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The re-emergence of small enterprises: Industrial restructuring in industrialised countries

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I. Introduction and summary

The role of small firms in the economy and their influence on labour markets has engendered a good deal of controversy recently. The idea that small firms, or at least some small firms, might hold the key to economic regeneration may have seemed eccentric 15 years ago, but now such ideas appear attractive to many at various points on the political spectrum. This paper has two main aims: the first is to examine the development of small firms in the United Kingdom and to look at some of the implications of recent changes; and the second is to review some of the existing material on small firms.

Piore and Sabel [1984] have argued that many developed countries have now reached a point at which there is a choice between pursuing economic prosperity by further development of mass production, reinforced by the economic institutions and policies required to make such systems viable, and encouraging the development of a small firm sector using different forms of economic and social co-operation. A renewed emphasis upon market as opposed to hierarchical co-ordination can be found in their argument, but it is a market supported by a strong body of social institutions. These institutions enable market co-ordination and competition to be combined with a greater degree of "high trust" relationships between firms than is normally associated with free market competition in which the contract is supposed to dominate trust. As will be seen in the course of this chapter, their argument leads one to highlight one of the weaknesses of the small firm sector in the United Kingdom compared, for example, to the Federal Republic of Germany, or their own examples from Italy; namely, the apparent absence of strong social organisations of small firms. Although many of the hallmarks of Piore and Sabel's theory seem absent or underdeveloped in the United Kingdom, there has nevertheless been a marked growth in the employment share, and some decline in the size of units of production used by large firms. Whether or not Piore and Sabel's thesis is borne out for the United Kingdom - and most of the existing data reviewed in this paper cannot give a clear answer - it is still important to assess the implications of this change in the structure of the British economy for labour market policies and for regulation of labour markets.

This paper seeks, as far as possible, to follow the standard format used for all the countries involved, thus facilitating comparisons. It falls into five sections. Section II deals briefly with typologies of small firms and their relations with other firms. It also compares the numerical importance of small firms in the United Kingdom with that in some other European countries, showing this to be smaller in the United Kingdom, although the

gap has been reduced in recent years. The evidence that small firms are commonly "satellites" of larger ones receives only limited support, and this accounts for the inapplicability of some of the "dual labour market" theories developed in other countries. Nevertheless, the problems of low pay and poor working conditions have proved more difficult to tackle among small firms, although such firms have often been competitors with, rather than satellites of, larger, better paying, and more strongly unionised firms.

Section II also examines some of the institutional arrangements for the representation of small firms, which is much weaker than in many countries of continental Europe. In several cases, such representation has arisen from the feeling among small firm owners that organisations designed to represent all firms are inadequate for their special needs, and they subsequently break away. Part of the weakness of small firms organisations could stem from their diversity, but if this is so, it would be interesting to know how such problems have been overcome in, for example, the Federal Republic of Germany.

Union recognition is less common in small establishments,[1] and there is a greater tendency than elsewhere for reliance upon multi-employer bargaining arrangements. But even among small establishments, establishment level bargaining is often the norm, perhaps reflecting the weakness of collective representation of small firms noted earlier.

Section III deals with the long-term historical, and recent, evolution of small firms in the United Kingdom. In manufacturing, for which the data are best, small establishments declined in share of output and employment until the late 1960s. Evidence of a similar decline in small retail shops could also be found for the post-war period. In manufacturing, one of the most important developments was the rise of giant multi-establishment firms. Many of the reasons commonly put forward for the decline of small firms, such as those relating to marketing, finance, transportation, and technical economies of scale appear to explain the decline of small firms as the inverse of factors explaining the rise of giant firms, and so implicitly presume that the provision of many such services from within the firm is more efficient than from outside.

As concerns changes during the 1970s, Section III documents in particular the resurgence of small establishments, especially after the deep recession of 1979-82. Within manufacturing, this resurgence affected all branches, but in retail distribution - the services sector for which the information is clearest - it seems that although the decline stopped, such increases did not occur. The structural aspects of the changes of the 1970s are also considered, notably the characteristics of new firms, and the questions of concentration and dependency. Production, construction, the retail and catering trades account for most business starts, and in these sectors the median completed life of firms is about four years. Most small firms deal with local markets, and many depend on a few major customers.

1. The terms "establishment" and "plant" are used interchangeably in this chapter, as are those of "enterprise", "firm", and "business". For stylistic reasons, the less cumbersome terms "plant" and "firm" are used frequently.

Ownership concentration increased during the 1970s, continuing a much longer-standing movement, and the number of establishments owned by the 100 largest firms increased by about 14 per cent. However, the average size of these establishments decreased in line with the overall decrease in average establishment size. Small firms appear to have played a bigger role in job creation, as in the United States, but this occurred in a period of employment shake-out in large establishments, and so may not be typical.

Section IV examines factors in the economic and social background to the development of small firms, and the reasons for their development. Labour costs have been lower in smaller establishments, and unit labour costs may also have been lower in the early 1970s. However, any unit labour cost gap appears to have been eliminated by 1983. If this is sustained by a more rigorous analysis, it may suggest that the labour cost advantage of smaller establishments has been a factor in the move to smaller establishments, at least in the United Kingdom. At the same time, the elimination of the unit labour cost differential could have been the purpose of heavy labour shedding by many large establishments after 1979, of which the car, steel, and shipbuilding industries provide some good illustrations (and also show the role of industrial relations in such changes).

Section V covers aspects of small firm development, but it was not possible to include much evidence of small firm communities in the United Kingdom, despite the historical importance of industrial districts. This weakness may be related to the comparative weakness in the United Kingdom of small firm collective organisations.

Section VI looks at government attitudes and policies towards small firms. In terms of government influence, employment law does not appear to have harmed small firms, although the present government has removed small firms from coverage under some provisions. The government has also acted to help small firm finance, one of the most important steps being its fiscal support of the unlisted securities market since its foundation in 1980.

The chapter concludes by arguing that the resurgence of small establishments may be an important development, but that much depends upon the reasons for it. If it is primarily because unit labour costs escaped management control in large establishments during the 1960s and 1970s, then the apparent reduction of the cost disadvantage of large establishments may neutralise further development. But the reasons for this loss of control are complex, and a return of the unit labour cost disadvantage depends on the reversibility of the changes occurring in labour and product markets and in management methods and industrial relations since 1979.

Small firm development has been favoured by a number of other factors, including changes in the cost and the flexibility of some capital equipment, new forms of management organisation for small firms, and moves by governments and by some large employers to "deregulate" labour markets. These, too, have important consequences for labour protection and collective bargaining, and the difficult problem of potential trade-offs between these issues and employment promotion.

II. Characteristics and extent of small firms

1. Definition of small firms

There is no institutional definition of the small firm sector in the United Kingdom arising from any special legal status similar to that of the West German *Handwerk* or the French *Artisanat* sectors. The Bolton Committee, which reported in 1971, established a statistical convention for its own purposes by taking small firms in manufacturing as those with under 200 employees. But with the gradual change in the concerns of policy and research, this definition has slowly become less influential, and the OECD's convention of 100 employees, because of its wider reference, is likely to become more widely accepted. In any case, a crude statistical threshold is bound to be arbitrary, and unsuited to the investigation of certain problems.

2. Volume and employment share of the small firm sector

During much of the post-war period, the United Kingdom has had a relatively weak small business sector in numerical terms. In the early 1960s, its share of small establishment (fewer than 100 employees) manufacturing employment was the lowest of the 13 advanced industrial countries surveyed by the Bolton Committee, at 31 per cent, against 34 per cent for the Federal Republic of Germany, 39 per cent for the United States, and 66 per cent for Italy. Ganguly's [1982] estimates for a period 10-15 years later suggest that the gap has narrowed owing to a faster decline in small firms in the other countries, except the United States and Canada. The results of the 1981 Eurostat Labour Cost survey show the United Kingdom to be closer to the position of the largest EEC economies, especially in manufacturing, but still very different in retail distribution, banking and insurance. In the latter sectors, the dominance of large firms in the United Kingdom is very striking.

The picture in Table 1 is somewhat distorted by exclusion of establishments and firms with fewer than 10 employees. In the United Kingdom, in 1982, these accounted for 5 per cent of manufacturing employment, but 31 per cent of retail employment. In addition, recent comparisons of the small firm sectors in the United Kingdom and the Federal Republic of Germany reveal many more very small firms in the latter [Bannock, 1976; Prais et al, 1981; Doran, 1984]. It may, therefore, understate the difference between the United Kingdom and other countries. This might explain the rather different emphasis in research on small firms to that found in, for example, Italy or the Federal Republic of Germany.

The boundary between small firms and other forms of employment activity is not a clear one in economic terms, and so it is worth comparing also the level of self-employment in the United Kingdom with some other countries (Table 2). Self-employment is also less developed in the United Kingdom than elsewhere, even when agriculture is excluded, but there has been a marked increase since the severe recession of 1979-82.

Table 1: Employment share by enterprise size, 1981

Sector	Enterprise size: less than 100	10 - 199	more than 1000
Industry + construction	25.9	37.4	32.7
Manufacturing	27.1	36.9	29.2
Wholesale distribution	42.2	48.4	38.6
Retail distribution	35.3	39.1	50.1
Banking	0.8	1.5	95.5
Insurance	2.6	4.8	80.0

Notes: Industry = establishments, services, enterprises.
Industry and construction = NACE 1-5;
Wholesale = NACE 61, 64, 653-56;
Retail = NACE 64 + 65 except 651 and 652;
Banking = NACE 812/813;
Insurance = NACE 82.
Establishment = "local unit".
Source: Eurostat/LCI.

