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Social Democracy and Distributive Conflict in the UK, 1950-2010

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DEPARTMENT OF ECONOMICS

Working Paper

Social Democracy and Distributive Conflict in the UK, 1950-
2010

By

Carlo V. Fiorio
Simon Mohun
Roberto Veneziani

Working Paper 2013-06



**UNIVERSITY OF MASSACHUSETTS
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Social Democracy and Distributive Conflict in the UK, 1950-2010¹

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This version: 6 May, 2013

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Abstract

In the last three decades, two questions have been central for the Left. Is there a future for electoral socialism and social democracy? And, is it any longer possible to promote a significant redistribution of income in favour of labour? Political and economic events seem to suggest negative answers. In his influential work, Adam Przeworski suggests that this is an irreversible trend that makes it impossible in the long-run to promote genuinely socialist objectives in capitalist democracies. In particular, the structural dependence of labour on capital severely constrains feasible income distributions. In this paper, a detailed quantitative and qualitative analysis of the post-war UK economy is provided which casts doubts on the structural dependence thesis. A short run profit-squeeze mechanism seems to exist, but income shares are more variable than the structural dependence argument suggests, and the power resources available to the two main classes in the economy are among the key determinants of distributive outcomes, different political-economic equilibria corresponding to different configurations of the balance of power between the two classes.

JEL Classification:

D33 - Factor Income Distribution;

E32 - Business Fluctuations; Cycles;

J5 - Labor-Management Relations, Trade Unions, Collective Bargaining

Keywords: social democracy, income distribution, structural dependence thesis.

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1 Introduction

In the last three decades, two questions have been central in both scholarly analyses and political debates on the labour movement and the Left. Is there a future for social democracy? And, is it any longer possible to promote a significant redistribution of income in favour of labour (whether through government policies from above or class struggle from below, or some combination of the two)? Political and economic events, both in national and international contexts, suggest negative answers. Even when parties of the Left have been electorally successful, this has been at the cost of such a significant revision of their traditional programme and rhetoric that they have abandoned many of their traditional egalitarian commitments in favour of market solutions supported by a rhetoric of ‘choice’, and have promoted policies with only limited redistributive effects.

A rigorous analysis of why this has happened has been proposed by Adam Przeworski ([50], [53], [54]). According to Przeworski, there is an irreversible tendency that makes it impossible in capitalist democracies in the long-run to promote a significant redistribution of income, let alone any socialist objectives. Indeed, “the era of electoral socialism may be over” (Przeworski [53], p.185). His main arguments can be summarized as follows.

In the political arena, socialist and social democratic parties are doomed to fail. Once socialist parties opt for electoral rather than extra-parliamentary strategies, socialist aims are inevitably abandoned, because the electoral road to socialism is impossible in the long-run. Workers (narrowly defined as "manual wage-earners employed in mining, manufacturing, construction, transport, and agriculture, persons retired from such occupations, and inactive adult members of their households", Przeworski [50], p.104) have never been the majority of the electorate and their proportion shows a secular decline. If however socialist parties choose class-alliance strategies, they face a trade-off: they may attract white collar voters but only at the cost of part of their working-class electorate. Further, the effects of such decisions tend to persist over time and to constrain future choices.

In the economic arena, Przeworski ([50]) rejects the standard Marxist view that the interests of workers and capitalists are diametrically opposed, both in short-run struggles over income distribution, and in the longer run struggle for a socialist transformation. According to him, the standard Marxist view is in striking contrast to the passivity of the working class in developed capitalist countries, a passivity born of acceptance of, if not active support for, the capitalist system. He rejects explanations of this phenomenon in terms of ideology, supposing instead that workers and their organisations are

rational, self-interested, forward-looking utility maximizers. He argues that the interests of capitalists and workers are indeed in conflict in the short-run: higher profits lead to lower wages, and vice-versa. This is not true in a dynamic context however, because in a capitalist system profits are the engine of growth, and growth delivers (at least potentially) higher welfare in the future. It is this mechanism that is the material basis of workers' consent to capitalism and thus of capitalist hegemony, since it explains why, faced with the likely high costs of transition to socialism, self-interested rational workers will support capitalism because of its promise of continued welfare growth.

Further, when socialist parties forsake revolutionary strategies, they inevitably enter into an economic logic of class compromise. For to gain the future benefit of the returns to investment, they must forego any significant expropriation of profits today.¹ Both high levels of taxation imposed by a sympathetic government and the promotion of working-class militancy through class struggle are counterproductive, because each will generate a profit-squeeze mechanism: low profits lead to a reduction in investment, which implies lower employment today and lower production and wages in the future. Significant changes in the distribution of income, either via a welfare state or via bargaining and conflict are severely constrained.² The working class is therefore structurally dependent upon capital, and the argument summarized as 'the structural dependence thesis' (henceforth, SDT).

Przeworski's theory is extremely influential, and his conclusions have been widely debated. It is difficult to underestimate the theoretical and policy implications of the idea that the structural features of private ownership economies severely constrain the range of attainable distributions of income. Przeworski has provided one of the most sophisticated analysis of SDT, but the basic idea has a long history and it is shared by a large number of authors belonging to very different traditions, from neo-Marxist schools to neoclassical economics (classic contributions include Offe [47], Lindblom [41], Peltzman [48], Becker [4], Bates and Lien [3]). It also lies at the heart of neoliberal approaches and provides the foundations for criticisms of social democratic parties, the welfare state, and Keynesian policies. Further, SDT has strongly influenced policy debates and the elaboration of actual political programmes. For example, in a series of papers, Wickham-Jones ([70], [71]) has forcefully shown that

¹For a more recent development of Przeworski's analysis of the income distributions consistent with democratic capitalism, see Benhabib and Przeworski ([5]): although the analysis is framed in terms of rich vs. poor the main thrust of the argument is similar to his earlier work.

²Przeworski and Wallerstein ([54]) analyse a slightly different version of the two-class model and show that any attempts to redistribute income trigger a profit-squeeze. It is true that once in office, left-wing governments can in principle redistribute welfare via increasing taxes on capitalists' consumption. But rational capitalists will anticipate this policy, reduce investment, and cause an economic crisis. Hence, "the state may be structurally dependent in the dynamic sense that, given costs of anticipations, left-wing governments may best promote the interests of their constituencies by assuring capitalists that they would not pursue such policies" (Przeworski [52], p.95).

from around 1990 onwards the UK Labour Party (in opposition) formulated policy programmes on the basis of a belief in SDT. Subsequently in government, its infatuation with the financial sector could be interpreted in the same light.

Perhaps surprisingly, given the relevance of the issues raised, and the widespread belief in SDT, there is little empirical evidence that definitively supports the idea that income distribution in capitalist economies is severely constrained. Indeed, empirical analyses of SDT are few and inconclusive. Existing studies focus in the main on *redistributive* policies by governments in order to ascertain the existence of limits to government policies either by examining differences in choices under different governments,³ or by considering the limiting cases of governments elected with radical programmes (e.g., Allende’s Chile or Manley’s Jamaica). According to Przeworski and Wallerstein ([54]), such empirical analyses of SDT are neither informative nor satisfactory because they “cannot speak to the issue of limits and possibilities” (Przeworski and Wallerstein [54], p.14). On the one hand, differences in policies would not prove much about “the existence of structural constraints that bind all governments. We cannot know whether the observed differences exhaust the realm of possibility” (ibid.). On the other hand, the issue of “possibilities cannot be determined on the basis of limited historical experience” (ibid.).

Those doubts about empirical tests of SDT that cannot distinguish between actual and possible choices are cogent. Trying to test choices generally involves counterfactual statements about what could have been done, and these are notoriously difficult to pin down. The difficulty is in determining whether and how structural constraints on choices are binding: whether and how the constraints on redistribution are so tight that neither government nor unions can do very much, and rational actors knowing this do not do very much.

Yet to move from these problems to advocating a purely theoretical analysis of SDT, by constructing “a formal model with which the internal logic of the theory can be explored” (Przeworski and Wallerstein [54], p.14) is both doubtful and unwarranted. It is doubtful because while SDT is a theoretical construct to explain the empirical world, Przeworski and Wallerstein’s claim suggests that it cannot be subjected to empirical scrutiny. Taken literally, this claim would place SDT into the realm of metaphysics. It is unwarranted because the examination of isolated historical episodes and of government choices does not exhaust the content of possible empirical tests. Indeed, Swank notes

³For a survey of the older literature, see Cameron’s ([11]) classic study. More recent contributions include King and Wickham-Jones ([32]), Swank ([64]), Wickham-Jones ([70]).

that although limiting cases of radical redistributive policies are interesting, it is the “more routine political-economic interactions that serve as a crucial test of the generalized form of the structural dependence thesis” (Swank [64], p.39).

While most authors focus on the set of political claims above concerning the electoral fate of socialist parties and the existence (and severity) of electoral trade-offs (Esping-Andersen [17], Sainsbury [61], Koelble [35], Kitschelt [34]), this paper focuses on the set of economic claims, and in particular on the feasible distributive outcomes that the labour movement may reach within a capitalist economy. It analyses the core claims of SDT empirically, focusing on the causal link from distribution to employment, and investigates whether there is indeed a basic distributive trade-off and what its characteristics are. In order to circumvent the above objections, the empirical analysis proposed does not focus on *actual or possible choices* of the actors in the economy, but tries to trace the *effects* of structural dependence on income distribution. In particular, if SDT is correct and relevant, the range of income distributions attainable in advanced capitalist democracies should be narrowly circumscribed and the economy should gravitate around some tightly determined equilibrium. “No government ... can reduce the share of income that owners of capital consume. Any additional income for wage earners, whether it consists of wage gains won at the bargaining table or as transfer payments won through election, reduces total investment, *dollar for dollar*” (Przeworski and Wallerstein [54], p.16, emphasis added). Attempts to redistribute income should therefore only yield short-run, temporary effects. Two issues are thus of considerable interest in evaluating SDT: first, whether there has in fact empirically been a profit squeeze mechanism of the sort postulated by Przeworski; second, the behaviour of long-run income distribution.

Section 2 lays out the framework of our empirical approach in detail and presents the empirical evidence. Instead of evaluating whether policy choices co-vary with the partisan orientation of cabinets in a cross-sectional context, we analyse the dynamics of distributive conflict by focusing on the time series of post-war UK data in order to understand the behaviour of pre-tax income distribution. Further, unlike in the rest of the empirical literature on SDT, we draw a fundamental distinction between short-run dynamics and long-run tendencies.

Two main stylised facts emerge from the analysis of the postwar UK data. First, evidence is presented in favour of the *short-run* profit-squeeze mechanism postulated by Przeworski. At any given point in time, attempts to alter the distribution of income in favour of labour do seem to trigger

a classic profit-squeeze mechanism. Second, and more important, however, the *long-run* distribution of income is much more variable than is implied by SDT, which problematizes its core idea that the structural features of private ownership and private investment decisions severely constrain the set of feasible distributions.

Section 2 focuses on all employees and this may be deemed unsatisfactory: SDT concerns the wage share as a class share, but aggregate employee compensation comprises all labour income, including that of top executives. While only limited data exists for the UK economy that distinguish different categories of employees, section 3 presents the empirical evidence for manual workers in production industries. The pattern of the data is strikingly similar to that for all employees: over the period 1974-1993, short-run cycles are visible (and match those of all employees) around a sharply declining trend.

In the light of these stylised facts, the main challenge for Przeworski is to provide an explanation of the behaviour of long-run income distribution consistent with the key insights of SDT. But section 4 argues that there is no such explanation of the long-run in Przeworski, and the profit-squeeze mechanism is consistent with an infinity of equilibrium income distributions. Not only that, it is unclear that a satisfactory explanation of the evolution of long-run distributive shares could be provided which would be consistent with SDT. For this would require a theory of long-run changes driven (entirely or mostly) by forces that are completely independent of distributive conflict (such as exogenous technical change or some Malthusian population mechanism). Theoretically, this would imply the endorsement of the crudest economic determinism that Przeworski himself has repeatedly and convincingly criticized (see, in particular, Przeworski [50], [51]). But the analysis developed in sections 4 and 6 suggests that this is also empirically doubtful, and an econometric investigation of the UK data confirms the main interpretive hypotheses of this paper.

Contrary to the key tenets of SDT, we suppose that the *power resources* available to the two main classes in the economy are among the key determinants of distributive outcomes, different political-economic equilibria corresponding to different configurations of the balance of power between the two classes (Korpi [36], [37], [38], Korpi and Shalev [40], Esping-Andersen [17], Bradley et al. [8], Korpi and Palme [39]). Section 5 introduces the power resources approach, and outlines the variables on which we have chosen to concentrate. Then, in section 6, a vector error correction model (henceforth, VECM) is used to investigate the short-run and long-run dynamics of income distribution. While there

is evidence of the existence of short-run profit squeeze cycles consistent with the analysis in section 2, the VECM also shows that there is a robust long-run relation between distributive outcomes and two variables capturing some key power resources of the two classes, namely trade union density and an index of capital mobility. Hence, a profit-squeeze mechanism may be operating at any given time, but to infer from this an economic dynamic whereby profits provide the basis for future increases in well-being is much more problematic as an explanation of the material basis for workers' consent to capitalism. For there is no obvious long-run equilibrium value of income shares, suggesting that whatever underlying mechanism is at work, it is too unstable to drive the workers' consent required by SDT. This suggests that Przeworski's mechanism is of empirically limited significance.

