DOI:
10.1057/s41295-016-0006-5

Document Version
Peer reviewed version

The Effects of the Distribution of Mortgage Credit on the Wage Share: Varieties of Residential Capitalism Compared

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Abstract

The financialisation of advanced economies has developed in part through the widespread engagement of workers with the financial sector, specifically through the increasing adoption of household debt. Taking on debt establishes "investor identities" for borrowers, which disciplines borrowers to demand employment and marginalises worker bargaining power. Although increased levels of household debt have been linked with a declining wage share of national income, there has been little examination of the effects of the specific channel of mortgage credit, the largest source of household debt, on the wage share. A series of regression models were implemented to test the relationship between the total mortgage stock and the wage share of GDP in four different countries, across three different Varieties of Residential Capitalism. While the panel data results demonstrate a negative relationship between mortgage credit and the wage share across the typologies, the relationship is concentrated in the liberal markets of the UK and the USA, and does not hold independently in Sweden and Denmark. There are four important differences that may explain the divergent results: (1) mortgages in liberal markets are provided at a higher cost than in non-liberal markets; (2) the use of mortgage bonds in non-liberal markets facilitates renegotiations in periods of borrower uncertainty; (3) the level of collective bargaining in Social Democratic states may strengthen worker wage negotiations; and (4) workers in liberal markets are reliant on mortgage finance to access the home as a financial asset in systems of asset-based welfare. The combination of which may explain how the increased disciplinary effects of mortgage finance have resulted in the reproduction of the conditions for capital accumulation in liberal capitalist states.

Keywords: Financialisation, wage share, mortgage debt, asset-based welfare

1. Introduction

The functional distribution of income between wages and capital has been recast significantly since the 1970s, as the wage share of national income has declined across the advanced OECD countries in favour of capital, which, in turn, contributes to the wider trend of increased social inequality (Stockhammer, 2013, viii). Neo-classical economists have considered globalisation and skill-biased technological change as the main drivers of this observed decline (e.g. Rodrik, 1998; IMF, 2007); however, post-Keynesian scholars have identified the phenomenon of financialisation as the principal cause for the reduction in the wage share observed in the advanced OECD economies (Stockhammer, 2013, 7, 43). The post-Keynesian understanding of financialisation is based on the increase of financial sector activity in advanced economies, which has occurred in part due to the diffusion of financial services into the "everyday life" of workers, predominantly through the widespread increase of household debt (Froud et al, 2002; Stockhammer, 2013; Köhler et al, 2015). Engagement with financial services has been identified as a mode of behaviour regulation and taking on household debt establishes "investor identities" for borrowers, which marginalises their wage bargaining power and disciplines them to demand employment to meet their debt obligations and stave off the negative threat of default (Froud et al, 2002; Langley, 2007; Lazzarato, 2012; Köhler et al, 2015). An econometric analysis has demonstrated that increased levels of household debt, as a proxy for the diffusion of the "investor identity" in an economy, are an important causal factor in the reduction in the wage share in advanced economies (Köhler et al, 2015, 18). However, not all channels of household debt carry the same financial burden or the same negative consequences of default, and such a generalised analysis of the effects of household debt masks the specific mechanisms that can lead to a reduction of the wage share. Mortgage debt is the largest single source of household debt, which carries severely negative legal and social consequences for default, and

private housing is considered a key node of financialisation that has led to an increase in household engagement with financial services through the sustained demand for mortgage credit to access owner-occupied housing (Montgomerie and Büdenbender, 2014; Aalbers, 2008; Schwartz, 2008). While housing finance has been identified as a key instrument of financialisation, there has been little examination of how engaging with the specific channel of mortgage credit may contribute to increased inequality through the observed reduction in the wage share in advanced economies, which is where this paper seeks to make an empirical contribution.

Neo-Weberian scholars Schwartz and Seabrooke (2008) have developed a systematic examination of different typologies of residential property markets and their corresponding systems of housing finance, entitled the Varieties of Residential Capitalism (VORC). From a Neo-Weberian perspective, the decision to engage with mortgage finance is based on bottom-up consent, as it provides access to socially beneficial outcomes in terms of the social norm of owner-occupied housing and the material gains from the home as a financial asset (Schwartz, 2008; Seabrooke, 2002, 29). However, despite the Neo-Weberian emphasis on the distribution of material gains as a bottom-up mechanism of consent, there has not been a sufficient examination of the effects of an increased exposure to the channel of mortgage credit, which is necessary for workers to engage with in order to access the socially beneficial outcomes from private housing, on material gains in terms of wages relative to capital. Therefore, this paper will attempt to bridge an important lacuna in both the financialisation literature and the VORC capitalism literature through the implementation of an econometric model to test the hypothesis *as to whether there is a statistically significant negative relationship between changes in the engagement with mortgage finance and the wage share of national income in advanced financialised economies.*

A comparative quantitative analysis was performed to evaluate the effects of changes in

the total mortgage stock, as proxy for the degree of engagement with mortgage finance, on the wage share of national income across three different VORC between 1979 and 2012; the Liberal markets of the USA and Britain; the Corporatist market of Denmark; and the Statist-Developmentalist market of Sweden (Schwartz and Seabrooke, 2008, 256). Although there is *prima facie* evidence that each case has experienced an absolute reduction in the wage share of GDP during this time period, as well as increasingly financialised housing markets, the political and economic institutional configurations between each case suggest that there may not be a single generalisable relationship across these different VORC. The key findings of this analysis lend support to the differences in institutional configurations inherent to a comparative political economy approach, as the results demonstrate that an increase in mortgage credit has a negative effect on the wage share of national income in the Liberal markets of Britain and the USA between 1979 and 2012, however, there is no significant relationship between an increase in mortgage credit and the wage share in the Corporatist market of Denmark or the Statist-Developmentalist market of Sweden during this same period. To account for these results, the most feasible explanation can be linked to the variance in institutional configurations between the typologies that shape the mortgage finance system, as well as the wider political economy of collective bargaining and welfare state structures, which may have positive counter-balancing effects on the disciplinary mechanisms of mortgage finance. The important differences in the institutional configurations may be summarised to four key points: (1) mortgages in liberal markets are provided at a higher cost to the borrower than in non-liberal markets; (2) the widespread use of the mortgage bonds in non-liberal markets allows for more flexible renegotiations in periods of borrower economic uncertainty; (3) the increased level of co-operative collective bargaining in Social Democratic states may strengthen worker wage negotiations; and (4) workers in liberal markets are increasingly subjected to the disciplinary mechanisms of mortgage finance, as access to the home as a financial asset in systems of asset-

based welfare is contingent on the ability of the worker to meet their debt obligations. Therefore, these institutional differences suggest that the mortgage credit channel of financialisation may be considered a disciplinary mechanism that facilitates the conditions for capital accumulation in the liberal markets of Britain and the USA, which is not present in Denmark or Sweden. The remainder of this paper is organised as follows: the second section of this paper will examine the different theoretical perspectives on the relationship between financialisation and the wage share, while the third section will outline the empirical design of the eight quantitative regression models used in this analysis. The fourth section will provide an account of the data used in the analysis, which will be followed by a fifth section consisting of a descriptive analysis the data. The sixth section will describe the key results of the regression models and the seventh section will discuss the results of the analysis in a comparative political economy context, which will be followed by a brief summarising conclusion.

