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'Strategies of European Trade Unions:
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TRADE UNIONS STRATEGIES AND PRODUCTIVITY: A SUGGESTED FRAMEWORK

Alan Booth and Joseph Melling

The economic impact of trade unions is once more the object of vigorous debate in a number of countries, including Britain. The proximate cause of the revival of interest in Britain was the coincidence of an acceleration in the rate of growth of output per head in manufacturing (the 'productivity miracle') and the weakening of the trade union movement by rising unemployment and the anti-union legislation of the Conservative government. Thus, Muellbauer (1986, iv) offers five possible explanations for the 'productivity miracle', one of which was the 'industrial relations hypothesis': "the rise in unemployment and (changes in) government legislation have weakened the trade unions and restored to managers the 'right to manage'. Thus workers have been less able to resist the introduction of new technology and more flexible work practices." Similar accounts can be found in the work of Maynard (1988), Ball (1989) and others. However, the weakness of this analysis was exposed after 1988, when the pace of productivity growth in manufacturing slackened enormously without any noticeable growth in trade union strength either at the workplace or in law. At the same time, economists and social scientists are becoming more aware of the ways in which different cultural and institutional factors inform the behaviour of economic actors and affect the expectations implicit in the bargaining process (Turner, 1989). The time is ripe for a re-examination of the place of trade unions in the production process (see Abelshauser 1990).

As will be seen below, many writers have constructed models of union behaviour without examining the way in which unions devise strategies and how they seek to work with an influence the policies of other institutions. It is possible to study the consequences of trade union actions without any serious consideration of how strategies are formulated. But if we are to gain a real insight into the deliberate impact of unions and the motives of their members (which is the basis for behaviour) then we need to take strategy as the focus of research (Abelshauser, 1990).

In defining 'strategy' we accept Mintzberg's distinction between deliberate strategies, which are the result of intended action by conscious agents, and emergent strategies, which are the cumulative result of a series of decisions within the constraints of a particular situation (Mintzberg, 1978). For this distinction to hold, however, we recognise that actors need to make consistent choices which reflect a particular set of preferences (for example, opting for wage rather than employment targets). In defining 'productivity', we have in mind output per person employed.

I

The literature on the impact of trade unions on productivity is massive. The debate has been dominated by three economic models: the neo-classical, the institutionalist, and the radical or political analysis. We consider each in turn, beginning with the neo-classical, or Marshallian, approach.

The Marshallian tradition in British economics, with its emphasis on the individual and the market, has found it difficult to be anything other than suspicious of organisations like the trade unions which seek collective representation in markets. The model of union behaviour which lies behind this explanation is broadly as follows. Unions control labour supply. They use this power initially to oppose some technological improvements and changes to outdated work practices. They will subsequently be prepared to bargain the introduction of these productivity improvements but will use their power to appropriate the returns to capital. This approach assumes that unions have no real positive effects on productivity growth, or that any favourable impact is dwarfed by the negative effects on the choice of technique and manning levels. The responsibility for this behaviour lies squarely with the unions and not with other agencies inside or outside the production process. Finally, the failure of the unions to embrace the equally obvious strategy of collaborating with managers to diffuse rapidly technological best practices to maximise output, employment and earnings must lie in the laws of behaviour of British trade unions as institutions.

The strongest case in this tradition has come in recent work by David Metcalf. He has used data from the Workplace Industrial Relations Survey (WIRS) to argue that unions tend to inhibit productivity growth. The theoretical model seems to be that set out in the previous paragraph, but Metcalf is much more interested in empirical results. His evidence seems to suggest that unionised workplaces performed worse in the early 1980s than did workplaces without unions and that the worst performance of all came from those establishments which operated the closed shop. To some extent, this evidence is supported by the work of Machin who argues that the negative impact of unions on productivity is greatest where firms enjoy high market share or operate in industries where production is concentrated in a few enterprises. Thus, unions are able to capture a substantial share of profits which a firm can extract when its market power is significant.

For all its apparent force, there are problems with this account of the effects of trade unions on productivity and unit costs. Metcalf's empirical evidence is very uneven. He acknowledges that in Britain trade union organisation "is associated with lower labour productivity or, at best, has no effect" (1989). These contradictions are only heightened when Metcalf admits that sectors of the economy which have historically had a poor level or organisation (such as textiles) have seen as significant an advance in productivity during the 1980s as industries which have traditionally been dominated by very strong unions. Metcalf's method is to establish correlations between the density of trade unionism and the movements in output and productivity levels. His conclusions imply a very simple model in which the union has organised all the relevant workers and is facing a set of unorganised employers producing for competitive markets. But oligopoly is the rule rather than the exception in the British economy in the late twentieth century and it has already been demonstrated that the employer's market situation is an important element in the ability of the unions to demand higher wages and impose job control. The regressions which Metcalf has discovered may represent the interaction of a complex set of variables over a specified time period rather than the effects of trade unions per se.