To be sure, it may be argued that our variables are only imperfect proxies of the power resources available to the main classes. Further, as Pencavel has noted, "the perennial problem with issues in labor relations is in unscrambling causal relationships where the key forcing variables are often unmeasured or poorly measured" ([49], p.183). Thus, although the econometric evidence presented in section 6 is strong, and the results robust to a number of specifications of the model, Section 7 develops a qualitative analysis of our key theoretical relations that supports our quantitative results. Our focus on a single country allows us to outline a concise but focused historical account of the changing conditions of class struggle in the postwar UK economy, which forcefully shows the importance of institutional, political, legislative and even cultural factors in determining long-run changes in the balance of power of the two classes, and of income distribution.

In closing this section, it is worth noting that, although the main focus of the paper is SDT, our analysis also provides novel empirical support for the power resources approach and the relevance of class. For it suggests that the power resources available to the two main classes in the economy are among the key determinants of distributive outcomes. Indeed our paper provides an innovative contribution: unlike virtually all of the empirical literature on the power resources approach (Bradley et al. [8]), we focus on the determinants of (pre-tax) distributive outcomes, rather than of social spending (and redistributive policies), and we take a time-series rather than cross-national perspective, which allows us to distinguish more clearly two types of effects of power resources and class conflict: the short-run effect *on* market distribution and the long-run effect of changes in the balance of power on the *conditions for* market distribution.

2 Distribution and conflict in the postwar UK: stylised facts

The theoretical framework of our empirical analysis is based on a stylised account of class conflict over distributive shares in the process of capitalist accumulation. Investment increases employment, which in turn increases the bargaining strength of the working class, and increases the wage share in value added. The corresponding falling profit share reduces investment, hence employment and hence the bargaining strength of the working class. This recreates the profitability conditions necessary for renewed accumulation, investment rises, and the cycle repeats. This is the mechanism originally analysed by Przeworski ([50]) and it can be considered as the canonical model of the profit squeeze cycle underlying SDT.⁴

There are, of course, many possible ways of formalizing this mechanism by considering specific causal links between the variables, thus deriving specific versions of the profit squeeze cycle.⁵ In what follows, however, we do not wish to analyse empirically a specific formalization of the SDT and so we keep our analysis at the most general level. Indeed, the stylised account above is sufficient to formulate our hypotheses. It identifies the two key variables of the analysis, the wage share and the employment rate, and it postulates a cyclical relation between them.⁶ A scatter plot of the employment rate (on the vertical axis) against the wage share (on the horizontal axis), with scatter points considered sequentially in time, should generate a clockwise path if it is to represent a profit squeeze mechanism of the sort postulated by Przeworski. In the wage share (WS) employment rate (ER) space, we call these clockwise movements WSER cycles.

Thus a first simple test of SDT can be formulated: if Przeworski's thesis is empirically valid, the data should show either a stable equilibrium income distribution (possibly with random deviations), or at most a stable cycle around the equilibrium. The former pattern would emerge in the absence of attempts to redistribute (because for example of an awareness of the profit-squeeze mechanism); the latter would derive from attempts to redistribute income by trade unions or social democratic parties when in power.

We use the UK as our case study. As a canonical example of a liberal market economy (Hall

⁴The model used by Przeworski and Wallerstein ([54]) is not adequate to analyse SDT and its profit squeeze mechanism. It is a growth model with little scope for cycles; it analyzes neither the labour market, nor the effect of labour market conditions on income distribution; it is a two-class model but with no bargaining theoretic framework.

⁵An elegant and influential model in this framework was proposed by Goodwin ([20]), with the wage share and the employment rate moving cyclically in conservative oscillations with a fixed period.

⁶While our focus on the wage share is motivated by our interest in the determinants of income distribution between classes, and on the conflictual dimension of their interaction as postulated by SDT, this does not imply that all aspects of the relations between employers and employees should be viewed as a zero-sum conflict (Wright [73], Korpi [38]).

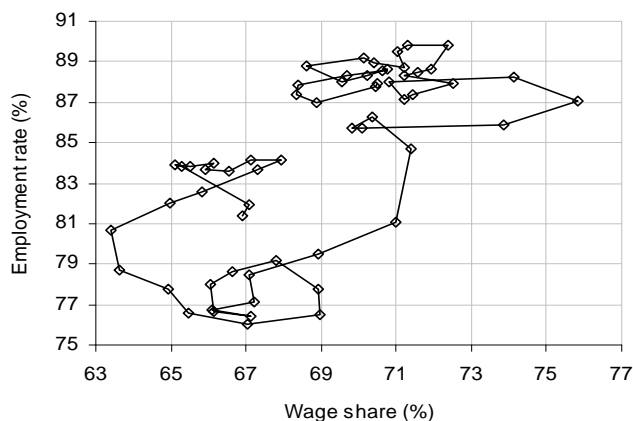


Figure 1: *Employment Rate Against Wage Share, UK, 1950-2010*

and Soskice [25], Korpi [38]), and given the influence of SDT on policy-making mentioned above, the UK should be an excellent test for the theory; indeed, it is so analysed in much of the literature on Przeworski (King and Wickham-Jones [32], Wickham-Jones [70], [71]). In exploring the empirics of WSER cycles in the UK, and their bearing on SDT, it is obviously desirable to obtain as long a run of data as possible; and so, we examine the period 1950-2010.⁷ The wage share variable is the ratio of total employee compensation to the sum of total employee compensation and the gross operating surplus of the whole economy, all pre-tax, a proxy for the ratio of wages to the sum of wages and profits. The employment rate variable is the ratio of employee jobs to the sum of workforce jobs and claimant count unemployment.⁸ These data have much longer time series than the more appropriate employment rate derived from the Labour Force Survey, and we use them for that reason. But this makes no difference to our conclusions.

In the case of the UK since World War II (1950-2010), a plot of annual data is shown as Figure 1. On the face of it, this evidence is not encouraging for the Przeworski thesis: there is no tightly determined income distribution and the wage share is rather variable, a well-known empirical finding (Boggio et al. [6]). Although the data do not accurately describe a uniform profit-squeeze cycle either, some have interpreted them as describing an erratic long-run cycle (see for example Flaschel et al. [18]). This interpretation is unconvincing: (three quarters of) a cycle is not a periodic motion and moreover if a profit squeeze mechanism is at work, it is quite unlikely to operate on such an extended

⁷Data sources are given in Appendix A.

⁸Note that our definition of the employment rate is an employee-employment-rate. Because it excludes the self-employed, subtracting it from 100 does not measure the unemployment rate.

time scale. Besides, this would not rescue SDT: if profitability is only restored after some 60 years, worker gains can hardly be considered ephemeral.

An alternative interpretation of the empirical evidence allows us to provide a refinement of SDT: the data describe a number of short-run cycles that are subject to continual displacement. Indeed Veneziani and Mohun ([68]) have suggested that in the analysis of WSER cycles, a clear distinction be drawn between the long-run and the short-run. In the long-run, the wage share and the employment rate vary because of long-run processes – such as technical change, institutional reforms, etc. – that continually modify the balance of power between classes and the structure of the bargaining process. The WSER cycles are then the shorter run cycles that appear around the long-run motion, and are subject to continual displacement as the bargaining environment and the balance of class forces evolves. This interpretation is more in line with intuition and with the operation of a profit squeeze mechanism. Therefore we can reformulate our conjecture more precisely, by stating that if Przeworski’s theory is valid, first, stable short-run WSER cycles should be visible in the fluctuations of the data, and second, most of the variability in the data should derive from these short-run fluctuations around (reasonably) constant long-run values of the two variables

In order to evaluate SDT in these terms, we filter the data to distinguish between short-run fluctuations and long-run changes. Figure 2 illustrates short-run cycles for the whole post-war period. The variables are defined as in Figure 1, with the wage share on the horizontal and the employment rate on the vertical axis, but the labels are omitted for visual convenience. For each variable, the axes measure the percentage points difference between the raw data and its trend value, determined using locally weighted scatterplot smoothing, a robust algorithm that is not sensitive to outliers.⁹ Several features are noteworthy. First, the data do indeed describe a repetitive cyclical process. There is only one exception: the data for 1983-86 do not describe a cycle at all. Second, although it is not obvious visually, the movements are always clockwise, as the profit squeeze cycle hypothesis requires (again with the exception of 1983-86). Third, the cycles are variable in both amplitude and periodicity. Indeed, it is obvious that the (‘stop-go’) period up to the late 1960s is characterised by cycles of much shorter amplitude and periodicity than the subsequent period (the end of the post-war boom, the

⁹For a thorough discussion of this ‘loess’ procedure, see Cleveland [15]. None of the results in this paper depends on data filtering in general, or on the specific filter used. Although filters sometimes produce spurious cycles (Canova [12]), *all* of the findings on WSER cycles are robust to the smoothing procedure adopted: neither the existence nor the qualitative features of short-run cycles depend on the use of loess and very similar results can be obtained by using a Hodrick and Prescott filter or P-spline regression. Indeed, the short-run cycles can be seen also in the raw data and filtering only makes them clearer. The results with the Hodrick-Prescott filter can be obtained from the authors upon request. Flaschel et al. ([18]) provide a thorough empirical analysis of WSER cycles using P-spline regressors.