2. Financialisation and the wage share

A key area of analysis for classical economists was the functional distribution of national income between workers and capital, where wages were thought to be compensated relative to the value of what labour produced, and capital accumulation was identified as being positively related to the rate of profit (Smith, 1976, 82-87; Ricardo, 1821; Stockhammer and Ederer, 2008, 484). Alternatively, neoclassical economists assume that all factors of production are valued at their marginal product, and the factor input share of national income would, therefore, be linked to the relative demand and supply elasticities of the corresponding factor of production (Marshall, 1920). While it is not necessary for waged income shares to be constant across different industrial sectors, neoclassical theory argues that the overall wage share of

national income should remain relatively consistent over time (Solow, 1958, 628). However, the post-Keynesian critique of neoclassical theory has demonstrated that the wage share of national income has declined in favour of capital across the advanced OECD economies since the 1970s (Stockhammer, 2013).

Traditionally, the key causes for the reduction of the wage share of national income have been identified as failures to adapt to technological change and globalisation, yet it is financialisation, defined in this case as the deregulation of the financial sector that has led to an increase in international financial openness, that has emerged as the dominant cause of the shifts in the functional distribution of income in favour of capital in advanced economies (Stockhammer, 2013, 43). Such an analysis suggests that the dominance of the financial sector has occurred due to the deregulation of financial markets, which could be mitigated through increased government interventionist policies (Stockhammer, 2010). However, the emphasis on a state-centric solution does not sufficiently account for the political power relations that would seek to hinder any attempt to redress the dominance of the financial sector (e.g. Talani, 2012). Additionally, the prominence of the financial sector cannot be reduced to the operation of 'high finance' above other sectors in the economy arising from the deregulation of the sector. Rather, the rise to prominence of the financial sector is linked to the increasing integration of financial services into the everyday life of wage-earners in society, through widespread investment in commodity vehicles, such as securitised financial products, as well as the diffusion of mortgage credit to fund private home purchases (Froud et al, 2002; Schwartz, 2008). While the post-Keynesian position successfully identify financialisation as the key driver in the reduction in the wage share, it has failed appropriately account for the mechanisms of bottom-up consent that has lead citizens to actively demand access to specific channels of financial services, which has contributed significantly to the ascendency of the financial sector.

The Neo-Weberian position addresses these two points by arguing that any

disequilibrium in the economy, such as the functional distribution of income, is derived from the political power struggle between human interests for material gains (Wiley, 1983, 39; Mann, 1988, 59). Potential homeowners choose to access financial services as a means to access the socially beneficial outcomes of housing in terms of the social norm of private housing and the material gains from the home as a financial asset (Schwartz, 2008; Seabrooke, 2002, 29). The Neo-Weberian scholars have established distinct typologies of residential housing markets, which allows for the identification of the varying weight of importance of owner-occupied housing in different housing markets, as well as the relative sophistication and diffusion of the systems of mortgage finance (Schwartz and Seabrooke, 2008). While a significant contribution is made through the development of the typologies of housing systems, there has been no examination of the different typologies of the VORC and the corresponding effects of the wage share, which is an important area for the Neo-Weberian position as it relates to the distribution of material gains within an economy in terms of wages relative to capital. Additionally, the emphasis on material gains ignores loss aversion, which argues that human behaviour is motivated by mitigating losses rather than achieving gains, and has been identified as an evolutionary trait in humans (Tversky and Kahneman, 1986, S258; Lakshminaryanan et al, 2008).

The incorporation of loss aversion allows for Marxism to make a significant entry point here, as the distribution of income can be related to the power struggle over the distribution of the profits of production between social classes, where the working class is put in a position to minimise losses against the owners of capital (Wright and Perrone, 1977, 53; Clarke, 1990, 465). A structured power relation has been identified within advanced financialised economies, where a portion of the subordinate worker's income is expropriated by the dominant financial firms in the form of corporate profits (Lapavistas, 2009, 133). Such an analysis makes an important contribution through the identification of the power relation between financial firms

and workers that redistributes waged income towards financial capital; yet the emphasis on such a top-down mechanism marginalises the importance of active bottom-up consent, which, in capitalism, is based on exposure to the commodification function that establishes a fear of physical insecurity, and subsequently creates active working class demand for income, via employment, to mitigate such physical insecurity (Tronti, 1966). Therefore, loss aversion is the very mechanism that establishes bottom-up consent for workers to engage as the subordinate party in the financial power relation with dominant financial firms in advanced financialised capitalism. Wage suppression policies have been implemented by firms and states seeking to be domestically and internationally competitive on price, which has contributed to the reduction of the wage share across the OECD economies (Bengtsson and Ryner, 2014). Therefore, workers may choose to take on debt in order to mitigate consumption losses resulting from the downward pressure placed on wages (Barba and Pivetti, 2009; Stockhammer, 2015). However, despite such a link between increases in household debt and the functional distribution of income, the direction of causality goes from income distribution to debt, which does not explain how the decision to engage with debt effects the wage share (Köhler et al, 2015, 9).

Financialisation has been identified as a mode of regulation, and from a Foucauldian perspective, engaging with financial services provides the individual with an internal logic that influences the constitution of their interests and identities (Froud et al, 2002; Langley, 2007). The decision to take on debt places the borrower in a subordinate position in their relationship with a lender, as the lender is able to set the terms of access to the loan, and engaging with financial services establishes an "investor identity" for the borrower, where the negative consequences of defaulting on a debt disciplines workers to service their debt obligations that are a source of revenue for the financial sector (Langley, 2007; Köhler et al, 2015, 9; Lazzarato, 2012). Here there is a tentative link to loss aversion, as the threat of default from the decision

to take on household debt establishes a coherent logic to maintain employment that will mitigate any potential losses resulting from a debt default. Therefore, the decision to take on household debt acts as a disciplinary mechanism that increasingly exposes workers to financial vulnerability, which reinforces their dependency on employment and marginalises their bargaining power with their employers (Köhler et al, 2015, 9; Lazzarato, 2012). Based on the disciplinary mechanisms inherent to the "investor identity", an econometric analysis has demonstrated that an increase in household debt is significantly related to a reduction in the wage share in the advanced OECD economies (Köhler et al, 2015, 18). Despite the results of this analysis, not all sources of household debt carry similar financial burdens or have the same degree of negative consequences on defaults, and such a general examination of household debt fails to account for the differentiated underlying causal mechanisms that are endogenous to specific channels of financialisation.

For most workers, the private owner-occupied home is the most significant financial asset in their portfolio, but the ability of workers to access private housing is often contingent on their ability to access to mortgage finance, which often carries the largest household debt burden (Montgomerie and Büdenbender, 2014). The decision to take on mortgage debt when purchasing a property leads the potential borrower to internalise the demands of the lender, which establishes a motivation for individuals to have an income from employment, a sufficient level of savings for a down-payment, and a credit history in good standing (Langley, 2013). Additionally, accessing mortgage finance exposes the borrower to a series of disciplinary mechanisms over the entire duration of the loan, as the penalties for deviating from a mortgage lending agreement by defaulting on a mortgage are often severe, and have much more negative consequences than defaulting on other forms of debt. If a mortgage borrower defaults on their loan, they may be forcibly removed from the property, and their credit history will be marked down, which reduces their ability to access forms of credit in the future. A mortgage default

may also hinder access to rented accommodation and certain employment roles, especially in the financial sector and mortgage debt is considered a recourse loan, where borrowers are liable for any negative equity remaining after their property has been repossessed (Aron and Muellbauer, 2010, 6). The loss of employment and reduced earnings are the most common causes of mortgage default (Ford et al, 2010); therefore, the potential negative consequences of default act as the disciplinary mechanisms of mortgage finance, which reproduces the demand for employment by the loss averse borrower to maintain an income that allows them to meet their debt obligations to the lender, further marginalising their wage bargaining position. However, despite the importance of the high debt burden and significant disciplinary mechanisms inherent to mortgage finance, there has been no empirical investigation of the impact of mortgage debt on the wage share, which is where this analysis seeks to make a contribution. From the results of previous studies on the effects of the aggregated productive outcomes of household debt on the wage share (e.g. Köhler et al, 2015), one would expect to see a negative relationship between an increase in total mortgage debt in an economy and the wage share of national income. Therefore, a series of time-series cross-sectional regression analyses will be implemented to test the hypothesis as to whether *there is a statistically significant negative relationship between changes in the engagement with mortgage finance and the changes in the wage share of GDP between 1979 and 2012 across the VORC in Denmark, Sweden, Britain and the Unites States of America*.

