative working class demographics has contributed to rise of support for right-wing populist parties over the last two decades?

3 Right to Buy and its Context

3.1 Historical and Political Context

Since the 1840s the modern British Conservative Party has been the party associated with the interests of land and property owners. Its leader at the time, Benjamin Disraeli forged a lasting alliance between large aristocratic landowners and more modest property owners. Smaller proprietors such as shopkeepers or landlords were the "ramparts of property" who provided the mass electoral force to challenge any attempt by Liberal councils and governments to increase property taxes (Offer 1981 [9]).

With the advent of universal male suffrage in 1918 and the replacement of the Liberals with the explicitly socialist Labour party in the 1920s, Conservative intellectual thought pivoted towards the promotion of mass home-ownership as a buttress against a potential socialist attack on private property. However, it took until the Labour landslide in 1945 for the party to adopt the creation of a "property-owning democracy" as part of its platform.

In practice it is highly debatable whether national level policies on homeowners and homeownership diverged between the two main parties. Both the Conservatives and their major opponents the Labour Party both supported, maintained and extended large-scale subsidies for homeownership throughout the post-war period (Nevitt 1966 [10]). Planning policies which gave neighbourhoods power to restrict housing were introduced by a Labour government in 1947 and extended in scope by subsequent Conservative administrations (Hall 1973 [11]). This was simply because neither party could alienate a large and growing section of the electorate, which comprised over one third of the population in 1953 and over half by 1971, and win an election.

However, in local politics parties positions were more flexible and often did not converge on the important local matters of property taxation, local spending and permitted housebuilding in many areas. More affluent rural and pre-established suburban areas in the South East and Midlands with the highest levels of homeonwership which tended to support conservative councils which offered lower taxation and the maintenance of tight zoning controls during the post-war era. However major urban areas such as London, Birmingham and Liverpool had large populations of working-class private renters. These areas elected Labour councils advocating higher levels of local taxation and spending coupled with a local programme of public housebuilding.

Contemporary politicians of all parties were explicit that they believed the growth of social housing in urban areas would impact local political choices. (Dunleavy and Ward 1981 [12]). The Labour leader of the London County Council from 1934 to 1940, Herbert Morrison, declared the purpose of the cities social housing programme 'to build the Tories out of London'. Local Conservative politicians in Birmingham and London countered this by developing a strategy to sell public housing to their residents in the 1960s. However Labour governments and councils opposed and restricted the policy. By 1974, the Conservative party wished to overcome this opposition by granting all long-term tenants of council housing a statutory right to buy their homes at a discount of one-third to a half, which was finally implemented after Margaret Thatcher's victory in the 1979 election.

The study of local politics in modern Britain has often been sidelined in political science in favour

of national elections and central government. Avner Offer's work on the interaction of property ownership with local and national politics ends in 1914. No equivalent study has been made of the modern period. Because of this, the history of the Thatcher government tends to downplay how important local politics was to her administration and the impact of her actions upon local government. Instead, all her policies are viewed within the parameters of national politics.

In this mainstream view, the Conservative party's endorsement of right to buy was to obtain the support of working class council house tenants at a national level either through a direct bribe or "reconciling" them to capitalism (Filby 2015 [13]). The importance of local politics to Conservative policy and the potential impact of shifting housing tenure on the structure of local politics is not considered.

However, the politics of property at a local level was central to both the political vision and fortunes of Thatcher's government. Working class homeowners were a key part of the Conservative coalition and the government took measures to protect them against high taxation and spending by Labour dominated urban local authorities.

The actions of Thatcher's administration shows that the fight against left-wing local governments was a central priority for her political programme. Local authorities were subject to spending cuts from 1979, had increases in their property tax rate capped in 1984 and the 7 largest metropolitan councils were abolished in 1986. Ultimately, Thatcher was prepared to destroy her premiership through an attempt to abolish local property taxation altogether, replacing it with a flat rate per-head charge, dubbed the "poll tax", in 1988. The ensuing riots and non-compliance campaign forced Thatcher's resignation.

Weakening the support base of Labour councils through expanding homeonwership at the expense of social housing was a key part of this programme. Right to Buy was the largest privatisation Thatcher's free market government ever made. By 1996, as a result of this policy, 30% of council tenants had bought their property, with 2.2 million houses, more than 10 % of the total English housing stock, being sold ((Davies 2013 [14]). . It was a social shift on a massive scale which was calculated to break left-wing power in local government. This paper attempts to quantify the political impact of Right to Buy on local government and in so doing return it to the centre of the historiographical debate.

3.2   Descriptive Analysis

The variation in the effect of the policy across the country is shown in Figure 1. The maps present the decrease in the share of the non-profit housing stock between 1980 and 2000 in both a conventional and an equal area map.

Figure 1:

Change in Social Housing Share From
1980-2000
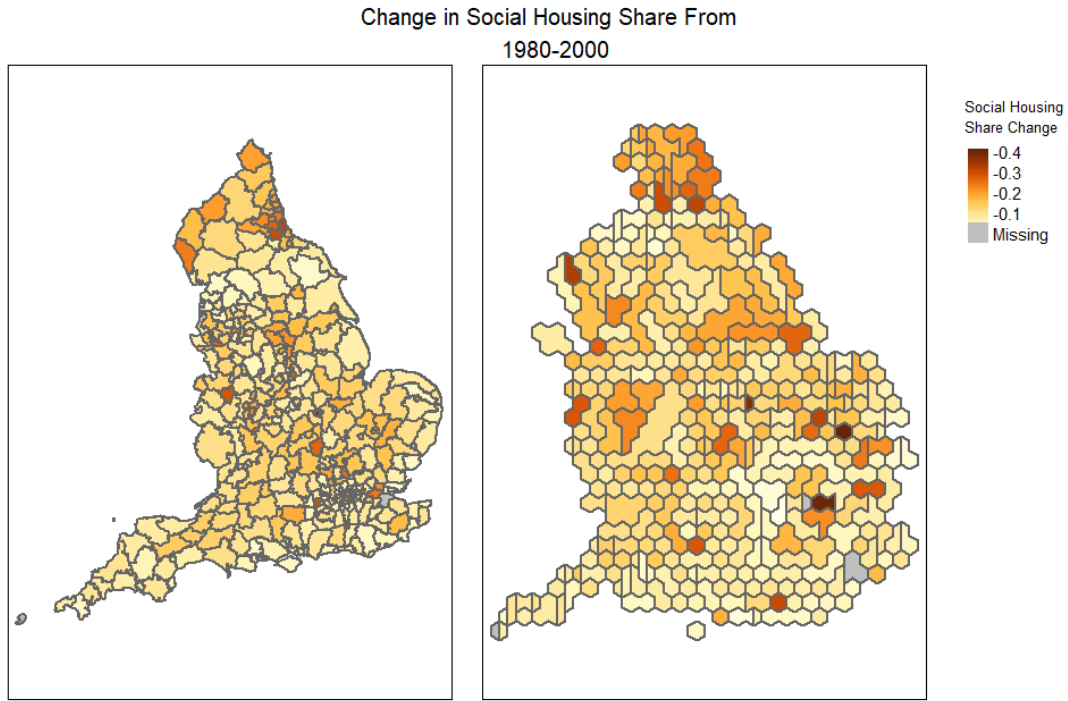
The map shows a large variation in the intensity of the policy across the country. The areas of the largest decrease in the share of council housing was in areas with an initially high proportion of social housing stocks. These include urban areas of Birmingham, East London and Newcastle but also many state-planned post-war new towns which result in the circular ring around London.

A simple multivariate regression is used to further indicate the pre-treatment drivers of these effects. In Table 1, the 1980 political and economic variables of each district is regressed against the cumulative change in social housing share in 2000. Note that the dependent variable is negative.

Table 1: Preliminary OLS

| | Dependent variable: | |
| | Change in Social Housing Share | |
	(1)	(2)
Social Housing Share in 1980		−0.546***
		(0.018)
Conservative Council Share in 1980	0.033**	−0.028***
	(0.015)	(0.008)
Labour Council Share in 1980	−0.136***	0.024**
	(0.016)	(0.010)
Liberal Council Share in 1980	−0.019	0.008
	(0.037)	(0.019)
Log of Real Wages in 1980	−0.056**	0.033**
	(0.027)	(0.014)
Log of Real House Prices in 1980	0.066*	−0.050***
	(0.037)	(0.019)
Log of Employment Variable in 1980	0.026***	0.025***
	(0.005)	(0.003)
Constant	−0.341	−0.188
	(0.230)	(0.118)
Observations	345	345
R^2	0.384	0.838
Adjusted R^2	0.373	0.834
Note:	*p<0.1; **p<0.05; ***p<0.01	

Without controlling for the initial levels of social housing in column (1), areas with higher reductions in social housing share had higher shares of Labour councillors, lower levels of Conservative support but also enjoyed higher wages. Once the initial share of social housing is controlled for in column (2), it immediately becomes the most significant determinant of social housing reductions. This is unsurprising given that the Right to Buy policy of existing social housing was the main driver of decreases in social housing share and the stock of social housing dictated how much could be sold. However, when the initial share of social housing is controlled for, then areas with higher social housing reductions had lower Labour and higher Conservative support. The most likely explanation for these results could be that the areas of high council housing concentration were in or

near Labour voting urban areas. However, within these areas, it was the more Conservative-leaning districts that had higher levels of social housing sales.