In a careful critique, Wadwhani, using a more sophisticated and varied data set, has demonstrated that workers in unionised firms are no more likely to appropriate the returns to capital than are workers in non-unionised plants. He concedes that unionised plants were more likely to have restrictive practices than non-unionised workplaces and that these were more noticeable in larger plants. But he rejects the suggestion implicit in the 'productivity miracle' analysis that unions always oppose change, since the most significant changes took place in unionised shops during 1980-4 and those companies with joint consultative committees were actually more likely to experience reforms in production methods than those without such formal management-union co-operation. The higher the debt-equity ration of a firm, the more likely it was to have improved labour productivity improvements in the early 1980s as managements were severely disciplined in a period of substantial increase in the number of mergers. Even in these circumstances, it is likely that unions would acquiesce in the changes. The net effect of this critique is to deny the argument that unions necessarily pursue economic strategies which have an adverse impact on productivity growth. Very complex processes were unfolding in the British economy in the early 1980s and changes in trade union density appear to have played a small part in the picture, a conclusion confirmed by the enormous reduction in the rate of productivity growth after 1987. It seems clear that the unions have themselves reacted to changing economic and political conditions and have tried to adapt to the environment in which they operate. There certainly was a tendency for unions to exact rent in excess of the return to labour when labour and product markets were favourable, but it is equally true that in the different market conditions of the 1980s firms have been permitted to expand their profitability, finance new investment, introduce new technologies (even those which resulted in substantial labour displacement) not only with the acquiescence of labour but also as the basis of a new contract with the unions involving a substantial reappraisal of the effort bargain. Thus, the impact of unions on productivity cannot be assumed from first principles on the basis of assumptions about the behaviour of collective organisations in atomistic markets. Union behaviour must be examined in the light of changing markets.

II

The stimulus to the study of trade unions as institutions has been Olson's (1982) analysis of the dynamics of collective interest groups. In the normal course of events, such groups will face a free rider problem: it is difficult to exclude non-members from the benefits won by the group. Rational economic actors will therefore not pay the pecuniary and emotional dues to collective organisations and the interest group will have only a short-lived existence. However, under stable political and social conditions, collective interest groups will be able to devise strategies to reward members and exclude non-members from benefit. Thus, the longer a society enjoys political and social stability, the more likely it is to develop special interest groups whose activities will retard the resource reallocations necessary for full exploitation of improved technological possibilities. Thus, societies which have not been disrupted by war, occupation or totalitarian government tend to develop 'sclerotic' tendencies which stultify the impetus to faster growth. Olson attempted to apply these ideas to explain relative rates of economic growth since 1945, but he has left a good deal of confusion about what an 'Olson effect' might be, what might be the 'underlying pace' of institutional change and development over time and even how the hypothesis might be tested. A subsequent attempt to deploy a quantitative measure of institutional rigidity (Choi, 1983) has encountered overwhelming criticism, and may well be a search for the methodologically impossible (Crafts, 1988, xvii).

The trade unions are the most easily identifiable of Olson's special interest economic groups, and Batstone (1986) has sought to develop and extend the Olson thesis. Batstone has pointed out that Olson's 'sclerotic' tendencies arise in industrial relations not only as a result of the stability of the social and political systems but also from the 'scope' and 'sophistication' of the organisations of employees and employers. Organisations which have narrow scope represent the interests of only small groups within any industry and will be more obstructive towards productivity growth than more inclusive organisations which would have to bear a much higher share of the costs of any growth-inhibiting actions. 'Sophistication' involves the ability of an organisation to represent and co-ordinate interests and implement strategies. Batstone uses these tools in a table which compares the growth of productivity in 'high' and 'low sclerosis' countries for the periods 1950-73 and 1973-9. The results are mixed. In the first period, there was a strong positive relationship between the rate of growth of labour productivity and the breadth and sophistication of the industrial relations system but that relationship broke down in the second period when poor productivity growth was associated with countries with broad scope and high sophistication, such as Sweden.

But the problems go deeper and suggest that Batstone has effectively undermined Olson's hypothesis. Batstone has identified a number of countries (Netherlands, Norway, Sweden, Belgium) which exhibit high sclerosis, in the sense that there is long continuity in institutions, and broad scope and high sophistication in industrial relations institutions. High sclerosis should in Olson's terms be productivity inhibiting, whereas broad scope and high sophistication should be productivity enhancing, according to Batstone. Batstone sought to modify and extend Olson's analysis, but there is a strong suspicion that he has fatally wounded it. Olson was surely mistaken in presenting collective interest groups as monolithic structures which have clearly defined restrictive strategies. Once it is recognised that Olson's collective interest groups might be composed of factions and competing power groups, the weaknesses of his analysis become apparent. Once collective interest groups cease to be monolithic, they are capable of internal regeneration and are not necessarily growth inhibiting.