3. Empirical Design

The VORC typologies will be used to test the hypothesis across different housing and mortgage markets, and are primarily based on the institutional frameworks that have established variations of the owner-occupation rate and the ratio of mortgage debt to GDP between states

(Schwartz and Seabrooke, 2008, 256). In the VORC typologies the owner-occupation rate is used to identify the level of housing commodification in each state, while the ratio of mortgage debt to GDP indicates the degree of financial repression in each economy (Schwartz and Seabrooke, 2008, 248). The demarcation of these specific typologies may not be perfectly applicable or generalisable, yet the distinction between different housing markets established by the VORC provides a viable and valuable means of establishing a comparative account of different housing markets and their corresponding systems of mortgage finance. According to the VORC typologies, Britain and the USA have been identified as fitting the liberal market form of residential capitalism, which is characterised by high levels of owner-occupation and high ratio of mortgage debt relative to GDP (Schwartz and Seabrooke, 2008, 256). The liberal markets are highly commodified, with private housing used as a financial asset, and many citizens are priced-out of the private housing market, which has created inter-generational equity problems (Schwartz and Seabrooke, 2008, 256). The corporatist Danish housing market is characterised by housing provision, both public and private, as a social right, with relatively lower levels of owner occupancy, but a high mortgage debt to GDP ratio (Schwartz and Seabrooke, 2008, 256). The Swedish statist-developmentalist market similarly considers housing as a social right, which is also provided by both the private and public sector, but with lower rates of owner-occupation than the corporatist and liberal markets, and the repression of financial markets in Sweden has limited the mortgage debt to GDP ratio (Schwartz and Seabrooke, 2008, 256)[i]. 1979 was selected as the starting year for this comparative analysis of VORC as it marks the point where inflation targeting became the economic objective at the expense of full employment, which denotes the start of the decline of the era of Fordism and the beginning of the period of post-Fordist financialisation (Korpi, 2002).

This econometric analysis will consist of eight models in total; two time series cross-section panel data models that examine the pooled data from the three VORC, a random effects

model and a fixed effects model, which will then be followed by a time series model of each individual state; Denmark, Sweden, Britain and the USA. The seventh model will consist of a panel data model examining the liberal VORC countries only, the UK and the USA, while the eighth model will form a pooled analysis of the non-liberal VORC, Sweden and Denmark, as observed by Ansell (2014, 400). Sweden and Denmark have been identified as belonging to the same category in various different typologies of comparative political economy, such as the co-ordinated market variety of capitalism (Hall and Soskice, 2001). The pooling of Sweden and Denmark into the same typology allows for a comparison of the degree of housing commodification in each state, using the welfare state regimes (WSR) identified by Esping-Andersen (1990). In the liberal states of the UK and USA there is a greater degree of housing commodification than in social democratic states of Denmark and Sweden, due to the prevalence of private housing markets over other forms of housing provision, which may be provided or more heavily regulated by the state (Esping-Andersen, 1990).

OLS regression models of pooled time-series cross-sectional data can suffer from autocorrelation, heteroskedasticity, or both simultaneously. Furthermore, there may also be the presence of contemporaneous correlation of errors (Plümper et al, 2005, 329). Therefore, to correct for these potential errors, a panel Prais-Winsten transformation model will be used to establish robust panel corrected standard errors (PCSE) (Plümper et al, 2005, 349; Beck and Katz, 1995). The four PCSE models (1, 2, 7 and 8) will be run using the AR1 autocorrelation structure to address problems of serial correlation, and will assume panel-level heteroskedastic errors to mitigate for heteroskedasticity. The first panel data model will be a random effects (RE) model, which assumes that the variation across each VORC is random and is uncorrelated to the independent variables within the model, while the second panel data model includes fixed effects (FE) to account for any potential country-level bias. The four subsequent models will provide a segregated examination of each country used in the panel data analysis, albeit

with a much smaller number of observations, which may indicate whether there are any differences according to each VORC. The last two models will compare the liberal and social democratic welfare state systems to account for any differences between the levels of commodification of housing. The dependent and independent variables remain the same in each model.

4. Data

The dependent variable in each model is the wage share of GDP, which is calculated using an employee compensation measure as the numerator, to fully account for wages and non-wage payments in-kind, such as pension and healthcare contributions (Kruger, 1999). GDP at factor cost is used as the denominator, as it can be divided entirely between employee compensation and gross capital shares (Kruger, 1999; Rognlie, 2015, 5). Capital depreciation could be included to account for the replacement costs for capital, which would establish a net value added measure of domestic product (NDP); however, the NDP variable is incompatible with the employee compensation measure used in this analysis, therefore, the GDP measure is used (Bengtsson and Ryner, 2014, 6). Alternatively, the social wage, which accounts for non-wage benefits in-kind from welfare services such as welfare transfer payments and public healthcare, was also considered as a potential dependent variable in this analysis to account for the role of the welfare state in each case. However, much of the social wage data is collected at the micro-level from household surveys, which is not compatible with an aggregate macro-level examination of the distribution of national income (Sefton, 2002); therefore, an employee compensation measure of GDP will be used to examine the wage share in this analysis.

There are three independent variables used in this analysis to refine the accuracy of the model specification according to the "rule of three" (ROT) (Achen, 2002, 446)[ii]. The number

of variables has also been limited to account for the reduced number of observations in the individual case models, which allows each model to use the same number of independent variables and provides a valid means of comparison between models. The key independent variable that is used as a proxy to examine the engagement with mortgage credit in each VORC is the total outstanding mortgage balance (OMB), which accounts for new mortgage loans as well as the reduction of mortgage balances paid off by borrowers. Alternatively, a specific residential mortgage lending variable could have been used, however, many of the sources (e.g. Hypostat) do not have data coverage for the whole time period of this analysis. Additionally, OMB data is used by professional analyses of residential mortgage lending (e.g. the UK Building Societies Association (Rex, 2013)); therefore, the OMB data will be used by this analysis. The OMB variable has been transformed using a natural logarithmic scale to examine the growth of the volume of the mortgage stock in each economy. The coefficient generated using the natural-log scale is interpretable as a close approximation of the percentage change, which is relevant to this analysis (Gelman and Hill, 2007, 60-61). The use of such a natural log technique is widely used in econometric empirical work, including economic projects undertaken by government bodies (e.g. Mawson, 2002, 5).