The policy changes of the early Thatcher administration allowed for a natural experiment with the results of changing housing tenure. Government policy underwent a dramatic change at a national level which allowed major shifts in the tenure composition of a local district. Importantly, however, the local variations in council house building and therefore council house stock at the time of treatment allowed for a large discrepancy in the number of council houses sold between districts. The difference in this "bite" of the policy over regions permits a significant amount of variation with which to test the hypothesis, assuming the research design is capable of controlling for any baseline differences between treated groups.

3.3 Political Context

The period began and ended with Labour administrations from 1974 to 1979 and from 1997 onwards. However, politics in this period was dominated by the Conservative government, which was in power from 1979 to 1997. The Labour Party were the main opposition during this period. After losing the 1979 election, party policy shifted towards the left during the 1980s. As well as calling for further nationalisation with higher levels of taxation and spending, the party also adopted what was considered to be a radical foreign policy. In particular, the party supported major cuts in defence spending and unilateral nuclear disarmament in both the 1983 and 1987 national elections.

Perhaps, unsurprisingly, during a period of extreme political polarisation between the right and the left, this period also saw the significant growth of the centrist Liberal Party which rejected both Thatcher's economic policies and the foreign policy of the Labour Party. Its growth was assisted by an alliance with right-wing Labour MPs who had defected during the early 1980s. As a result, it emerged as a strong political force at a local level during the 1980s despite limited success at a national level due to Britain's first past the post system at national elections.

In this period, independent councillors were mainly comprised of resident and taxpayer associations mobilised on specific local issues, such as resisting unwanted development or local tax rises. As can be seen in Figure 2, the prevalence of independent councillors was declining during this period. The local rise of alternative parties such the Greens, the right-wing Eurosceptic United Kingdom Independence Party (UKIP) and the far-right British National Party was a phenomenon of later political periods.

The relative local strength of these political groupings during the 1974-2001 period is shown in Figure 2. The expected trend in British politics is for governing parties to lose support to the opposition at a local level during their administration. Given this, it can be seen from Figure 2 that Conservative support was relatively robust during the 1980s, with it remaining the largest party at a local level, only fracturing during the 1990s. The Conservative government of John Major, in office from 1990 to 1997, suffered a major setback when it was forced to withdraw from the European Exchange Rate Mechanism in 1992. This led to the party becoming increasingly divided over further European integration, with backbench MPs and members at a local level becoming increasingly Eurosceptic. The fall in Conservative support was also driven by the Labour party moderating its stances on economic and foreign policy, which accelerated after the election of Tony

Blair to the party leadership in 1994. From 1993 to 1996, the Conservative share of total councillors in England collapsed from 36.1% to 18.8%.

Share of Local Councillors by Party
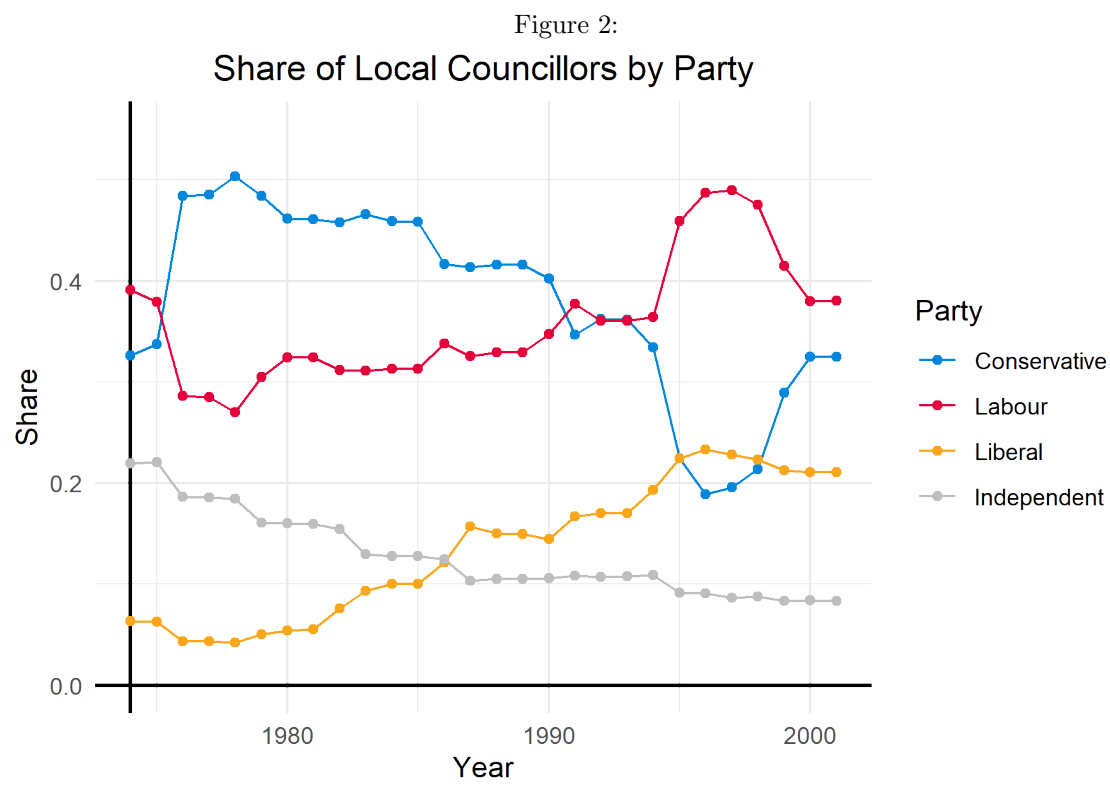
4 Data

The data for this project covers the period from 1974 to 2001 across England. All data is taken at the level of Local Authority Districts. These are the lower form of local government in Britain, of which 354 existed at the time of the 2001 census. During the 1974 to 2001 period the functions and sizes of these districts varied. Rural districts were generally smaller and had fewer areas of responsibility than in Britain's metropolitan areas. However, all districts had prerogative over matters of housing, planning and the collection of local taxation.

4.1 Council Share and Electoral Data

Given the lack of local voting data, council composition by party was taken as the closest substitute. Data on council composition by district was taken from the website "Open Council Data" [15]. Data on years that local elections took place, the number of council wards contested and the number of votes cast was obtained from the Elections Centre website affiliated to Nuffield College Oxford [16].

It is assumed that the Council share at a local level is a proxy for support of the political positions of the three major parties. This assumption is based upon the strong link between local and national elections under the British electoral system and the centralised structure of British political parties. Council share is indicative of the strength of the local political party, both in its ability to gain local support and also because councillors are instrumental in campaigning for the party in national elections. Equally, local parties campaign at council elections by adopting similar political positions to the national party on district-level issues. In particular, views on local taxation and council spending mirrored national views during this period (Miller 1988 [17]).

4.2 Housing Stock

Due to the control of district government over housing matters both housing completions and right-to-buy sales were reported at the district level. Housing completions by year and tenure from 1980 and 2001 and the housing stock at each census from 1981 to 2001 were taken from the Office of National Statistics [18] [19]. District-level data on housing completions and council house sales before 1980 were taken from scanned copies of British Housing returns which were then processed via ABBYY OCR software and cleaned [20].

This enabled the estimation of yearly total housing stock estimates by tenure between 1974 and 2001. These estimates were calculated through methods detailed in the appendix.

4.3 Controls

Data on district-level controls for each year was taken from Hilber and Vermeulen (2016),[21].

These district-level controls are:

- Average mix-adjusted house price. The housing is divided into six "types" [1] and the type of housing sold is held constant. From 1974 to 1994, the data is taken from the Consortium of mortgage lenders. From 1995 to 2001, it is taken from the British Land Registry.

- Total weekly gross earnings for full-time male workers taken from the New Earnings Survey.

- A proxy for the employment levels in a district based upon the 1971 UK census. Industry types at the census are aggregated by district and then employment trends by district are interpolated from this using the employment data of industry over time from the Office of National Statistics.

All data has been aggregated to local authority districts at the 2001 census. Local government districts were constant throughout this period, with the exception of a gradual local government reorganisation beginning in 1996 which merged a small number of districts to create larger "unitary authorities". Where this occurred, housing stock was transferred from old to new districts by the proportion of housing stock in wards at the 1991 census geographically located in the new district. Council shares were divided similarly by the proportion of the population in intersecting wards.

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[1]The types are: Bungalow, detached house, semi-detached house, terraced house, flat/maisonette in converted house and flat/maisonette in purpose built block

5 Research Design

5.1 Summary Statistics

Table 1 provides the mean and standard deviations of all variables used in the study in the pre-treatment period and two decades after the instigation of the Thatcher reforms. The values for all three independent variables, the non-profit housing share, the cumulative number of social housing sales and the owner-occupied share are all provided relative to 1979. These variables are discussed in more detail in the next section. The values for the dependent variables, which are the share of seats on a district council held by each party, and the controls are also displayed. To illustrate any baseline differences between groups with different intensities of treatment, the statistics are divided into the quartiles of a decrease in the share of the council housing stock that had occurred by 2000 [2].