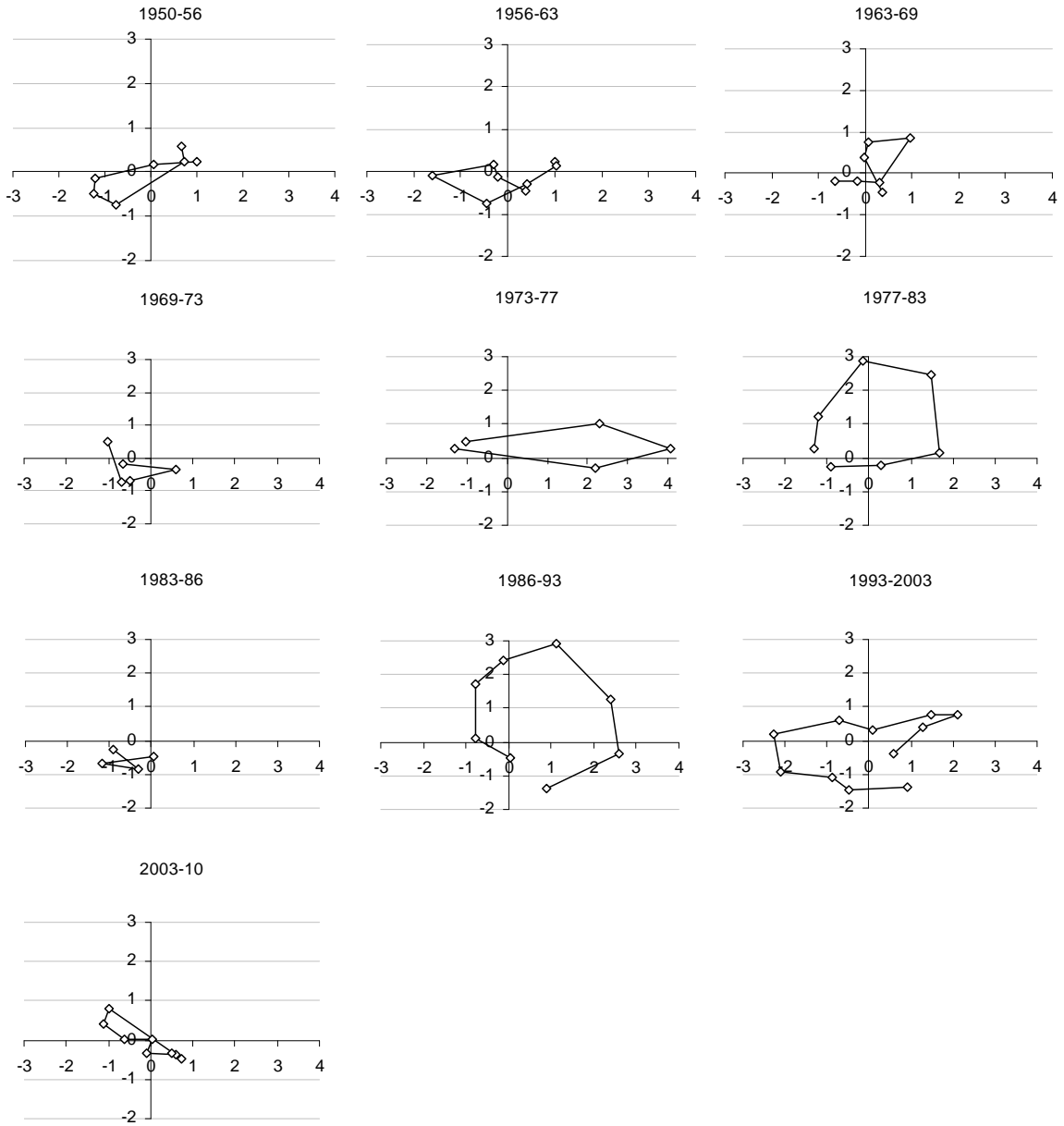


Figure 2: *WSER Cycles as Deviations from Trend, UK, 1950-2010*

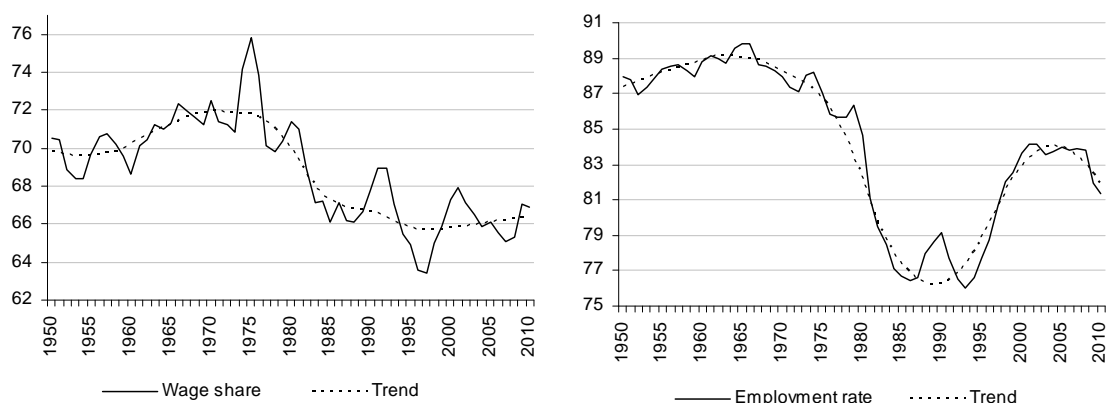


Figure 3: *Level and Trend: Wage Share and Employment Rate, UK, 1950-2010*

neoliberal revolution, globalisation and the growth of financialization).¹⁰

These findings are consistent with the operation of a profit-squeeze mechanism at any given point in time. The cycles depicted are by no means perfect, but they are suggestive of an interpretation of the Przeworski thesis, concerning the impossibility of significant redistributions of income. Indeed, the WSER cycles depicted in Figure 2 perhaps help to explain the widespread popularity of the SDT. In line with the basic intuitions of the SDT, at any given point in time, an increase in the share of national income going to workers triggers a profit squeeze, which restores profitability reasonably quickly, after an increase in unemployment weakens workers' bargaining power.

While the existence of a short-run profit squeeze may explain the intuitive purchase of SDT, this evidence provides only a partial picture of distributive conflict. As noted above, the SDT is not just about short-run trade-offs: it is a theory of the constraints on feasible long term equilibrium distributions. The variations in the long-run values of the wage share and the employment rate are shown in Figure 3, which illustrates the timepath and its trend for each variable. From 1950 to the mid-70s, the mean equilibrium wage share was 70.8% and the mean equilibrium employment rate was 88.2%. We interpret the short-run WSER cycles depicted above as moving along a long-run trend, and it is this trend that has to be interpreted by SDT, for visual inspection shows that these long run trends are not even approximately horizontal straight lines. Thus, whereas the analysis of short-run motions lends some support to the existence of a short run profit-squeeze mechanism, the set of attainable equilibrium values of the wage share and employment rate are all but limited, *even after*

¹⁰Interestingly, the cycles are temporally related to growth cycles in (constant price) GDP measured from peak to peak, but the relation is only approximate.

all temporary and cyclical movements have been eliminated.

But before we examine the long run dynamics directly, there is a further issue. It may be objected that SDT concerns the wage share as a class share, and that is not what is depicted in Figures 1, 2 and 3. Employee compensation is just that; it includes the labour income of the highest paid industrial and financial executives on the same basis as the labour income of the most lowly paid unskilled worker. Ideally, a much narrower definition of wage share would be appropriate to throw light on SDT (recall Przeworski's narrow definition of the working class, cited above), and the next Section considers this further.

3 Disentangling the wage share

Unfortunately, only very limited data exists for the UK economy that precisely distinguishes different categories of employees. Census of Production data provide a continuous series for Manufacturing for the years 1971-1995, and for the Production Industries (Mining, Manufacturing and Utilities) for the years 1974-1995. Data is reported on wages paid to manual workers and value added, and hence a manual worker wage share can be constructed. But there is no analogous sectoral employment rate, and so we have to assume that the employment rate used in Figures 1 and 2 above can be used as a proxy for that of Production industries. This is difficult because of the secular decline of employment in Production industries. With that caveat, if WSER cycles can be found for the economy as a whole, then one would expect them to exist in Production industries (whose manual workers are a major component of Przeworski's definition of the working class).¹¹

We apply the same methodology to the raw data and derive some surprising conclusions. First, using the same periodization as in Figure 2, Figure 4 displays the deviations from trend of the wage share in net output of manual workers in Production industries (horizontal axis) plotted against the deviations from trend of the national employment rate (defined as before, and on the vertical axis). The pattern in Figure 4 is strikingly similar to that in Figure 2, and it does show some support for the existence of the short-run mechanism at the heart of SDT. If one focuses on the core segment of the working class, any attempt at altering the income distribution seems to trigger a profit squeeze in the short-run, as predicted by SDT.

¹¹For the US economy data exist which distinguish employees with no supervisory responsibilities from those with supervisory responsibilities. The wage share of the former alone provides a closer proxy for the theoretical wage share required to investigate the existence of a profit-squeeze mechanism in WSER cycles. The analysis of the US economy in Mohun and Veneziani ([46]), however, yields qualitatively similar conclusions to those derived here.

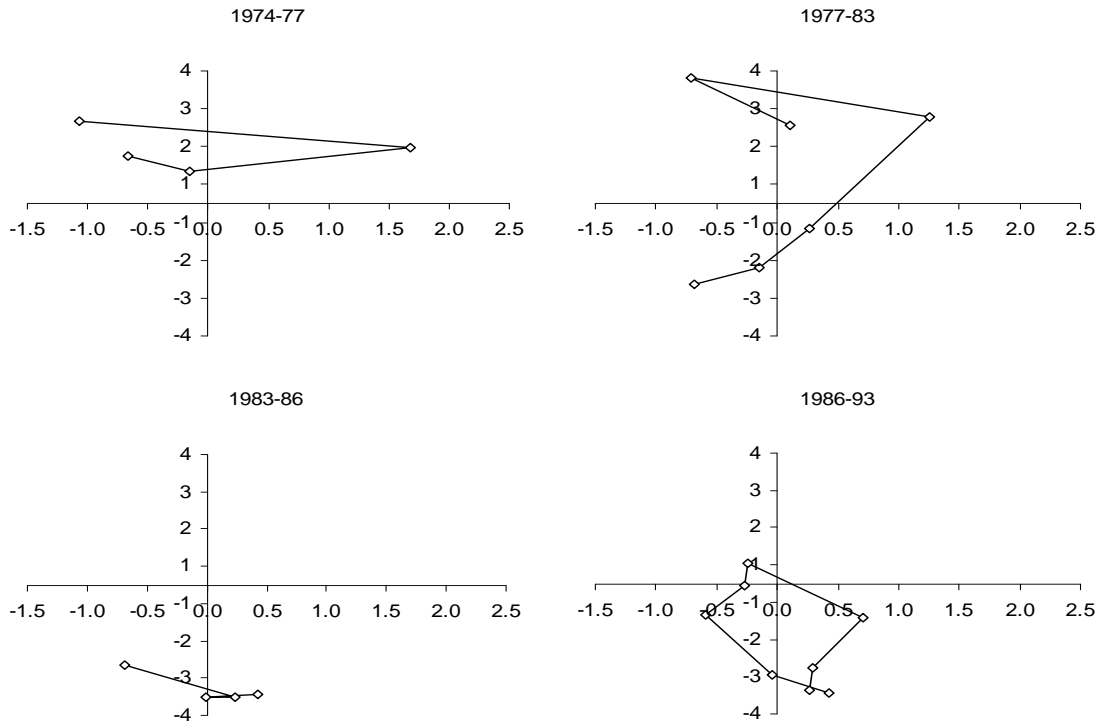


Figure 4: *WSER Cycles as Deviation from Trend, UK Production Industries, Manual Workers, 1974-1995*

However, the long-run analysis of the behaviour of the income share of the core of the working class confirms, indeed further strengthens the doubts on the empirical validity of SDT discussed above. For the short-run equilibrium values, the centres of the WSER cycles, around which the wage share and the rate of employment fluctuate, vary significantly over time, and there is a very sharp long-run trend in the manual wage share data in Production industries, as illustrated in Figure 5. It should be noted that this variation in wage share is not attributable to the considerable relative decline in Production industries in the UK between 1971 and 1995. For both wages and value added are defined with respect to Production industries, and hence a relative decline in the totals should make no difference. What should be noted is the changing proportion of manual workers to total employment *within* Production industries, which falls from 72.6% in 1974 to 65.3% in 1995, perhaps an effect of capital-using labour-saving technical progress.

In summary, the empirical analyses in this section and in the previous one identify two key stylised facts about income distribution and distributive conflict. There is indeed evidence of a short-run profit squeeze mechanism as predicted by SDT, but the data also show significant variability in long-run



Figure 5: *Manual Wage Share in Value Added, Production Industries, UK, 1974-1995*

income distribution that is *prima facie* inconsistent with SDT. Thus the question arises as to whether a satisfactory explanation of this empirical evidence can be provided which is broadly consistent with a refined version of SDT, and with Przeworski’s methodological commitments. This question is addressed in the next section.

4 SDT and the long-run dynamics of income distribution

Recall Przeworski’s remark “No government ... can reduce the share of income that owners of capital consume. Any additional income for wage earners, whether it consists of wage gains won at the bargaining table or as transfer payments won through election, reduces total investment, *dollar for dollar*” (Przeworski and Wallerstein [54], p.16, emphasis added). But while the empirical evidence shows the existence of a growth/distribution trade-off operating at any given point of time, as predicted by SDT, it also shows that the trade-off itself is moving over time. The determination of the longer-run distributive equilibria of capitalist economies is therefore a significant issue.

Does Przeworski’s approach provide an explanation of the long-run? Przeworski ([50], p.43) posits a profit squeeze mechanism whereby “if profits are not sufficient then eventually wages or employment must fall”. Lacking a proper definition of ‘sufficient’ profits, however, the explanatory power of his mechanism is limited. Let P^e be a measure of capitalists’ expected or ‘normal’ profits. Przeworski’s analysis is consistent with an infinity of values of P^e and thus, in the absence of an explanation of P^e , is at best underdetermined. This would not be (too) problematic if profits were found empirically

to vary within a reasonably narrow range, but given the significant variability of equilibrium income shares, the theoretically and empirically interesting issue is precisely the determination of P^e , as the product of social, political, and economic conditions, past and present government policies, etc. But this is lacking in Przeworski's SDT – there is no long-run argument.

Can Przeworski's approach provide a satisfactory explanation of the long-run consistent with the fundamental insights of SDT? SDT could be (partly) rescued if it could be shown that the long-run changes were driven (entirely or mostly) by forces that are completely independent of class conflict and distributive policies.

Theoretically, it is very difficult to find some long-run explanatory mechanism that is completely independent of distributive conflict. This would require the identification of some explanatory variables that are not influenced (directly or indirectly) by class struggle and government policies, and have no effect on the latter. Yet even long-run changes in the institutional and legislative framework, the cultural and education system, and the basic structural features of the economy (including long-run trends in technological progress, labour supply, skills, and so on) are hardly independent of distributive conflict and government policies. For the major political and economic actors struggle not just to place the economy in a different point along a given growth/distribution trade off but to alter the trade off itself. The idea of identifying some completely exogenous explanatory variables is unconvincing in that it would imply the endorsement of the crudest form of economic determinism, which Przeworski himself has repeatedly and convincingly rejected. Indeed, an explanation of long-run income distribution and the limits to class conflict based only on exogenous variables would be inconsistent with Przeworski's broader approach to classes and class struggle.

As Przeworski has forcefully argued, structural constraints on individual choice and the social determination of agents are central in the analysis of class. The conception of “undifferentiated, unchanging, and unrelated ‘individuals’” (Przeworski [51], p.381) typical of rational choice theory is both unsatisfactory and unrealistic, and the structural features shaping agents' interaction (in the economic or political arena) and their preferences and beliefs have a key explanatory relevance. “The appropriate view is neither one of two ready-to-act classes nor of abstract individuals, but of individuals who are embedded in different types of relations with other individuals within a multidimensionally described social structure” (ibid., p.393). Further, Przeworski emphasises the role of politics and culture in the formation of classes as collective actors. “Classes must thus be viewed as effects of

struggles structured by objective conditions that are simultaneously economic, political and ideological” (Przeworski [50], p.47). Therefore “the process of class formation is a perpetual one: classes are continually organized, disorganized, and reorganized” (ibid., p.71).