The second part of Batstone's article indirectly pursues such themes. He looks at the failure of efforts to reform British industrial relations since the Donovan Report (1968). At the core were attempts to increase the scope of unions (encouraging inter-union co-operation) and employer organisations and raising their sophistication (by encouraging a hierarchy of shop stewards on the union side). Such changes would have changed the balance of power within trade unions. Batstone argues, however, that restructuring failed because of the lack of sophistication of management, both in labour relations and in the more technical aspects of production. In short, the unions were prepared to and capable of change but were frustrated by rigidities elsewhere. A similar, though more favourable, conclusion emerges from the discussion of the 'productivity miracle' noted above. If trade unions have become involved in the efforts to promote faster productivity growth, they have certainly achieved this without increasing either their scope or their sophistication. This conclusion appears to leave both the Olson and Batstone variants of the institutional rigidity analysis without empirical support.

We deduce from this discussion, first, that Olson's belief that the growth inhibiting effect of institutions is related more or less directly to the social and political stability of the society in which collective interest groups are found is unlikely to provide useful results. The more refined approach of Batstone in which scope and sophistication are the key to the effect of institutions on output and productivity growth is also incapable of illuminating what has happened in British manufacturing since 1979. This is not to argue that institutions have no part to play in the explanation of productivity growth, but that it is impossible to deduce what that effect will be from either the longevity of the political system within which that institution operates or key structural aspects of that institution.

III

Radical analysis of shop floor behaviour, or study of the labour process, has fared rather better since its pioneering study by Braverman (1974). Many works have demonstrated the capacity of skilled workers to resist capitalist control and defend their autonomy in production. The motor car industry has been much studied from this perspective. Not the least attractive feature of labour process studies is the strong historical perspective. It has been pointed out that motor vehicle production developed comparatively late in Britain. Employers were able to adopt very quickly the specialist automatic machinery innovated by French, German and especially US producers. The use of semi-automatic machinery was also facilitated by the nature of the labour force, which was drawn from unemployed and semi- or un-skilled workers from declining industries such as watch- and bicycle-making. Thus, the craft Amalgamated Engineering Union (AEU) failed to get an early foothold and the strong bargaining position of the workers found expression in demands for improved wages and conditions rather than the defence of skill against the threat of dilution. Struggles over the control of production have been primarily about payment systems (Gardiner, 1981). Labour process studies have demonstrated the ways in which each successive attempt by managers to raise the productive potential of the workforce relative to its cost has been partially neutered by the ability of key groups of shopfloor workers to reassert control.

Managers first found it very difficult to co-ordinate the complex processes of vehicle manufacture and turned to individual piece work systems which induced shopfloor workers to drive line managers to maintain an adequate supply of materials.

However, the shopfloor retained the ability to control the pace of work which was critical in increasing the power of workers in the very strong demand conditions which prevailed in the 40 years after the industry was granted protection in 1915. As managers turned successively to the gang system and finally to measured day work, workers found ways to so manipulate job timings that shopfloor workers retained control over the pace of work. In this way, British motor car producers have required many more worker-hours to build motor cars than has been needed in other countries and have appropriated some of the returns to investment. This extent of shopfloor control in British car plant can be seen as a disincentive to invest in UK production in an industry increasingly dominated by multinational firms.

It is, however, possible for labour process theorists to produce almost diametrically opposite conclusions. Peter Nolan, for example, has argued (1989) that Britain continues to suffer poor labour productivity levels in the 1980s because of its commitment to the production of low value added goods rather than to the research intensive sectors of the new industries. In this situation, it was not the strength but the weakness of the unionised workforce which enabled manufacturers to continue to use labour intensively rather than shift to higher productivity methods. The apparent productivity gains of the 1980s were, according to Nolan, merely the result of greater pressure on the workforce, reflecting the further weakening of organised labour at the start of the decade. Managers were able to drive their workers harder and to introduce new technologies to the shopfloor. Nolan was surely right in believing that there had not been fundamental changes to the British economic structure or underlying rate of productivity growth in the early 1980s; the increase in the rate of productivity growth was the result of specific political changes which could be reversed.