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[2] These subsections are defined as follows, the lower quartile (Sales < 25%), Upper quartile of sales (Sales > 75%) and Middle quartiles of sales (25% < Sales < 75%)

Table 2: Summary Statistics

Variable	Treatment	1974-79	1974-79	1980-89	1980-89	1990-99	1990-99
		Mean	SD	Mean	SD	Mean	SD
Non Profit	Lower Quartile	-0.002774	0.00611	-0.02289	0.01702	-0.05243	0.01725
Share Relative	Middle Quartiles	-0.001834	0.00832	-0.04241	0.0241	-0.09539	0.01893
to 1979	Upper Quartile	-0.01041	0.07873	-0.08046	0.04907	-0.1752	0.05557
Cumulative Social		-0.002104	0.002683	0.0197	0.01286	0.04187	0.01319
House Sales		-0.002808	0.003801	0.02947	0.01809	0.05943	0.01583
Relative to 1979		-0.003837	0.007255	0.04654	0.03597	0.09843	0.04429
Owner Occupied		-0.002782	0.006743	0.02802	0.02574	0.05144	0.02937
Share Relative		-0.006008	0.008949	0.04118	0.03475	0.09002	0.03265
to 1979		-0.006954	0.01286	0.06062	0.05849	0.1455	0.05959
Conservative		0.5443	0.2423	0.5468	0.2236	0.3565	0.2037
Share		0.4445	0.2412	0.4673	0.2157	0.3113	0.1927
		0.3035	0.2231	0.2886	0.2217	0.1985	0.2065
Independent		0.2009	0.2617	0.1341	0.204	0.1098	0.1781
Share		0.2576	0.2858	0.1822	0.24	0.1372	0.1906
		0.14	0.1923	0.0847	0.1425	0.057	0.1023
Labour		0.1992	0.2071	0.1857	0.2163	0.2726	0.2643
Share		0.2417	0.2058	0.2461	0.2274	0.3398	0.2681
		0.5209	0.2635	0.5403	0.2665	0.6212	0.2754
Liberal		0.05559	0.08814	0.1334	0.1471	0.2611	0.2177
Share		0.05625	0.06895	0.1044	0.1093	0.2117	0.1832
		0.03559	0.06773	0.08646	0.1061	0.1233	0.1388
Log of		10.95	0.6519	10.94	0.6501	10.99	0.6512
Labour Demand		10.9	0.6068	10.87	0.5979	10.89	0.5932
Shock		11.06	0.66	11	0.6592	11.01	0.6622
Log of		5.895	0.1081	6.057	0.1439	6.262	0.1485
Real Male		5.885	0.1071	6.035	0.1377	6.243	0.1425
Earnings		5.915	0.09964	6.06	0.134	6.266	0.1527
Log of		11.2	0.1195	11.45	0.2549	11.63	0.1614
Real House		11.1	0.1176	11.33	0.241	11.51	0.1358
Prices		11	0.1217	11.18	0.2332	11.38	0.1432

The overall pattern of Right to Buy suggested by Table 1 is one where the policy was significant but also highly asymmetric. Districts in the upper quartile had significantly greater decreases in

the share of non-profit housing, council housing sales and increases in the share of owner-occupied housing. Likewise, the different quartiles of areas have notably different political preferences. Areas in the upper quartile have lower proportions of councillors from the Conservative party and higher proportions for the Labour party. Equally, there is lower growth in the share of Liberal party councillors and lower independent council share.

The logarithmic values of the controls obscure differences between the separate quartiles. Real male earnings and the employment variable are fairly consistent between quartiles. However, the areas in the upper quartile notably have lower housing prices which are approximately 20% less than the lower quartile throughout this period.

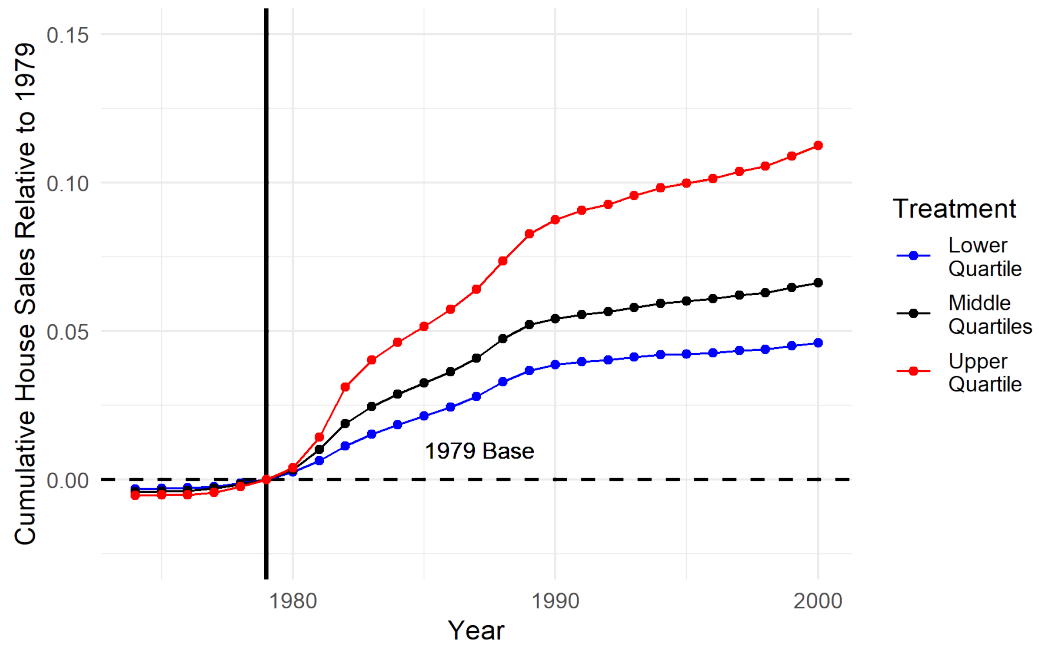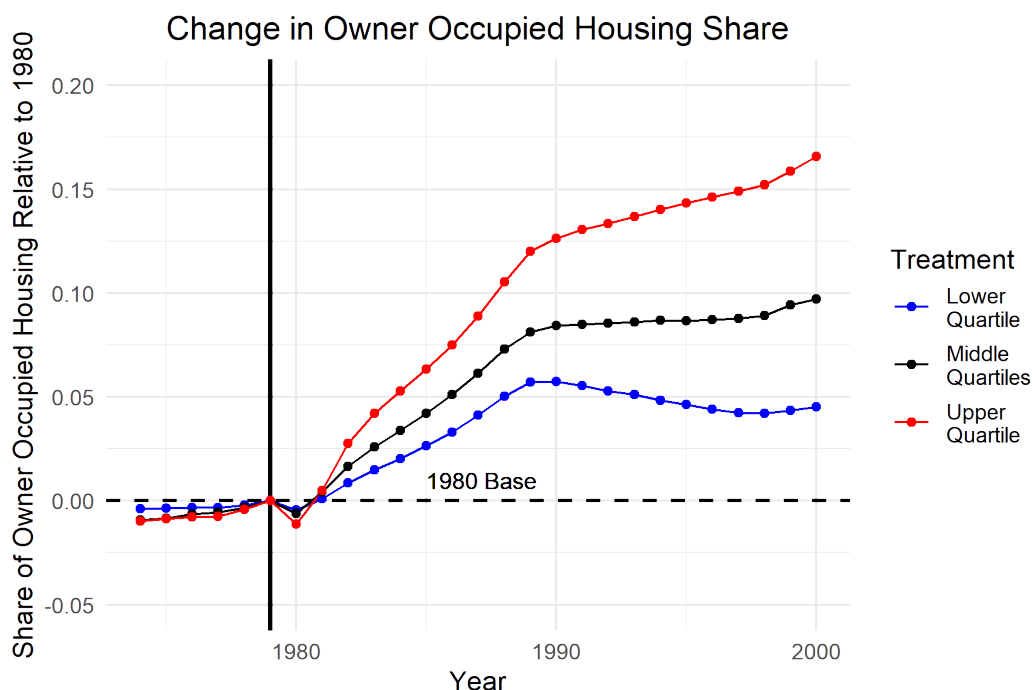## 5.2 Independent Variables

All three independent variables are plotted below. These show the difference in the mean value between separate quartiles of the independent variable every year.