The second independent variable in each model is the unemployment rate, which will be used as a proxy for wage bargaining power (Dünhaupt, 2013, 11). The unemployment rate is thought to be a key determinant of wages in labour economics, and is included to account for the effects of changes in wages from the overall labour supply, which is considered to have a negative relationship with wage growth (Clark and Hyson, 2000, 1; Ehrenberg and Smith, 2009, 513). Although the different wage bargaining and welfare state structures suggest that there would be different results for the unemployment variable between the liberal and non-liberal cases, an increase in wage bargaining power is positively linked to an increase in the wage share (Bengtsson and Ryner, 2014). The third independent variable examines the

ideological centre of gravity of each parliament to account for the different political institutional environments in each VORC, based on the mean right-left (RILE) position of each party that ran in each election, weighted by the vote share each party received (Gross and Sigelman, 1984, 467). The ideological centre of gravity for parliament has been included as a means of accounting for the influence of opposition policies as a counter-acting force that limits the implementation of policies that merely suit the political group in control of the institutions of the state. There have been criticisms of CMP database (e.g. Gemenis, 2013); however, the data generated by the CMP has been widely cited, and the RILE scale established by the CMP is also comparable to several independent right-left scales, which suggests that the CMP may be considered a widely accepted source (Laver, 2014, 217)[iii]. Descriptive statistics for all variables can be found in Table 1.

[Insert table 1 here]

5. Descriptive Analysis

[Insert Figure 1 here]

Figure 1 examines the changes in the employee compensation share of GDP between 1979 and 2012 in the UK, Sweden, the USA, and Denmark. In Britain, there was an initial increase in the wage share of GDP after 1979 that subsequently declined from 1980 until 1996, but from 1997 to 2001 there was a significant recovery in the wage share. Over the whole period, the average wage share of GDP in Britain has been decreasing, as demonstrated by the negative linear trend-line. The Swedish case also demonstrates a negative linear trend line, but at a steeper gradient than the British case. The period between 1991 and 1995 shows a sharp decline

in the wage share of GDP, which has occurred during a period of deep financial crisis in Sweden; however, the employee compensation share of GDP has increased from the low of 1995 to 2012. In a similar pattern observed in the British and Swedish cases, the US data also shows a negative trend line for the wage share of GDP; however, there is much less fluctuation in the wage share between 1979 and 2012, which was posited by the relatively small standard deviation figure. In the Danish case, the lowest point of the employee compensation share of GDP came in the mid-1990s, which then increased to reach a peak in 2009, just after the GFC, followed by a subsequent decrease. Although the employee compensation share of GDP in Denmark has decreased by 0.34 percentage points between 1979 and 2012, the slightly positive linear trend line in figure 1 suggests that, on average, the employee compensation share of GDP has actually been on an upward trend in Denmark over this period, which is contrary to the other cases in this analysis. Therefore, the decrease in the employee compensation share of GDP in Denmark may simply be a reactionary adjustment to the aftermath of the GFC.

[Insert Figure 2 here]

Figure 2 demonstrates the differences in the OMB share of GDP between each case. An examination of the 2012 mortgage debt to GDP ratios of each country show that Denmark was the most leveraged state with a level of mortgage debt at 153.29 per cent of GDP, followed by the UK (87.21%), the USA (83.14) and Sweden (75.74%), which shows that while the UK and the US have similar mortgage debt to GDP ratios, these figures are dwarfed by the Danish figure. The largest increase in the mortgage stock between 1979 and 2012 occurred in the UK (2,807.61%), which corresponds to a 62.80 percentage point increase in the OMB share of British GDP. The Swedish mortgage stock increased by a slightly lower amount than Britain (2795.10%) during the same time period, which led to a 57.21 percentage point increase in the OMB share of GDP. The USA and Denmark had much smaller relative increases in the

mortgage stock than the UK or Sweden; in the US OMB grew by 1042.41 per cent, leading to a 33.40 percentage point increase in the OMB share of GDP, while Denmark had the smallest increase in mortgage stock (970.63%), but the highest increase in the mortgage stock share of GDP (73.33 pp). In each case, the increases in OMB as a share of GDP vastly outpaced employee compensation growth, and the main increases in mortgage stock all occur after 2000, which coincides with the reduced interest rate environment after the synchronised monetary expansion implemented by central banks to address the East Asian financial crisis and the vast increase in demand for certain mortgage-backed securities as a form of government-guaranteed debt (Diamond and Rajan, 2009; IMF, 2014, 18).

6. Findings

[Insert table 2 here]

Table 2 provides estimates of the coefficients from the eight regression models. The signs of the coefficients accurately represent the direction of the substantive effects of the relationship between the two variables, however, as each model uses a non-linear independent variable to measure the OMB in each state, the coefficients may only provide reliable information as to the direction and the statistical significance of the relationship between OMB and the wage share of GDP, which is of more use to this analysis than the predictive capacity of the coefficient values (Martin and Stevenson, 2010, 41; Dana and Dawes, 2004)[iv]. The first column of table 2 demonstrates the results of the random effects PCSE regression (model 1). This shows that the positive growth in mortgage credit across the different VORC is statistically significantly negatively related to the wage share of GDP, and allows the null hypothesis to be rejected. The other two variables in the first model, the unemployment rate and the weighted RILE index, both have negative coefficients; however, neither of the effects of these two

variables may be considered statistically significant from zero. The results from the second model, which includes fixed effects to account for the country-level differences, shows similar results to the first model in that there is a statistically significant negative relationship between an increase in mortgage credit and the wage share of GDP, which also allows for the null hypothesis to be rejected. The lower coefficient value of the OMB variable in the FE model suggests that the effect of mortgage credit on the wage share is reduced once the country-level effects are taken into account. The unemployment rate variable also has a negative coefficient and is statistically significant, which means that a decrease in wage bargaining power has a negative effect on the wage share of GDP across the cases. The weighted RILE index also has a negative coefficient and is statistically significant; therefore, the wage share of GDP decreases as the ideological centre of parliament shifts to the right.

6.1 Individual Country Results

Models 3 through 6 segregate the pooled data into an analysis of their respective countries, and in each case, there is a negative relationship between an increase in mortgage credit and the wage share of GDP; however, the statistical significance of that relationship is different between the liberal and non-liberal VORC. The results from the corporatist market of Denmark (model 3) show that there is no statistically significant relationship between mortgage credit growth and the wage share. There is also no significant relationship between the unemployment rate and the wage share in the Danish case; however, the weighted RILE index variable was statistically significant from zero, and the negative direction of the coefficient for the RILE index shows that the wage share of GDP decreases as the ideological centre of parliament shifts to the right in Denmark. The results from the statist-developmentalist market of Sweden (model 4) also show that there is no statistically significant relationship between mortgage credit

growth and the wage share. There is also no significant relationship between the unemployment rate and the wage share. Additionally, there was no significant relationship between the weighted RILE index and the wage share of GDP in the Swedish case.

The models for the UK (model 5) and the USA (model 6) display very similar results to one another, but different results from the Danish and Swedish cases. In the UK and the USA models there is a statistically significant negative relationship between an increase in mortgage credit and a decrease in the wage share of GDP, which allows the null hypothesis to be rejected in both cases. The direction of causality is of importance between these two key variables, and in both the British and US models the null hypothesis that the mortgage credit variable does not Granger-cause the changes in the wage share of GDP can also be rejected, which provides further evidence for a causal relationship between the increase in mortgage credit and the decrease in the wage share of GDP observed by the regression results in models 5 and 6. The unemployment variable in both models also has a statistically significant negative relationship to the wage share, which suggests a link between a decrease in wage bargaining power and a reduction in the wage share in both Britain and the USA. The weighted RILE index variable was not statistically significant in either model 5 or 6, therefore, the ideological centre of parliament has no meaningful effect on the wage share in either the USA or Britain. The divergent results between the different VORC models means that there can be no single effect that is common to every case, therefore, the fixed effects model (model 2) will not be used further in this analysis. The strong similarities between the results of the liberal British and US models, and the non-liberal Danish and Swedish models, suggest that comparing the results of the pooled liberal VORC to the pooled non-liberal VORC, in line with the VOWC literature, may provide an insight into the overall pooled data models.