There are, however, difficulties with this approach. Nolan suggests that the 'defeat' of trade unionism has ensured that Britain has increasingly become a low-cost assembler of products designed and manufactured elsewhere. However, the work on the motor car industry suggests that the strength of British trade unionism has countered the efforts of British managers to seek production methods that have been efficient on a world scale. There must be doubts about an analysis which can so easily produce two very different answers to the question 'why has the British economy achieved such comparatively poor rates of growth of labour productivity?' Part of the problem arises because labour process literature cannot easily combine analysis of capitalist relations in industry with an understanding of the policies of unions as autonomous institutions. For it is evident that the resources of such organisations in part depend upon their political and social standing rather than their economic functions. Britain has been characterised by reasonably stable industrial relations despite slow economic growth. Is it possible that trade unions are engaged in a complex process of trading institutional stability for limited economic rewards and a slow pace of innovation? Some writers have suggested that unions were willing to trade wages for jobs in the interwar years (see Booth, 1987), though this was not necessary in the postwar boom. Yet they did not achieve the high wage, high productivity returns which British unions aspired to and which Swedish and German labour achieved. An important problem would be the precise ways in which strategies for wages and workloads were formulated and the outcome of bargaining on the perceived effort of the labour force. In other words, the 'social relations' view of productivity tends to present output as the result of a clear power game in which capital and labour contend of maximum returns (see Nicholls, 1987; Williams et al, 1989 for exceptions). This view tends to collapse institutions like trade unions into an expression of class or sectional interests. As this is exactly the approach of the neo-classical theorists it is hardly surprising that there is a surprising amount of common ground between labour process theorists and more orthodox studies of the 'British disease' when it comes to the effects of trade union organisation, especially among the skilled (such as Phelps Brown, 1977). It is also possible to combine neo-classical and institutionalist analyses, as can be seen in the recent work of Crafts and associates (Crafts 1988; Broadberry 1988; Broadberry and Crafts 1990) which seeks to provide a long run explanation of slow growth in Britain during the present century.

IV

From the mid-1980s when his attention turned to the problems of the twentieth century British economy, N.F.R. Crafts has developed a simple model to explain Britain's relatively slow rate of manufacturing productivity growth from 1914 and its apparent acceleration after 1979. The model is simple because it is rooted very securely in the neo-classical approach and its powerful analytical device, growth accounting. One of the bedrocks of the analysis is a comparison of British and American physical output per operative over the period 1907-47 (Broadberry and Crafts 1990; hereafter BC). These figures show that the relatively small productivity gap which was apparent in 1907 opened dramatically over the period of the First World War (Broadberry 1988). The US lead appears to narrow over the 1930s in the majority of industries, but widens again over the period of the Second World War (BC, 5). This differential increases from the late 1940s to the mid-1960s, when there are signs that the gap begins to close, only to open up again during the 1970s (Crafts 1988b). As might be expected from work produced in the euphoria over the 'productivity miracle', the gap appeared to be closing in the 1980s, though apparently by not as much as during the period 1964-73 (Crafts 1988b, 2).

To explain the opening of the gap between US and UK productivity in manufacturing from 1907 to 1937, Crafts and associates turn to growth accounting. They begin with factor inputs but find that the substantially higher fuel costs in the UK and the superior levels of capital per worker in the US cannot explain the differential. The much larger size of the US market, giving longer production runs and greater economies of scale, and higher levels of human capital formation in the USA do purport to explain a large part of the gap, but not all. Here is the problem for the neo-classical formulation: in a competitive economy, these 'economic fundamentals' should account for all observed productivity differentials. To explain a persistent productivity gap it is essential to invoke market failure.

BC review the literature on the possible causes of persistently slow growth of productivity under five main headings: the absence in Britain until comparatively late in the post-1945 period of Chandleresque big, multi-divisional, vertically-integrated mass production business; the poor quality of British management; the greater technological flexibility of US managers (for example, in the use of electricity supply and machine power); the limited R & D spending in British industry until the postwar period; and the absence of tight management control over the workforce, leading to overmanning in British manufacturing, which itself lies at the heart of British productivity problems. BC reformulate these five portmanteau explanations in a novel way to make them more recognisable to neo-classical spirits by calling upon the God of competition. Productivity lags can persist only if competitive forces are insufficiently strong to drive the inefficient out of business. Thus, the five 'explanations' of slow productivity growth become four 'causes' of blunted competition: the British economy of the interwar years was highly collusive, with a multiplicity of market sharing agreements and cartels, especially after the imposition of the general tariff in 1932. Secondly, the stock market failed to discipline inadequate managements because so little information was open to potential bidder; the hostile takeover was unknown in Britain before 1939. Thirdly, the weakness of competitive forces made it easy to keep old capital equipment in production. Finally, the state chose not to promote competitive forces but to emphasise profit margins and employment stability, to be achieved by the encouragement of collusion to raise prices. In this environment, there was little pressure on industrial management to seek to regain job control which allowed the craft unions in particular to insist that the effort bargain be concluded at the lower end of the labour output scale. Thus, this is a basic neo-classical model in which the key factors are human capital formation, the size of the market and the extent of competition.