Figure 3:

Change in Social Housing Share
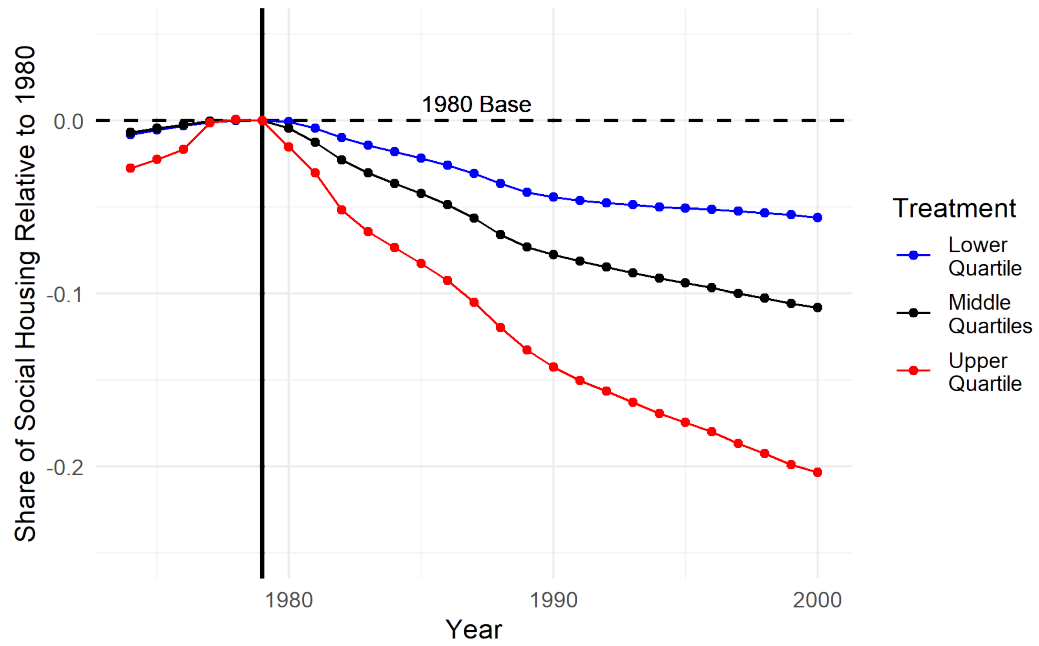
Change in Share of Social Housing Sold

18

Change in Owner Occupied Housing Share

There are several major patterns between the separate variables. Firstly, the overall pattern is similar. The decrease in social housing share, the increase in owner-occupied housing share and the cumulative number of sales follow a similar trajectory from 1980. Both areas and periods of higher social housing sales see larger decreases in social housing share and higher rates of increase in owner occupation share.

However, there are also significant differences which must be taken into account during the subsequent analysis. As shown in the summary statistics, the overall value of council house sales is less than the respective decreases and increases in the social and owner-occupied housing stock. This is because the change in the share of the housing stock from 1980 resulted from multiple policies, which were the enforced discounted sale of council housing and the cessation of central government investment in social housing. From 1980, the primary means of additions to the housing stock were private homes built for owner occupation. This caused additional changes in the social housing share in favour of owner-occupation.

Finally, there are diverging trends between quartiles with both the social housing share, and in particular, the owner-occupation share variables. Although the two other variables do not have major differences in the trends between their pre-treatment values and the intensity of the treatment during the treatment period, this is not the case for the share of social housing. Figure 3 shows that the averages for the units in the upper quartile of treatment were increasing their share of the social housing stock at a far greater rate than the other two quartiles before the treatment.

Regarding the owner-occupied share, there are two issues to notice. Firstly, there is a discontinuity in the data in 1980 where the level drops. Secondly, there is a greater divergence in the share of owner-occupied housing after the treatment than with the other two variables. This is associated with transfers within the private sector, from the owner-occupied sector to the private rented sector, which is greater in areas with fewer social housing sales. The asymmetries in these variables will be considered in the research design specification and controls.

5.3 Data Aggregation

The data is longitudinal data in a panel format. The dataset contains all values for each district and each year from 1974 to 2001. To avoid the attenuation bias that would result from taking data in all years, including those that do not have elections, the conventional approach would be to only take the results from election years. However, this method is complicated by the staggering of British local elections. Although every council is subject to re-election every four years, this is staggered between different years depending on the council. The potential solution of simply taking the results of each council election also potentially creates problems. Some councils do not elect all their seats within one year, instead hosting elections for parts of their council within separate years. This means that councils with these piecemeal elections will be over-represented relative to councils that elect all councillors in one single election.

Therefore, to avoid this problem, values of all relevant variables are grouped within four-year periods [3] in which every council will have had exactly one election for each seat in the council. The share of the council at the end of the period is then taken as the dependent variable. However, for both the independent variables and the controls, the values from the year in which the election was held are used. Where elections occur over more than one year an average of these variables was taken which is weighted by the number of council seats elected in each election year.

5.4 Specification

As shown by the summary statistics, any attempt to identify the impact of the sales of council housing must overcome serious potential co-founders. Areas with higher sale rates of council housing also had higher initial Labour vote shares. Likewise, throughout the treatment period there is a downward trend in overall share of Conservative councils. The combination of these factors imply that a coefficient obtained for the relationship between council house sales and conservative vote share by a simple pooled OLS regression will suffer from downward bias. However, given the longitudinal panel structure of the aggregated dataset these initial differences, assuming no hetergenous effects over time, can be controlled through the use of two way fixed effects.

Any attempt to approximate the effect of decreases in the shares of council housing must take advantage of exogenous variation in the shares of council sales. The 1980 reforms, being at a national level, create variation based upon the initial level of social housing in a district. However, this cannot be used as an instrument due to the strong possibility that the initial distribution of social housing is correlated with council share, violating the exclusion restriction. Given this, a

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[3] These periods are the share of council control in 1975, then 1976-1979, 1980-1983, 1984-1987, 1988-1991, 1992-1995 and 1996-1999. This allows for seven electoral periods to be compared for all districts, with two before and five after treatment

difference-in-difference specification using the reduction in the share of council housing as the intensity of treatment requires more feasible assumptions.

Therefore the overall specification of the regression is given as follows:

$$Y_{it} = \theta_i + \eta_i + \beta^{\text{twfe}} \times D_i \times \text{Post}_t + v_t + \epsilon$$

Where

- Y_{it} - The outcome variable which is the relative share of a party's councillors on a district council at the end of the period.

- θ_t - Period fixed effect

- η_i - District fixed effects.

- D_i - Is the modifier for treatment intensity, which is the share of social housing in a district minus the value in 1980.

- Post_t - A dummy equally 1 during the treatment period and 0 otherwise.

- v_t controls - These are currently the log of average real house prices and the log of average male wages in a district that year.

- ϵ - The error term

5.5   Assumptions

Due to the difference in difference specification the following assumptions apply to obtain a causal estimate for the ATE. The following framework is taken from (Calloway and Saint Anna 2023 [22]).

Assumption 1: The data is independently distributed with a period before and after treatment.

Assumption 2: The treatment consists of a mass of units that do not participate in the treatment.

This assumption must be clarified in the context of a continuous and cumulative treatment variable. The traditional difference-in-difference framework uses a control. However, the 1980 Housing Act and associated cuts in funding for social housing were applied nationally and were explicitly designed to curtail the discretion of local councils in the sale of local authority housing. This means that the untreated group refers to the period before treatment. Instead of differences between the treated and untreated group in the post-treatment period, the treatment effect refers to variations within the treated group. Importantly, this means that the treatment effect presented should not be interpreted as a straightforward shift from non-treatment to treatment but a shift within the pre-existing confines of the treatment.

Assumption 3: For all units untreated potential outcomes are observed in the pre-treatment period and in the post-treatment the outcome corresponding to the dose that the unit was treated with:

$$Y_{it-1} = Y_{it-1}(0) \text{ and } Y_{it} = Y_{it}(D_i)$$

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The most important implication of assumption 3 is that there were no pre-treatment anticipation effects. This has two major ramifications for this study. Firstly, this means that voters eligible for social housing sales did not change their voting behaviour at local elections based upon the knowledge that the conservative party would institute the right-to-buy policy at a national level. This is a reasonable assumption given that the policy was implemented at a national level and designed to bypass council control altogether.

Of more significant concern for this study is the impact of shifts in tenure before the treatment period. As shown in Figure 3, there are distinctive and separate trends in the independent variable between groups with different intensities of treatment. In particular, the groups with higher levels of social housing sales were increasing their social housing shares at a greater rate before 1980. Therefore to assume treatment can be viewed as an exogenous shift in the overall tenure, it must be assumed that the effect of pre-1980 tenure shifts are controlled for via the fixed effect mechanism. This assumption is tested in the event study.

However, as the treatment is a continuous variable, it therefore takes multiple treatment values, one for each district in each period. This means that further assumptions are required to obtain the treatment effect D_i

Assumption 4: For all $D_i \in d$

$$E[(Y_t(d) - Y_{t-1}(0)] = E[Y_t(d) - Y_{t_1}]$$

For all doses, the average treatment across the average change in outcomes across if they had been treated with dose d is the average change in outcomes over time for all units that experienced that dose. Assumption 4 is a significantly stronger assumption than for conventional difference in differences. This is because parallel trends do not just need to be assumed between treated and untreated groups, but between all different treatment values. The strength of such an assumption is mitigated by the fact that the main source of violation of the parallel trends assumption is the ability of individual units to select into treatment. However, this is ruled out by the treatment being applied at a national level.

Assumption 5: The effect on one period may not spill over to the subsequent one. Due to the likely persistence effect of council house sales over subsequent periods, a cumulative treatment variable is used. This means it is assumed that the council share of a party in a given period is only due to the cumulative sales in one period, and not the cumulative sales in an earlier period.

With these assumptions then the coefficient obtained by the difference in difference specification is equal to the treatment effect.

$$ATE = E[\Delta Y_t | D = d_j] - E[\Delta Y_t | D = d_{j-1}]$$

5.6   Fixed Effects and Controls

The addition of fixed effects allows for the elimination of bias caused by either baseline differences or time trends correlated with reductions in social housing. However, fixed effects do not control for either reverse causality or time-variant unobserved heterogeneity, (Cunningham 2019 [23]).

The most obvious cause of reverse causality would be where a Conservative council would seek to further decrease the social house share in its district by either promoting sales or restricting the construction of social housing. Indeed, as mentioned before, there is a large body of anecdotal evidence for this being true for the post-war period before the 1970s. However, from an empirical standpoint, the reforms of the Thatcher government effectively rule out reverse causality due to implementing a uniform sale policy and budget cuts which curtailed all discretion available to local councils.