Table 2: Percentage self-employed in industry and services, by gender, 1979 and 1983

Year	Industry: Male	Industry: Female	Services: Male	Services: Female	All workers ('000s)
1979	2.1	0.1	3.3	1.1	23 804
1983	2.8	0.2	4.2	2.1	22 473

Source: Eurostat Labour Force Survey.

One contributory factor to the lesser development of small firms and self-employment in the United Kingdom is the relative concentration of taxation upon wages and salaries instead of upon firms. The proportion of total labour costs represented by statutory social charges in the United Kingdom remains light by EEC standards, so there is correspondingly less incentive to avoid tax by subcontracting to moonlighting firms and individuals. For industry and construction, statutory social charges in 1981 accounted for 17 per cent of total labour costs in the Federal Republic of Germany, 19 per cent in France, and 23 per cent in Italy, but only 9 per cent in the United Kingdom.

3. Types of small firms

As in all countries, there is great diversity among small firms in the United Kingdom. Some of this has been given institutional expression through the organisations created to represent small firms but, as will be seen later, there is no institutional equivalent to the organisations of the German *Handwerk* sector, nor to those of the French *artisanat*. There is a variety of legal forms of small firms running from those quoted on the stock exchange, through partnerships, to sole proprietorships, and self-employment (Table 3). But many of the collective organisations, for example in those sectors where partnerships are strong, are based primarily on the type of activity (legal, medical, etc.) and not the scale or type of organisation. If such lines of cleavage are weak in the United Kingdom, what other bases of typologies have been discussed?

Table 3: The legal status of small enterprises by economic sector, 1970

Enterprise size	Legal status of small enterprises					
	Quoted companies	Non-quoted limited companies	Unlimited companies	Partnerships	Sole proprietorships	Total
Manufacturing						
Enterprise size						
1 - 24	0.0	77.4	2.6	7.4	12.6	100.0
25 - 99	1.0	94.6	1.1	2.3	1.0	100.0
100 - 199	5.4	91.7	1.6	0.7	0.7	100.0
Non-manufacturing	0.3	33.3	0.4	20.3	45.8	100.0
Retail	0.4	34.5	0.6	22.6	41.8	100.0

Notes: Definition of small firms: manufacturing, fewer than 200 employees;
non-manufacturing: construction, fewer than 25 employees;
motor trades, turnover less than £100,000;
retail, less than £50,000;
wholesale, less than £200,000;
catering, all excluding multiples and brewery managed public houses;
road transport, fewer than 6 vehicles.
Turnover values in real terms using 1963 prices.

Source: Bolton [1971, p. 6], based on questionnaire sample survey.

There are two strands to thinking about small firms in relation to labour market segmentation. One relates to theories of dependence of small firms producing for larger ones, providing them with a greater degree of cost flexibility in recession. The second strand relates to the problem of low pay. For many years it seemed doubtful that there was any simple identification that could be made between small firms and "secondary labour market"

conditions. In the early 1970s there was not much evidence that small firms were fulfilling such functions in the economy. Indeed, the Merrett Cyriax survey [1970] found that 78 per cent of small (fewer than 200 employees) firms in manufacturing were in competition with large firms, 16 per cent were specialists, and only 6 per cent were what they called "satellites" of large firms. Only 35 per cent of small firms were dependent for more than 25 per cent of their business on a single customer [Bolton, 1971, p. 32]. The proportion of "satellites" would diminish further if the sample included retail shops and partnerships in many services.

According to the second strand, small firms have been seen as part of the problem of low pay (see Tables 13 and 14), but this is a separate question from that of the links between large and small firms [for a recent discussion see Craig et al., 1984]. Indeed, often such small firms have been seen as a threat to larger firms offering union rates and conditions, a point raised in the defence of the Wages Councils and the Fair Wage Resolution (forms of minimum wage protection) by several members of the Confederation of British Industry in its consultations on minimum wage policy in 1984 [see Chronicle, *British Journal of Industrial Relations*, November, 1984].

Reflecting the concerns of the time, the Bolton Committee's chief interest in small firms arose from their potentially beneficial role in the economy as a source of innovation and new ideas, and in maintaining competition; in particular, what Lydall [1979] later characterised as "entry and product market competition". Completed shortly afterwards, Boswell's [1973] study of small firms stressed the "two-edged" nature of the sector: on the one hand, a source of vitality and renewal; and on the other, an area of inefficiency and decay, something which had also been of concern to Bolton.

Interest in small firms has revived recently because of changes in some employers' policies, and the present government's policy to "deregulating" labour markets. For example, in October 1985, the Director General of the Engineering Employers' Federation (EEF) James McFarlane, boldly stating many of the points on the EEF's negotiating agenda with the engineering unions, urged further moves towards more flexible employment patterns. Notably, he urged contracting out such functions as security and catering; offering temporary contracts to semi-skilled workers when orders so justified; employing easily acquired staff, such as telephonists and truck drivers, on standard terms; and offering superior conditions of employment, including job security, to key permanent workers, electricians and toolmakers, who would be expected to offer complete job flexibility. Beyond statements of bargaining intention, Atkinson's [1986] case studies suggest that a number of firms have been seeking to adopt more flexible employment patterns. Firms have sought flexibility of deployment between jobs for core employees, and a range of practices from temporary contracts to contracting work out for activities the demand for which is likely to fluctuate, or which are not central to the firm's main business. In these examples, the reason for contracting out is one of cost, but it is a cost arising from under-utilisation of labour due to fluctuating output demands and the difficulties of redeploying labour within the firm, rather than one arising from

subcontracting to individuals or organisations which can avoid taxes and social charges.

The present government has also come to regard small firms as a source of vitality and job creation. It has pursued a variety of policies designed to alter the environment in which small firms work, including changes in industrial relations, dilution of social legislation for small firms (e.g. maternity benefits), removal of impediments to firms taking on new labour, plus measures to boost youth employment which small firms have utilised a great deal. This emphasis on small firms is particularly strong in the government's 1986 white paper on deregulation [*Building business ... not barriers*, United Kingdom Government White Paper] and this has been sustained in the Government's 1988 Industry White Paper.

Recently there has also been much discussion of particular types of small firms, for example those organised by "franchising", especially in distribution, and technological "spin-offs" in which small firms are established by former employees of large R & D-based firms. It is, however, very difficult to assess the extent of these developments (see for example *Financial Times* special supplement 1 April 1986).

4. The collective organisation of small firms

The *Handwerk* sector in the Federal Republic of Germany plays an important institutional role in regulating the life of small businesses by defining the training content and minimum standards for a particular trade, and by providing comprehensive sectoral representation for its businesses. No such comprehensive arrangements exist in the United Kingdom. They are much more piecemeal, and much less comprehensive in their coverage, their representation, and their regulation of standards. There is no compulsory registration of small firms other than that arising from legislation affecting all firms, such as the 1961 Factories Act which regulates health and safety in all establishments employing manual workers, the obligation to register for Value Added Tax (VAT) if annual turnover exceeds a certain limit, for taxation, and for filing annual reports under the Companies Acts.

Differences in the legal status among small firms provide an illustration of the diversity of the small business sector. In manufacturing, sole proprietorships are important only among the very smallest firms, and the predominant form is that of limited companies not quoted on the Stock Exchange (Table 3). Outside manufacturing, sole proprietorships are more important, except in construction and in wholesale distribution, which are closer to the pattern for manufacturing.

Small firms are represented by a number of organisations including trade associations, employers' associations, chambers of commerce, and some organisations specially for small businesses. Particularly important for small engineering firms is the Engineering Industries Association (EIA), and the Engineering Employers Federation (EEF). The latter negotiates minimum rates of pay, overtime provisions, standard hours and training provisions with the Confederation of Engineering and Shipbuilding Unions for the whole

industry. Although not specifically intended for small firms, many large engineering firms have left the EEF on the grounds that it represents more the interests of smaller firms. Small firm participation in such bodies is not very great. Doran estimated that the small firm membership density in the EIA was only 5 per cent, although it is higher in some other activities (as high as 60 per cent for the British Printing Industries Federation). He estimated that over all sectors, only about 7.5 per cent of small firms were members of a trade association or an employers' organisation [Doran, 1984, pp. 38-39].

Broader forms of representation are provided by the Confederation of British Industry (CBI), which has a long-standing interest in small firms through its Small Firms Council, and the Association of Independent Businesses, which broke off from the CBI in 1968. Another important organisation is the National Federation of the Self-Employed and Small Businesses, set up in 1974. Its foundation was stimulated by the self-employed sector's protest against the Social Security Amendment Act (1974), which required them to pay a National Insurance contribution of 8 per cent of gross profits. It also stimulated the formation of two other bodies, the National Association of the Self-employed (NASE), and the Association of Self-employed People (ASP). VAT and employment legislation provided major campaign issues notably in connection with complaints about harassment by the tax authorities, unfair dismissal compensation and maternity rights [McHugh, 1979]. For these and other representative associations for small businesses, political and economic influence is greatly weakened by their relatively small and diverse membership. This may not appear surprising in the light of the desire of many small business owners for independence, but it seems unlikely that small businessmen in other countries have any lesser preference for independence.

