The Re-emergence of Small-Scale Production: An International Comparison[1]

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ABSTRACT. During the 1970s the long standing trend towards centralisation in the organisation of business ceased, and was reversed in many advanced industrialised countries as the share of employment in small enterprises and establishments began to increase. The article documents the important developments in the size distribution of production of the six largest OECD countries, and examines various explanations for the changes, such as the business cycle, the sectoral recomposition of the economy, labor cost advantages in small firms, and the spread of flexible specialisation. It also discusses potentially unfavourable effects of these changes on wages, working conditions, and industrial relations, and proposes institutional reforms to mitigate, or avoid, such effects.

On the basis of an analysis of the small firm sector in the larger economic, social, and institutional context it is argued that the individual small firm lacks sufficient resources to compete effectively with large firms. To overcome these deficiencies it either has to depend on resource transfers from large enterprises, i.e., on a foster relationship, or be linked to a community of small firms, such as the industrial districts in Italy, in which productive resources are jointly procured, developed, and utilised, commercial services shared, and intermediary institutions created to elicit and maintain inter-firm cooperation. In this way small firms can become parts of "big" organisations, enjoy many of the advantages possessed by large firms, and consequently offer jobs of comparable quality.

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I. Introduction

Just a decade ago the idea that small enterprises might be seen as the key to economic regeneration, and a road to renewed growth of employment and the fight against unemployment, may have seemed eccentric or even absurd. Today, this view seems much less far-fetched. On the contrary, many observers from different traditions and political orientations embrace the idea, though they may disagree on why and how the small firm expansion and dynamism have arisen.

Small and medium-sized enterprises used to be a largely mute, or marginal, subject in economics and the social sciences. There used to be a widely shared understanding on how industrial society evolves, according to which small business was considered largely as a vestige of an earlier period of economic development. In their seminal book, *Industrialism and Industrial Man*, Kerr, Dunlop, Harbison and Myers viewed it as imperative to industrialisation that "the technology and specialisation of the industrial society are necessarily and distinctively associated with large-scale organisations" and "economic activity is carried on by large-scale enterprises which require extensive coordination of managers and the managed . . ." [Kerr *et al.*, 1960, p. 39].

Large-scale units[2] of production and employment, organised by the dynamic center of the economy, the giant, vertically integrated corporation, were themselves part of a more encompassing, coherent *model of economic and social development*, whose essential ingredients were:

— *mass production* of standardised products, built on specific capital equipment and technology;

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- *market expansion* to minimise cost and to assure the absorption of the output of mass produced commodities;
- Keynesian-type *demand management policies* and *income stabilisation schemes* to assure stable and continuous mass purchasing power;
- a Taylorist-type *work organisation*, built on an extensive division of labour, narrowly defined jobs with a low skill content, correspondingly little training, the separation of the planning and execution of work, a related gulf between blue-collar and white-collar work, an extensive managerial apparatus organised along hierarchical control, bureaucratic administration, and close supervision.

This coherent model of production, consumption, and work organisation has been termed "Fordism" (for an elaborated discussion, see Piore and Sabel (1984)). Yet, the model had even wider ramifications. It put its stamp not only on the way people work, produce and consume, but also on how people live. Standardised leisure activities, urbanisation and suburbanisation, and finally the devolution of regionalism and localism — not just in economic activities, but in cultural life — can be seen as collaterals to that paradigm.

The model of industrialisation pervaded not only the Western market economy countries. Significant elements, notably mass production and the centralisation and integration of productive organisations, could be found in the Eastern European planned economy countries, as well as in parts of the developing world. Certainly, not all structures and institutions conformed to this concept. But the exceptions and deviations were generally seen to play a residual role or were a left-over, bound to disappear as economic development proceeded.

The facts seemed to be in accord with this model, at least until the early 1970s. Most studies revealed that capital ownership was continuously concentrating, and enterprises and establishments were growing in size. Small firms were expected to gradually wither away, due to inferior organisation, poor management, and backward technologies.

The mainstream theoretical notions offered plausible explanations for why this should happen. Industrial economics emphasised the principle of economies of scale and predicted a tendency towards larger units of production, or sought to find optimal plant size. Practically every textbook offered Adam Smith's famous example of the pin factory to illustrate the theory of the degressive cost of increased production scale attributable to the specialisation of labour, machines and equipment, as well as the more profitable use of technology at higher capacity levels. The physical "law" of scale efficiencies appeared to be especially relevant in the domain of mass and process production industries.

A dynamic force in the direction of "business" was also assumed in the Marxian tradition of social science, though here it was not as much attributed to technical efficiencies as it was to the process of growing capital concentration and centralisation that is considered inherent in the capital accumulation process under the capitalist mode of production. Small enterprises would remain only in areas of production "which modern industry has only sporadically or incompletely got hold of" (Marx, 1934, pp. 5, 7, 8).