However, the possibility of time-invariant co-founders over this period is a significantly greater potential problem. The Thatcher administration presided over large-scale industrial decline and mass unemployment concentrated in less-well-off areas where heavy industries were based. Less well-off voters, the unions and workers in traditional industries disproportionately voted for the Labour Party at a national and local level. Local Labour administrations built more council housing and areas with a higher initial stock of council housing had a larger decrease in their housing stock under the Thatcher administration. This implies that there is a strong possibility of time-invariant economic co-founders with council house sales.

This can bias the regression result in two ways. Firstly, the results of local elections are at least partly based on the approval of the national government. Therefore, the negative impact of the national policies of the Thatcher government could reduce Conservative council share at a local level meaning that we would expect a downward bias on conservative council share. However, time-invariant negative economic trends may also suppress the income of local residents and lead to lower rates of house purchase. This is more troubling as it would lead to a positive bias on conservative council share and therefore make any significant result uncertain.

Therefore, to ameliorate this problem three economic controls listed in section 3.3 are used in the regression. Total weekly real gross male earnings and the labour demand shock are used as a proxy for the strength of the local labour market. Real house prices are a proxy for the affordability of local housing.

6 Difference in Difference Results

The specification presented in this chapter is the overall results of the continuous difference in difference specification outlined in chapter 5.4. The hypothesis tested in this chapter is whether, over the entire period from 1975 to 1999, there was a statistically significant relationship between changes in tenure following 1980 and council seat share. Given the predictions made from existing theory, it should be expected that the stronger decrease in the share of social housing results in a relatively larger conservative council share at the expense of more economically left-wing parties, namely Labour and the Liberals.

The results are presented without controls for all versions of the independent variables in Table 3. The independent variables will be referred to in their table order, the change in social housing being the first specification, sales of social housing being the second and the change in owner-occupied housing share being the third.

Table 3: Fixed Effects Coefficients

| | *Dependent variable:* | | | |
	Conservative Share	Labour Share	Liberal Share	Independent Share
Change in Social Housing Share	−0.735*** (0.132)	0.190 (0.118)	0.727*** (0.114)	−0.182* (0.097)
Cumulative Social Housing Sales	1.068*** (0.197)	−0.425** (0.170)	−1.180*** (0.185)	0.537*** (0.141)
Change in Owner Occupied Housing	1.220*** (0.154)	−0.516*** (0.125)	−0.395*** (0.129)	−0.309*** (0.117)

| *Note:* | *p<0.1; **p<0.05; ***p<0.01 |

The results for all variables suggest a strong statistically significant correlation at the $p < 0.01$ confidence level between Conservative council share and tenure. In the order presented in Table 3, the initial results agree with the hypothesis that Conservative share, and therefore implied Conservative political support, is negatively correlated with the share of social housing and positively associated with the share of owner-occupied housing. Regarding the value of the respective coefficients, it should be noted that due to the measurement of different variables, the political impact is not directly proportional to the size of the coefficients. The coefficients of all three council shares imply that the conservative council was 9.02 %, 6.14 % and 11.4 % in between the lower and upper quartiles of decreases in the social housing share respectively by the 1990s. Although there is variation within the coefficients, they show strong evidence, and in the same direction, for the impact of tenure shifts on Conservative support.

However, there is significant variation within the specifications of the impact of shifts in coun-

cil tenure on the council shares of the opposition parties. Surprisingly, the first specification does not show any statistically significant result for Labour Council share while the other two do. Likewise, the same is said for the impact on independent council share, although it should be noted the second and third specifications have opposite signs on their coefficients.

Further analysis is shown for all three specifications when controls are introduced, as shown in the tables below.

Table 4: Social Housing Share

	Dependent variable:			
	Conservative Share	Labour Share	Liberal Share	Independent Share
Change in Social Housing Share	−0.901*** (0.147)	0.397*** (0.125)	0.324*** (0.125)	0.181* (0.102)
Log of Real House Price	0.122*** (0.038)	−0.045 (0.033)	−0.122*** (0.030)	0.045** (0.022)
Log of Real Male Earnings	−0.007 (0.083)	−0.298*** (0.073)	0.108 (0.069)	0.197*** (0.051)
Log of Labour Demand Shock	0.246* (0.138)	−0.383*** (0.095)	0.841*** (0.113)	−0.704*** (0.100)
Observations	2,417	2,417	2,417	2,417
R^2	0.801	0.913	0.716	0.871
Within R^2	0.041	0.053	0.106	0.062

Table 5: Social Housing Sales

	Dependent variable:			
	Conservative Share	Labour Share	Liberal Share	Independent Share
Cumulative Social	1.228***	−0.730***	−0.622***	0.123
Housing Sales	(0.213)	(0.172)	(0.189)	(0.141)
Log of Real	0.115***	−0.043	−0.121***	0.049**
House Price	(0.039)	(0.033)	(0.030)	(0.022)
Log of Real	0.031	−0.310***	0.099	0.180***
Male Earnings	(0.083)	(0.071)	(0.069)	(0.051)
Log of Labour	0.152	−0.374***	0.844***	−0.622***
Demand Shock	(0.133)	(0.091)	(0.110)	(0.098)
Observations	2,417	2,417	2,417	2,417
R^2	0.800	0.913	0.717	0.871
Within R^2	0.034	0.057	0.108	0.060

Note: *p<0.1; **p<0.05; ***p<0.01

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Table 6: Owner Occupied Housing Share

|	Conservative Share	Labour Share	Liberal Share	Independent Share
	Dependent variable:			
Change in Owner Occupied Housing	1.254*** (0.159)	−0.545*** (0.119)	−0.234** (0.111)	−0.474*** (0.113)
Log of Real House Price	0.119*** (0.037)	−0.044 (0.033)	−0.118*** (0.030)	0.043* (0.022)
Log of Real Male Earnings	−0.030 (0.078)	−0.290*** (0.071)	0.101 (0.069)	0.220*** (0.049)
Log of Labour Demand Shock	0.118 (0.129)	−0.325*** (0.085)	0.917*** (0.103)	−0.710*** (0.096)
Observations	2,417	2,417	2,417	2,417
R^2	0.810	0.914	0.716	0.874
Within R^2	0.084	0.065	0.103	0.079
Note:				*p<0.1; **p<0.05; ***p<0.01

The results in all three tables once again shows statistically significant values for Conservative council share at a value of $p < 0.01$, showing the effect is robust to the addition of economic controls. Reassuringly, the addition of economic controls in Table 4 increases the estimate of the change in social housing stock and the number of social housing sold upon Conservative council share. This suggests that the omitted variable bias caused by divergent economic trends for these variables was downward and there did not increase the risk of a false positive result. In addition, the value of coefficients, signs and significance levels for controls are large and consistent within all specifications.

The new three specifications imply a respective increase in the Conservative council share of 11.1 %, 6.94 % and 11.5 % in districts in the upper quartile relative to the lower quartile by the 1990s. It should be highlighted that in all the specifications the impact of changes in housing tenure upon Conservative council share is very large. Taking the coefficients for each specification as direct proxies for political support would suggest that nearly all households who shifted from public to owner-occupied tenure changed their vote to the Conservative party in local elections.

However, there are certain factors that should mitigate against such an extreme interpretation. Firstly it should be noted that as seat share is being measured instead of vote share it is a plausible transmission mechanism that greater numbers of council house sales increased the chance of pivotal voters within wards voting for the Conservative party rather than the opposition parties, meaning a greater level of seat change than vote change. Secondly, it should be remembered that the coefficients represent the marginal change in council seat share relative to the intensity of treatment in

other districts, not an absolute value between treated and untreated. Given the magnitude of the shift, it should not just be interpreted as a change in the behaviour of voters. Such a large effect suggests a shift in the electoral base of the Conservative party. Strategic Conservative politicians could have tailored policies to attract the support of the new homeowners during this period, potentially at the expense of their support with other demographics. Therefore, the 11.5% increase in Conservative council seat share between the upper quartile compared to the lower quartile that had emerged by the 1990s could represent a compound effect. The Conservative behaviour that allowed their vote to be more robust amongst new homeowners also reduced their vote share amongst those in other tenures.