6.2 Welfare State Regime Results

Model 7 examines the pooled data for the liberal WSR cases, Britain and the USA, and as in both individual cases, there is a statistically significant negative relationship between the increase in mortgage credit and a decrease in the wage share of GDP. The range of potential coefficient values maintains a negative value between -1.9145 and -0.3875 at a 99.99 per cent confidence interval, which provides strong evidence for the rejection of the null hypothesis in the liberal cases. As in models 5 and 6, there is a statistically significant negative relationship between the employment rate and the wage share of GDP, which shows that decreases in wage bargaining power places downward pressure on the wage share in liberal capitalism. There was no statistically significant relationship between the weighted RILE index and the wage share in model 7, which is congruent with the results in the individual subsetted models. Model 8 examines the pooled data for social democratic WSR (or the non-liberal VORC) in this analysis, Denmark and Sweden. While the coefficient for the mortgage credit variable does have a negative sign in model 8, the relationship between OMB and the wage share is not statistically significant from zero. There was also no statistically significant relationship between either the unemployment rate or the RILE index and the wage share of GDP in model 8. The analyses of models 7 and 8 suggest that the results from the liberal WSR may act as a source of bias in the overall pooled data results in this analysis (models 1 and 2), and there is no single generalizable relationship between the diffusion of mortgage credit and the wage share of GDP across the VORC. Therefore, there is a specific set of circumstances inherent to liberal capitalism that creates an environment where increases in mortgage credit lead to an overall reduction in the wage share of GDP, which is not present in the other VORC or WSR examined in this analysis.

7. Discussion

The results from the individual and pooled data regression models of the liberal markets of the

UK and the USA suggest that an increased engagement with the disciplinary mechanisms of mortgage finance will result in the reduction of the wage share of national income in liberal capitalism. This is not to suggest that the diffusion of mortgage credit is the sole explanation for the reduction in the wage share in the liberal markets; rather, it is that the mortgage credit channel of financialisation may be considered a significant underlying technical mechanism in Liberal capitalism that disciplines workers to adopt a subordinate position in capitalist power relations, which reinforces the conditions for capital accumulation at the expense of waged labour. Therefore, the "everyday life" decision by workers to engage with mortgage credit to purchase a home, no matter the motivation, has a negative effect on the distribution of material gains for workers relative to capital in liberal markets. In terms of a comparative political economy analysis, the results from models 7 and 8 suggest that the highly commodified private housing finance markets in liberal capitalism have a negative disciplinary effect on the wage share of national income. Although both the Danish and Swedish cases have similar or greater levels of mortgage debt in their economies than the UK and USA cases, the institutional configurations that shape the mortgage finance system, and the wider political economy of collective bargaining and welfare state structures, differ greatly between the liberal and non-liberal markets, which may have positive counter-balancing effects on the disciplinary mechanisms of mortgage finance.

An examination of four important differences in the institutional configurations between the liberal market of Britain and the Corporatist market of Denmark may highlight how mortgage debt influences the wage share differently between the Liberal and non-liberal cases. Firstly, the back-end funding structure differs greatly between liberal and non-liberal mortgage markets, and non-liberal bond-based mortgage systems can provide lower cost mortgages that reduces the debt burden on borrowers. Mortgages in liberal markets are profit making vehicles for capital investment, facilitated by private banking institutions that generate

revenues from the interest rate margin between the rate at which they borrow and lend at, which varied between 0.82 and 2.43 percentage points above the bank rate in the aftermath of the GFC in Britain, and is passed onto the borrower (Winnett and Wallop, 2009). Alternatively, Danish mortgages have traditionally been provided by co-operative credit associations that are based on a pass-through match funding system using covered bonds. The Danish system provides mortgages at close to market cost as the credit institutions do not add interest rate margins to mortgage products, and they generate revenue from charging annual fees that are sufficient to only cover administration costs that are approximately 0.5 per cent of the outstanding loan amount. For example, in 2015, the Danish central bank moved their short-term interest rates into negative territory, and the negative interest rate environment has been passed on to mortgage borrowers who have been given mortgages at rates of up to negative 0.0562 per cent (Duxbury and Gauthier-Villars, 2016; Milne, 2015). Therefore, the traditional Danish match-funding model has maintained the distribution of low-cost mortgage credit, which reduces the disciplinary weight of the monthly mortgage debt obligation payment in comparison with the liberal mortgage markets. Secondly, although mortgage loans in each case are recourse loans that carry the same negative consequences of default, the Danish match funding mortgage finance system allows for a greater flexibility when it comes to renegotiating repayments due to periods of lower income or unemployment for the borrower. If a borrower experiences difficulties making their mortgage payments, the mortgage finance institution is easily able to renegotiate the mortgage terms with the bond holder, even as a temporary measure, which allows borrowers to meet their debt obligations. Alternatively, renegotiating a mortgage in the liberal market of Britain is a complicated process, especially if the mortgage has been securitised and divided among many mortgage-backed securities. In 2015, 0.96 per cent of all mortgages in Britain were in arrears, which is more than four times higher than the Danish arrears rate of 0.21 per cent, which is significant as Denmark has a much higher

aggregate mortgage debt burden as a share of GDP in comparison to the UK (CML, 2015; Realkreditraadet, 2016). Therefore, the difference in structural constraints within the mortgage systems may well have contributed to a much higher arrears rate in the liberal markets than the non-liberal markets. Thirdly, the reduction in the wage share in financialised capitalism can be linked to the "structural weakness of organised labour" that has marginalised the ability of workers to successfully bargain for higher wages (Bengtsson and Ryner, 2014, 19). Social Democratic states have strong traditions of co-operative collective wage bargaining with much higher rates of union membership when compared with workers in the liberal markets. Therefore, the decline of wage bargaining power that has occurred in liberal states since the early 1980s may weaken worker negotiations for higher wages, which further exaggerates their financial vulnerability when exposed to the disciplinary mechanisms of mortgage finance. The statistically significant negative relationship between an increase in the unemployment rate and the reduction of the wage share in the liberal markets (model 7) that is absent in the non-liberal (or Social Democratic) markets (model 8) suggests that wage bargaining power is significantly lower in the liberal cases than the non-liberal cases. Lastly, the threat of default from unemployment or lower wage shares may not have the same disciplinary effects in Social Democratic states due to the increased provision of de-commodified welfare state services in comparison to the limited provision of state services in liberal markets (Esping-Andersen, 1990). Commodified welfare services in liberal states are provided through market operations based on a system of asset-based welfare, which primarily uses the asset-price gains from owner-occupied housing as a vehicle to access welfare services (Doling and Ford, 2007). Therefore, the increased exposure to the market provision of welfare services in the liberal cases may reinforce the "investor identities" of loss averse individuals, who are disciplined by their decision to take on mortgage debt as it is their primary means of accessing the asset-price gains from their housing asset that are necessary for them to access welfare services.

Homeowners in liberal markets are reliant on the home as a financial asset to provide welfare functions throughout their lifecycle (e.g. Smith and Searle, 2008), which may be reinforced by the increased exposure to the disciplinary mechanisms of mortgage finance through the reduction of the wage share. Therefore, the results from this analysis provide evidence for the trade-off between private homeownership and a strong welfare state (e.g. Kemeny, 1980; 2005), as opposed to the trade-off between private homeownership and strong pension provision (e.g. Castles, 1998; 2005).