Against this background of widely shared beliefs, it is astonishing to see, within less than a decade, a profound change in view. What happened to refocus attention on smaller firms, which had previously been considered anachronistic? First, spectacular cases of large enterprises running into economic difficulties and shedding employment arose in nearly all countries. On the other hand, the small firm sector or parts of it seemed to travel relatively well through the period of economic turbulence that started in the early 1970s. In addition, in the late 1970s the David Birch story, claiming that small firms created the majority of new jobs in the United States, spread quickly around the world (Birch, 1979).

A revival of smaller units of employment occurred not only in the United States, but also elsewhere in the industrialised world. In terms of employment growth small firms performed better than large ones or showed — as in some European countries with aggregate employment losses — a small rate of decline. The Organization for Economic Cooperation and Development (OECD) concluded in 1985 that in several of its member states a tendency towards concentration of workers in small firms could be found, even after accounting for shifts in industrial structure or sectoral

composition. Furthermore, they found that "small firms have been particularly important in net job growth over the past 10 or 15 years. The same holds, perhaps with a little bit more certainty, for establishments" (OECD, 1985, p. 80).

From these observations a growing number of politicians and organisations concluded that a new dynamic of small firm growth might lead the way out of the unemployment problem, and recommended the active encouragement and financial support of the small firm sector. Orthodox economists enthusiastically embraced the idea of the "new enterpreneurship", as it seemed to speak in favour of competitive markets and finally disprove the efficacy of market intervention and regulation. Small firms were seen now as carrying innate qualities, such as competitiveness and innovativeness, superior to large firms (Acs and Audretsch, 1990). They were also viewed as showing more drive and better providing a needed element of flexibility. While this view can be found in an OECD document of 1982, the OECD employment report of 1985 stated more soberly that more detailed knowledge is required as to why small firms have on average been associated with a greater capacity for job growth, and what are the externalities of jobs created by the small firm sector (OECD, 1985, p. 10).

Indeed, there has been as yet little discussion about the nature of the shift of employment towards smaller units. Those who argued for innate small firm characteristics of greater efficiency and flexibility were led to believe that this could expand economic activity without losses elsewhere in the economy. There has been little concern for the question of whether the growth of employment in small firms is indeed independent from what is going on in the large firm sector; whether, for instance, the small firms absorb the labour resources that are shed in the large firms so that the structural shift amounts to merely a displacement effect (Brown *et al.*, 1990).

The trade unions have perhaps been the most worried about the apparent shifts in the size structure of employment. Many unions have their organisational strongholds in the large firm sector, and it has normally been the big firm where the pattern and pace for gains in wages and other terms of employment have been set. Collective worker influences, at least *de jure*, have generally been better established in large than in small companies. Thus, *ceteris paribus*, the shift toward smaller establishments inevitably confronts workers' organisations with the threat of shrinking membership, loss of organisational strength and loss of influence and participation. Hence, on top of the negative impact for unions stemming from the sustained slack in the labour market, there seemed to be a structural factor at work that could weaken the unions, lead to a severe loss of their influence, and consequently have a negative impact on the functioning of industrial relations.

Yet it is important to guard against rushing into premature and overly general conclusions as to both the origins and the economic and social implications of the shift toward smaller units. Both the social scientist and the policy maker have reason to look into the matter carefully.

Doubts may be raised as to whether it is the size dimension of business organisation *as such* that plays the crucial role in determining economic efficiency and vitality; and also, whether there is something inherent in large or small firms that could make one or the other particularly apt as job generators. If there were an intrinsic superiority in the economic performance of small enterprises, why should their relative share of employment first decline and then grow again? Similarly, large units are not inexorably stricken with rigidities and lack of responsiveness in their markets and in their production systems, nor are small firms necessarily more flexible or dynamic. Without denying that there are certain technical efficiencies associated with the scale of production, it need not follow that there is a natural law that inescapably puts the size of business units at the root of superior economic performance.

Against the tenet of physical determinism of economic organisation is the claim that economic performance crucially depends on the *social organisation* of activities. While large firms may enjoy advantages through a more powerful market position, positive economies of scale or scope, and better utilisation of services like Research and Development, marketing, advertising, distribution etc. which require certain minimum investments, small firms can overcome their disadvantages and gain similar efficiency, or a different sort of efficiency, if they organise their production and ancillary services on a communal basis. Thus, for

example, a number of small producers of the same product and in the same area, or industrial villages of firms producing different products, may organise their purchase of energy, raw materials and equipment jointly; and in grouping together and forming associations and consortiums, they can also overcome the lack of political influence which small firms typically face if they act on their own. The well-known "industrial districts" in what has become known as the "Third Italy" provides evidence of such communal organisation (Bagnasco, 1977; Brusco, 1982; Becattini, 1987; Pyke *et al.*, 1990).