To clarify the impact of tenure shifts over the period, a graph of the council share by party for the lower and upper quartiles of decreases in social housing is presented below:

Figure 4:

Council Composition Trends
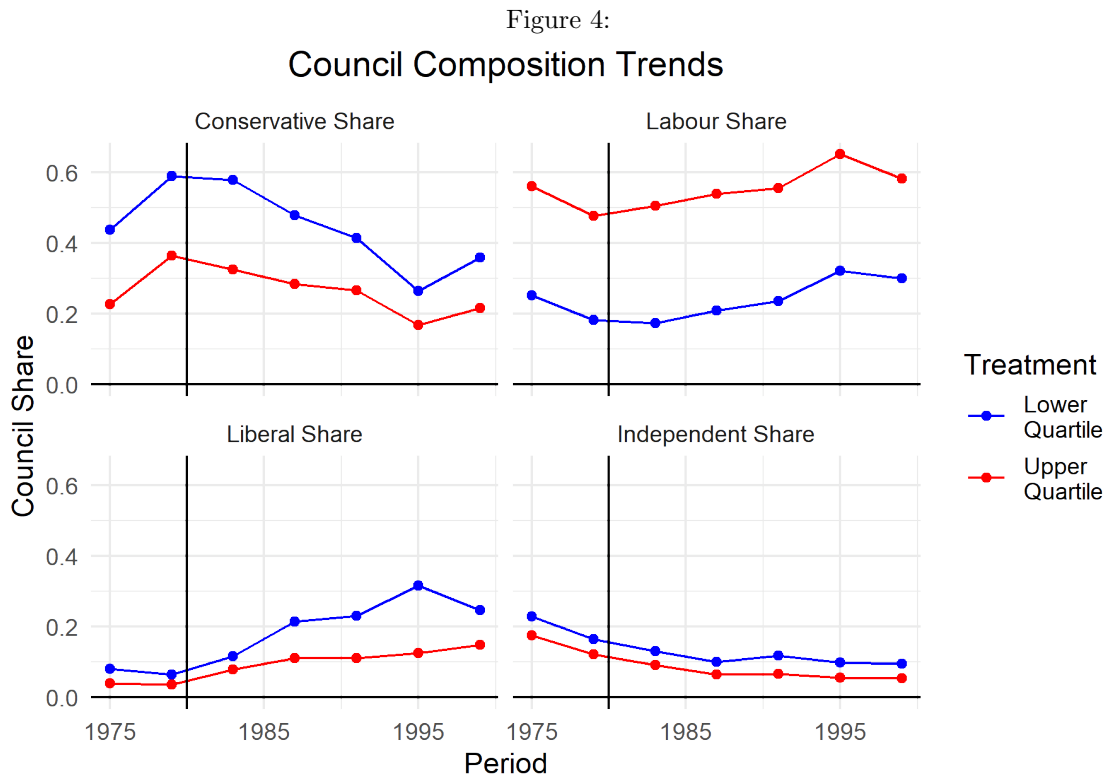
As is shown in the figure the areas in the upper quartile begin with significantly lower Conservative council share, but this support does not erode as quickly as areas in the lower quartile, meaning there is partial convergence in Conservative vote share between these quartiles after 1980. Therefore, the contextual interpretation of these coefficients is that they represent a lesser decrease in Conservative support over this period.

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The relationship between the share of separate parties to decreases in the non-profit housing stock is less robust to the change in specifications or addition of controls than the Conservative vote share. Table 3 shows that, without controls, the first two specifications show a significantly greater inverse relationship between social housing share and Liberal vote than the Labour party. With controls, all three specifications show the impact of tenure shifts to be greater in reducing Labour vote share than Liberal vote share.

Further analysis of the control coefficients provides insight into this. Economic deterioration in Labour voting areas is strongly suggested by the negative coefficients for Labour demand and for real male earnings in all specifications. However, in all specifications, the coefficients for real male earnings and labour demand are not significant at the $p < 0.05$ level for the Conservatives. This is surprising given the general conservative reputation as the "party of the rich" and the right-wing economic policy of contemporary Conservative administrations. Instead, the strong performance of local economies and higher wages are associated with higher Liberal and independent vote share respectively. The one exception is with the coefficient for house prices, which is positively correlated with the Conservative vote share and negatively correlated with the Liberals. However, it should be noted that this may also be due to geographical, not just economic, reasons, with Conservative support geographically concentrated in suburban and urban fringe areas closer to expensive urban areas with tighter planning restrictions and Liberal support being in more affordable rural areas.

We can see a partial alteration of the traditional narrative of the Conservative government of this period. It is generally portrayed in the historical literature as an all-conquering right-wing government that benefited its high-earning voters at the expense of the poorest. However, at the local level, the Conservative party is in retreat during the entire period, haemorrhaging voters in more prosperous areas to the Liberals and where members of its wealthier core vote, continue to opt for independent councillors. The Conservative's local support is more stable in areas with higher council house sales, blunting gains by both the Liberals and the Labour party. One surprising consequence of this is that because areas with higher council house sales have lower income the degree of Conservative support is not correlated with local economic performance.

The earlier hypothesis of how property ownership influences political behaviour can be interpreted in light of these results. The theory that the extension of property ownership will shift economic preferences to the right is compatible with the coefficients on party share. These show a positive association between home ownership and Conservative vote share and a negative association with that of the more left-wing economic parties. However, this is contradicted by the economic control coefficients where areas with higher income growth and employment growth, traditionally associated with right-wing economic preferences, are not significant for the Conservatives. Therefore, it is inconsistent that areas with higher social housing sales have a shift to right-wing economic preferences when these areas are behaving differently to other cohorts with similar expected preferences. What is more compatible with these results is that as richer and more liberal voters on the economic right were less prepared to vote for the contemporary Conservative party, socially conservative voters with left-wing economic views had their economic views shifted to the right to sufficiently entice them to support the Conservative party.

It should also be noted that there are also inconsistencies between the specifications. As noted before, there are inconsistencies between the relative impacts of the tenure shifts suggested by the

coefficients. All specifications agree that there is a positive relationship between the increase in owner-occupation and Conservative vote share. The suggested impacts range from 6.94% to 11.5 % of council seat share between upper and lower quartiles by the mid-1990s. Secondly, there are serious differences between the impact of changes in housing tenure on independent council share. In the first specification, the coefficient for independent council share , both with and without controls, is not significant at the $p < 0.05$ level. Equally, the sign of the coefficient changes with the addition of controls. In the second specification the coefficient is not significant when controls are added. It is therefore reasonable to conclude that there is not sufficient evidence to reject the null hypothesis for both of these specifications and conclude that there is any impact on independent vote share from tenure shifts. However, in the third specification, the coefficient is statistically significant both with and without controls

The results of this chapter have suggested a strong and statistically significant relationship between the tenure of the housing stock and political behaviour. However, before concrete conclusions can be made, robustness checks are necessary to assess whether the variation detected is likely to be from the 1980 reforms. In addition, the questions raised about both the mechanism for political change consistent with the results and the discrepancies between specifications, merit investigation. In order to fulfil these objectives an Event Study framework is employed, which is the subject of the next chapter.

7 Event Study

Taking the specification from (Cunningham 2019), the event study equation is written as:

$$Y_{its} = \gamma_s + \lambda_t + \sum_{\tau=-q}^{-1} \beta_\tau D_{st} + \sum_{\tau=0}^{m} \beta_\tau D_{st} + x_{ist} + \epsilon_{ist}$$

Where:

- γ_s: District fixed effects

- λ_t: Period fixed effects

- D_{st}: The treatment

- q and m: The relative lags and leads to test the treatment effect.

- x_{ist}: Controls

- ϵ_{ist}: Error term

In an event study framework, an interaction term is created for the treatment value and **each** individual election period bar one and regressed on the outcome in each period. This is because, in order to avoid perfect multicollinearity, one of the time periods must be dropped. As with convention, the period before the treatment (the 1979 period) is dropped to provide the reference.

7.1 Placebo Test

As is conventional in Difference in Difference frameworks, an event study is used as a placebo test. In conventional event studies, the overall format is to apply a binary treatment to the treated objects before the treatment period begins. If a null result is obtained for the treatment before the actual treatment period then it provides evidence for no divergent trends between treated groups before the treatment.

However, the continuous nature of the treatment means a separation into treated and untreated groups is not possible. Instead, in all districts the treatment is applied to the share of publically owned and owner-occupied housing before 1980. The change in the nature of the difference in difference specification coupled with the use of fixed effects means that the test should not be interpreted as directly checking for baseline differences. Instead, what is being tested is whether the change in the housing stock caused by the Thatcher housing reforms represents a discontinuity in the relationship between housing tenure and voting behaviour relative to the general trend of a district. If the placebo test holds, and the coefficients are non-significant for the pre-treatment periods, then this provides evidence for the reforms of 1980 being an exogenous shock to the political behaviour of a district. The controls and assumptions are the same as in the last chapter. The coefficients for the period before the treatment, 1975, are presented below in Table 7:

Table 7: Placebo Coefficients

Period	Variable	Conservative Share	Labour Share	Liberal Share	Independent Share
1975	Social Housing	-0.0718	0.0668	0.008	-0.003
		(0.1633)	(0.0835)	(0.075)	(0.153)
1975	Housing Sales	0.8256	-3.5102***	0.2903	2.3943**
		(2.5399)	(1.9462)	(1.5947)	(2.1026)
1975	Owned Housing	0.1077	0.6572	0.7725**	-1.5374**
		(1.3719)	(0.9321)	(0.7575)	(1.4397)

Table 7 shows the pre-treatment coefficient by party for all three specifications. The placebo test only holds for the Social Housing specification, which does not have any significant values before the treatment. This means that there is further evidence that, conditional on controls and fixed effects, the reduction in social housing share from 1980 can be considered exogenous to asymmetric time trends between districts.

This is not true in the case of the other two specifications. For both the levels of social housing sales and the share of owner-occupied housing, there are significant pre-treatment coefficients. For social housing sales, pre-treatment coefficients for the Labour Party are significant, as are those of the Liberal Party for the change in owner-occupied housing. The 1975 coefficients for independent shares are significant for both, although in different directions.As a result, there is significant evidence that, even with controls and fixed effects, the parallel trends assumption is not satisfied for these two specifications.