It is difficult to underestimate the relevance of structural constraints (and changes in the political, economic and institutional framework) and endogenous preferences (and thus ideological struggle) in the analysis of long-run political-economic processes and policy formation. Indeed, based on Przeworski’s own theory of class and class conflict, long-run changes in the structural features of class conflict (produced by the voluntary or involuntary effects of agents’ actions), and shifts in hegemony should be focal in the analysis of distributive struggles. For political and class struggles are not just about choosing the optimal position in a given structure of trade-offs, but first and foremost about altering those trade-offs themselves, by creating the conditions for changes in structural constraints and for shifts in hegemony. As Rothstein ([60], p.35) forcefully puts it, “institutions are created with the object of giving the agent ... an advantage in the future game of power”. It is these long-run forces that are arguably central to understanding the dynamics of class struggle and income distribution in advanced capitalist countries.¹²

For there are continuous changes in the economic and institutional framework that are at least partly endogenously produced by class struggles: labour market regulations, technical change, globalisation, etc. “[P]ower relations and institutional rules ... are themselves shaped by class processes and class conflicts” (Wright [74], p.110). These structural features affect “the rights and powers accompanying private ownership of the means of production” (ibid., p.111) and the boundaries of feasible income distributions within the capitalist system, and tend to change over time and across national boundaries. For example, in most European countries after 1945 the absence of a viable exit strategy implied that “immobile productive capital had to opt for voice within corporatist institutions; the absence of exit created the same incentives for [the social-democratic] compromise as workers’ reliance on capitalist investment for future wages” (Schwartz [63], p.258). In the 1980s and 1990s, the increased international mobility of capital, the deregulation of labour markets, more restrictive union legislation, and the decrease of revenue flows necessary to provide a high social wage have weakened labour’s position in the economy and altered the range of feasible income distributions against it

¹²There is robust historical evidence that political actors intentionally act to modify the structural and institutional features of the economy in order to change the balance of power between classes (Rothstein [60], Korpi [38]). Such changes are generally associated with shifts in hegemony, the product of the “battle of ideas” (King and Ross [33], Roemer [59]).

(Korpi and Palme [39]).

By implicitly taking a short-run perspective, Przeworski has analysed income distribution in advanced economies in models in which institutions (except for private property and private investment decisions) play no role and agents's preferences are exogenously given.¹³ The explanatory power of this approach is limited, as the empirical analysis in section 2 above shows, and as Przeworski's own theory of class suggests, for complex structural and subjective factors are central in determining the equilibrium of the economy. Przeworski's own general claims on the importance of hegemony, endogenous preferences, and culture on the one hand, and on social structures and structural constraints, on the other hand, forcefully show the shortcomings of his theoretical approach to distributive struggles. In particular, they cast doubt on the idea that income distribution in advanced economies can be derived deductively in an abstract model which assumes only the institution of private property together with instrumentally rational agents with given, exogenous preferences.

It is therefore theoretically difficult to find a long-run explanatory mechanism for income distribution independent of class struggle. By contrast, the following sections focus on power resources and on the effect of changes in the balance of power over long-run distributive outcomes to show empirically that plausible mechanisms do exist that are precisely *not* independent of power relations and class struggle.

5 Power, conflict and distribution

We have argued that the data on income distribution in the postwar UK economy provide *prima facie* evidence against SDT: a profit-squeeze mechanism seems to operate at any given point in time (which might explain the widespread intuitive appeal of SDT), but the long-run distribution of income is much more variable than SDT allows for. We have also argued that there is no explanation of the long-run in Przeworski's theory, and we have raised some doubts about the possibility that a robust theoretical model of the long-run evolution of income distribution can be provided that is consistent with SDT. Indeed, Przeworski's general theory of class forcefully suggests that an alternative approach to SDT is necessary to explain long-run trends in income distribution in capitalist economies.

¹³The profit-squeeze mechanism is produced by the actions of two 'ready-to-act' classes which are perfect agents of 'abstract individuals' with exogenously given preferences. The social structure is in no way 'multidimensionally described'. This might be justified as a mere methodological simplification aimed at separating "the analysis of action at a particular moment from everything that created the conditions under which this action occurs" (Przeworski [51], p.385). It leads, however, to a tension in his approach, as argued by Veneziani ([66]; see also [65], [67])

In the rest of the paper, we develop an empirical analysis of the existence of a short-run profit squeeze mechanism and the long-run variability of the political-economic equilibrium of the UK economy. The aim is *not* to provide an exhaustive explanation of the determinants of the wage share and the employment rate, which have been the subject of a vast debate (for a recent survey, see Boggio et al. [6]), let alone the determinants of earnings inequality (for a discussion see Bradley et al. [8]). Rather, our purpose is to provide further evidence on the limits of SDT and to outline the foundations of an alternative interpretation of the long-run movement of distributive shares which emphasises changes in the bargaining power of social classes as one of the key determinants of the political-economic equilibrium of capitalist economies. To be specific, contrary to the key tenets of SDT, we suppose that the *power resources* available to the two main classes in the economy are among the key determinants of distributive outcomes, and different equilibria correspond to different configurations of the balance of power between the two classes.¹⁴

There is a long standing tradition in social theory that provides robust theoretical foundations for the idea that the power resources of the working class in the economic and political spheres are among the key determinants of the political-economic equilibrium of capitalist societies (see Korpi and Shalev [40], Korpi [37], [38], Cameron [11], Esping-Andersen [17], Wright [73], Bradley et al. [8]). The power-resources approach “has long been considered one of the ... main theoretical approaches in the literature on welfare state development” (Bradley et al. [8], p.193) and in comparative political economy. The empirical literature has indeed shown that various measures of working class power in the labour market (e.g., unionization, labour law, collective bargaining institutions), in the workplace (e.g., work councils, co-determination) and in the political sphere (e.g., strong Labour parties, participation of the Left to cabinets, political institutions) explain a significant part of cross-national differences in the structure and development of welfare states (Korpi [37], [38], Esping-Andersen [17], Kangas [30], Bradley et al. [8]) and even some important macroeconomic outcomes, such as inflation and unemployment (Cameron [11]).¹⁵

¹⁴Our analysis focuses mostly on the relation between macro variables. For a thorough discussion of the microfoundations of a power-centered account of class conflict and distribution, see Wright ([73]) and Korpi ([38]).

¹⁵The emphasis on working class power has recently been criticised by the *varieties of capitalism* approach, which has provided an alternative explanation of welfare state development focusing on the role of firms and on workers' investment in skills (Hall and Soskice [25]). This debate is important but not directly relevant to our analysis. For in this paper we do not aim to adjudicate between different theories of the welfare state. Nor are we trying to provide an explanation of cross-national differences in welfare state development. Our key claim is that power resources are *among the main* determinants of long-run income distribution, but they are not necessarily the only ones (Bradley et al. [8], pp.193-5; see also Iversen [27] for an interesting attempt to reconcile the power resource and the varieties of capitalism approaches). We should note, however, that in a time-series - rather than cross-sectional - perspective, a focus on power resources rather than, for example, skills, seems quite natural. Moreover, whereas skills may be a determinant of

At a theoretical level, however, the power resources approach is not limited to the analysis of social spending and government policies, and it can be interpreted as a general framework to analyse class relations and distributive conflicts. “In the power resources approach attention is focused on the assets, or power resources, which actors bring into distributive conflicts and, if necessary, can bring to bear in asserting their interests” (Korpi and Palme [39], p.427). From this perspective, the main actors in the economy are “expected to organize for collective action in political parties and unions to modify *conditions for* and outcomes of market distribution” (Korpi [38], p.173, italics added). That is, classes use their power resources both to alter income distribution in the short-run, given a certain structure of trade-offs, and perhaps more importantly, to modify the structure of trade-offs in the long-run.

In the empirical analysis below, we consider trade union density as the key measure of the bargaining strength of the working class. From a theoretical viewpoint, unionization “may be seen as the primary organization form of the working class and can thus be considered a basis for other forms of working class strength” (Rothstein [60], p.33). Arguably, the key dimension of workers’ power lies precisely in their ability to act collectively as a class, and unionization is the most basic form of workers’ collective organization both in the labour market and in the workplace - the fundamental dimension of their “associational power” (Wright [73], p.962. See also Korpi and Palme [39]). Further, measures of trade union density capture working class strength better than indices of strike activity (such as number of stoppages and working days lost): there is no clear relation between conflict, or militancy, and organizational strength, because strength, or power is a property, not an act and powerful actors often do not need to use it. Unionization correctly measures labour’s collective power resources, not their use (Korpi and Shalev [40], Cameron [11]) and it is considered as a causally important variable in the analysis of distribution and distributive conflict in a number of approaches across the social sciences (see, *inter alia*, Masters and Robertson [45], Freeman [19], Gustafsson and Johansson [22], Alderson and Nielsen [1], Iversen [27]).¹⁶

Second, our analysis focuses primarily on distributive outcomes rather than on welfare state provisions and redistributive policies. In this context, measures of the bargaining power of the working class

earnings inequalities, it is not obvious that they can explain the dynamics of class shares over time.

¹⁶We do not distinguish unionism in the private sector from unionism in the public sector on both theoretical and historical grounds. Theoretically, we do not regard the state as a referee between contending classes but as an active participant in that struggle. While the precise nature and timing of that participation is historically contingent, the state is not above class struggle. Historically, as we outline in Section 7, unionism in the public sector (nationalized industries, other public corporations and general government) was a very important contributory factor to working class bargaining strength in the UK.

are arguably more focal. Indeed, in empirical studies of pre-tax income distribution, other measures of working class power often turn out to be insignificant after controlling for unionization (see, e.g., Bradley et al. [8], pp.216ff.). Third, from the econometric viewpoint, many of the variables used in cross-national studies are hardly useful for our time series analysis: indices measuring the structure of collective bargaining or employment protection, or variables capturing the existence of work councils vary very little, if at all, for very long periods of time within any given country.

In a two-class bargaining framework, however, what matters is the *balance* of power between the main protagonists. The key power resource of employers are economic assets, or capital (Korpi [38]), but the extent to which ownership of economic assets translates into power depends on a number of factors, and in particular on capitalists' capacity to control investment and the options available to them. Indeed, the major difference in the power resources available to capitalists and workers is precisely that, unlike human capital, economic resources can be divested and transferred (Korpi [38]), and the actual mobility of capital depends both on technological factors and on the broader legal, political, and institutional framework. From this perspective, the openness of an economy is a key determinant of the power of employers and so of distributive outcomes and redistributive policies (Scharpf [62], Wright [73], Bradley et al. [8], Korpi and Palme [39]).

In the econometric analysis below, we capture openness by focusing on capital flows in and out of the country, consistent with the emphasis on capital as the main power resource of capitalists. Increased capital mobility (in both directions) tends to increase the capacity of capitalists to control investment and the allocation of capital. International capital flows (in both directions) provide a direct measure of the extent to which, in their relation to workers (and the nation state), capitalists can choose 'exit' as opposed to 'voice', and hence measures their incentive to find a compromise in distributive conflicts.¹⁷ Other measures of openness used in the literature, such as intensity of trade or population flows, only indirectly capture the effect of openness on the power relations between classes, and the empirical evidence suggests that they may be more relevant to explain some of the income inequalities *within* the working class (for example, by their effect on skill differentials; Borjas [7], Wood [72], Richardson [58], Gustafsson and Johansson [22], Alderson and Nielsen [1]) rather than income distribution between classes (Boggio et al. [6]).

It may be argued that what matters are the restrictions (or lack thereof) on capital mobility, rather

¹⁷Some authors focus only on capital outflows (see, e.g. Alderson and Nielsen [1]), but this can only partially capture the freedom of movement of capital, and so changes in capitalists' bargaining power.

than mobility itself. However, measures of openness focusing on legal and institutional restriction on capital mobility have three problems. First, at the theoretical level, formal legal and institutional restrictions do not really capture all of the factors affecting capital mobility. Second, even if there are no juridical restraints to capital movement, there may be other sources of frictions (such as an insistence on product standards). And third, capital mobility depends not only on *national* laws but on the overall international framework. At the empirical level, indices of capital restrictions are rather imperfect and although they provide some insight in cross-national analysis, they are inadequate in a time-series framework.

In line with the power resources approach, we suppose that increases in the power resources of one class have long-lasting positive effects on the share of income that goes to that class. Thus, contrary to SDT, in the long-run we expect union strength to be positively associated with the equilibrium wage share, whereas capital mobility should be negatively associated with both the wage share and the employment rate.¹⁸ In line with the findings in section 2 above, and with a standard profit squeeze mechanism, we also expect to find evidence of a short-run cyclical relation between the wage share and the employment rate.

In the next section we test whether there exist interaction and a common dynamic between wage share, employment rate, an openness measure and trade union density variables in the UK over nearly five decades, by using a vector error correction model.

6 Distributive conflict in the UK: an econometric analysis

We use annual data (described in Appendix A). Owing to data limitation on capital movements, the analysis starts in $t = 1966$ and ends in $t = 2010$, comprising 45 yearly observations, which allows us to study the long-run properties of the data (Hakkio and Rush [24], p.572). At time t , our data are represented as a column vector of four variables, y_t , comprising measures of wage share, employment rate, trade union density and openness. For any t , let $\Delta y_t = y_t - y_{t-1}$ denote the change in the four variables between period t and period $t - 1$.

The dynamics of the wage share (w_t) and employment rate (e_t) were described in Figure 3 and are reported again in Figure 6 Panel (a) (left scale), for ease of comparison. The openness of the economy

¹⁸Using a cross-country panel, Jayadev [28] shows a robust negative correlation between the degree of openness and labour's share in national income.