Yet, if the notion of an intrinsically inferior or superior performance of small business organisation is dismissed, and, furthermore, if it is assumed that this shift in the size distribution of business is more than a statistical artifact (as, for example, caused by the growth of the service sector with smaller average firm size), how then can the move to smaller units in most countries since the early 1970s, which is documented in Section III below, be accounted for?

In essence, two kinds of interpretations are offered. Both direct attention to the larger socio-economic environment in which the reversal took place. The first maintains the logic of technical-organisational efficiency, but claims that as a result of largely exogenous developments some basic parameters in the efficiency equation were altered in favour of smaller units. For example, it is asserted that the much increased turbulence in the international markets, the instability of demand, and more differentiated consumer tastes, render the mass production of standardised goods in large production units unprofitable or obsolete. In addition, the advent and diffusion of new technologies, based on micro-electronics, is seen to lower capital costs and permit the efficiency gap between long and short runs of production to shrink, thereby enhancing the cost competitiveness of small-scale production.

A second line of reasoning steps out of the narrow efficiency logic. It attributes a much more critical role to social or political organisation. It asserts that there is — within limits — a strategic choice of how to organise production, employment, and work. Which option is chosen is ultimately decided by "politics", i.e., the dominant groups in society, the power relations among them, and the institutions they create. Sabel (1981) and Piore and Sabel (1984), for example, hold, contrary to the conventional view, that the victory of the mass production paradigm over the craft system earlier in this century was by no means inevitable. It was not based on an inherent technological superiority or greater dynamism. Rather, it was a product of politics: property rights, distribution of capital and wealth, Fordist-type regulation, etc. As a consequence, the course of industrial development can produce rather different results in different societies, and it can be redirected. The period starting in the 1970s could be seen as one of a "second industrial divide", in which reorientation and transformation of industrial organisation took place.

The remainder of this paper is in six sections. Section II presents data on the international variance in the size distribution of production. The next section shows the time series evidence for a recent shift toward smaller units of production, reviews the job generation debate in several countries, and identifies problems in the interpretation of these data. Section IV examines size-related differences in wages, working conditions and industrial relations, and shows how these differences are related fundamentally to international variance in labor market institutions. The fifth section evaluates alternative hypotheses for the shift to smaller units. Section VI considers options for future SME development, and the final section offers some conclusions.

II. Substantial international size differences in employment units

"Small enterprise" or "small- and medium-sized enterprises" are elusive concepts. They do in fact hide a large heterogeneity in the types of firms. The country studies testify that the definitions, conceptions, and available topologies vary from one country to another. Depending on the institutional or historical context, major criteria for structuring the SME sector are the legal status (as in France), the ownership status (as in Hungary), the distinction between "craft" and "industrial" firms (as in the Federal Republic of Germany), independent and subordinate firms (as in Japan), or small firms in small-firm industries vs. small firms in industries where large enterprises domi-

nate or where there is a mixed size composition. Such structural variety, within and across national boundaries, will have to be taken into account when analysing the SME sector.

Another frequently raised question concerns the statistical definition of "small", "medium" and "large" with regard to firm size. Usually, underlying this question is the expectation that somebody comes up with a precise answer to what a small firm is. If the respondent does not live up to this expectation, or if the answer is "it depends" (on the country, the industry, the time period, etc.), the conclusion drawn is often that it would be futile or meaningless to conduct a comparative statistical analysis on the size structure of enterprises.

We believe that underlying this sort of reasoning is a misconception of what the analysis of the size composition of a production system is intended to do. There is no value as such in studying size dimensions and, consequently, there is no need to provide uniform definitions. The concern with the scale of enterprises or establishments is meaningful only in a relative or comparative context. That is, if significant differences in the size structure of regional or national economies can be identified, or if this structure changes over time, this may say something about the scope and latitude for industrial organisation in relation to regional, national or historical institutions. It is, then, sufficient to set ad hoc or convenient statistical conventions aimed at revealing as much as possible of the variation in the size composition. After all, despite the formidable problems with measurement and comparability of the data, size is still one of the most accessible indicators of organisational characteristics across countries. Instead of worrying about what a "small firm" is, the energy of the researcher is better spent studying why there are such remarkable differences in the size distribution of enterprises, not only in the economy as a whole, but in various sub-sections.

Table I provides evidence that among the countries included in this study the scale of organisational units varies a great deal. For example, if one follows the OECD definition of a small enterprise as one with fewer than 100 employees, then the share of small enterprises in total employment ranges from roughly 43% in Germany to nearly 70% in Italy. The employment share of medium-sized enterprises, with 100 to 499 employees ranges from 12% in Italy to 18% in France, while the shares of large firms with more than 500 employees varies widely from 18.5% in Italy to 41% in the United States.