There are potential reasons for these discrepancies. Although overall council housing sales were heavily restricted by the central government from 1974-1979, the total number sold was not zero, and at a local level, Conservative administrations were more likely to permit council house sales. This may explain the negative coefficient between cumulative council house sales and Labour council share. Likewise, it should be remembered that the share of owner-occupied housing is not simply the result of direct government policy regarding social housing, but also due to transfers between the privately-rented and owner-occupied sectors.

As Figure 3 Shows, there are clearly divergent trends in this outflow between treatment quartiles, particularly after 1990. Despite a continually positive outflow of social housing to the owner-occupied sector, the owner-occupied trend is negative in the lower quartile for much of the 1990s, while remaining positive in the upper quartile. This suggests that the growth in the private rented sector was significantly greater in areas with less social housing sales at least towards the end of this period. This may be controlled for in the social housing specification, but depresses the value of the independent variable with the change in owner-occupied housing and therefore causes bias.

One consequence of this is that it should be concluded that the impact of tenure shifts on the independent council share is non-significant. Table 3 strongly suggests that the significant values of the independent coefficient in the final two specifications may be due to bias in the resulting regressions.
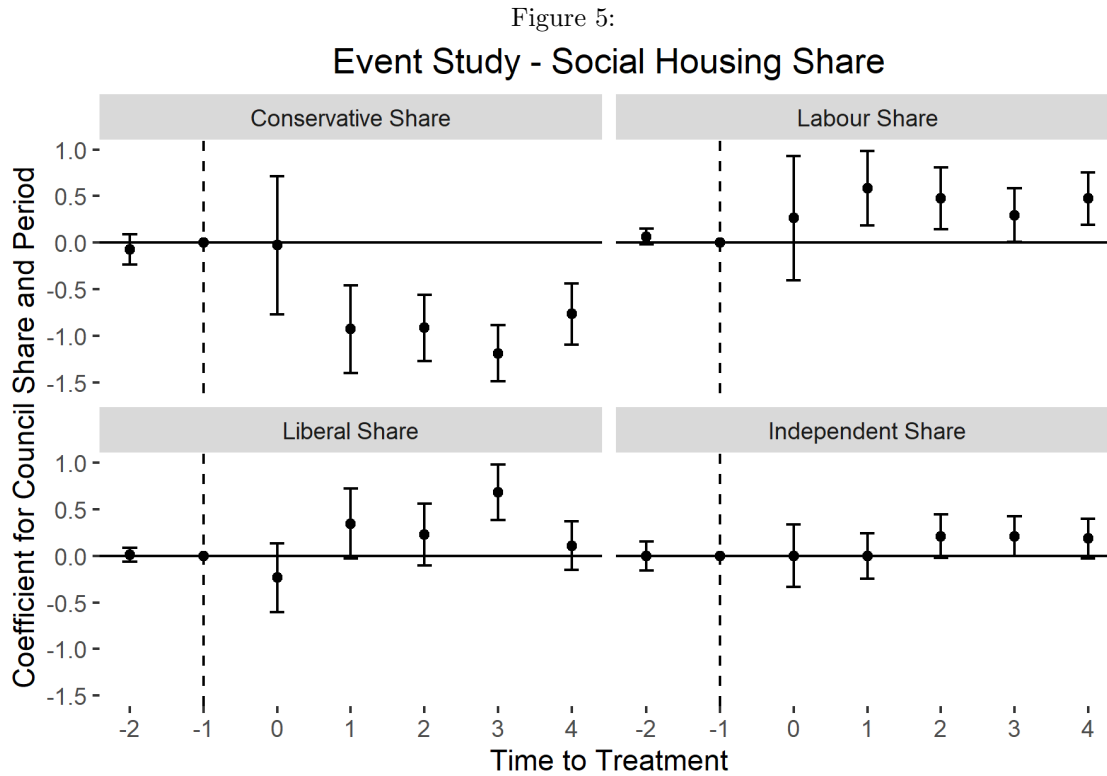
7.2   Interpretation

The specification of the event study allows for the analysis of the coefficients by period. This enables the periods driving the statistically significant results to be isolated. Two further investigations into the results are now possible. Firstly, it can be seen whether the overall results obtained in the previous chapter are consistent or are the result of particular anomalous years. Secondly, it allows further exploration of potential mechanisms through exploiting the change in the relative political positions of the parties. As noted before, the economic positions of parties converged during the 1990s and the Conservative reputation for economic competence was hit following Black Wednesday. Therefore, it is reasonable to expect that if the mechanism through which social housing sales influences voting behaviour is entirely economic then it should be expected that the coefficient should attenuate during the 1990s.

The first specification, the change in social housing share, is most likely to provide an unbiased value of the impact of tenure change on council seat share. Consequently, it will be the focus of the following analysis. The values for the coefficient for the effect of the change in social housing share relative to 1979 upon the council seat share of each party is provided for each period, except 1979, in Table 8 and Figure 5 below.

Table 8: Social Housing Share Event Study

Period	Conservative Share	Labour Share	Liberal Share	Independent Share
1975	-0.0718	0.0668	0.008	-0.003
	(0.1633)	(0.0835)	(0.075)	(0.153)
1983	-0.0268	0.2646	-0.236	-0.0017
	(0.7406)	(0.6671)	(0.3697)	(0.3359)
1987	-0.9267***	0.5857***	0.3448*	-0.0038
	(0.4675)	(0.3978)	(0.3771)	(0.2435)
1991	-0.913***	0.4783***	0.2267	0.2079*
	(0.356)	(0.3314)	(0.3317)	(0.2338)
1995	-1.1866***	0.2961**	0.6817***	0.2087*
	(0.3003)	(0.2883)	(0.2983)	(0.2126)
1999	-0.7636***	0.4726***	0.1075	0.1834*
	(0.3293)	(0.2812)	(0.2624)	(0.21)

Event Study - Social Housing Share

After 1987, there is a consistently positive effect on decreases in social housing share on the share of a council comprised of Conservatives while decreasing the share of Labour councillors. Likewise, there are no values of statistically significant values at the $p < 0.05$ level for independent vote share. These results can be interpreted as confirming a sizeable long-run electoral shift to the Conservative party from the Labour Party observed in the last chapter. Equally, the null hypothesis for the independent share of councils is also supported. However, the effect on liberal council share appears less consistent over time, with statistically significant values at the $p < 0.05$ level in 1995.

The exceptional results in 1983 and 1995 require further analysis. The 1983 period shows no effect of a decrease in the social housing stock on the Conservative council share. A strong potential reason for this could be that the first term of the Thatcher administration was rocked by a deep recession and double digit rates of unemployment. This resulted in deep government unpopularity until a combination of economic recovery and victory in the Falklands war improved the government's ratings from 1982 onwards. The areas of high persistent unemployment were concentrated in traditional industrial areas with higher levels of social housing and therefore correlated with social housing sales. However, it should also be noted that economic recession and mass unemployment was also prevalent in the early 1990s, where the decrease in the social housing stock is associated with increases in Conservative vote share. A potential explanation of the differences between these periods is that the cumulative numbers of social housing that had been sold was significantly higher

by 1991 than it had been in 1983. Simply put, this means that in 1991, unlike in 1983, the number of conservative-leaning new homeowners was not sufficient to outvote the number of newly unemployed and change the electoral result in a council ward.

The pattern of Liberal support appears more complex. The coefficient on the Liberal vote was not significant at the $p < 0.05$ level except for 1995. As shown earlier in Figure 2 the results in the period from 1991 to 1995 were exceptionally bad for the Conservatives. During this period there was a major shift from the Conservative party to the opposition. In particular, the Labour party increased its council seat share after the election of Tony Blair as Labour leader in 1994 which allowed the Labour Party to appeal to more moderate voters. As the pattern in Table 8 shows, during this period, areas with higher council house sales maintained their shift towards the Conservative party relative to general trends. However, they were more amenable to electing Labour councillors than previously, at the expense of the Liberals. Therefore, the positive coefficient on the Liberal vote share may represent a period-specific flow of votes to the Labour Party in certain areas rather than to the Conservatives. Consequently, there is limited evidence for a consistent effect of social housing sales upon Liberal vote share.

The evidence presented above confirms that the shift in tenure created a consistent effect in increasing Conservative vote share primarily at the expense of the opposition Labour Party. This is consistent with the hypothesis that owner-occupation has a right-wing impact on political views. The consistency in the coefficients during the 1990s suggests that areas with higher levels of council house sales did not revert to greater local Labour support despite both parties' convergence on economic policy. This suggests that voters affected by council house sales did not just change their political behaviour due to economic policy alone.

The most likely explanation for this behaviour is that changes in tenure meant that the Conservative party gained the support of socially conservative former labour voters. These voters preferred Labour on economic issues but already supported the Conservatives on social issues. Before the extension of property ownership to them their economic preferences for the Labour party were more important than their social preferences for the conservative party. A change in tenure may not have changed their economic preferences to be closer to the Conservative party than the Labour party. However, it reduced these economic preferences for Labour sufficiently that their support for the Conservatives on other policy matters became more important in their voting decision. As discussed in section 3.3 during the 1980s the Conservative and the Labour parties adopted radically different policy positions on economic and social issues. The 1990s saw convergence in economic issues with a large difference in both parties' attitudes to social and foreign policy remaining. After the Maastricht treaty in 1992, the most salient issue became the European Union. The Conservative party became increasingly opposed to further European integration while the previously eurosceptic Labour party became increasingly amicable towards the European Union (Tournier-Sol 2015 [24])[4]. Analysis of the potential impact of non-economic policy preferences is carried out in the following chapter.