The degree of unionisation, wage bargaining power and welfare state service provision may also be linked to political outcomes in each state, which was examined by the ideological centre of gravity of parliament in each model. While the political institutional settings of each VORC may be thought to effect the functional distribution of income in each state, only the Danish case (model 3) demonstrated any significant effects of any changes in the ideological centre of gravity of parliament. The results suggest that as political partisanship in the Danish parliament becomes increasing right-wing, which may be defined as the belief in individual competition and the securing of personal rights, the wage share of national income decreases (Noel and Therien, 2008, 24). An analysis of this result is complicated by the changing structure of the Danish political system since the 1970s, as the shift from "old" politics to "new" politics in Denmark has created a division between right-wing economic policies, which, for example, seek to commodify welfare state functions and liberalise markets, and right-wing social policies, which prefer to preserve the state provision of welfare services that marginalises the role of the market (Harrits et al, 2010). However, a comprehensive explanation of the influence of the Danish political system over the wage share is beyond the scope of this quantitative analysis, and may be more fully articulated in a qualitative historical examination of the Danish case.

8. Conclusion

This analysis has sought to establish a bridge between the financialisation and VORC literature through an examination of the disciplinary effects of the specific channel of mortgage credit on the wage share of national income in four counties across three different VORC. In each case examined by this analysis, the UK, USA, Denmark and Sweden, there has been an absolute reduction in the wage share of GDP between 1979 and 2012. The results from the pooled panel data regression models confirm that an increase in the outstanding mortgage stock has a statistically significant negative effect on the wage share of GDP across the three different VORC examined in this study. Such common outcomes across different typologies of residential capitalism may suggest that this negative relationship could be a generalisable feature of financialised capitalism; however, once the results are segregated to a country level, there is a marked distinction in the results between liberal and non-liberal VORC, which limits the generalisability of the results. The statistical significance of the negative relationship between the increase in mortgage credit and a decrease in the wage share identified by the panel data analysis holds in both of the liberal markets of the UK and the USA, but does not hold in either the corporatist market of Denmark or the statist-developmentalist market of Sweden. Therefore, the "everyday life" decision to engage with the mortgage credit channel of financialisation can be understood as a technical disciplinary mechanism that reinforces the "investor identities" of borrowers and is an underlying causal factor that reproduces the conditions for capital accumulation at the expense of waged labour in Liberal capitalism. While this econometric analysis has demonstrated that there is a causal relationship between an increase in mortgage debt and the reduction of the wage share in liberal markets, the "investor identity" mechanism that connects the two variables is specified in such a way that does not allow for it to be tested in this analysis. However, from a Critical Realist perspective, the results

have identified that mortgage debt is an underlying causal mechanism in the reduction of the wage share, which may be articulated more comprehensively in a future study. One way to address the weak causality of this macro-level examination could be to incorporate a micro-level analysis of wages and mortgage payments into a multi-level model that would add further weight to the understanding of the disciplinary effects of mortgage debt on wage growth. Additionally, the introduction of a micro-level analysis may allow for an examination of the disciplinary effects of mortgage debt by income decile, which would allow for the identification of those income groups most effected by the disciplinary mechanisms of mortgage credit.

An alternative explanation for the reduction in the wage share of GDP in the liberal cases may be that capital has simply been more productive than waged labour; however, the increased returns to capital are not due to an increase in factor productivity, but are rather related to the combination of a reduction in the rate of waged labour increases, as well as a shift from productive to financial capital (Bengtsson and Ryner, 2014, pp. 7-8). Additionally, from a comparative political economy perspective, the important differences in the institutional configurations between the liberal and non-liberal cases in this analysis may be reduced to four key aspects that have resulted in the disciplinary effects of mortgage credit: (1) mortgages in liberal markets may be provided at a higher cost to the borrower than in the non-liberal markets, increasing the disciplinary weight of the mortgage payment; (2) the widespread use of the mortgage bonds in non-liberal markets may allow for more flexible renegotiations in periods of borrower economic uncertainty in comparison to liberal markets; (3) the increased level of co-operative collective bargaining in Social Democratic states may strengthen worker wage negotiations; and (4) liberal asset-based welfare systems emphasise the importance of accessing financial gains from the private housing asset, which may reinforce the "investor identities" of loss averse borrowers and increase the disciplinary effects of mortgage credit in

liberal states. While it is posited that these factors may explain the differences in the disciplinary effects of mortgage finance between the liberal and non-liberal cases, a full evaluation of these institutional configurations of each state is beyond the scope of this econometric analysis. A more comprehensive explanation of the different results between the liberal and non-liberal cases may be developed further in a qualitative case study of each state as a future research project.

Endnotes

[i] There is another typology of the VORC, described as the familial market, which has a high owner-occupation rate, combined with a low mortgage debt to GDP ratio. However, a familial case (e.g. Italy) was not included in this analysis due to the lack of financial sophistication attributed to that specific typology, as the analysis of this paper seeks is limited to advanced financialised economies.

[ii] See appendix A for an analysis of a fully specified panel data model, which demonstrates the validity of the efficient model specification used here.

[iii] A full description of the data sources used to compile the dataset is available in appendix B.

[iv] See appendix C for a full explanation of the data validation techniques and diagnostic tests performed on these regression models.

Acknowledgements:

Earlier versions of this paper were presented at the 2015 International Political Economy workshop at King's College London, as well as the 2015 Department of Business and Politics internal seminar at Copenhagen Business School. I would like to thank the participants in both workshops for their insightful comments on this paper. I am also grateful to the anonymous reviewers of this journal for their constructive and challenging feedback that allowed me to adjust the manuscript substantially. Additionally, I am particularly indebted to the assistance of Dr Lee Savage for his repeated comments that have led to the refinement of the econometric models in this paper. However, responsibility for all errors and omissions made in this paper must lie solely with me as the author. I am also grateful to acknowledge receipt of a funding award from the King's College London Interdisciplinary Social Science Doctoral Training Centre.

Appendix A: Expanded Model Specification

Although the models developed in this paper have sought to adhere to Achen's (2002) ROT to refine the accuracy of the model specification, the literature has identified key variables that may influence the formation of the wage share that were not included in the regression models. Therefore, a wider specification model has been developed to test the validity of the results of the refined models used in this analysis. Technological change and globalisation have been identified as key determinants of the wage share of national income (IMF, 2007). Technological change has been modelled using the capital-labour ratio, which is measured using the logarithm of net capital stock divided by number of persons employed in domestic industries, and the data was obtained from the AMECO database (Stockhammer, 2013, 21). Exports as a share of GDP, and foreign direct investment (FDI) inflows as a share of GDP have been used as proxies for globalisation, and this data was obtained from the World Bank (2015) (Stockhammer, 2013, 20). Labour productivity has also been identified as a significant causal factor in the formation of the wage share of national income (e.g OECD 2015a, 7), which can be measured in terms of GDP per hour worked, and the data was obtained from the OECD (2015b). The post-Keynesian analysis of financialisation is measured in terms of ffinancial globalization, which is the logarithm of external assets plus external liabilities divided by GDP, and as per Stockhammer (2013) the data was obtained from Lane and Milesi- Ferretti (2007). The deregulation of the financial sector is another way to account for the financialisation of the economy, which has been modelled using the summary financial reform index developed by Abiad et al. (2008). The financial reform dataset only accounted for years up to 2006, therefore, specification models with and without this variable were included to maximise the number of available observations and degrees of freedom. Table 3 shows the results of the specification models, and in both cases the sign and significance of the OMB variable is consistent with the

results from the main models used in this analysis, which is all that is necessary as the variable has been converted to a natural log. Therefore, one may conclude that the efficient model specification in this analysis, according to Achen's ROT, may be considered valid.