A. Industrial training

A system of industry training boards was set up by the 1966 Industrial Training Act, and revised by the Employment and Training Act (1973). It provided for a training levy to be raised on all employers within the scope of a particular board, and the money to be used to reimburse employers providing apprenticeship training. Small firms were exempt from the levy, but the benefit to such firms has been reduced over time. The levy was reduced in 1973, and several training boards were abolished in 1981. On the other hand, small firms have been major beneficiaries of a number of government employment subsidies, especially for young workers, such as the Young Workers' Scheme, and the Youth Training Scheme.

5. Employment and work in small firms

Information on management and employee relations in new firms is not readily available, but as most new firms are small ones, an approximation may be obtained by looking at evidence on employee representation and pay and conditions in small firms. Unfortunately, much

of the statistical material on management and industrial relations in small firms does not distinguish between new and established small firms.

A. *Labour costs and wage levels*

It has often been argued that small firms play an important part in secondary labour markets, offering lower labour costs and poorer working conditions than larger firms. On the labour supply side, small firms can recruit lower wage groups who are prevented, by family obligations, from travelling to work in higher paid firms. The small firms thus offer convenient location instead of good pay. On the demand side, many small firms are more closely tied to local markets, and if they do supply a local large firm, a degree of monopsony may enter their relations, restricting the small firm's capacity to offer better wages. In addition, small firms are less highly unionised, and so are less likely to pay the union mark-up. Recent estimates in the United Kingdom suggest a mark-up of about 8 per cent in aggregate [Stewart, 1983].

Labour costs are lower in smaller establishments, as is shown by Eurostat's labour cost survey (Table 4): £363 a month in establishments with 10-49 employees, against £420 in those with 50 or more employees. The structure of labour costs is broadly similar, the main difference arising from a smaller proportion of voluntary social payments and payment for days not worked in the small establishments. The voluntary social payments include redundancy payments, plus all other non-statutory social payments, and probably reflect the stronger degree of unionisation of larger establishments (see Table 7).

There is evidence that expenditure on vocational training is higher both absolutely and as a proportion of labour costs, in small firms (Table 4). This may be because smaller firms make greater use of apprenticeships than do larger firms, as they employ a higher proportion of skilled and craft labour (Table 5). The larger firms employ a higher proportion of semi-skilled workers whose main training takes place informally on the job, and as such is unlikely to figure in company accounting systems. This would reduce the real difference in training expenditures, but might not eliminate it, as apprenticeships are more expensive and provide a higher quality of skill.

However, earnings and labour cost data from the production census and the labour cost survey say nothing about the possible effect of differences in the type of workforce used. The engineering industry is particularly interesting because it provides a degree of homogeneity both in terms of the industrial activities undertaken and of the types of skill used, although it is confined to male manual workers. Thus, if larger firms were considering decentralising production, or subcontracting major activities to other firms, they might well do it within the same industry.

In engineering, it is clear that differences in pay levels and in working conditions prevail even for workers with the same skill level between small and large establishments. Surprisingly, if one remembers the growth in small firm employment during the 1970s, pay differences between

Table 4: The structure of labour costs in small establishments in industry and construction (NACE 1-5), 1978

Labour cost component	Size of establishment (no. of employees) 10 - 49	50 or more
Direct earnings	75.4	71.8
Periodic bonuses	1.7	1.0
Payment for days not worked	7.1	8.5
Pay in kind	0.3	0.3
Total direct costs	84.5	81.6
Statutory social security	(10.1)	8.7
Voluntary social payments	(3.2)	6.8
Total social payments	12.6	15.5
Vocational training	2.5	1.8
Other	2.9	2.9
Total labour cost (£ Sterling)	363	420

Note: Estimate for 10-49 size range obtained by extracting range less than 50 from that less than 10. Vocational training expenditure includes apprentices' pay.
Source: Eurostat Labour Cost Survey.

Table 5: Weekly earnings and skill composition of manual workers in the engineering industry, by establishment size, 1970 and 1980

(% of all engineering)

Skill group	Average weekly earnings (1) 1970		1980		Employment share 1970		1980	
	Establishment size (no. of manual employees)							
	25-99	500 or more	25-99	500 or more	25-99	500 or more	25-99	500 or more
Maintenance	99.5	121.9	105.8	120.6	4.4	4.9	3.4	5.9
Toolroom	101.8	118.3	109.1	113.2	4.7	4.2	4.8	3.7
Other skilled	93.7	110.9	100.6	110.5	49.0	34.8	53.5	33.1
Semi-skilled	83.9	100.0	85.3	95.6	32.6	50.3	31.2	52.4
Unskilled	69.7	81.2	74.9	87.6	9.3	5.9	7.1	5.0
All manual	88.9	104.5	94.6	102.2	100.0	100.0	100.0	100.0
Total ('000s)					107.4	643.8	166.4	441.5

Note: (1) Average gross weekly earnings in all engineering: 1970 £28.67; 1980 £105.93.
Source: UK/GB/EESC.

large and small establishments were considerably reduced during that period (Table 5), and the reduction in the differential in weekly hours shows that this also occurred in hourly pay rates.

Two factors may be relevant. First, incomes policies of the 1970s, combined with the two periods in which bigger percentage increases were allowed for the lower paid (1972-73 and 1975-77), may have held back pay increases in larger establishments (especially because more visible) and also pushed up the lower paid small establishments. It may seem ironic that employment should also have increased in small establishments. However, the second factor may be that the crisis of 1979 and after hit large establishments hardest (see below).

For a view of non-manual workers' earnings it is necessary to turn to the workplace industrial relations survey. Differentials by plant size within occupations appear slightly larger than in engineering, but the present survey covers the whole economy and includes women. Table 6 shows that clerical pay increases about the same amount with plant size as it does for manual workers, but pay increases most for middle management. The advantage small firms have in labour costs must be considered together with their relative disadvantage in labour productivity. Labour costs and labour productivity together determine unit labour costs, which are discussed later (Table 13). Nevertheless, despite offering lower pay at each skill level than large plants, in the early 1980s, small firms did not pay so much less as to constitute a low paid sector.

B. Working conditions

Another important change is that the differential in hours of work between small and larger engineering firms has narrowed considerably. Payment by results (PBR) systems have often been associated with unpleasant working conditions, and a work environment in which co-operation between workers is undermined. In this respect, small firms might appear to offer better working conditions than larger ones (Table 7). Here again, differences have narrowed between large and small establishments, with the decline in PBR in large establishments and a small increase in small ones. One reason for the move away from PBR in large firms was the increasing difficulty that management had in controlling such schemes, a factor which could be related to the higher levels of strike activity in large plants (Table 8).

C. Differences in skill composition

One final point worth noting is the difference in structure of the workforce in small and large plants, especially with regard to skilled and semi-skilled labour. Unfortunately, 1980 was probably too soon to see the effects of microelectronic technology on skills, but the difference in fixed capital investment can surely be seen in the higher proportion of semi-skilled workers in the larger engineering establishments (Table 5).

The different skill composition may also be indicative of a different relation with labour markets. Smaller firms rely more on workers with

Table 6: Weekly earnings (£) of non-manual workers, by skill level and establishment size, 1980

Skill level	Establishment size (no. of employees)							
	25-49	50-99	100-199	200-499	500-999	1000-1999	2000+	All sizes
Semi-skilled	67	76	75	80	83	85	88	74
Skilled	90	97	95	103	104	107	110	96
Clerical	69	72	73	75	75	75	84	72
Middle management	117	121	121	125	132	135	143	121

Note: (1) £ per week.
Source: *Workplace Industrial Relations Survey* [1980], Daniel W.W. and Milward N. [1983] p. 266.

Table 7: Working hours and payment systems in engineering, by establishment size, 1970 and 1980

	Working hours				Payment systems			
	1970		1980		1970		1980	
	Establishment size (no. of manual employees)							
	25-99	500 or more	25-99	500 or more	25-99	500 or more	25-99	500 or more
Time rates	46.1	44.5	42.6	41.6	72.0	50.2	68.0	65.2
PBR (1)	44.6	42.6	40.7	40.7	28.0	49.8	32.0	34.8
All workers	45.7	43.5	42.0	41.3	100.0	100.0	100.0	100.0

Note: (1) Payment by results.
Source: UK/GB/EESC.

Table 8: Trade union recognition by type and size of establishment, 1980 (*proportion of establishments that recognised manual trade unions*)

Type of establishment	Size of establishment (Number of manual workers employed)					
	Total	1-24	25-49	50-99	100-199	200+
All establishments	50	25	43	63	78	91
Independent establishments	31	16	24	50	66 (1)	67(1)
Establishments part of a group	58	28	55	68	81	92

Note: Union recognition for manual workers; private sector.
Source: Daniel and Millward [1983], p. 25.

readily identifiable skills who can be hired directly from their local labour markets, instead of relying on their internal markets. The latter option is more available to larger establishments. However, as has been argued elsewhere [Marsden et al. 1985], the existence of occupational labour markets for skilled labour in the United Kingdom, coupled with the patterns of occupational defence used by skilled workers, has meant that many British firms have much less scope for organising strong internal markets based on upgrading even in large establishments.

D. Patterns of worker representation

It has long been known that unionisation has been weakest in small firms. The reasons for this difference include the less bureaucratic and more personalised relations in small firms, and the fact that unions have only limited resources to service members scattered in small firms. The 1980 workplace industrial relations survey confirms this view, showing that union recognition (for bargaining purposes) declines sharply with establishment size, from nine out of ten establishments with more than 200 employees, to only one in four among those with under 25 employees. In small establishments which were not part of a larger firm, it fell to only one establishment in six (Table 8).