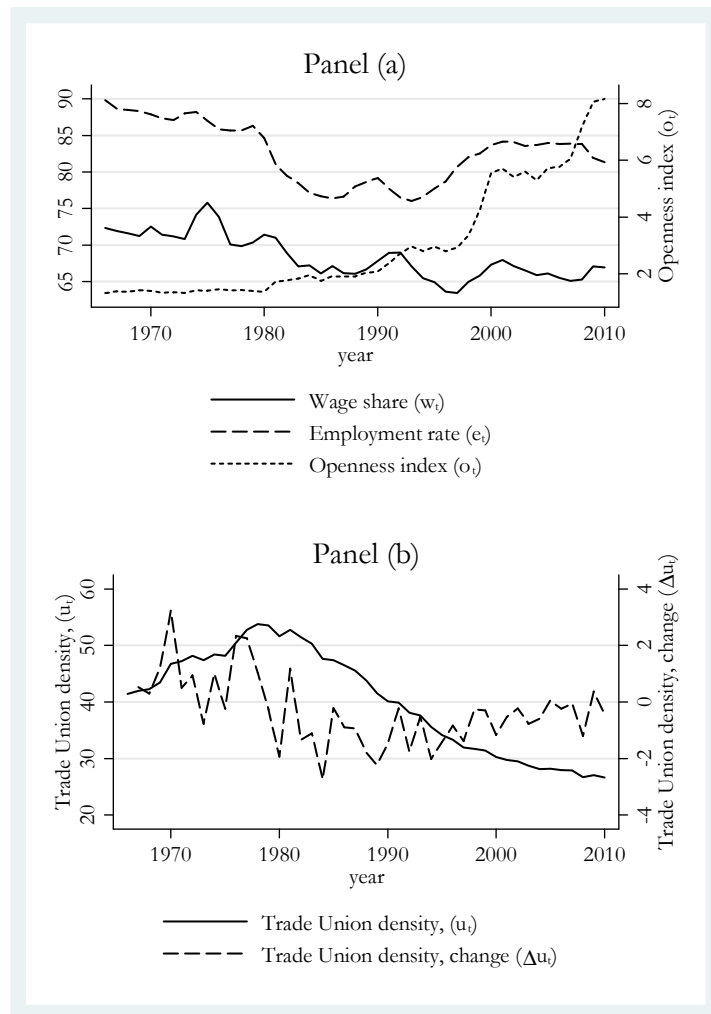


Figure 6: *The Pattern of the Main Economic Variables, UK, 1966-2010*

(o_t) is measured by the sum of inward and outward foreign direct investment over gross fixed capital formation. The dynamics of o_t is depicted in Figure 6 Panel (a) (right scale) and shows a steady increase since the early 1980s, from just above 1.3% to over 8%. Finally, Figure 6 Panel (b) depicts the trade union density variable (the ratio of trade union membership to employee jobs) measured in levels (u_t , left scale) and in differences (Δu_t , right scale). Over 41% of the workforce belonged to a trade union in 1966, which rose to nearly 54% at the end of the 1970s but decreased steadily thereafter. In 2010 only one out of four in the workforce was unionized. The change of trade union density (Δu_t) has been very unstable, but clearly decreasing for the first fifteen years of our data and progressively moving closer to zero thereafter.

Visual inspection of the time pattern of all variables suggests that they are nonstationary. We investigate whether the single processes have a unit root by using the modified Dickey–Fuller t test, including a linear trend (Elliott et al. [16]),¹⁹ and conclude that the wage share (w_t), the employment rate (e_t) and the openness indicator (o_t) are integrated of order 1, while trade union density (u_t) is integrated of order 2.²⁰ Thus, given our interest in detecting the short-run dynamics and the long-run interaction between them, we estimate a cointegrated vector auto-regressive model with lag p (VAR(p)) written as a Vector Error Correction Model (VECM).²¹ We define the multivariate vector $y_t = (w_t, e_t, o_t, \Delta u_t)'$ and estimate the following VECM representation of the VAR(p):

$$\Delta y_t = \sum_{j=1}^{p-1} \Gamma_j \Delta y_{t-j} + A B y_{t-1} + v_t \quad (1)$$

where v_t is a sequence of independently and identically distributed shocks, with zero mean and full rank variance-covariance matrix; p is the finite number of lags considered; Γ_j is the 4×4 matrix capturing the short-term interactions among the variables of interest; B is the $r \times 4$ cointegrating matrix (with rank r , also known as the *cointegrating rank*) which captures the long-run relations between the variables; and A is the $4 \times r$ matrix capturing the link between short-run and long-run

¹⁹This is an augmented Dickey–Fuller test, where the time series is transformed via a generalised least squares regression before performing the test. It has significantly greater power than the previous versions of the augmented Dickey–Fuller test.

²⁰Using asymptotic econometric theory, bounded variables – such as shares – cannot be nonstationary. However, using the linear model as a reasonable approximation of the true process and considering that also shares that are relatively distant from the boundaries can have nonstationary properties in finite samples, one can analyse their long-run statistical properties using cointegration methods. In fact, there exists a vast empirical economic literature analysing the dynamics of bounded variables with cointegration models, such as interest rates, which cannot be negative, exchange rates fluctuating within a bandwidth, and unemployment rates. For an advanced theoretical analysis of limited time series with unit roots, see Cavaliere ([13]).

²¹The econometric methodology adopted is explained in detail in Appendix B.

dynamics by expressing the effects of deviations from the long-run equilibrium, By_{t-1} , on the short term dynamics, Δy_t . Given the cointegrating rank r , simultaneous estimation of Γ_j, A and B can be obtained using the full information maximum likelihood framework (Johansen [29]). In order to investigate the number of lags p in the model, we use Schwarz's Bayesian information criterion and a series of specification tests, which suggest estimating a VAR(1). This is not surprising given the yearly frequency of our data and also advisable in order to keep the model as parsimonious as possible.²²

Consistent with the pattern of the series under analysis, we assume a model with only a constant and no deterministic trend in the cointegrating equation, and estimate the cointegrating rank by iterating the cointegration test starting from $r = 0$. Table 1 shows the trace test.

Table 1: Johansen rank test

max. rank (r)	param.	Log-likel.	eigenvalue	statistic	5% crit. value
Trace test					
0	4	-216.251		89.338	47.21
1	11	-194.441	0.637	45.719	29.68
2	16	-175.694	0.582	8.225	15.41
3	19	-172.901	0.122	2.638	3.76

Notes: The null hypothesis of the trace test is that there are no more than r cointegrating relations in the VECM.

Constant included in the model. Observations: 40. Lags: 1

We reject the hypotheses that $r = 0$ and $r = 1$, but we do not reject the hypothesis that $r = 2$, and so conclude that there are two cointegrating relationships.

Assuming the presence of two cointegrating equations, we next check that the residuals of the estimated VECM are not subject to significant heteroskedasticity. Letting $r = 2$, A and B' are 4×2 matrices, where as noted above A captures the effects of deviations from the long-run equilibrium By_{t-1} . The estimated VECM with $p = 1$ can then be written as:

$$\Delta y_t = \hat{A}\hat{B}y_{t-1} + \hat{v}_t. \quad (2)$$

Table 2 gives estimates of the two cointegrating equations B , estimating the long-run relationships, and of the error correction matrix A , estimating the effect of deviations from long-run equilibrium on the four variables in y_t . Because By_{t-1} is stationary, shocks affecting these relationships have only a temporary effect, and By_{t-1} can be seen as a long-run equilibrium.

²²Lutz ([42]) demonstrates that choosing the lag order to minimize Schwarz's Bayesian information criterion or the Hannan and Quinn information criterion provides consistent estimates of the true lag order.

Table 2: Estimated VECM. $\Delta y_t = \hat{A}\hat{B}y_{t-1} + \hat{v}_t, y_t = (w_t, e_t, o_t, \Delta u_t)'$

Cointegrating equations (matrix \hat{B}):				
	CE1	CE2		
w_{t-1}	1.000 ^(b)	0.583 (0.200)		
e_{t-1}	0.000 ^(a)	1.000 ^(b)		
o_{t-1}	0.454 (0.114)	0.000 ^(a)		
Δu_{t-1}	-1.779 (0.223)	-5.649 (0.596)		
Error Correction (matrix \hat{A}):				
	Δw_t	Δe_t	Δo_t	$\Delta^2 u_t$
CE1	-0.464 (0.110)	-0.390 (0.089)	-0.091 (0.033)	0.000 ^(a) (0.000)
CE2	0.206 (0.045)	0.068 (0.037)	0.029 (0.014)	0.180 (0.025)

Notes: Standard errors in parentheses. (a) indicates the restriction imposed; (b) indicates the normalisation imposed. LR test statistics: 0.023 (5% critical value, 3.841)

As we have no *a priori* theoretical restrictions to impose, we test the model with all variables included, normalizing to unity the coefficients of the wage share and the employment rate in the first and second cointegrating equations respectively.²³ The coefficients of the employment rate in the first equation and of openness in the second are both statistically insignificant, and so we test the assumption that they are jointly equal to zero by using the likelihood ratio (LR) test. The likelihood ratio test statistic is 0.023, which is well below the chi-squared 5% critical value of 3.841 for one degree of freedom, allowing us not to reject the restrictions imposed.²⁴ This result is also presented at the bottom of Table 2.

Using the estimated coefficients of \widehat{B} , and including the estimated constant, the two cointegrating equations (CE) can be written as:

$$\begin{aligned} \text{CE1: } w_t &= 70.32 - \underset{(0.12)}{0.45} o_t + \underset{(0.22)}{1.78} \Delta u_t + \widehat{v}_{1t} \\ \text{CE2: } e_t &= 124.41 - \underset{(0.20)}{0.58} w_t + \underset{(0.60)}{5.65} \Delta u_t + \widehat{v}_{2t} \end{aligned} \quad (3)$$

with estimated standard errors in parentheses.

CE1 suggests that, in the long run, trade union density and wage share are positively correlated (if the change of trade union density increases by one percentage point, the wage share increases by 1.78 percentage points), and openness and wage share are negatively correlated (if openness increases by one percentage point, the wage share decreases by 0.45 percentage points). CE2 suggests that in the long run the wage share and the employment rate are negatively correlated (an increase of the wage share by one percentage point decreases the employment rate by nearly 0.6 percentage points) and the change in union density and the employment rate are positively correlated (an increase in the change in union density by one percentage point increases the employment rate by 5.6 percentage points).

In other words, in the long-run, the dynamics of the wage share and of the employment rate are significantly correlated to the dynamics of other variables, namely openness and trade union density change, and the signs of the relevant coefficients coincide with the hypotheses set out in section 5. Although the coefficients of CE1 and CE2 should be interpreted with care, given that the estimation methods do not allow us to make precise statements about causality, these results show that an

²³Johansen's ([29]) maximum likelihood estimation methods require some normalisation restrictions, which is why the coefficients of the wage share and of the employment rate are set equal to unity in CE1 and in CE2, respectively.

²⁴Throughout the analysis we use a critical value of 5%.

increase in the power resources of workers, proxied by the change of the trade union density measure, is correlated to a long-run increase in the wage share and the employment rate. An increase in the power resources of capitalists, as measured by international capital mobility, is correlated to a long-run decrease in the wage share. Further, in the long-run, an increase in the wage share is negatively correlated with employment. These results validate the power resources approach while raising serious doubts about SDT and in particular the assumption of a dollar-for-dollar relationship between wage share and employment rate. For an increase in the power resources of a class tends to modify the long-run income distribution in favour of that class.

The analysis of the estimated error correction matrix (\hat{A}) allows us to rule out the hypothesis that some of the variables included are (weakly) exogenous because no variable has zero estimated correction coefficients in both cointegrating equations. Estimated coefficients of the first cointegrated equation (CE1) suggest that when the wage share is above its equilibrium level, the wage share quickly reacts reducing its value, ($\hat{a}_{1,1} = -0.46$), and openness decreases ($\hat{a}_{1,3} = -0.09$), while there is no effect on the short-term dynamics of the change of trade union density, Δu_t . If a positive deviation from the long-run equilibrium of the employment rate equation (CE2) occurs, the employment rate increases ($\hat{a}_{2,2} = 0.07$), the change in trade union density quickly increases ($\hat{a}_{2,4} = 0.18$), possibly because of the increased employment rate, and openness of the economy also increases ($\hat{a}_{2,3} = 0.03$).

The values of the parameters $\hat{a}_{1,2}$ and $\hat{a}_{2,1}$ are of particular interest for our analysis, because they support the existence of the short-run profit squeeze cycles identified in section 2 above. For if the wage share is above its long-run equilibrium level, the demand for labour decreases and the employment rate with it ($\hat{a}_{1,2} = -0.39$), and *vice versa* when the wage share is below the equilibrium. Further, if the employment rate rises above its long-run equilibrium level, the wage share quickly reacts upward ($\hat{a}_{2,1} = 0.21$), and vice versa when the employment rate is below the equilibrium. These findings are consistent with a profit squeeze mechanism, and with the clockwise motion of WSER cycles.

As all variables in vector y_t are endogenous, we analyse long- and short-run dynamics jointly, simulating the orthogonalized impulse response function (IRF), which traces out the response of current and future values of each of the variables to a one time unit increase in the current value of only one of the errors at a time, holding everything else constant. We use the Cholesky factorization of the residuals covariance matrix to orthogonalize the impulses, ordering the variables as follows: $o_t, \Delta u_t, w_t, e_t$, i.e., introducing first those variables that seem to react less quickly to shocks in the

multivariate model. In Figure 7, each diagram plots the response of each variable o_t , Δu_t , w_t and e_t to a Cholesky standard deviation shock of itself and the other three variables for a time lag that goes from 1 to 10 years.