This account of the British economy in the interwar years is very attractive, at least on the surface. There are, however, two areas of comment. The first relates to human capital formation, and is one of the problems which Crafts, following the work of Prais and others at the NIESR, has emphasised as one of the principal longrun weaknesses of the British economy (BC, 29; Crafts 1988, xii; Crafts 1988b, 24). But the method of measuring human capital formation is to assume that factors are paid their appropriate marginal products, so that higher wage rates will reflect higher levels of human capital. Thus, a key conclusion emerges not by observation but as an embedded assumption of the basic model, which is unsatisfactory. BC try to supplement their 'evidence' by reference to secondary work on the subject, but this is an area in which much unsatisfactory work has been done. Until a reliable survey of interwar British and US 'systems' of education is undertaken in the way that Pollard compared and contrasted German and British provision in the period 1870-1914, it is perhaps best to remain healthily sceptical of the conclusions about British education and training in the interwar years. It is not, for example, immediately clear that the migrant workers sucked into interwar US automobile plants were better trained and educated than the craft derived workforces of British car plants. To criticise the interwar British economy for both a failure of vocational training and continuing with craft-intensive methods seems to be a little inconsistent.

There are similar concerns about the importance of the competitive environment to BC's conclusions. Of course, it is virtually impossible to measure the degree of competition. There does not seem to be much doubt that the British economy in the 1930s was highly collusive, but whether that uncompetitive environment can be used to explain the persistence of slow rates of British manufacturing productivity growth long after 1945 is more dubious. BC measure the extent of collusion on an industry-by-industry basis by the three-firm concentration ratio, the tariff rate and trade union density. While this may be acceptable for the 1930s, it seems inappropriate for the postwar period. It is certainly true that British industry has shifted significantly towards oligopoly since the later 1950s. Figures for 1977 showed that in 30 per cent of the 162 manufacturing industries covered, the five largest firms accounted for 70 per cent of total output; however, when the same data are broken down into 817 product groups, in over half the cases the five largest firms accounted for 70 per cent of total output (Prest and Coppock 1984, 221-2). At the same time, however, foreign competition has increased in ways which may not be captured by changes in the tariff rate. Import penetration has been rising since the early 1960s initially in response to a major fall in the level of protection following the Kennedy round of GATT. But the tariff was only one factor; a ratchet effect has been observed as foreign suppliers reached the threshold at which distribution and servicing networks became viable (Alford 1988, 42, 79). The relevance of union density figures to competition in this sense is obscure. It certainly does not seem unreasonable to suggest that competitive forces in the British economy have been strengthening since the mid-1960s and certainly the early 1970s and EEC entry. Yet the growth rate of British manufacturing productivity which accelerated during the 1960s was more or less stagnant during the 1970s. BC seem to indicate that only in the Thatcherite 1980s was the industrial climate sufficiently competitive to induce managers to confront the problems of poor productivity, and especially of overmanning which had become institutionalised since the 1930s. But surely they cannot mean that competition is sufficiently intense only when firms begin to collapse like buildings in an earthquake. The introduction of institutional analysis does not solve BC's problems, especially in relation to the role of the trade unions. BC argue that British craft unions sought to retain a share of control over intensity of effort and demarcation. But precisely how this concern translated into inefficient work practices, why British craft unions were able to preserve this position, what the influence might have been on non-craft unions, what unions thought they were trying to achieve is not at all captured by the insertion of a measure of trade union density by industry into a multiple regression analysis.

If Broadberry and Crafts have not been successful in integrating a trade union variable into their model, it does not necessarily follow that trade unions have had an insignificant effect on the pace of productivity growth in British manufacturing. It might simply be that Broadberry and Crafts have not identified the appropriate variable to insert into their regression. It appears obvious, for example, that what is needed is some measure of union strategy rather than of union density. It remains to be seen, however, that differences in union strategy can be presented in quantifiable form, especially as so little interpretative work has been undertaken on the problem. Where Broadberry and Crafts do point the way forward is in their focus on the competitive position in each industry as a critical starting point for the study of the impact of trade union strategies on productivity growth. This is certainly a definite advance on approaches which unions would necessarily inhibit productivity growth simply because they were either collectivities operating in an individualistic environment, or were bound by the logic of collective interest groups in stable societies, or, finally, were pre-destined to wage class war on the shopfloor.