For establishments which do recognise unions, the Warwick survey [Brown (ed.) 1981] showed that, in manufacturing, multi-employer bargaining predominated among small establishments (fewer than 100 employees, Table 9). Nevertheless, the amount of single employer bargaining was high even among small establishments, and higher still for non-manual workers. The importance of single-employer bargaining may, allowing for differences in size definition and coverage, help explain the low participation by small firms in employers' organisations and trade associations mentioned earlier. Nevertheless, the Warwick finding that 44 per cent of establishments with 50-99 employees had multi-employer bargaining seems to be high compared with Doran's [1984] estimates of small employer participation in multi-firm organisations.

The union weakness in small firms has caused many unions to regard government policies which favour small firms as part of a wider policy to undermine collective bargaining and to weaken the unions' influence on the economy. The main response by the unions so far to the rise of employment in firms in which they are most weakly represented has been twofold. First they have campaigned against contracting-out, with some success in the public sector, notably the National Health Service and local government, but less success in the private sector. Indeed, a number of the recent flexibility agreements have specifically included a provision for use of contractors, but with a common proviso that the existing workforce should not be available to do the work. The second response, again as much motivated by public as by private sector considerations, has been the decision to press for a national minimum wage, adopted, after long preparation, at the Trade Union Council's annual congress on 3 September 1986.

E. Industrial relations in small firms

Strike patterns might be taken as a very crude indicator of the climate of industrial relations. It has been observed in a number of countries that strike frequency increases with plant size, and this has been taken as an indicator of the more difficult nature of industrial relations as the size of production units increases. Strike frequency increases with plant size, but only up to plants with about 500 employees, after which it levels off. This could indicate that in larger plants there is some tendency to organise action into larger disputes, and to group grievances together which in smaller plants could lead to a stoppage. Working days lost per thousand employees shows a more continuous rate of increase with plant size (Table 10).

Prais et al. [1981] take the analysis further providing comparisons with strike patterns by plant size in the United States and the Federal Republic of Germany. They show that, for 1965-75, strike activity increased most with plant size in the United Kingdom, followed by the United States, with the Federal Republic of Germany a long way behind. At least one of the authors has taken this to be an indicator of management's lesser ability to run large plants in the United Kingdom, given their pattern of industrial relations as compared with the other two countries [Jones, 1981]. This point has been further supported by an analysis of the United Kingdom's productivity gap with the United States [Davies and Caves, 1987]. These observations perhaps call for some qualification of Bolton's argument that the rise of large firms in the United Kingdom had been helped by the development of expertise in managing large production units.

III. Quantitative development of the small firm sector

1. Long-term trends

The Bolton Committee [1971] reported towards the end of a long period of decline of small firms in the British economy. It was a period in which many of those concerned with economic and industrial policy still looked to giant enterprises as the way to rationalise and restore the economy. The British car firms had been amalgamated to form the ill-fated British Leyland Motor Corporation (later to become BL) in 1968, and the steel industry was still to embark upon a huge investment in large-scale production facilities intended to capture the economies of scale enjoyed by large firms in Japan and South Korea. Consequently, much of its evidence documented the decline of small firms, especially in manufacturing, but later also in certain services, and sought to explain the decline and suggest policies that could sustain the small firm sector as a spur to competition.

After a small rise during the 1920s, the number of small manufacturing firms declined sharply after 1935. Whereas the employment share of *establishments* with fewer than 200 employees stood at about 44 per cent between 1924 and 1935, it declined to 37 per cent by 1948, and to 31 per cent by 1963. Their share of net output similarly fell from about 40 per

Table 9: Bargaining patterns in manufacturing by worker status and establishment size, 1977-78

Worker status *Level of agreement*	Establishment size (no. of employees) 50-99	100-199	200-499	500-599	1000+
Manual workers	% of establishments				
Multi-employer	44	33	32	23	15
Single-employer	39	59	60	70	84
of which:					
Corporate	7	11	15	16	32
Establishment	32	48	45	54	52
Other	-	2	1	2	1
No bargaining	17	5	6	4	-
Total	100	100	100	100	100
Non-manual workers					
Multi-employer	23	18	15	9	4
Single-employer	43	56	64	72	85
of which:					
Corporate	7	16	23	22	39
Establishment	36	40	41	50	46
Other	2	1	3	3	2
No bargaining	32	25	18	15	8
Total	100	100	100	100	100

Source: Brown [1981], pp. 9 + 14.

Table 10: Industrial stoppages in manufacturing by size of establishment, 1971-1973

Establishment size (no. of employees)	Working days lost per 1,000 employees	Number of stoppages per 100,000 employees
11-24	14.8	8.0
25-99	72.4	19.2
100-199	155.0	23.0
200-499	329.1	25.4
500-999	719.4	29.7
1000-1999	1127.8	26.7
2000-4999	2075.4	29.4
5000 +	3708.0	31.7

Note: Annual average 1971-73, Great Britain.
Source: Smith et al. [1978], p. 57.

cent to 27 per cent. The employment share of small *enterprises* fell from 38 per cent in 1935 to only 20 per cent in 1963 [Bolton, 1971, pp. 58-9]. A similar decline in employment share of small manufacturing establishments between the 1950s and the middle 1960s occurred in a number of other countries, including the Federal Republic of Germany, Sweden, France and Japan, but not in the United States and Canada. In the United States, part of the increase was the result of a move to more multi-plant enterprises [Bolton, 1971, p. 70].

Equally striking was the growth of giant firms. Between 1958 and 1970, the number of employees in firms employing more than 50,000 people more than doubled from 547,000 to 1,181,000 [HRCP, Table 15]. Over the same period, the concentration of industrial output increased as the share of net output by the 100 largest firms (defined in terms of net output) increased from 22 per cent of manufacturing net output in 1949 to about 40 per cent in 1970 [Prais, 1976]. It remained at more or less that level through the 1970s, and early 1980s (41 per cent in 1983, Census of Production). Merger activity remained through the early 1980s at a level well below that reached in 1972-73.

Table 11: Employment and share of net output in manufacturing, by enterprise size, 1930-1983

Year	Enterprise size (no. of employees) 1-24	25-99	100-499	500-999	1000+	Total ('000s)
Employment						
1930	12.8	16.1	32.7	38.4		5 554
1948	9.9	16.9	32.2	13.5	27.5	7 080
1954	8.4	15.7	32.4	13.1	30.4	7 672
1963	8.0	12.2	30.7	14.2	34.9	7 952
1970	7.3	11.1	27.0	13.9	40.6	8 033
1974/5	19.7		25.3	13.3	41.8	7 467
1983	26.2		27.0	13.3	33.5	5 079
Share of net output						
1930	12.3	15.4	30.6	41.6		1 191
1948	9.4	16.9	32.6	13.6	27.4	3 954
1954	7.6	13.7	30.9	13.7	34.2	6 235
1963	7.1	10.5	28.6	14.8	39.0	10 820
1970	16.4		25.7	14.4	43.5	18 531
1974/5	16.7		24.2	14.3	44.9	36 948
1983	22.3		25.8	14.2	37.7	80 804

Note: In 1970 the establishment definition changed from that of "local unit" to "smallest unit for which information required in a production census can be made". Prais [1976] estimated that in 1970 there were roughly 1.5 times as many local units as establishments.
Source: *HRCP: Historical record of the census of production 1907-1970*, updated from later production censuses. Results for 1930-70 not shown for less than 200 range.

Also important within manufacturing have been changes in the relationship between establishments and enterprises. Prais [1976, p. 62], using the "local unit" definition of establishment, showed that the average number of establishments belonging to the 100 largest enterprises increased greatly between 1958 - the first year such data were available - and 1972, rising from 27 to 72. But, at the same time, the average plant size in these enterprises declined from 750 employees to 430. Employment per enterprise increased from 20,300 to 31,180, again showing the increased importance of large employers in the economy. However, as shown later (Table 7), for establishments of all sizes the establishment level is more common for bargaining than the corporate level, indicating a good deal of independence for plant level management. Since 1970 the number of establishments owned by the largest 100 (in terms of employment) enterprises has further increased rising from 36 establishments in 1970 to 41 in 1983. And the average size of these establishments has continued to fall, dropping from 774 employees in 1970 to 429 in 1983, with nearly two-thirds of the fall coming after 1979 (Census of Production, see Table 12).

Table 12: Small firms in retail distribution since 1950

A. Small establishments defined by turnover (1)

	Employment all establishments ('000s)	% employment in small establishments	% of turnover small establishments
1950	2 348	72	63
1957	2 472	70	63
1961	2 485	66	59
1966	2 556	67	60

B. Small establishments defined by no. of outlets and employment size

	emp. all estabs ('000s)	shops with 1 outlet % share of employment	shops with 1 outlet % share of turnover	shops with fewer than 10 employees % share of employment
1971	2 541	49.5	40.8	56.2
1976	2 503	39.8	34.0	31.7
1979	2 429	36.6	31.7	30.1
1982	2 264	36.6	30.2	31.3

Note: Establishments with an annual turnover of less than £50,000 in 1963 prices.
Sources: Part A, Bolton Report Tables 5.VI and 5.VII based on Censuses of Distribution and Other Services. Part B, Census of Distribution 1971 and Business Monitor Retailing 1976+.