Summing up the main findings, Figure 7 shows that a one standard deviation shock on the openness indicator (o_t) has a permanent negative effect on the wage share (see *Responses of w to o*), while a similar shock on the change of trade union density has initially a negative effect on the wage share, which becomes positive after the fourth period and remains positive thereafter (see *Responses of w to Δu*). The employment rate does not respond to a shock of the openness index (see *Responses of e to o*) but it increases in the long-run after a positive shock of the change of trade union density (see *Responses of e to Δu*). In general, with a couple of exceptions, a shock in one of the variables considered has a permanent effect on the others.

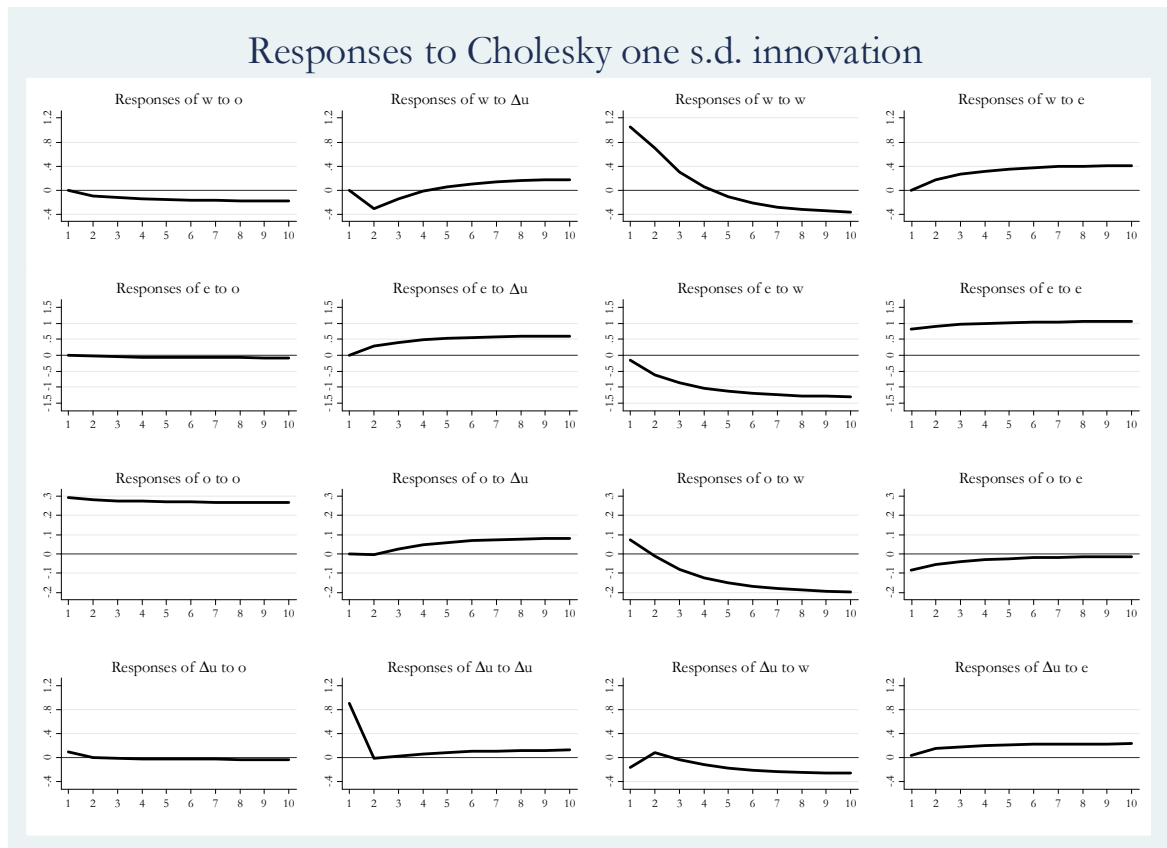


Figure 7: *Impulse Response Functions (Cholesky Decomposition, Shocks of 1 Standard Deviation)*

We assessed the robustness of our results in several ways.²⁵ First of all, we used alternative measures of trade union density, namely (a) the revision by Bailey and Kelly ([2]) excluding non-UK citizens, retired people, the unemployed, the self-employed from the official figures and (b) the series produced by Visser ([69]), which is the standard for cross-sectional analysis among different countries. They all suggest that trade union density increased at a decreasing rate up to the end of the 1970s, then declined by nearly 5% per year between mid 1980s and mid 1990s (hence decreasing but at a more moderate rate). Our main empirical conclusions remain unaltered regardless of the measure of trade union density used. Similarly, no significant change emerges if the measure of trade union density (the ratio of trade union members to employee jobs) used is replaced with the ratio of trade union members to workforce jobs or with ratios that include the unemployment benefit claimant count in the denominator. As alternative measures of workers' bargaining power, we also used the number of working days lost and the number of stoppages in a year, and confirmed results obtained with trade union density measures (actually increasing the statistical significance of the estimated coefficients). The key results of our econometric analysis continue to hold if, instead of the change in union density, we use the level of the unionization variable, but the properties of the residuals are less satisfactory from an econometric perspective.

Second, we ran a set of robustness checks involving the use of different variables to measure capitalists' bargaining power, such as the sum of inward and outward foreign direct investment over GDP but results were virtually unchanged. Indeed, we have also estimated the model without the openness variable, which allows us to obtain a longer time series. Unsurprisingly, the explanatory power of the model decreases, but the key insight on the importance of the bargaining power of the working class remains true.

Last but not least, we have also analysed the two key variables of our model, the wage share and the employment relation in isolation and the results are unambiguous, and in contradiction with SDT: quite strikingly, there exists no long-run cointegrating relationship between w_t and e_t , either in the restricted sample 1966-2010 or in the full sample 1950-2010. The two variables are cointegrated only if at least another variable - openness and/or trade union density, in our analysis - is added.

As a final comment on our empirical results, both the definition and the substance of causality in time series analysis are vexed questions, which is why many studies, especially when looking at the influence of political variables on income distribution, do not determine causality, and focus only

²⁵Results are available from the authors upon request.

on correlations (e.g. Cameron [11], and the studies cited in Bradley et al. [8], p.198). But although the empirical analysis does not allow us to make any definite claim about causality, we believe that it provides sound evidence for questioning the dollar-for-dollar relationship between wage share and employment rate suggested by SDT. We now turn to a narrative account of the long run, to put some historical flesh on the bones of this econometric analysis.

7 The changing conditions of class struggle in the UK

The capitalism that emerged from depression and war was a much more regulated capitalism than had been the case prior to the war years. New international financial institutions were created to encourage the development of multilateral trade, and currency and credit were heavily regulated both at international and national levels. Alongside commitments to full employment, extensive social protection systems were put in place, and the state took an active role in fiscal and industrial activity. As world trade recovered, historically low levels of unemployment and buoyant demand were associated with a post-war investment boom, and norms of consumerism were established on the basis of expectations of rising living standards, exemplified by the growth of mass markets for consumer durables.²⁶

While the UK shared in the general prosperity of the metropolitan capitalist world through the 1950s and 1960s, its performance in terms of productivity and growth was rather less impressive than most other developed capitalist economies. While there were characteristics of European capitalist economies (such as large agricultural populations) that the UK did not share contemporaneously (because of its earlier industrialization), there were also two features peculiar to the historical evolution of the UK economy. The first concerns the general international orientation of UK capital, and the second the position of organized labour.²⁷

7.1 The orientation of UK capital

In the years after 1945 the UK lined up as the junior partner of the USA in a ‘special relationship’ with the aim of preserving as much as it could of its pre-war imperial heritage in the face of both

²⁶Hence the resonance of the phrase “you’ve never had it so good”, a slogan of the US Democratic Party in the 1952 Presidential election campaign and reworked in a July 1957 speech by Harold Macmillan (“...most of our people have never had it so good”). [http://news.bbc.co.uk/onthisday/hi/dates/stories/july/20/newsid_3728000/3728225.stm]

²⁷The following account builds on some of the prescient account presented by Purdy [55] and [56].

reduced capacity and independence movements in its colonies. With continental rivals incapacitated by defeat and destruction, this was initially a successful policy, but it entailed significant costs in three respects. First, despite its heavy indebtedness arising from the war, the UK retained a 'defence' budget (with a significant 'East of Suez' component) that was much larger than its European rivals. Second, while the preservation of the Sterling Area continued the City's role as a financial centre, it also elevated defence of an overvalued exchange rate to a shibboleth of economic policy for some two decades. And third, the indicative planning as a peacetime inheritance from the war economy proceeded in a somewhat haphazard and disorganized manner: the nationalized industries were never coordinated with one another and never used as significant instruments of industrial policy; indeed, Cold War rhetoric disavowed planning as undemocratic.

This orientation meant that the UK was not involved in the formation of the institutions which were to become the European Economic Community (EEC) in 1958. But once the economies of continental rivals had recovered from the war, it was not obvious that an imperial and post-colonial reach was preferable to a serious engagement with continental Europe. Following the veto of the 1956 Anglo-French Suez adventure by the US, and the exposure of the 'special relationship' as rather less than two-way, the UK applied to join the EEC in 1961 but was vetoed by France in 1963. Part of the reason for the veto was the continued existence of the Sterling Area and its implications for exchange rate stability within the EEC – Commonwealth members kept sterling balances in London (often the result of Imperial wartime loans to the UK) and UK interest rates had to be high enough so as not to cause any significant outflow. After rejection of its application to join the EEC, political drift then followed for a decade. But in 1958 the dismantling of exchange controls began, and through the 1960s the debt financing of both US domestic social programmes and the US war in Vietnam led to substantial off-shore Eurodollar dealings in which the City of London proved important.²⁸ While the pooled reserves of the Sterling Area had been useful in the dollar shortage of the late 1940s, dollar shortages had long ceased to apply, so that the Sterling Area balances could be wound down as the prerequisite for a renewed attempt to join the EEC. Joining was finally achieved in 1972-3, just as the 'golden age' ended.

The 1970s drift away from a managed Keynesianism towards a deregulated neoliberalism was hard to combine with a wholehearted commitment to a neo-corporatist EEC and its social market under-

²⁸The 1960s Eurodollars (and other eurocurrencies) were held offshore from their original domicile; the etymology is unfortunate, for they had nothing to do with the much later euro.

pinnings. Relations with the EEC in the 1980s were dominated by UK resentment and renegotiations over the financial commitments that were entailed by membership, and then by the negotiations over the Single European Act of 1986 followed by the Maastricht Treaty of 1993. Insofar as these treaties revolved around the single market, they were supported by the UK, but as these treaties also presaged and developed extra-economic processes of integration, the UK's attitude ranged from ambiguous support to outright hostility, particularly towards anything that might be interpreted as support for Franco-German proposals for greater political integration.

Commitment to the EEC required a serious attempt to modernize UK industry, but the 1970s retreat from even a weak form of social democracy ensured that this did not happen. After the Conservatives took office in 1979, deregulation was pursued enthusiastically: in 1979, all exchange controls were abolished, and in 1986 the City was opened to US capital by abolishing the institutional separation of stockjobbing from stockbroking, retail from wholesale banking, and commercial from merchant banks. As the City rose to pre-eminence as a major financial centre of the world, its orientation to financialization within a world market took precedence over any modernization of the UK's industrial structure, and deregulated markets condemned the latter (apart from certain niche areas) to low investment, low productivity and low wages.

These developments are captured in the openness index depicted in Figure 6 Panel (a) (right scale). The index initially changed little between 1966 and 1980, averaging 1.4 (with a standard deviation of 0.0396). The removal of capital controls saw an immediate jump in the index from 1.4 in 1980 to 1.7 the following year. It then climbed to 1.9 in the mid-1980s and 2.1 by the end of the decade. The effects of the deregulation of the 1980s were amplified further in the 1990s, and the index rose from 2.1 in 1990 to 5.7 in 2000 and 8.2 in 2010. This 518% increase over the whole period had a significant long run effect. The increasing openness of the UK economy, despite an initial ambivalence of UK capital as to its orientation, gave an outside option to capital in struggles over the wage bargain, and the lack of modernization amplified that effect by making closure and relocation, outsourcing and so forth easier. In terms of class struggle, the outside option significantly tilted the balance towards capital in the wage bargain.

7.2 The position of organized labour

Perhaps because it was the original capitalist economy, with a deep historical commitment to *laissez-faire*, the historical development of trade unionism in the UK was quite peculiar compared with that in later developing capitalist economies. Prior to the 1970s, statutory legislation was conspicuous by its absence. There was no legislation compelling employers to bargain with trade unions, no legislation that made collective agreements legally enforceable, no legislation concerning either workers' rights to join a trade union or employer recognition of unionization, and no legal right collectively to withdraw labour and hence to strike. Because English common law, based on judicial opinion over the centuries, had evolved to protect the rights of the individual, it was hostile to any action that interfered with contract and property rights. Such interferences were torts, and those so interfered with could seek punitive legal redress (with effectively a judicial guarantee of success). Hence because any collective action by organized labour was a 'restraint of trade', in common law trade unionism was impossible. The only way to nullify this was both to exempt trade unions from liability in tort, and to protect individual organizers of trade union activity from torts concerning trade disputes. This was the effect of the 1906 Trades Disputes Act, and it was the sole legal basis for trade unionism until the 1970s. There was indeed a raft of legislation in the 1960s and 1970s establishing individual rights for workers: minimum notice periods for employees (1963), minimum redundancy payments (1967), protection against unfair dismissal (1971), protection in case of accidents (1974), extensions of workers' statutory rights (1975 and 1978), and protection against discrimination on grounds of sex (1970 and 1975) and race (1976), together with a system of industrial tribunals before which breaches of individual rights could be brought. But these were not the collective rights of trade unionism. The latter only existed by virtue of the 1906 immunity from torts arising out of restraint of trade.