V

The need for careful empirical study is emphasised by the work of industrial economists who have examined the performance of British industries since 1945. Pratten and Atkinson (1976), reviewing 25 separate studies of British firms undertaken between 1944 and 1975 found overmanning and inefficient use of labour in every case, with restrictive labour practices identified as a cause of inefficiency on ten occasions. However, almost every study also identified poor management practices as a cause of low productivity and in ten studies management deficiencies were especially emphasised. It was also clear that overmanning, whether created by union or management, was not the only factor contributing to poor performance. Pratten and Atkinson compiled a long list of contributory factors: differences of scale, differences of lengths of production runs, differences in the age of capital equipment and other differences in the stock of capital. Pratten's own study of productivity differentials within international companies attempted to estimate the relative magnitude of these various factors. He chose international companies because the methods of production ought to have been similar in the various plant of such firms. He found that in 1972 output per man in the North American plant of international companies was almost 50 per cent higher than in the UK, and productivity in German and French operations were 27 per cent and 15 per cent respectively above the UK levels. For comparisons with American factories, differences in the scale of production, and particularly the rate of output of products and the length of production runs, were often the main cause of differences in productivity. In comparing the British with the French and German plant of international companies, Pratten concluded that the less efficient British manpower and other labour practices were as important as differences in scale and capital equipment.

There are, however, problems with this body of literature. These studies give an effective 'snapshot' of the problems of particular industries at a particular time, but they cannot explain Britain's slower rate of growth of labour productivity over time; only comparative longitudinal studies can show if it was consistently easier for competitors to introduce new methods and negotiate appropriate manning levels. This point also applies to Pratten's work on international companies. The choice of multinationals incorporates a strong element of comparative study, but the longitudinal aspect is almost absent and the source of much of his information (interviews - primarily with managers) imparts a suspicion of partiality - the behaviour of workers was regarded as an important source of productivity differentials but management failures in Britain, which other empirical studies have emphasised, was not mentioned as a cause of poor British performance.

In the substantial study directed for the NIESR by Prais (1981) an explicitly comparative framework was adopted in an examination of labour productivity in the UK, the USA and West Germany at the level of manufacturing as a whole and in ten selected industries. In the micro-level studies the utility of an historical perspective was explicitly recognised. In six of these industries, Prais concluded that productivity growth had been retarded by problems in negotiating appropriate manning levels with trade unions when technological improvements had become possible. But Prais's study concerns itself neither with reasons why it was more difficult to negotiate appropriate manning levels in Britain, nor with the attitudes of the parties concerned. If we wish to understand why certain courses of action were or were not taken, we need to examine motivation, and that was no part of Prais's project.

VI

The approach thus far might appear unduly negative; it must be clear that there is no a priori reason to suppose that unions necessarily have a positive or a negative effect on the pace of productivity growth. Neither can positive or negative effects be deduced from the longevity and stability of the union movement nor from the structure and organisation of bargaining associations. But there are also very positive conclusions. We believe that a broad agenda for research on the effects of trade unions on productivity has emerged. On the basis of the discussion above, we would suggest that empirical observation should focus on the following three dimensions: first, the structure and changing markets of the economy; secondly, the origins, scope and strategies of collective bargaining associations; and thirdly, the institutional environment of the organisations, including the political context in which they operate. We can take these conclusions forward in two ways; first, by reporting the conclusions from a comparative study of interwar labour relations and productivity growth in Sweden and Britain to illustrate the importance of and limits to labour market and institutional explanations. And secondly, we offer for discussion the framework for a large-scale study of unions and productivity since 1945.

In interwar Sweden the structure and 'scope' (in Batstone's sense) of bargaining associations allowed capital and labour to identify a general interest for their class and the nation. The growth of the economy and the market opportunities in the decades before 1940 required the rapid shift from agricultural to higher quality industrial production, with the leading sectors being dominated by larger industrial and financial firms. Both employers and workers had the potential for a strong bargaining position, though both suffered seriously in the economic crisis of the early 1920s. These influences can be traced in the evolving structures and strategies of the main bargaining associations as they sought to build a comprehensive front for employers and unions respectively. The power of the national bodies and their capacity for conflict became fully apparent in the late 1920s, but the institutional environment began to change in response to shifts in the political views of trade union members and of other social groups. It is possible to argue that the origin of the 'Swedish model' of industrial relations is to be found in the growing commitment of labour to solidaristic principle on wages, employment and social benefits which led unions to become much more concerned with the competitive position of employers and ultimately to co-operation over the modernisation of Swedish industry in the late 1930s and 1940s. The structure of Swedish bargaining associations showed no great shifts in scope and sophistication but permitted widely different strategies by unions and employers. Equally clearly, the strategies of shopfloor bargaining agents was shaped and coloured by national strategies of the bargaining associations.