Retail distribution is another important employment sector. Here, too, the importance of small establishments and, by implication, small businesses has declined, although satisfactory data are available only for the post-war period. The decline of small businesses was no less striking in the retail trade in terms of both their shares of employment and of turnover. Applying the Bolton definition, Bannock [1976] showed that the employment share of small retail shops had declined to 65 per cent in 1971.[2] Up to the late 1960s, employment in small shops remained fairly steady at between 1.6 million and 1.7 million, so the loss of employment share could be attributed to the growth of new larger shops, notably supermarkets and discount stores. In contrast, their declining employment and turnover shares in the 1970s were associated with absolute decline, as employment declined in the sector as a whole. The decline slowed in the late 1970s, but does not appear to have been reversed, in contrast to manufacturing (see below). The Bolton Report also revealed some decline in small organisations between 1950 and 1965 in wholesale distribution [Bolton, 1971, p. 66].

The share of employers and self-employed also declined, although as Bannock [1976] has shown, it roughly halved between 1911 and 1951 (12.8 per cent to 7.2 per cent of the labour force), but declined only half a percentage point between then and 1965. Only recently has it started to grow again (Table 2).

The image of decline painted by the Committee did not pass uncontested. Boswell [1973], from his own research, argued that a declining employment share could also be caused by an increase in the dynamism of small firms expressed in increased "birth" and "death" rates, and in increased rates of expansion. The cross-sectional data used so far does not give any information on such developments, but the data now most widely used, based on VAT registrations, only started with the introduction of VAT in 1973 (see Table 16).

2. The recent period: Since 1970

The decline of small firms in manufacturing appears to have ceased by the middle 1970s. The recent sharp increase in the employment and output shares of small firms started in 1979 with the worst recession to hit British industry since the 1930s, as a 20 per cent rise in the value of Sterling against other major currencies coincided with the arrival of recession in the United Kingdom's main export markets.

Between 1979 and 1983 the number of small manufacturing establishments increased, as did their share of employment, whereas that of the largest establishments declined (Table 13). Moreover, the employment share of small establishments increased in every branch of manufacturing (Table 14), and in some branches, despite the overall decline in employment, numbers increased in small establishments. Throughout the period, small firms and small establishments have been roughly synonymous, the average

2. The Bolton definition of small retailing establishments could not be applied for 1976 and later because the size ranges of annual turnover in published data were too great.

number of establishments per enterprise being only 1.2 in each year from 1970 to 1983.

On the whole, changes in net output were smaller than those in employment, hence the increase in the labour productivity gap between small and large establishments. Taken with the observation (Table 12) that the size of the average establishment of the 100 largest firms decreased, this would suggest that one important factor has been the employment shake-out in large establishments since 1979. These may have been harder hit by the Sterling overvaluation due to their greater involvement in products which are traded internationally. Job losses in the car and steel industries after 1979 would be good illustrations of this explanation.

Table 13: Distribution of employment, net output, and productivity in manufacturing, by establishment size, 1974-1983

Establishment size (no. of employees)	Establishments (in %)			Employees (in %)		
	1974/5	1979	1983	1974/5	1979	1983
1-10	51.9	55.7	51.8	3.5	4.0	4.5
11-19	16.1	15.9	23.1	3.2	3.5	6.5
20-49	14.0	12.3	11.8	6.0	6.0	7.5
50-99	7.2	6.2	5.4	7.0	6.8	7.7
100-199	4.7	4.4	3.5	9.3	9.5	10.1
200-499	3.7	3.4	2.7	16.0	16.1	16.9
500-999	1.4	1.2	1.0	13.3	13.2	13.3
1000-1499	0.4	0.4	0.3	7.2	8.0	6.7
1500 +	0.6	0.5	0.4	34.6	32.9	26.8
Total	100.0	100.0	100.0	100.0	100.0	100.0
Numbers ('000s)	104.1	107.4	102.4	7 467.0	6 925.6	5 078.8

	Net output (in %)			Net output per head (% of all sizes)		
	1974/5	1979	1983	1974/5	1979	1983
1-99	16.7	17.8	22.3	83.7	87.6	85.4
100-199	8.5	8.8	9.2	92.0	92.9	90.9
200-499	15.7	16.2	16.6	98.2	100.1	98.4
500-999	14.3	13.6	14.2	107.4	103.3	106.5
1000-1499	7.2	8.2	6.9	100.0	102.6	102.9
1500 +	37.7	35.4	30.8	108.9	107.7	114.7
Total	100.0	100.0	100.0	100.0	100.0	100.0

Note: 1974/5 and 1979 SIC 1968, 1983 SIC 1980.
Source: UK Census of Production.

Table 14: Distribution of small establishments (1) by branch of manufacturing, (2) 1979 and 1983

NACE	manufacturing branch	Numbers of small establishments ('000s)		Per cent small establishments within branch	
		1979	1983	1979	1983
21	Extraction metal ores	0.4	-	25.0	-
22	Metal manufacture	31.7	29.0	9.2	16.3
23	Extraction other minerals	9.9	9.0	42.1	68.2
24	Manufacture non-metal mineral products	62.4	57.3	22.4	27.5
25	Chemicals	42.3	41.8	11.7	14.5
26	Man-made fibres	0.5	0.5	1.6	2.5
31	Manufacture metal goods nes.	175.1	163.0	35.2	47.4
32	Mechanical engineering	242.2	220.0	25.0	32.5
33	Office and data processing equipt.	3.2	4.3	6.8	10.7
34	Electrical engineering	69.7	73.7	10.1	13.5
35	Motor vehicles and parts	34.1	33.8	6.9	11.2
36	Other transport equipment	22.2	21.7	5.8	6.7
37	Instrument engineering	28.2	30.3	27.0	37.3
41/42	Food, drink, tobacco manufacture	96.5	95.5	13.3	15.8
43	Textiles	69.3	60.1	18.8	25.6
44	Leather and leather goods	17.4	14.1	56.3	65.0
45	Footwear and clothing	138.2	109.3	33.1	36.7
46	Timber and wood furniture	130.3	120.9	53.1	59.8
47	Paper and printing	155.2	150.9	29.1	33.8
48	Rubber and plastics	57.0	59.8	21.3	29.8
49	Miscellaneous manufacturing	37.5	32.3	39.6	56.2
50	Construction	626.6	686.2	46.9	57.8
2-4	Manufacturing	1 423.6	1 327.4	20.6	26.1
2-5	Manfacturing and construction	2 050.2	2 013.6	24.9	32.1

Notes: (1) Establishments with more than 100 employees.
(2) SIC 1980.
Source: UK Census of Production.

3. Concentration and dependency

Although employment in small establishments and small firms had increased, especially after 1979, the number of establishments per enterprise has hardly changed since 1970, remaining at 1.2 establishments throughout (Table 15). Thus, these figures might be interpreted as showing a growth in the importance of legally independent small establishments. However, the picture has to be qualified by changes among the top 100 firms, whose average number of establishments increased from 36 in 1970 to 41 in 1983, with much of the increase occurring after 1979. As these are only snapshots it is impossible to tell whether large firms are decentralising production into smaller establishments by breaking up their own operations, or whether they are buying up existing small and medium-sized firms. Either way, the average size of establishments belonging to them declined from 774 employees in 1970 to 429 in 1983, again with much of the fall occurring after 1979. As mentioned earlier, at least part of this change seems to be due to the employment shake-out in large firms after 1979. If the change were due solely to this factor, then it would follow that the employment share of the 100 largest firms would have fallen. However, it fell only modestly, from 37.3 per cent in 1979 to 36.0 per cent in 1983, while the average number of establishments per firm rose. This leaves room for other explanations, including the buying up of smaller firms and the subdivision of existing operations. Unfortunately, the production census gives no indication as to the nature of such changes.

Table 15: Employment and number of establishments of the 100 largest enterprises and of all enterprises, 1970-1983

Year	100 largest enterprises		All enterprises	
	Average no. establishments	Average establishment size (employees)	Average no. establishments	Average establishment size (employees)
1970	36.2	774	1.2	85.8
1975	38.4	695	1.2	82.2
1979	37.5	644	1.2	68.6
1983	40.7	429	1.2	49.6

Note: 100 largest firms by employment size.
Source: Census of Production.

One attempt to estimate the extent to which larger firms have been contracting-out work has been based on an analysis of expenditure on non-industrial services by manufacturing firms. Ray [1986] showed that the purchase of non-industrial services increased from 4.5 per cent to 8.0 per cent of gross manufacturing output between 1973 and 1983. However, Ray pointed out that part of the growth in spending probably arose from the need for new services not hitherto provided by existing manufacturing firms. Hence at least part of the increase does not seem attributable to contracting-out of established in-house activities.

The Bolton report's evidence suggested that a relatively small percentage of small firms was engaged as satellites of larger firms, although many were heavily dependent upon a few large customers. Without citing specific figures, studies by Lloyd and Mason [1985] and by Gould and Keeble [1985] suggest that many small new manufacturing firms serve local markets, and have a few major customers.

4. Characteristics of new firms

An increase in employment and output shares of small firms does not, by itself, say much about the nature of new firms. The introduction of Value Added Tax (VAT) in 1973 and the obligation on all firms, except the very smallest, to register, has created a new source of information on new enterprises.

In which sectors are most new firms established, and what is their initial size? About 45 per cent of starts occurred in three branches: production industries, construction, and the retail trade, although when starts are compared to the existing stock of firms, these branches appear to be about average (Table 16). Thus, no branches stand out as being especially fertile in the rise of new firms, except for the rag-bag of "other services". If median sales turnover can be taken as an indicator of entry costs, it is perhaps suprising that there is no strong tendency for new firms to have started more frequently in branches in which median turnover was lowest, although too much should not be made of one year's figures. It is also clear that not all new firms are small ones. The upper quartile turnover of new firms in some branches were £129,600 in production, and £204,600 in wholesale distribution, which were in both cases well above the median turnover for the branch as a whole.