For this reason, the development of trade unionism in the public sector was especially important. Dating back to 1918, freedom of association and organization had been conceded in the public sector, together with 'fair wages' policies whose effect was to compel private sector employers either to recognize trade unions or to pay the going rate (and by the late 1940s a quarter of the employed labour force was covered by wage levels administered by wages councils). While trade unionism was actively encouraged in the public sector, nevertheless the inter-war depression had mitigated its spread and effects. In the 'golden age' in the 25 years after 1945, this was no longer true. The wave of nationalizations after 1945 in mining, utilities, transport and communications, in pursuit of a

modernization that the inter-war private sector had demonstrated that it could not deliver, together with the expansion of public sector health, social services, housing and education, encouraged the spread of public sector trade unionism.²⁹ And post-war growth also boosted trade unionism in private sector manufacturing. Outside of private sector manufacturing and the expanded public sector, trade unionism was weaker; it was the historically low levels of unemployment, combined with a large public sector, that made trade unionism appear stronger than it in fact was (but this was not evident until the 1980s). As shown in Figure 6 Panel (b) (left scale), overall trade union density peaked in 1978 at 53.8%; in 1980 it was still 51.6%.

With the low unemployment of the ‘golden age’, the ‘problem’ of organized labour was identified as its apparent ability to lead a wage-price inflationary spiral through wage demands in excess of productivity increases. Three approaches to resolving this issue were attempted. The first was to incorporate trade unions in some form of corporatist agreement around an incomes policy. The second was to alter the legislative framework to which trades unions were subject. The third was to manage the economy at higher levels of unemployment. These three approaches were not alternatives, and they received varying emphases at various times in the decades after the 1950s. After a hesitant experiment with a timid corporatism (through the National Economic Development Council) in the early 1960s, the remainder of the 1960s saw attempts at an incomes policy, the voluntary adherence to which was intended to be bought by policies of ‘fairness’ towards both incomes and prices. But the unions never wholeheartedly signed up to the policy, particularly at grass roots level where the ‘prices’ part of the policy was seen as merely a cover for the implementation of wage restraint. Recourse was additionally made to higher levels of unemployment (also necessitated by the deflationary policies required to make a success of the 1966 sterling devaluation). The increase in unemployment appeared large at the time (the claimant count unemployment rate was around 1.5% in the mid-60s and 2.5% in 1970 as international demand conditions remained buoyant), but proved too small to have much impact. With neither incomes policies nor rising unemployment seeming to work, towards the end of the 1960s proposals were made to alter the legislative framework governing trade union activity, but the (Labour) government was divided, and the proposals came to nothing. By 1970 then, all three approaches to trades unions had been attempted. But none had had great success, and the difficulties that organized labour posed for capital remained unresolved.

²⁹In 1980, for example, trade union density among full-time employees of nationalized industries was 97% and of general government 89% (cited by Pencavel [49] p. 191).

These difficulties deepened in the first half of the 1970s at the same time as the ‘golden age’ came to an end. The Conservative Government of 1970-74 attempted to alter the legislative framework, but the imprisonment of trade unionists did not prove popular, and an unwise confrontation with the unions, particularly with the National Union of Mineworkers, triggered a ‘who governs?’ general election which the Conservative Government lost in 1974.³⁰ Cooperation was then tried again, but the circumstances were not propitious. For the post-war conditions that had underpinned the use of Keynesian policies of demand management had evaporated. Comparing 1975-79 with 1965-69, the average (claimant count) unemployment rate had almost doubled from 2.0% to 3.8%, and the average (Retail Prices Index) inflation rate had almost quadrupled from 4.3% to 15.6%. With such ‘stagflation’, capital was split between industrial interests whose representatives wanted an expansionary fiscal policy and an accommodative monetary policy to boost demand in the face of falling profitability, and financial interests whose representatives wanted a deflationary fiscal policy and a restrictive monetary policy to increase real interest rates. This played out in policy terms as a Keynesian-Monetarist controversy in which the Monetarist approach was increasingly ascendant, and the abandonment of the Keynesian approach was definitively announced in Prime Minister Callaghan’s 1976 speech to the Labour Party Conference.

Against this background successive Labour Governments (1974-79) attempted a more corporatist approach, involving a ‘social contract’ in exchange for an ‘incomes policy’ in an attempt to toughen the incomes policy stance that had been adopted in the 1960s. But because profitability had collapsed, a successful incomes policy entailed straightforward wage restraint. Under these stresses, the social contract of the mid-70s disintegrated in a revolt of the low paid (after three years of wage restraint) in a ‘winter of discontent’, and the general election of 1979 resulted in a Conservative government committed to the abandonment of any sort of corporatism, the reduction of the size of the public sector, deregulation and a vigorous anti-union legislative agenda. The period between the early 1970s and the end of the decade was thus a period of transition from the social democracy of the ‘golden age’ to the era of neoliberalism and globalization.

In the 1980s the UK (along with the US) was a prominent cheerleader for the neoliberal approach. The deflationary policies pursued had an immediate effect on the manufacturing sector. This was

³⁰It is clearer in retrospect that the reasons for the legislative failure (compared with what was to occur a decade later) were partly a lack of piecemeal gradualism, partly trade union solidarity in resistance, and partly a government panic at the consequences of rising unemployment, culminating in a policy U-turn by Chancellor of the Exchequer Barber and a dash for growth.

partly because a rise in the trade-weighted exchange rate rendered much of manufacturing uncompetitive; as a percentage of domestic demand, manufacturing imports were 26% in 1980 and 45% in 1995. It was also partly because of the ways in which labour-saving new technologies affected a number of sectors (notably printing, newspapers, shipping and stevedoring). Hence the traditional strength of trade unionism in manufacturing was undermined by an intensification of product market competition.

The collapse of manufacturing in turn increased unemployment. As illustrated in Figure 3, the employment rate dropped very sharply. Compared with an average (claimant count) unemployment rate of 3.9% in the 1975-79 period, unemployment averaged almost double that rate over the next 15 years: 8.3% over 1980-84, 8.7% over 1985-89 and 8.2% over 1990-94.³¹

With this backdrop of a collapse in manufacturing and a dramatic increase in ‘normal’ unemployment, there was a state-sponsored assault on the institutions of organized labour. Partly, this was indirect, and took a number of forms. Privatizations reduced the size of the public sector, the headcount employment in nationalized industries falling from 1.85 million in 1979 to 0.72 million a decade later, and to 0.23 million in 1997 (MacGregor [43] Table D). State-sponsored support of collective bargaining was reversed, with the elimination of procedures that had extended the effects of industry-wide collective agreements to non-unionized private sector firms. The powers of wages councils to set wage floors were reduced in 1986, and wages councils themselves were abolished in 1993.³² In 1988, local authorities were forced to allow competitive tendering, and were prohibited from specifying minimum standards.³³ And decentralized pay bargaining was actively encouraged by the state. All of this amounted to a historical reversal of the public sector encouragement of trade unionism in favour of a state-sponsored active low wages policy in both public and private sectors.

At the same time, there was a direct assault by the state on trade union organization. A succession of Employment Acts ‘reformed’ the trade unions, by restricting (1980 and 1982) and then eliminating (1988 and 1990) the legal basis for the closed shop, by rendering secondary picketing illegal (1980), by

³¹The Claimant Count is defined in terms of who is a recipient of unemployment-related benefits, and so changes with changes to the benefits system. The series used in this paper is a time-consistent series. For the serious problems in interpreting the data, especially through the 1980s, where time-consistency eliminates many of the unemployed, see Gregg [21]. The more internationally accepted (ILO) definition of the unemployment rate only goes back to 1971; it is on average 1.76 percentage points higher than the claimant count unemployment rate over the period 1971 to 2010 (with a standard deviation of 0.623). The ILO average measures corresponding to the claimant count measures in the text are 5.3% over 1975-79, 10.2% over 1980-84, 9.8% over 1985-89, and 9.3% over 1990-94.

³²Except for the Agricultural Wages Board (whose intended abolition was announced by the Coalition Government in July 2010). In the early 1980s, the 27 wages councils set legal minimum rates of pay for some 2.7 million workers (Marsh [44] p. 187). Indeed, in 1980, in firms not covered by collective bargaining, some one third of managers considered that their manual workers’ pay was set by wages councils (Pencavel [49] p. 192 and n. 21).

³³Competitive tendering was controversially extended to the National Health Service in 2013.

imposing balloting requirements upon unions (1984, 1988), and, crucially, by partially removing trade union immunity from torts by successively narrowing the definition of what constituted a legitimate trade dispute (1980, 1982, 1984 and 1990).³⁴ At the same time, changes were made to the 1971 unfair dismissal legislation. As regards the individual, virtually all industrial action involves a breach of their employment contract, rendering that individual liable to immediate termination of employment. Some legal protection was given to individuals by the 1971 act, and by 1979 employers were protected from liability for unfair dismissal only if *all* strike participants were dismissed; employers *were* liable in cases of selective dismissal or selective re-engagement. But by 1990, employers were given further immunities covering selective dismissal and selective re-engagement. In the event of unofficial industrial action, unions were faced with endorsing the action (opening themselves to damages in tort) or repudiating the action (in which case they could not defend their members from selective dismissal). While these ‘reforms’ were in progress, a conflict was provoked with the National Union of Mineworkers in 1985-86, and state power was used demonstratively to crush the union. And in the following years employers were not slow to use the new legislation to obtain injunctions and penal damages against (largely craft-based) unions with pre-entry closed shops (Marsh [44] Tables 4.1-4.3, pp. 86-90.).

The consequences of the transition to neoliberalism were significant. First, declining union membership was principally attributable to the failure of unions to gain recognition in firms formed after 1980, particularly in private sector manufacturing. Second, whereas more than four-fifths of the workforce had been covered by collective bargaining and statutory sectoral wage arrangements in 1980, by 1994 just under half the workforce was so covered. The UK thereby moved away from the European experience, and much closer to the North American situation. Third, the abolition of wages councils and the statutory minimum pay levels they had set facilitated greater pay dispersion in the lower part of the wages distribution, affecting not only the traditional low paid sectors (agriculture, retail, catering) but also the young, and this contributed to wages inequality growing more rapidly in the UK than in any other developed capitalist economy save the USA. Fourth, by 2010 trade unionism had only a marginal significance in the private sector of the economy, and the relentless pressure of neoliberalism on the public sector threatened its position there.³⁵ And fifth, the legal framework established after 1979 “confirmed an underlying assumption of adversarialism and separation of interests in British labour-management relations” which was only “strengthened by the draconian new

³⁴See Marsh [44], Tables 3.2 and 3.3, pp. 77-8.

³⁵This summary is largely drawn from the surveys of Brown et. al. [9] and Pencavel [49] which have further detail on other aspects (union pay differentials, unionism and productivity, union democracy) not drawn upon here.

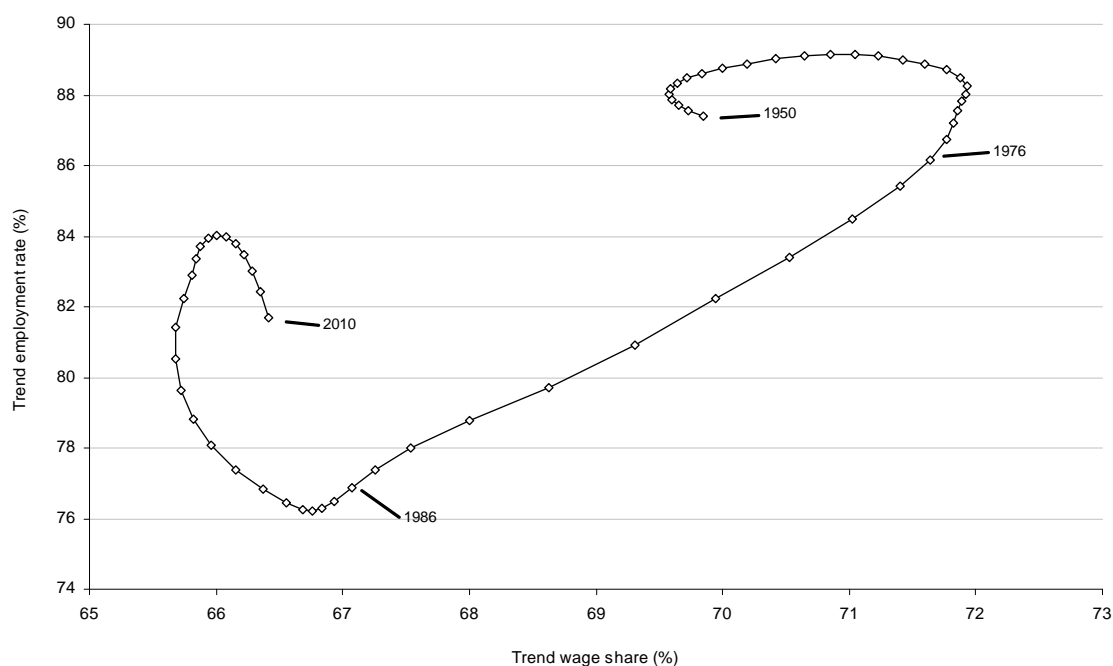


Figure 8: *Trend Employment Rate against Trend Wage Share, UK, 1950-2010*

legal sanctions made available to employers and the courts” (Brown et. al. [9], p.81).