[insert table 3 here]

Appendix B: Data Sources

An adequate pre-collated dataset was not readily available to examine the relationship between the wage share of GDP and mortgage credit growth in the USA, the United Kingdom, Sweden and Denmark between 1979 and 2012; therefore, an original dataset compiling data from each country had to be constructed. Data to construct the wage share variable, employee compensation and nominal GDP at factor cost for each case was obtained from the European Commission's annual macro-economic database (AMECO, 2015). The data for the OMB variable was obtained from a variety of sources: a complete dataset of British OMB data for the selected time period was not available from a single source, and the data was compiled from two sources; data from 1979 to 1991 was obtained from the Council of Mortgage Lenders' (CML) compendium of housing finance statistics (CML, 1997, 88), and data from 1992 to 2012 was collected from the British Building Societies Association annual yearbook (Rex, 2013, 102). All OMB data for the Swedish case was obtained from the Swedish statistics office (Statistics Sweden 2015); while the Danish OMB data from 1979 to 2011 was obtained from the Danish Central Bank (Abildgren, 2012), and the missing 2012 figure was obtained from the Association of Danish Mortgage Banks (*Realkreditraadet,* 2015). The OMB data for the USA was collected from the Federal Reserve Bank of St Louis (2015) statistical database. The data for the unemployment rate for each country was also collected from the AMECO (2015) database. The RILE data was collected from the Comparative Manifesto Project (CMP) database (version 2015a), which is a subjective qualitative content analysis of party election manifestos from domestic democratic elections, and contains data for each case covered by this analysis (Volkens et al, 2015). The data was transformed to the weighted RILE index using the Stata do-file provided on the CMP website.

Appendix C: Data Validation and Diagnostic Tests

A Levin-Lin-Chu test was run on each variable in the pooled dataset to test for the presence of unit root, and in each case the null hypothesis that all panels contain a unit root could be rejected, which suggests that the panels are stationary for each variable. A cointegration test was also run for the key variables in the pooled data models, the wage share of GDP and OMB, and the tests reject the null hypothesis of no cointegration, which suggests that there is a stable relationship between the key variables in this analysis. Post-regression diagnostic tests were performed on the four OLS models pertaining to the individual VORC (models 3-6), where each model was tested for the normality of the residuals, heteroskedasticity, serial correlation and multicollinearity. In each case the residuals were distributed normally, and each variable in each case had a VIF score of less then 5, which demonstrates that there is an absence of multicollinearity in the models (Belsey et al, 1980). A Breusch-Godfrey test was run for each OLS model to test for serial correlation, and the results show that in each case the null of no serial correlation must be rejected, therefore, first order autocorrelation (AR1) is present in each model. A test for heteroskedasticity was run on the OLS models and in each case, except for the British case (model 5), we fail to reject the null hypothesis of homoskedasticity being true; therefore, it can be stated with at least 95 percent certainty that the errors are homoskedastic in the Swedish, Danish and US models, and are drawn from a distribution with a constant variance. To account for the serial correlation in each model and heteroskedasticity of the British case, each individual model was re-run to include robust standard errors, which are included in the results table. As stated in the empirical design, the results form the pooled data models (1, 2, 7 and 8) were obtained using the AR1 autocorrelation structure and the assumption of panel-level heteroskedastic errors to address problems of serial correlation and heteroskedasticity respectively. Each of the OLS models were also run using the bootstrap

resampling method, which replaces the unknown population distributions with the known empirical distributions originated by the regression to establish precise statistical estimates that allow for robust hypothesis testing using relatively few assumptions (Chernick, 2008). The bootstrap models were re-run with 2,000 repetitions, and each variable retained its statistical significance as reported in the results section (table 3), with identical parameter estimates to the non-bootstrap models. Diagnostic tests were also run for each bootstrap model with results that were similar to the corresponding non-bootstrap models above. These bootstrap models, and the subsequent diagnostic tests performed on them, suggest that the results from the individual VORC models (models 3 to 6) may be considered valid and robust.

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Figures

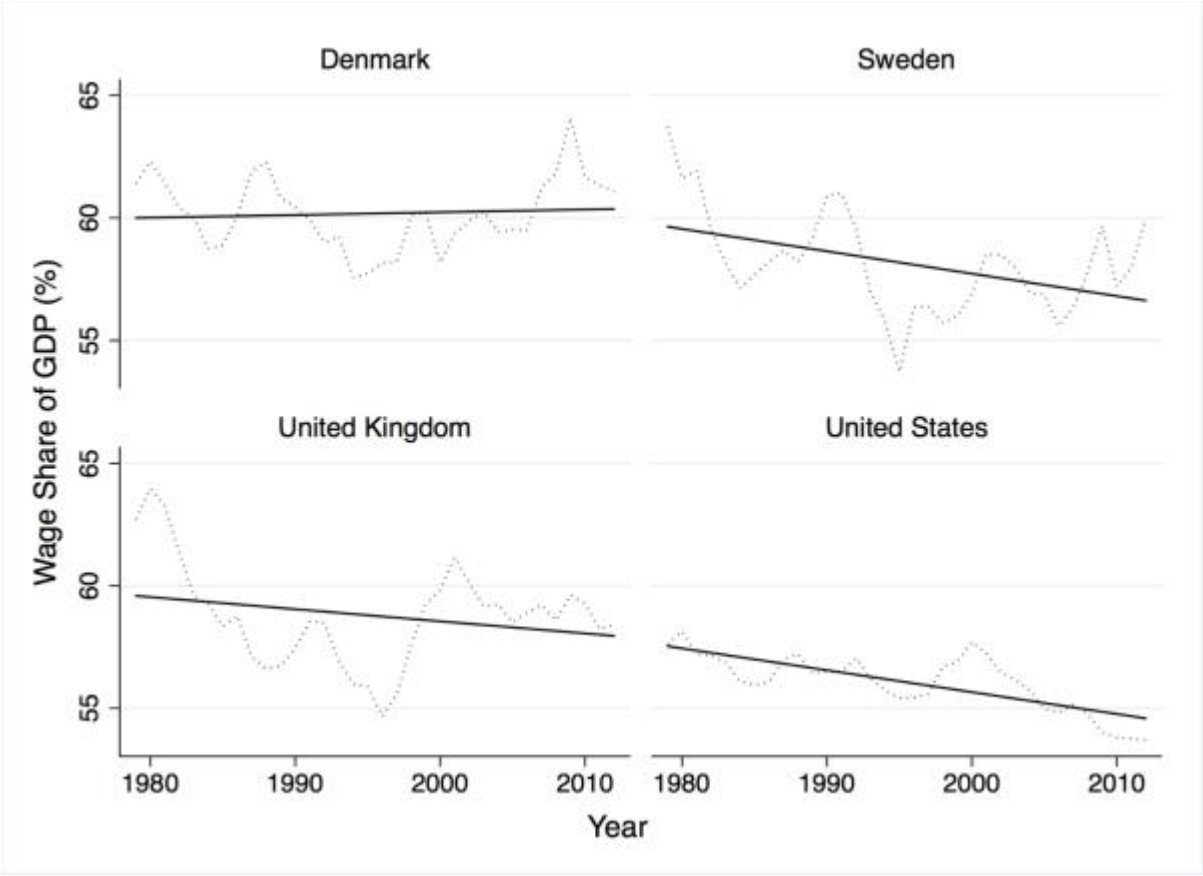

Figure 1: Employee compensation share of GDP.