The median age of firms which deregistered for VAT in 1981 was nearly four years. This might understate the true age of some very small firms which may deregister for tax reasons by keeping their turnover below the VAT threshold. This can be done in small-scale construction, for example, by getting the client to pay directly for all building materials used so that turnover consists solely of labour-related costs.

On the other hand, median ages on deregistration in 1981 may overstate the survival potential of new firms because many firms which registered in 1973 had already been going for a considerable time. According to VAT registrations, in 1982, about two-thirds of new businesses fail within the first two-and-a-half years [*British Business*, 12 Aug. and 7 Oct., 1983]. Nevertheless, the ages on deregistration in Table 16 show a surprising consistency between branches if agriculture, motor trades and "other services" are excluded.

Table 16: New firms by sector and turnover in 1982

Sector	Stock '000s	Starts % of stock	Starts % of starts	Turnover (£'000s) Median stock	Median starts	Q75 starts	Median age at "death"(1) (months)
Agriculture	181.1	3.6	4.0	35.1	16.8	40.7	less than 84
Production	131.2	12.9	10.4	81.2	44.5	129.6	50.3
Construction	199.3	11.8	14.4	37.5	34.1	49.6	45.4
Transport	56.0	13.1	4.5	42.6	35.3	54.2	43.2
Wholesale	104.5	14.2	9.1	100.4	48.6	204.6	40.9
Retail	264.6	12.5	20.7	61.7	45.3	84.5	51.5
Finance	86.6	11.1	5.9	39.4	31.9	47.8	45.7
Catering	118.9	13.5	9.8	57.5	45.2	80.9	46.1
Motor trades	71.4	13.2	5.8	76.0	42.1	97.7	38.3
Other services	145.4	17.3	15.4	35.6	33.5	49.4	37.1
All sectors	1 359.0	12.0	100.0	46.5	39.2	77.8	47.2

Notes: Based on VAT registrations.
(1) Median age of businesses deregistering in 1981, in months.
Source: *British Business*, 18 May 1984, and 7 Oct. 1983.

These figures are compatible with those of the Merrett and Cyriax survey [1970] which found that once firms survive the early years, their life can be quite considerable. They found that the median ages of small firms interviewed in 1970 which had been active seven years earlier were quite high, ranging from 19 years in retail and in motor trades to 22 years in manufacturing and 69 years in construction.

5. Job creation by small firms

The opening of a new small firm creates new jobs in that firm, and the higher birth rate of small firms has aroused widespread interest in the contribution by small firms to job creation in aggregate. However, their higher mortality rate, as compared with larger firms, also has to be considered to measure *net* job creation properly.

The work in the United States by Birch [1979], which showed that small firms (with fewer than 20 employees) there had been responsible for 66 per cent of all net new jobs between 1969 and 1976, has stimulated similar work in the United Kingdom. Gallagher and Stewart [1984] also found that small firms were responsible for a greater than proportionate share of net new job creation in the United Kingdom. They compared information on firms from a commercial credit rating and market research agency for 1971 and 1981: firms present in 1971 but not in 1981 were counted as "deaths", those present in 1981 but not in 1971 as "births", and those whose employment size changed between the two dates as

"contractions" or "expansions". Their study showed a lower annual rate of "births" of new firms in the United Kingdom compared with the United States (2.4 per cent against 5.9 per cent), but also a lower annual rate of "deaths" (3.8 per cent against 5.1 per cent). Likewise, British firms expanded and contracted more slowly than those in the United States. One factor they mentioned, borne out by other studies of firms' hiring practices, is that British firms are more likely to lose jobs by closure than by smaller scale lay-offs - at least this was the case in the 1970s [Bowers et al., 1982]. Gallagher and Stewart also showed that rates of job loss between 1971 and 1981 were greater in large firms (48 per cent for those with more than 500 employees against 14 per cent for those with between 1 and 19 employees), but recall that the employment shake-out of 1979-82 hit large establishments especially hard (see above).

Table 17: Net job creation by firm size, between 1971 and 1981

Enterprise Size (no. of employees)	% of job creation in sample	"Fertility" ratio (1)
1-19	31	2.4
20-49	11	1.4
50-99	10	1.2
100-199	21	0.9
500-999	10	0.8
> 1000	17	0.5

Note: (1) Ratio of % of job creation to % of employment in sample.
Source: Gallagher and Stewart, in *British Business*, 13 July 1984.

Gallagher and Stewart's estimates of net job creation by small firms show a strong relative advantage for small firms, but in view of the higher birth and death rate of such firms, it is likely that many such jobs are of shorter duration and less secure than those in larger firms. This aspect of job creation by small firms has also been stressed by Storey [1985]. His study of employment change in Northern England 1965-78 used a number of local authority sources, and found that although small establishments had contributed more than large ones to employment creation, in many cases they were not independent, but part of larger groups based outside the region, and often attracted by regional subsidies. Hence he was less sanguine about the impact of small firms on net job creation. Finally, the studies brought together by Storey [(ed.), 1985] show considerable regional variation in patterns of new firm formation.

IV. The economic and social background to recent changes

Surveying the changes up to 1970, the Bolton Committee identified a number of economic and social factors responsible for the decline of small firms. The factors it analysed are interesting both as an analysis of the causes of the decline of the small firm sector in the United Kingdom up to the early 1970s, and as a summary of the accumulated research and knowledge at that time.

The factors included:

- technical change and optimum plant size;
- economies of research and development;
- improved management for large firms;
- economies of transport and communication;
- economies of marketing;
- greater social appeal of large organisations;
- state intervention.

In their view, in a broadly competitive economy the decline of small firms for such reasons may not be harmful. These should be examined in greater detail.

Although technical change had favoured the growth of large plants in some industries, the studies carried out for the Bolton Committee suggested that in many cases technical economies of scale had not changed greatly since the 1930s, and stressed instead economies in marketing and finance. In retailing, the economies of "self-service" have been less readily available to small shops, as have been new techniques of warehousing and stock control. Nevertheless, many small shops have been able to pool resources whilst retaining some independence - for example, in purchasing and advertising - and many small stores have been able to organise their lay-out on self-service lines.

Research and development expenditures have risen sharply since the last war, and there are industries in which considerable economies of scale exist, such as the automobile industry and certain defence industries. However, in many sectors, such as the new science-based ones, small size has proved an advantage. Indeed, more recently in the biotechnology area, several large firms have preferred to buy up successful small innovating firms, rather than do all the research themselves and face the associated risks.

Managerial factors were also put forward, notably the increased skill in managing large organisations in such areas as financial control, plus the possibilities opened up by modern communication methods. These factors could favour co-ordination by "hierarchies" rather than by "markets", and hence facilitate the growth of very large organisations. Any advantages from these factors could, however, be partly offset by the disadvantages of greater specialisation within such organisations, and a possible loss of flexibility.

Changes in transport and communication were thought to favour larger firms because of the way in which they turned previously local markets into

national markets and, in turn, opened up international markets. Because larger firms are better placed to deal with national and international markets, primarily because of economies of marketing and of production for export, such changes were thought to favour large firms relative to small firms.

The importance of marketing in the Committee's thinking is already clear, but social factors deserve some consideration, particularly in relation to countries with a strong small firm culture such as the Federal Republic of Germany and Italy. In the United Kingdom, small firms do not have the social organisations equivalent to those of the *Handwerk* sector in the Federal Republic of Germany, nor do they have the effective pressure-group organisations like the French General Confederation of Small- and Medium-Sized Firms (CGPME). The social image of small firms has also proved less attractive to highly trained manpower. This is because higher education graduates have mostly sought jobs in larger organisations. Furthermore, technical training in the United Kingdom is generally weak. There is, for example, no equivalent to the middle-level technical training for engineers found in the Federal Republic of Germany. The absence of such training restricts the availability of technical expertise to small firms.

The State has, until the 1980s at least, contributed to the rise of large organisations, in part by virtue of being a large employer itself either directly through government and social services (the National Health Service is the largest employer in Western Europe), and indirectly through the nationalised industries. But the State has partly also played a role through the way government policies for labour markets and for industrial development can affect firms. The Committee argued that the growth of the public sector restricted the areas of activity open to small firms: the state's purchasing policy had often unwittingly militated against small firms; government intervention in industrial reorganisation had concentrated on creating large units (for example in automobiles and shipbuilding, but also in coal and steel); state regulation of environmental problems could also hurt small firms, for example by planning controls and increased social regulations, such as redundancy payments; and finally, taxation policies, through their impact on incentives and on the transmission of wealth between generations, could discourage small firm development.

From these factors, it is clear that the decline of small firms, and the rise of giant enterprises are closely, but not necessarily inversely, related phenomena. The Committee's view that these factors did not call for urgent remedial action depended, in part, on their belief that there was no major discrepancy between public and private benefits involved. Yamey [1972] criticised the report for failing to distinguish adequately between the fate of the relatively few high-fliers, rewarded for their merit, and the decline of the overall population of small firms.

Implicit in the Committee's reasoning (and indeed also their terms of reference) was the idea that change is not irreversible. Of the reasons put forward, optimal plant size could decline, and there is a good deal of evidence of such a decline in certain sectors. In the automobile industry, for example, the technical pressure for large plants has declined. Process and

product changes have made it possible to work with smaller volumes for each model, although the minimum efficient production of certain parts, such as gearboxes, could require the same basic gear box to be used in several different models [Altshuler et al, 1984].