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[4]This is usually credited with the establishment of the "social chapter" as part of the Maastricht treaty which strengthened Europe-wide worker's protections.

8 Mechanisms and Interactions

Further investigation of the results is possible using Heterogeneous treatment effects. This allows an exploration of the particular transmission mechanisms for how changes in housing tenure can affect political behaviour. In this specification, three variables are interacted with the change in the decrease in social housing share.

The first is a proxy for Euro-scepticism with a dummy for voting to leave the European Economic Community in the 1975 European referendum. Then, to investigate any economic asymmetry a dummy indicating that male wages in an area were above the median level in 1980 is added. Finally, to see if there any major geographical differences in the electoral impact the proportion of developed area is used.

The introduction of interaction variables is equivalent to "triple difference" estimations, which is the difference between two differences in difference estimators. It should be noted that to produce an estimate that can be interpreted as causal the parallel trends assumption must hold for both subcategories. This is not tested and as a consequence, the results should only be considered exploratory suggestions for further study.

Presented below are the coefficients for the interaction variables:

8.1 Results

Table 9: Interaction Coefficients

	Dependent variable:			
	Conservative Share	Labour Share	Liberal Share	Independent Share
1975 European Referendum	-0.398^{*} (0.234)	-0.282 (0.194)	0.220 (0.184)	0.459^{**} (0.178)
Urbanisation	1.537^{***} (0.354)	-0.052 (0.312)	0.383 (0.280)	-1.868^{***} (0.287)
1980 Wages	0.403^{***} (0.132)	0.137 (0.107)	0.032 (0.115)	-0.573^{***} (0.107)

Note:	*p<0.1; **p<0.05; ***p<0.01

The heterogeneous specifications suggest that the increase in Conservative support resulting from tenure changes occurred disproportionately in poorer and less urbanised areas. The question of Euro-scepticism is more ambiguous, with the coefficient showing a positive relationship between decreases in the social housing stock and Conservative council share in more Euro-sceptic areas.

However, the coefficient is only significant at the $p < 0.1$ level. This may however be the result of attenuation bias due to political divergence on European integration only beginning during the 1990s.

An additional issue arises due to the fact that changes in the Conservative vote share are at the expense of independent councillors, not the major opposition parties. This is contrary to the findings of the difference-in-difference study which showed no significant effect for the independent vote share. Therefore, this can be explained by two different conclusions. This may be due to the parallel trends assumption being violated and interaction subsets having divergent trends in independent vote share. Alternatively, a more generous interpretation would suggest that these results imply that a further effect in poorer, less urbanised and more euro-sceptic regions was for tenure changes to reconcile voters who didn't previously vote for mainstream parties to support the Conservatives.

9 Conclusion

Given the results from the last three chapters, it can be concluded that the decrease in the social housing stock due to the 1980 measures of the Thatcher government led to significant increases in Conservative council seat share in areas with higher rates of decrease in the social housing stock. The results of the most accurate specification suggest an average increase in the Conservative share of 0.94% for every 1% decrease in the share of publicly owned housing.

The structure of this study means, however, that the result is not an absolute shift in voter preferences compared to a baseline of no treatment but it is between the intensity of treatment within a treated group. Consequently, the effect should be interpreted as a shift in the Conservative voter base towards areas with larger decreases in the share of council housing from its more traditionally affluent heartlands. The main implication of this is that the Conservative party may have shifted its strategies and message to attract those who had bought council homes at the expense of other social groups. Therefore, the coefficient represents a combination of effects that were not limited to those directly affected by tenure shifts in this period, for example, people who did not buy a council house but changed their vote based upon changes in Conservative policy stance.

Even with this caveat considered, it is reasonable to conclude that the results of this study provide evidence for a significant and consistent impact of property ownership upon voting behaviour by shifting voter preferences towards right-wing political parties. This occurs even in a political system in which all major parties have converged into supporting extensive subsidies for homeownership. Yet the exact mechanism for homeownership impacting political behaviour requires further research. The evidence presented above suggests that the reasons political support shifted amongst treated areas to the Conservatives does not appear to be solely through shifting the economic preferences of new homeowners from the Labour party to the Conservatives. Instead, a more indirect mechanism should be considered through which a smaller shift in economic preferences instigated by homeownership meant socially conservative Labour voters were more likely to accept and prefer a socially conservative and economically right-wing political platform over one that was socially liberal and economically left-wing.

The most important area for further research suggested by this interpretation is the impact on the growth of right-wing Euroscepticism from the early 1990s. The switch in British Euroscepticism from being a predominantly left-wing phenomenon during the 1975 referendum to being a right-wing movement during the 21st century can be explained by a rightward shift in economic preferences amongst its socially conservative voter base [5]. Equally, although tests on earlier eurosceptic voting patterns proved at best inconclusive, it should be noted that interaction study suggests that Conservative gains were most pronounced in less urban and possibly poorer areas. These areas were the heartlands of the growth of UKIP and were crucial in the Leave victory in the 2016 referendum. It is somewhat ironic then that, if this is true, an extension of property ownership contributed to the most significant setback for liberal economic policies in modern British history.

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[5]This is also consistent with the theoretical predictions of (Buisseret and Van Weelden 2020 [25])

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A Housing Stock Estimates

For years between 1981 and 2001

1. Census values of the total, owner-occupied and socially rented housing stock were taken for each district in 1981, 1991 and 2001.

2. A first round of cumulative estimates were taken for the value of housing stocks between census years according to the following formulae:

   (a) **Provisional Total Housing Stock =**
   Cumulative Total Completions + Census Base

   (b) **Provisional Owner Occupied Housing Stock =**
   Cumulative Total Private Completions + Cumulative Social Housing Sales + Census Base

   (c) **Provisional Socially Rented Housing Stock =**
   Cumulative Non Profit Completions - Cumulative Social Housing Sales + Census Base

   The term Census Base refers to the value of the housing stock at the census immediately before the year. For example, if the year were 1983 the census base year would be 1981, for 1993 it would be 1991. Cumulative completions and sales refer to the total number of houses built or sold in a district between the date of the previous census and a given year. The housing stock is estimated for the beginning, not the end of the year, so the house completions of the current year in which the housing stock is calculated are not included. Using 1983 as an example, the cumulative construction or sales would be the homes built or sold in 1981 and 1982 but not 1983.

3. Demolitions and conversions are not included in the provisional values. To estimate this, the difference between the provision values for 1991 and 2001 and the census values in the respective years are taken. The total value is then assumed to be distributed proportionally to the gross housing completions each year. For example for the year 1985:

$$\text{Total Adjustment} = \sum_{1981}^{1990} \text{Completions} + 1981 \text{ Census Stock}$$
$$- 1991 \text{ Census Stock}$$
$$1985 \text{ Adjustment} = \left(1985 \text{ Completions} \Big/ \sum_{1981}^{1990} \text{Completions} \right) \times$$
$$\text{Total Adjustment}$$

This is then added to the total completions in that year:

$$1985 \text{ Adjusted Completions} = 1985 \text{ Completions} + 1985 \text{ Adjustment}$$

Therefore the final estimation for the housing stock at the beginning of 1986 is:

$$1986 \text{ Housing Stock} = \sum_{1981}^{1985} \text{Adjusted Completions} + 1981 \text{ Census}$$

For Years between 1974 and 1980

1. Districts were created from major local government reforms in 1972. As a result, housing stock data in the 1971 Census which is automatically comparable after 1972 is not accessible. Therefore data is taken from the 1981 Census.

2. The total Net completions from 1974 to 1980 is taken for each district and then subtracted from the 1981 census value to form the 1974 Base Value:

$$\text{1974 Base} = \text{1981 Census} - \sum_{1974}^{1980}(\text{Completions} - \text{Demolitions})$$

   Note that, given the pattern of post-war slum clearance which was concentrated primarily in the private rented sector, it is assumed that all demolitions are in the private rented sector and therefore demolitions of owner-occupied and public housing are zero.

3. The value of the cumulative net completions in a given year is then added to this 1974 Base value for each tenure. This is the same method as part of 3 of the algorithm for 1981-2001.

The values of the housing stock are then used to calculate three independent variables.

It is reasonable to assume that the political effect of housing sales should last outside of the electoral period in which the housing is sold. Therefore, the cumulative change in the share of the housing stock since 1979 is taken, rather than simply the decrease in the share of social housing stock during that period. Therefore, the dependent variable for each year y is:

$$\text{Social Housing Change} = y \text{ Social Housing Share} - 1979 \text{ Share Social Housing}$$

An alternative specification can be taken for the change in the owner-occupied share of the housing stock:

$$\text{Owned Housing Change} = y \text{ Owned Housing Share} - 1979 \text{ Share Owned Housing}$$

. The third independent variable is the cumulative number of social houses sold in each district. This is standardised between districts by dividing the cumulative number of social housing sales from 1974 by the housing stock in that year. Therefore for any given year y.

$$\text{Cumulative Sale Share:} = \sum_{1974}^{y} \text{Social House Sales} \Big/ y \text{ Housing Stock}$$

Which is then normalised to levels relative to 1979:

$$\text{Cumulative Sale Change:} = y \text{ Cumulative Sale Share} - 1979 \text{ Cumulative Sale Share}$$