In the case of Britain, the contrasts in the pattern of institution-building and conflict are stark. Sectionalism and occupational frictions were almost as apparent amongst employers as among craftsmen and labourers. The structure and scope of organisations reflected the provincial identities of the employers and the demand for district autonomy from the workforce. The formidable cost constraints and institutional rigidities of the manufacturing sector made any consensus on reconstruction extremely unlikely. Employers' leaders were determined to defend the 'managerial prerogatives' of the individual firm against the unions and the state. Issues of technology and organisation on the shop floor were recognised as the battleground for workplace control rather than the means of promoting a common interest in productivity improvement. There was little sign of a growing consensus in wider society despite the rise of labour. Employers and unions took highly defensive positions with regard to wages, employment and social welfare; the aim was to secure an advantage in the labour market and, in turn, this was incompatible with the definition of a consensual national interest. Thus, in this case structure and strategy were more closely intertwined, but it is possible to identify initiatives which might have resulted in institutional reform and which foundered as much on economic collapse as the sectionalism and frictions of the bargaining associations.

Thus, it is the interaction between national institutions and the market position of the national economy which helps to shape trade union behaviour and, hence, the impact of organised labour on productivity growth. Neither the characteristics of the institutional framework nor the relative strength of the national economy is enough by itself to 'explain' trade union behaviour. Thus, our view of development and importance of the 'Swedish system' of industrial relations is subtly different from that of Ingham (1974) in that we place much more emphasis on the market structure and position of Sweden's economic development since the turn of the century. It is also reassuring to note that recent micro-level studies of British industries which purport to offer 'institutional' explanations of relatively poor British performance, do in fact see Britain's problems in terms of the interaction of markets and industrial relations institutions. Thus, Lorenz and Wilkinson (1986, p.128) conclude that 'the failure of the British response in shipbuilding can be understood only by considering the particular technical and market conditions in which the firms operated, and the ways in which these conditions interacted with the systems of industrial relations'. A very similar conclusion emerges from Lewchuk's (1987) work on the failure of the British motor car producers in the 1970s which stresses the evolution of a particularly British method of production and labour management in the formative years of the industry which proved very resistant to change when market conditions became less favourable and led managers to seek more direct control of the production process. Thus, the broad framework which we are suggesting seems to offer potentially useful results.

VII

These favourable preliminary results encourage us to flesh out a methodology in greater depth. Perhaps the most persistent difficulty in explaining the source of productivity growth is the need to disentangle macro and micro levels of causality and analysis. This is particularly important if we are to investigate the claims for 'institutions' having an impact on output and productivity growth. For the single most important facet of economic life since 1945 has been the massive increase in the role of the state in the advanced economies. Governments have taken responsibility for the reform of collective bargaining in an attempt to improve the performance of industry. In the British case, we have the growth of a wide-ranging literature in economics and politics which has emphasised the failure of the British state to take a positive role in the modernisation of a failing economy (Gamble, 1988; Newton and Porter, 1988; Ingham, 1984). The impact of state policies on the actions of managers and workers is of some importance in explaining the context for productivity growth, though it is extremely difficult to trace the complex relationships between macro institutions and shopfloor performance.

Our starting hypothesis is that the positive or negative impact of trade unions cannot be demonstrated a priori. Such an analysis must begin with an examination of the historical structure and evolved strategies of the union itself. Union strategies are the consequence of established practices and responses of the institution to its environment. Any study of union attitudes towards productivity must concern itself with the way in which information is received by the organisation and how leaders communicate with their members. It is not simply a question of discriminating between what is intended and what emerges, but how the strategies emerge from the existing structures of the union. The most obvious part of the environment to which union leaders and members must adapt is the economic situation in which they are operating. Trade unions do not make decisions (or exert influence) in isolation from the labour and product markets in which they function. It is also true that markets are themselves subject to a variety of institutional structures and that the legal and political constitution of society must provide the framework for capital-labour relations. It is the interface between institutions and markets that provides the terrain for trade union activity.

The period in which to study these two aspects of trade union behaviour must contain significant changes in the competitive position of both the macro-economy and individual sectors chosen for detailed study but must also be sufficiently distant to permit some measure of historical detachment. The most obvious difficulty of most of the participants to the 'productivity miracle' debate which we have cited so copiously is that their very closeness to the events they were describing did not allow them to distinguish trend from cycle. These desiderata are met by the period 1945-70. British policy makers had to come to terms first with the extent of the productivity gap which had opened between Britain and the USA during the 1940s, and then face the 'economic miracles' in one European country after another, whilst British output and productivity growth seemed sluggish. British governments innovated an increasingly sophisticated array of policies to prod both sides of industry into more competitive patterns of behaviour. In the late 1940s, the Attlee government tried moral suasion through the Anglo-American Council for Productivity. When this failed, there were a series of measures by the Conservative governments of the 1950s to introduce a series of measures to improve the quality of management and make it more responsive to market forces. In the 1960s there emerged a structure of political bargaining with productivity improvement as one of the key issues on the agenda, not least because the level of effective protection for British manufactures was greatly reduced by the Kennedy Round of GATT. The limits of corporatist management persuaded governments of the need, following Donovan (1968), of a radical reform of trade unions rather than engage in a wide ranging programme of modernising government and industry. Meanwhile manufacturing productivity growth continued to disappoint employers and government alike.