Economies of transport and communication, marketing, and possibly even improved management are also not necessarily irreversible. Hannah [1980] stressed the importance of the sophistication of intermediate markets in nineteenth century Britain in explaining why it developed patterns of vertical integration later than the United States, and then on a smaller scale. Should the forms of intermediate business service activities, and of marketing organisation stressed by Piore and Sabel [1984], develop further in the United Kingdom, it is conceivable that firms would find it more efficient to contract-out a number of activities internalised by the growth of large firms.

The rise of small firms in manufacturing during the 1970s, but especially since 1979 in the United Kingdom, could owe something to a shift in relative costs between large and small establishments. It was noted earlier that wage levels had been lower in small establishments in the early 1970s, and that the gap had narrowed somewhat by 1980. Output per head, however, is higher in large establishments. A very crude way of adjusting for differences in the quality of labour in large and small establishments is to give output per head as output per unit wage cost: in other words, to take labour costs as a proportion of net output. In 1983, labour costs as a percentage of net output in manufacturing were 46 per cent in establishments with under 100 employees, and 45 per cent in those with over 1,000 employees, suggesting that lower pay was slightly more than offset by lower labour productivity. A full analysis would require taking account of the capital stock in large and small establishments. Nevertheless, it suggests that there is no great advantage currently on straight unit labour cost grounds.

However, in earlier years there appears to have been such an advantage: in 1975 the comparable figure for establishments under 100 employees was 51 per cent, while for 1,000 and over it was 53 per cent; and in 1979, 45 per cent and 49 per cent, respectively. Could this explain part of the decline in large establishments? Clearly, if large and small establishments were in equilibrium and operating at their desired production levels in both periods, then a higher labour share would indicate higher labour productivity. But if management and industrial relations difficulties in large establishments were such as to prevent the achievement of output levels for which the plants were designed, then the reduced labour cost differential could be interpreted as indicating an improved position for large establishments.

It was suggested earlier that strike rates were higher in large than in small establishments, and that this difference was greater than in other countries, such as the Federal Republic of Germany or the United States. This argument has been used to suggest that the United Kingdom has a comparative disadvantage in the management of large plants [Jones, 1981; Davies and Caves, 1987]. The major management and industrial relations changes which have occurred in large plants when facing major job losses,

and the decline in private sector strike activity in the United Kingdom, both point to improved management as a factor in the improved performance of large plants in that country. Without further evidence, however, such an interpretation must remain tentative.

1. Small firms and technical change

It is in the area of technical change where the balance of the argument has perhaps shifted more. Piore and Sabel's [1984] argument rested mostly on new flexible forms of automated equipment, but small firms may also contribute more directly to innovation. Reviewing work by SPRU, Rothwell [1986] shows that in the United Kingdom small and medium-sized firms (1-499 employees) have played a major part in technical innovation, as have very large ones (over 10,000 employees). Intermediate sized firms did less well. Moreover, he showed that the performance of small firms had improved between 1955-59 and 1975-80 (measured as innovations per employee). One of the reasons for the bimodal pattern, Rothwell argued, was that many large firms encourage innovation in small firms if they are component suppliers, and many also enter into joint technological ventures with innovative small firms which supply them with sophisticated goods, or which complement their product range.

V. Special studies on small firm development

Small firms have received a great deal of attention in studies of regional and inner city regeneration but, as already noted, a good deal of the literature has been somewhat sceptical, perhaps in response to the excessive expectations.

One irony raised by the studies of British business in the nineteenth century is that the sophistication, by contemporary standards, of intermediate markets, and the importance of the "industrial districts" that played an important part in Alfred Marshall's thinking [Bellandi, 1986], should not have given rise to a stronger small firm sector akin to the German *Handwerk* sector.

Small firms have, however, had an important part to play in the development of what might be thought of as contemporary forms of Marshallian industrial districts in some of the "hi-tech" areas in the United Kingdom; notably in Scotland's "Silicon Glen", around Cambridge, or in the Thames Valley. In such cases, the firms involved are not all small, but they could be said to group into industrial districts in so far as they provide services to each other, work in competition and, perhaps most important, develop a pool of qualified and experienced labour on which they can all draw. Beyond this, Marshall's conception of an industrial district implied a certain intensity of exchange between firms *within* the district so that they become an alternative to large firm organisation. Whether this is true of the

science-based growth areas, or whether they simply provide a convenient location for particular activities of larger firms, is hard to assess.

VI. Attitudes and policies towards small firms

British governments have influenced small firm development mainly through employment law, and through financial support. The main support from business has come from the establishment of new forms of access to equity finance, notably through the Unlisted Securities Market and, more recently, the new Third Market. Unions under pressure from a declining membership base in large firms have recently been seeking ways to increase recruitment of workers in small firms and in non-standard forms of employment, both of which are traditionally difficult areas for recruiting and retaining new members. One area of interest has been the recent establishment of training schools by two unions with important craft memberships.

1. Role and impact of government

As was noted above, the two main ways in which government has had an impact on small firm development have been through employment laws and financial support.

A. Employment law

One way in which government activity has been thought to influence, and perhaps harm, small firms has been employment legislation, especially in areas of unfair dismissal, maternity leave, redundancy, health and safety, and the support for collective bargaining and trade union activities. Several of these measures had been reinforced during the 1970s, and this generated some concern that they would discourage new employment. In particular, it was feared that they would disadvantage smaller enterprises which are unable to afford specialist personnel managers, to arrange cover for absent workers (e.g. on maternity leave), and to carry inefficient workers.

A survey of firms with under 50 employees carried out by the Department of Employment in 1978 [Clifton and Tatton-Brown, 1979] revealed that 54 per cent of their sample had had no experience with the employment legislation provisions. Of those which had, the most important were health and safety (28 per cent), unfair dismissal (15 per cent), need to pay workers temporarily laid off (10 per cent), maternity provisions (8 per cent), and union-related provisions (5 per cent). On the whole, these experiences were not considered to be among the major difficulties of the firms, although provisions such as unfair dismissal had caused many small firms to increase care in recruitment (47 per cent), and to reduce numbers recruited (26 per cent - prompted answers). So the survey showed that employment legislation up to 1979 had had some effect on the policies and recruitment by small companies, but a modest one.

Nevertheless, since 1979 the emphasis in employment legislation has moved sharply in the direction of reducing trade union power and individual employment rights, especially in the more weakly unionised small firm sector. The 1980 and 1982 Employment Acts restricted picketing and outlawed the use of secondary picketing (picketing the premises of an employer not directly involved in the dispute), which, it could be argued, reduced the likelihood of small firms being drawn into disputes in larger firms they were supplying. The termination of legal encouragement of trade union recognition in 1980 perhaps reduced the likelihood of further extension of unionisation to small firms, although it had in fact been a small firm, Grunwick, which proved the inefficacy of the earlier legislation in this area. Removal of small firms from the coverage of maternity protection in 1980, and the extension of the minimum period for an employee to qualify for unfair dismissal protection, could also be seen as measures to help job creation in small firms. These moves are soon to be reinforced by the government's new white paper on deregulation [UK Government White Paper, 1986].

B. White Paper on deregulation, 1986

In May 1986, the Government published its White Paper on further deregulation measures to promote employment. It emphasised that the way to reduce unemployment is to promote more businesses, more self-employment, and greater wealth creation, and to direct the Department of Employment to encourage the development of an enterprise economy. Among the main proposals of the White Paper were recommendations: to review the impact of VAT on small businesses; to review planning regulations to allow a wider range of changes of use without planning permission; to reject the idea that small companies should be exempted from having their accounts audited, or from compliance with health and safety provisions; to deter "ill-founded" unfair dismissal claims by charging applicants £25 to appear before an industrial tribunal; to restrict the range of industrial relations duties for which lay union officials must be allowed time off with pay; to consult on the amount of information companies are required to file with the registration offices.

Key aspects of the Department's new role should include: promoting enterprise and job creation in growth areas such as small firms, self-employment and tourism; helping businesses to grow by cutting red tape, improving industrial relations by ensuring a fair balance under the law, and encouraging employee involvement; improving training arrangements; helping the young and the long-term unemployed to find work.

C. Government help

After publication of the Bolton Report in 1971, the then government set up the Small Firms Service within the Department of Industry, and this has evolved into a counselling and consultancy service for small firms with 50 area offices around the country. A similar service is provided in rural areas by the Council for Small Industries in Rural Areas (CoSIRA). Local

government has since also become involved, sponsoring projects such as the pioneering London Enterprise Agency set up in 1978. Direct public sector finance has been fairly limited in the United Kingdom. Doran [1984] estimated that in 1981 the total public sector loans to small- and medium-sized businesses were about £66 million, and reached only one in 500 firms. The bulk of the finance came from CoSIRA, the Scottish and the Welsh Department Agencies. The government also planned to allocate £20 million in 1982/3 through the Department of Industry's Small Engineering Firms Investment Scheme, for firms employing under 200 people.

Private sector finance has been promoted through the Industrial and Commercial Finance Corporation, jointly owned by the English and Scottish clearing banks and the Bank of England. It provides loans and loan/equity arrangements between £5,000 and £2,000,000, and in 1982 had advanced about £400 million. Another important joint public and private sector initiative has been the government's Loan Guarantee Scheme, designed to encourage banks to lend to small firms.

D. Financial help

The Enterprise Allowance Scheme was set up in 1983 to help unemployed people set up on their own account, or to start small businesses. It is run by the Manpower Services Commission, and can provide a subsidy of £40 a week to people starting their own ventures.