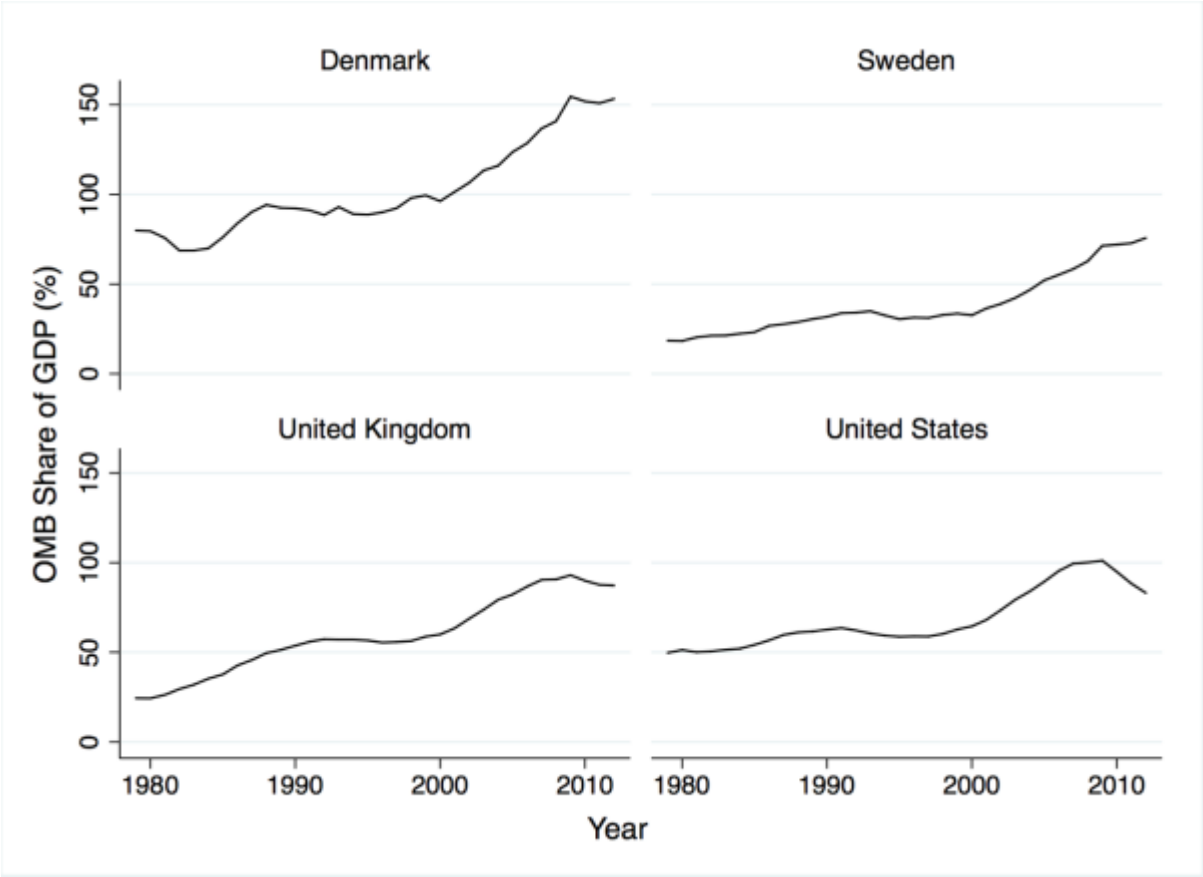

Figure 2: Comparison between the wage and OMB share of GDP.

Tables

Variable	Country	Obs	Mean	Std. Dev	Min	Max
Wage Share	Denmark	34	60.18	1.48	57.58	64.09
	Sweden	34	58.14	2.09	53.72	63.73
	UK	34	58.77	2.08	54.66	63.97
	USA	34	56.06	1.18	53.7	58.15
	Total	**136**	**58.29**	**2.29**	**53.7**	**64.09**
OMB (ln)	Denmark	34	27.49	0.69	26.26	28.53
	Sweden	34	26.93	0.95	25.1	28.43
	UK	34	26.61	1	24.53	27.87
	USA	34	29.23	0.76	27.88	30.32
	Total	**136**	**27.56**	**1.33**	**24.53**	**30.32**
Unemployment	Denmark	34	6.16	1.63	3.4	9.6
	Sweden	34	5.63	2.73	1.6	9.9
	UK	34	7.55	2.16	4.6	11.2
	USA	34	6.42	1.64	4	9.7
	Total	**136**	**6.44**	**2.18**	**1.6**	**11.2**
RILE Index	Denmark	34	1.92	9.41	-11.13	12.56
	Sweden	34	-0.62	10.28	-9.89	21.88
	UK	34	3.94	5.04	-3.02	10.75
	USA	34	12.41	7.23	-8.61	20.86
	Total	**136**	**4.41**	**9.52**	**-11.13**	**21.88**

Table 1: Descriptive Statistics 1

Model	(1) Random Effects	(2) Fixed Effects†	(3) Denmark	(4) Sweden	(5) UK	(6) USA	(7) Liberal VOWC (RE)	(8) S. Democratic VOWC (RE)
Mortgage Stock (ln)	-0.9462***	-0.7218***	-0.2875	-0.4676	-1.1528***	-1.1359***	-1.1510***	-0.0964
	(0.2216)	(0.2429)	(0.4235)	(0.6366)	(0.3896)	(0.2449)	(0.1962)	(0.5481)
Unemployment Rate	-0.1519	-0.2134***	-0.2241	-0.2831	-0.5405***	-0.3005***	-0.2200**	-0.1980
	(0.0865)	(0.0790)	(0.1482)	(0.2141)	(0.1080)	(0.0710)	(0.0953)	(0.1396)
Right-Left Index	-0.0246	-0.0350**	-0.0720**	-0.0634	-0.0509	-0.0177	-0.0057	-0.0187
	(0.0192)	(0.0179)	(0.0236)	(0.0472)	(0.0952)	(0.0291)	(0.0283)	(0.0236)
Constant	85.6469***	81.4914***	69.6032***	72.2835***	93.7303***	91.4169***	91.1604***	63.2870***
	(6.2109)	(6.6946)	(12.0720)	(16.1701)	(10.4086)	(6.7068)	(5.5899)	(14.7603)
Observations	136	136	34	34	34	34	68	68
R-squared	0.9483	0.9511	0.1988	0.4711	0.3695	0.7157	0.9676	0.9345
Number of Groups	4	4	-	-	-	-	2	2

Table 2: Results of the PCSE and OLS analysis of the effects of mortgage credit growth on the wage share of GDP

Standard errors reported in parentheses

*** p<0.01, ** p<0.05, * p<0.10

† Coefficients for country dummies are not reported

Specification Model	(1) With Financial Reforms	(2) Without Financial Reforms
Mortgage Stock (ln)	-1.1393***	-1.3907***
	(0.4112)	(0.4315)
Unemployment Rate	-0.2307***	-0.2580***
	(0.0861)	(0.0778)
Right-Left Index	-0.0254	-0.0479***
	(0.0176)	(0.0183)
Technological Change	3.75e+06***	3.48e+06***
	(6.75e+05)	(6.50e+05)
Labour Productivity	0.0123	0.0308
	(0.0459)	(0.0430)
Export Share of GDP	-0.2419***	-0.2196***
	(0.0570)	(0.0525)
FDI Inflows	-0.0742	0.0232
	(0.1804)	(0.1844)
Financial Globalisation	2.0438***	1.6104***
	(0.4121)	(0.4019)
Financial Reforms	-5.141**	-
	2.4343	-
Constant	127.3303***	124.3340***
	(11.4368)	(11.3562)
Observations	120	96
R-squared	0.9792	0.9750
Number of Groups	4	4

Table 3: Specification model results

Standard errors reported in parentheses
*** p<0.01, ** p<0.05, * p<0.10