The effects of these consequences on trade union density was not surprising: Figure 6 Panel (b) (left scale) shows that density fell sharply from 53.85% in 1979 to 41.6% in 1989 and to 31.4% in 1999. By 2010 it had fallen to 27.3%, almost half its 1979 level. The substitution of individual for collective agreements, the abolition of pay floors, a seriously adverse legislative environment, and more intense product market competition, taken together meant that the labour movement could take little advantage of the local improvement in labour market conditions after 1995. Unemployment rates averaged 5.7% from 1995-99 (ILO 7.2%), 3.1% from 2000-04 (ILO 5.2%) and 3.1% from 2005-09 (ILO 5.9%), but did nothing to facilitate any reversal of the major shift in the balance of power towards capital that had occurred after 1979.

7.3 A summary

Consider a connected scatter of the trends in wage share and employment rate, depicted in Figure 8. The long-run movement of the variables can be thought of as depicting changes in their equilibrium values, after purely erratic or cyclical fluctuations are purged from the data. The movement over

time is clockwise, but the data certainly do not describe random deviations from a stable long-run equilibrium. We interpret the empirical evidence depicted in Figure 8 as showing that power and hegemony have played an important role in the determination of the long-run behaviour of the two variables. While it may be reasonable to assume such factors as bargaining power of social classes, capitalists' propensity to invest, and technical conditions constant in the short-to-medium run, they are likely to vary over longer time periods, depending, *inter alia*, upon changes in institutional factors, norms and expectations. For this reason there is no cointegrating relationship between wage share and employment rate taken on their own. A focus on class struggle requires, as we have seen, additional variables, proxying working class strength by trade union density and capitalist class strength by the degree of openness.

Then the data in Figure 8 can be partitioned into three periods, matching the historical account above. The first period, from 1950 to the mid-70s, was one of comparative labour strength domestically and imperial decline internationally, with a mean (trend) wage share of 70.8% and a mean (trend) employment rate of 88.2%. The second period was a decade of transition, roughly the decade from the mid-70s to the mid-80s, through which the trend employment rate fell monotonically by some 9 percentage points and the trend wage share monotonically by some 4.5 percentage points. The third period, roughly from the mid-80s to 2010, was one of comparative labour weakness domestically and increasing financialization internationally, with a lower mean (trend) wage share of 66.2% and a (much) lower mean (trend) employment rate of 80.4%.

In short, the long run data do not describe the sort of profit squeeze phenomenon required by the structural dependence thesis. Rather they vividly portray the long run economic effects of changes in the social, political, and institutional conditions of class struggle in the UK, which we have described both econometrically and historically.

8 Conclusions

Przeworski is effective in exposing some problems of naïve visions of the electoral road to socialism, such as the idea that socialism would automatically emerge from universal suffrage; that gradual reforms would be cumulative and inevitably lead to socialism; and that capitalism and representative democracy are incompatible. This paper does not attempt to prove that a gradual transition to socialism via the ballot box is indeed feasible, nor that the tactical and strategic choices of social

democratic parties have historically been optimal. It does not assert that any income distribution is feasible at any moment of time, nor that the prospects for an electoral socialism/social democracy pursuing redistributive class policies are good. For there certainly are structural limits to attainable distributions within capitalist institutions, and the empirical analysis suggests that some form of profit squeeze is indeed operating at any given point in time. It does argue, however, that strong versions of the structural dependence thesis based on a profit squeeze mechanism, such as Przeworski's, do not explain the actual choices and trade-offs faced by the labour movement. In sum, the social democratic model is more undetermined than Przeworski suggests. The real history of class power and class capitulation has more to offer than an abstract story of optimizing forward-looking individuals subordinating themselves to capitalist rationality.

We close the paper by noting some potential avenues for further research. First, a cursory look at the related literature on Goodwin's ([20]) model suggests that the pattern of the UK data is by no means exceptional: the analysis of US data in Mohun and Veneziani ([46]) and the scatter plots for ten OECD countries presented by Harvie ([26]) broadly confirm the stylised facts about income distribution and distributive conflict identified in section 2. Short-run distributive cycles appear around moving long-run equilibria. A comparative study focusing on the international variability of income distributions and class compromises might thus provide further insights on SDT and social democracy.

Second, it is important to investigate the empirical relevance of ideology, hegemony and endogenous preferences in the determination of distributive outcomes. As argued in section 4, agents are socially determined, and therefore the 'battle of ideas' may play an important role in determining the political-economic equilibrium of a capitalist society. This paper has tried to show the limits of SDT and for this it is sufficient to focus on the structural features of an advanced economy capturing the material power resources of the two classes. However, in order to analyse the evolution of conflict and distribution in advanced capitalist countries, we need to understand the evolution of the ideological centre of gravity in the political sphere, and the shifts in hegemony. Empirical studies have thus far focused mostly on variables capturing the partisan composition of governments. However this only tells part of the story as it does not capture deeper shifts in hegemony and in the ideological centre of gravity of a society.³⁶

Third, in this paper, we have focused on all employees owing to data limitations, and because, again, this was sufficient to criticize SDT. However, our analysis suggests that the development of

³⁶A very interesting quantitative approach to hegemony and ideology in the UK can be found in Hakhverdian [23].

a class-based dataset on income distribution should be a primary objective for students of income distribution and class conflict.

A Data sources

Apart from data on trade union membership, and for the wage share data for operatives in Production Industries, all time series data is electronically available from the Office for National Statistics at <http://www.statistics.gov.uk/>. Each series has a 4 digit identifier, as listed below.

In Figures 1, 2, 3 and 8:

The wage share is total compensation of employees (HAEA) divided by the sum of total compensation of employees (HAEA) and gross operating surplus, whole economy (ABNF).

The employment rate is employee jobs (BCAD) divided by the sum of workforce jobs (DYDA) and total claimant count (BCJA).

The deviations from trends in Figure 2 and the trends in Figures 3 and 8 are constructed using a loess filter, formed from a locally weighted least squares regression (Cleveland [15]), using a polynomial of degree 2 and bandwidth (proportion of data covered) of 0.4.

In Figures 4 and 5:

The wage share is Wages and Salaries of Operatives in Production Industries (mining and quarrying; manufacturing; and electricity, gas and water supply) divided by Gross Value Added in Production Industries, both from Business Monitor (Census of Production), PA1002, Table 2, Annual Years [14].

The employment rate is as above.

The trend and deviations from trend are derived from a loess filter using a polynomial of degree 1 and a bandwidth of 0.3.

In Figure 6:

Openness is the ratio of the sum of outward total foreign direct investment (HBWD) and inward total foreign direct investment (HBWI) to gross fixed capital formation (NPQX).

Trade union density is the ratio of trade union membership to employee jobs (BCAD), where trade union membership for 1950-1987 is column (1) of Table 1 in Bailey and Kelly [2], and for 1987-2010 is taken from annual reports of the Certification Officer (<http://www.certoffice.org/Publications/Annual-Reports.aspx>). While the Bailey and Kelly data from 1960 to 1987 is taken from the Department of Employment Gazette for February 1987, there are small differences with the same data more recently

sourced from the Department for Business, Innovation and Skills ([10]). We have ignored this because our results are so strongly robust to the specification of density.

B Estimation of short- and long-run relations: methodology

This appendix provides a general description of the econometric methodology adopted in the paper, mostly following Lütkepohl and Krätzig [42]. Consider a set of K time series variables, $y_t = (y_{1t}, \dots, y_{Kt})'$. Using a vector auto-regressive approach (VAR), the dynamic interactions of the vector components are:

$$y_t = \sum_{j=1}^p \Phi_j y_{t-j} + v_t, \quad (4)$$

where $v_t = (v_{1t}, \dots, v_{Kt})'$ is a sequence of independently and identically distributed shocks, with $E(v_t) = 0$, $E(v_t v_t') = \Omega$, with $\text{rank}(\Omega) = K$, p is the finite number of lags and the order of the VAR model, and Φ_j is a $K \times K$ matrix.

In general, a process such as (4) is stable if the polynomial defined by the determinant of the autoregressive operator has no roots in and on the complex unit circle, i.e. $\det(I_K - \sum_{j=1}^p \Phi_j z^j) \neq 0$ for $|z| \leq 1$, where I_K is the $K \times K$ identity matrix. On the assumption that it has initiated in the infinite past ($t = 0, \pm 1, \pm 2, \dots$), it generates stationary time series that have time-invariant means, variances, and covariance structure. If the variables in y_t are integrated of order 1 ($I(1)$) the process is not stationary, but if they have a common stochastic trend so that there are linear combinations of them that are $I(0)$, they are cointegrated.

A convenient representation of (4) with cointegrated relations is the Vector Error Correction Model (VECM):

$$\Delta y_t = \sum_{j=1}^{p-1} \Gamma_j \Delta y_{t-j} + \Pi y_{t-1} + v_t. \quad (5)$$

If the $VAR(p)$ process has unit roots, i.e. $\det(I_K - \sum_{j=1}^p \Phi_j z^j) = 0$ for $z = 1$, the matrix $\Pi = (I_K - \sum_{j=1}^p \Phi_j)$ is singular. If $\text{rank}(\Pi) = r$, then Π can be written as a product of $(K \times r)$ matrices A and B , with $\text{rank}(A) = \text{rank}(B) = r$ as follows: $\Pi = AB'$. In a VECM representation, long- and short-run dynamics are modelled separately and the matrix A is the link between the two, as it

expresses the effects of deviations from the long-run equilibrium, By_{t-1} , on the short term dynamics, Δy_t . The matrices Γ_j express the short-term interactions among the variables of interest.

If the multivariate process y_t is not stationary, the shocks may also have permanent effects. Hence, there may be r nontrivial $1 \times K$ vectors β_i , $i = 1, \dots, r$, such that $\beta_i' y_t$ is stationary for all i . In this case the deviations from the linear relation $\beta_i' y_t$ are only temporary, and $\beta_i' y_t$ is a stable relationship in the long-run. For all i , the variables in y_t with nonzero coefficients in $\beta_i' y_t$ are then cointegrated and β_i is the cointegrating vector and r is the cointegrating rank.

A stationary y_t can also be expressed in its Wold moving average representation, i.e. as a function of the original shocks v_t , $y_t = \sum_{j=0}^{\infty} \Psi_j v_{t-j}$ where $\Psi_0 = I_K$ and

$$\Psi_s = \sum_{j=0}^s \Psi_{s-j} \Phi_j, \quad s = 1, 2, \dots \quad (6)$$

can be computed recursively from the reduced-form coefficients of the VAR in levels in (4). The coefficient of this representation can be interpreted as reflecting the responses to impulses hitting the system. The (i, j) th elements of the matrices Ψ_s trace out the expected response of $y_{i,t+s}$ to a unit change in y_{it} holding constant all past values of y_t . Since the change in y_{it} given its past is measured by the innovation v_{it} , the elements of Ψ_s represent the impulse responses of the components of y_t with respect to the v_t innovations. In the stationary case, $\Psi_s \rightarrow 0$ as $s \rightarrow \infty$, hence the effect of an impulse vanishes over time. When y_t is nonstationary the Ψ_s impulse response matrices can be computed in the same way as in (6) based on VARs with integrated variables, even though a Wold representation as such does not exist for nonstationary cointegrated processes. In this case the Ψ_s may not converge to zero as $s \rightarrow \infty$ and some shocks may have permanent effects. As the impulse responses have been criticized because underlying shocks are not likely to occur in isolation if the components of u_t are instantaneously correlated, orthogonal innovations are preferred by adopting a Choleski decomposition of the covariance matrix. As the ordering of the variables in the vector y_t may produce different shocks, we followed standard practice of trying various triangular orthogonalizations, checking the robustness of the results with respect to the ordering of the variables (Lütkepohl and Krätzig [42], p.167).

As in our analysis $y_t = (w_t, e_t, o_t, \Delta u_t)$ is a 4×1 vector, there may be only $r \leq 3$ nontrivial cointegrating vectors, which can be stacked in a $r \times 4$ cointegrating matrix B with cointegrating rank r . The cointegrating rank can be estimated using a likelihood-ratio test known as the trace test, whose

null hypothesis is that there are no more than r cointegrating relations. The method starts testing $r = 0$ and accepts as \hat{r} the first value of r for which the trace statistic fails to reject the null (Johansen [29]). Finding the r stable long-run relationships is of interest for the economic interpretation of the SDT since they provide information concerning the determinants of long-run income distribution. But it is also important for statistical reasons, for when y_t is not stationary, the estimates of the VAR in (4) and of the IRF are consistent but less efficient, unless integration and cointegration are properly accounted for.

Given the cointegration rank r , simultaneous estimation of Γ_j , A and B can be obtained using the full information maximum likelihood framework (Johansen [29]).

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