We believe that there is a particular need to investigate the ways in which the trade unions responded both to the bargaining climate (of which full employment was a vital feature) and the policy initiatives outlined in the previous paragraph. There exist good studies of the economic programme of unions in Britain and other countries during this period (Gourevitch et al. 1984). The changing climate of industrial relations has been extremely well covered (Crouch, 1979). Union participation in incomes policy an crisis management has been the subject of various accounts (Dorfman, 1973; Panitch, 1976; Middlemas, 1979; Fishbein, 1984). What we lack is some explanation of how unions perceived this policy process, and how policy-engagement influenced the behaviour of both union leaders and members towards productivity improvement. It seems likely that the leaders were drawn into a shared discourse with politicians and employers, though it is not clear just how this informed the strategies which the unions developed. There is a need to ascertain to what degree government policy objectives were influenced by union thinking and the ways in which policy statements shaped behaviour on the shopfloor. In short, in the critical area of productivity improvement there is a real need for research to identify the extent of convergence between the main participants and the extent to which convergence at the aggregate level shaped behaviour on the shop floor. Such research will investigate the behaviour patterns which are assumed by the most commonly deployed analytical approaches which have been outlined above and will begin to give an empirical base to the study of union strategies on productivity.

Clearly, the choice of micro-level case study is critical. Ideally, it would be possible to select a sector which would permit comparisons with other European countries. The obvious case would be engineering. In Britain (as elsewhere) it is a vital sector for technological diffusion and has been the focus of much discussion of productivity in the period since 1945. It has also been recognised as a pace setter for industrial wages and collective bargaining in manufacturing for much of this period (as has been the case in other countries). Thirdly, the sector has a range of branches with a variety of skill levels and scope for new mass production technologies. Finally, the institutional practices of the main British union (the AEU) have attracted considerable attention and research. It seems clear, therefore, that the engineering sector offers not only an attractive test case in the British context, but also ample scope for comparative study.

Logistical considerations dictate that it would be sensible to take two contrasting branches of engineering and examine shopfloor strategies in areas with obvious implications for productivity growth. It would be sensible to take one firm in the medium-heavy sector, preferably with a secure market and a male, craft base and another in a lighter sector of consumer durables in a more volatile market and using cheaper female labour with fewer recognised manual skills. The aim is to use firm- and plant-level records to examine behaviour in response to the following key areas of production: the introduction of new technologies, training, supervision, and incentive pay. We hope to obtain documentary sources and a series of interviews with shopfloor union officials, line management and those responsible for the negotiation of company or plant collective agreements. Clearly, it is unlikely that studies in other countries will exactly replicate the branches of engineering which we hope to choose in Britain. The strategic position of the case studies is much more important than the precise nature of the business carried on within the firms chosen for study.

What we hope to construct is a rather more complex picture than that stated with such authority by Donovan more than two decades ago. Donovan (1968) identified in Britain 'two worlds' of industrial relations (the world of formal procedures and bargaining, and the world of shopfloor practices) which were in conflict. On the key question of labour productivity, it is possible that there was a third, superimposed level of macro-economic policy formulation which had neither the authority of formal agreements nor the continuous flexibility of shopfloor practices. It is in the interaction of these three levels that explanations of trade union strategies on productivity must be located. It is certain that some part of the explanation of differences in rates of productivity growth must lie in the differences between countries in the ways that the macro-economic, formal industry level, and shopfloor negotiations are interrelated and conducted. It is our view, however, that the existing models described above fail to appreciate the complexity of the problem. If trade unions have obstructed productivity improvement it might have come either at the leadership or the shopfloor levels, or both: if only one level is primary obstructive, then channels of communication and control must also form part of the problem. The proposed method of approach would also permit a conclusion that unions were prepared to co-operate with productivity-enhancing measures but were frustrated by poor management or by a government machine which could not provide the economic and social climate conducive to rapid productivity change at the shopfloor level. We suggest that there are more realistic alternatives than the over-simplified approaches with which we began.

In helping to evaluate the evidence which we hope this project will generate, we have constantly referred to the benefits of comparative study. This project has grown out of existing collaborative work at Exeter and Uppsala Universities on interwar productivity, including the survey of Swedish and British union strategies reported above. The work proposed in this paper complements parallel studies already being planned at Uppsala and Gothenburg and should enable us to address more sensitively the complex question of trade union strategies on productivity in two industrial countries in the long boom. Both the Swedish and British projects also form part of a much wider research initiative on the broader question of trade union strategies directed from the European University Institute (see Abelshauser and Dartmann, 1990). This forms an excellent milieu for the study and discussion of trade union strategies, both on productivity and in more general terms.

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