Moving up the scale, the Small Business Loan Guarantee scheme, introduced in 1981 initially as a three-year experiment, is designed to encourage participating banks and financial institutions to make additional loan finance available to small businesses when they would otherwise not have lent the money. It provides a 70 per cent government guarantee for a 2.5 per cent premium over the normal small business lending rates. A report commissioned by the Department of Industry [*British Business*, 6 April 1984] suggested that the scheme had been fairly successful in encouraging greater support by financial institutions, but that it had encouraged the use of loan finance when often equity finance would have been more appropriate. By January 1986 it had helped over 17,000 businesses with loans totalling £554 million. However, the restrictive rules attached to the scheme caused many to predict its demise at the last Budget. In fact, it was renewed for a further three years.

2. Industry and unions

For the larger small firms, the City's launching of the Unlisted Securities Market (USM) in 1980 has provided a new source of equity finance especially adapted for smaller firms. By 1986, the USM had 113 fund management organisations, plus a large number of smaller organisations operating at its fringes [*Financial Times*, 3 July 1986]. Since 1980, institutional investors have put in about £700 million into venture capital funds. The USM has been boosted also by the Government's Business Expansion Scheme (BES), set up in 1983, which permits private investors to

claim tax relief for supporting unlisted companies. The 1986 Budget made the first sale of BES shares exempt from capital gains tax.

Union interest in small firms has been mainly representational, although initiatives to recruit among small firms and in the new "hi-tech" assembly plants, have been of fairly recent origin. This has been a difficult area in which to establish membership, and has to some extent required new methods, such as the highly controversial "no strike" agreements [Bassett, 1986]. Other union initiatives which could prove important include those of the electricians' and the engineers' unions to establish training schools in new technology skills for their members. In view of the reluctance of private employers to undertake training, and the decline of apprenticeships, one avenue for the future would be the re-establishment of craft labour markets with greater union control over training. One of their prime interests would be to preserve the transferability of skills of use to their members, but also useful to small firms which are not in a position to have high overheads. However, so far, these schools are of limited capacity, and the unions' main concern has been to help their members keep their skills up to date.

VII. Conclusions

1. Permanency of the changes

One of the most important ideas recently put forward has been that technical change has enabled smaller scale organisations to thrive, because the flexibility of "electronically controlled" capital goods enables firms to spread their cost over more varied and smaller markets, obviating the need to capture homogeneous mass markets. This argument may place too much emphasis on the technical side of production, as distinct from the economies of scale in finance and marketing that have been stressed by Bolton [1971] and later by Prais [1976]. The financial and marketing factors put forward by Prais are not inconsistent with Piore and Sabel's [1984] concept of "flexible specialisation". But in this case the economies of scale in finance and marketing are provided by the continued existence of giant firms, and the advantages of more flexible capital equipment give a further push to the decline in establishment size (a trend which has continued even in the 100 largest enterprises). It may be that Piore and Sabel's argument runs into trouble in the United Kingdom over the structure of ownership rather than the structure of production. This recalls the apparent weakness of the institutional organisation of small firms in the United Kingdom, but this is only part of the problem. It is also necessary to explain why intermediaries, specialising in marketing or financial risk-spreading, have not developed at the expense of giant firms which provide these services internally.

Nevertheless, there are important forms of market organisation geared to smaller firms, such as the importance of occupational markets for skilled labour which enable small employers to hire ready-trained skilled workers without having to develop their own internal labour markets. In

addition, multi-employer bargaining, although not predominant, remains an important feature of industrial relations in smaller firms in industries such as engineering. But in recent years this form of bargaining has declined somewhat in favour of enterprise based systems.

One potentially important factor behind the revival of small firms and establishments in manufacturing has been their unit labour cost advantage (measured as the proportion of labour costs in net output, to take account of lower wages and social contributions in small firms). The reversal of this cost differential by 1983 raises the possibility that further growth of small establishments may be limited. The reasons for this change need to be analysed in greater depth and, in particular, this has to be set in the context of a rise in small firms in several other countries during the same period. Again, these developments are not necessarily inconsistent with Piore and Sabel's hypothesis because more flexible capital goods can help multi-establishment firms as much as single establishment ones. But there is another potentially important factor: that the decline in employment share of large establishments arose because management regained control of industrial relations and manning levels, and so was able to introduce major manpower cuts.

The likely impact of increased production flexibility requires an assessment of economies of market size, in which marketing and financial costs are also a component, but it is beyond the scope of this paper. At least as far as the technical side is concerned, it seems probable that the adaptability of capital goods will increase further and their cost continue to fall, and this could further enhance the position of small production units, however organised.

Assessing the internal management and industrial relations problems of large and small plants in the United Kingdom is equally difficult. Controlling the growth of workplace "custom and practice" needs constant management attention, because the employment relation is at heart a bargaining relation. Large plant managers in the United Kingdom have been greatly assisted in their negotiation over changing working practices by high levels of unemployment, and the acute awareness of many workers that even many large firms faced closure. A major change in product or labour markets could well reverse some of the changes which have taken place.

A third force promoting small firms has been government policy aimed at reducing regulations applying to small firms, and also at making labour markets more flexible, especially as concerns weaker groups of workers. The Department of Employment survey [Clifton and Tatton-Brown, 1979] showed evidence of a modest side-effect of employment protection legislation on employment in small firms, and the removal or weakening of some of these provisions would seem likely to have helped employment in small firms. Similarly, removing young workers from the coverage of wages councils (which set industry-specific minimum wages), plus the special youth employment and training subsidies, could prove advantageous to small firms, although it is common for many such schemes to have a fairly high "deadweight effect" as employers can claim them for people they would have recruited anyway. On the whole, it seems likely that

these measures will produce some increased employment in small firms, but not a prolonged growth of the sector at the expense of larger firms and plants.

One factor which could have a more prolonged effect is the encouragement of the unlisted securities market, offering a permanent, and possibly growing, source of finance for small and medium-sized firms. It seems possible that this could offset some of the financial factors favouring giant firms, and possibly even encourage the development of marketing organisations which would provide services to many small firms as an alternative to the multi-plant firm with internally provided services. However, Ray's [1986] analysis of non-manufacturing services purchased by manufacturing firms shows that the growth of such services has so far been limited.

Overall, therefore, it seems possible that employment in small manufacturing plants and in small firms will continue to grow, if not at the rate of the last five years. This has a number of implications for economic and labour market policy, some of which are discussed below.

2. Some implications

As concerns the *quality of jobs and employment*, there has been a long-standing concern that workers in small firms receive lower pay and work in less security than workers in larger firms, although there may be some compensation through more personal contact. Smaller firms offer fewer opportunities for internal advancement, particularly for managerial staff, and this point is visible in the greater differentiation of management pay between small and larger establishments (Table 6), especially if the small ones are independent. However, the pay differential, within engineering at least, declined greatly during the 1970s, as did the differential in hours of work and payment systems. The growth of small firm employment may have accentuated the problems of low pay to some extent, but the question of low pay should be kept separate from that of poverty, as there are strong economic arguments for attacking poverty through improved social security.[3]

As concerns *labour market structure*, perhaps the most important point relates to skills and training. If small firms are to contribute to, and to draw from, a pool of well-trained manpower, it is important to maintain a system of occupational labour markets rather than to rely upon company internal labour markets. In the latter case, skills are often non-transferable, and even if similar equipment is used, training often lacks the degree of standardisation required to facilitate mobility between firms. Indeed, employers often wish to restrict this in order to reduce labour turnover. In the United Kingdom, apprenticeship linked to craft labour markets

3. There remain, however, three main arguments for removing low pay: that it is an affront to people's dignity (claiming social security remains a humiliating process for many); it can undermine the efforts of better paid workers to maintain their own conditions; and it reduces the opportunities of unscrupulous employers to take advantage of unequal bargaining power.

developed originally as a form of training suitable to small organisations. It would be ironic if the system finally decayed just when small establishments and small firms appeared to be reviving.

Much policy on *worker representation* in the United Kingdom has been based on the idea that collective bargaining is the norm, but if small firms continue to increase, given the organisational problems that unions have in small firms, there may be other methods which can be used. The British TUC and the Labour Party have opted for a national minimum wage in order to protect workers in the growing areas outside the reach of collective bargaining. But although it may be possible to fix pay by remote control, it is not usually possible to deal with individual workers' grievances in this way. It may be preferable to offer workers in small firms in the United Kingdom rights, similar to those of workers in the Federal Republic of Germany, to have a works council if there are more than five employees, or to have a statutory elected representative as in France. Given the very large number of small employers outside any form of representative institution in the United Kingdom, it is unlikely that a general framework for representation in small firms could be set up by voluntary agreement.

Growth of small firms, if sustained, could also raise new demands on the *social welfare system*. Direct regulation of employment conditions by law could be more damaging in small firms than larger ones because the marginal recruit or employee represents a much larger proportion of the existing workforce. Provisions for maternity benefit or for training which can be easily dealt with by large organisations can impose severe burdens, particularly on very small firms. One solution is to exempt small firms from such provisions, but this may harm the employees concerned. An alternative would be to spread the burden across all employers or across ntersociety as a whole. As they increase their demands for functional flexibility of their core workforces, larger firms may be less willing than before to take on workers in more vulnerable groups or who need training, thus pushing these groups more into areas of employment where small firms predominate. Exempting small firms from employment protection provisions could thus have a disproportionate effect on these sections of the workforce. Providing for these workers could be by a form of levy on all employers which would fund certain social benefits and training, or by direct State intervention.

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