TABLE I
Employment shares by enterprise size (number of employees)

Country	Sector	Year	<20	20—99	100—499	500+
United States	T	1982		45.7[a]	13.0	41.3
	M	1982		17.6[a]	12.7	69.7
Japan	T	1985	37.8[b]	17.9[c]	17.3	27.0
	M	1983	27.8	19.3	19.6	33.3
France	T	1985	25.8	20.4	18.3	35.5
	M	1979	10.7	17.9	22.0	49.4
Germany	T	1970	21.7[d]	22.5[e]	16.9	39.0
	M	1984		15.6[f]	24.1	60.3
United Kingdom	M	1981		27.1[g]	36.9[h]	29.2[i]
Italy	T	1981	53.2	16.1	12.2	18.5
	M	1981	33.7	21.8	18.5	26.0

Notes: T = Total Economy; M = Manufacturing.
[a] <100 employees.
[b] 1—29 employees.
[c] 30—99 employees.
[d] 1—10 employees.
[e] 10—100 employees.
[f] Enterprises with less than 20 employees are not included in the sample.
[g] <100 employees.
[h] 100—199 employees.
[i] 1000 + employees.

To some extent the differences in the size structure reflect varying sectoral and industrial compositions. Since employment in SMEs is in all countries more important in the service sector than in manufacturing, it can be expected that countries with a larger service sector have smaller average scale of organisational units. But taking, for example, the manufacturing sector (Table I) separately, major international differentials remain. This suggests that size differences are not purely compositional.

Even more pronounced dispersions in the size composition are revealed at the *establishment* level. Table II presents the figures at the total economy level and for the manufacturing sector.

TABLE II
Employment shares by establishment size (number of employees)

Country	Sector	Year	<20	20—99	100—499	500+
Japan	T	1981	49.4	27.6	11.2[a]	11.7[b]
	M	1983	35.0[c]	21.0[d]	17.0[a]	27.0[b]
United States	T	1985	26.9	29.0	23.9	20.2
	M	1985	7.4	20.2	33.8	38.6
France	M	1981	21.8	23.0	27.1	28.1
Germany	T	1983[e]	27.3	22.4	22.6	27.1
	M	1970		33.4[f]	25.3	41.1
United Kingdom	M	1983		26.2[f]	27.0	46.8
Italy	T	1981	50.7	21.7	14.9	12.7
	M	1981	35.5	23.8	21.1	19.6

Notes:
[a] 100—299 employees.
[b] 300+ employees.
[c] 1—29 employees.
[d] 30—99 employees.
[e] Data from Employment Statistics; excludes self-employed.
[f] ⩽99 employees.

The latter, for example, shows that manufacturing establishments with fewer than 20 employees account for 7.4% of all workers in the United States, but roughly 35% in Italy and Japan. Taking the available information for the category of "small" establishments with up to 100 employees, the extreme cases are the United Kingdom (26%) on the low end, and Japan (56%) and Italy (50%) on the high end. Employment shares of large manufacturing establishments range from slightly less than 20% in Italy to almost 47% in the United Kingdom.

Again, it could be argued that these sectoral differences reflect the fact that manufacturing contains a different industry composition with different size in different countries. Yet, the substantial international variance in the size structure remains at a more disaggregated level. Although there has been no systematic collection of official information in this study, casual knowledge does exist of large differences in the size of production units in particular industries. To take a few illustrations, Norway and Sweden organise most of their bread production on a mass scale in a few larger firms, while Germany still has more than 30,000 firms in bread baking, most of which are small craft bakers that produce and sell for local markets of just a few housing blocks. In beer brewing, there are more than 1,000 enterprises of various size categories in Germany, but only four large firms in Japan. In British beer brewing, after a massive concentration process, a number of small breweries offering real ale and other specialties have reappeared. Similarly, small artisan bakeries have come back on the scene after a long phase of decline in Britain, whereas in the Netherlands there has been a continuous strong shrinkage of their number.

One has to dig deeply into history to understand why and how the structures have developed in this way. One would have to draw upon national systems of regulation such as a law dating from World War I that prohibits bread baking during the night hours in Germany and that clearly puts the artisan baker at an advantage over the larger industrial producer. In some cases, one might even have to go further back in history and look into the evolution of guilds and crafts and inquire why they have survived in some countries and eroded in others. To understand the peculiar Japanese industrial structure of today it helps to study inherited historical organisational patterns, such as the ancient agricultural village, the traditional hierarchical social order, and the *Zaibatsu*, which played a key role in industrial modernisation following the *Meiji* period. The *Zaibatsu* were big compounds of numerous directly and collaterally affiliated subsidiary companies closely knit together. They were completely disbanded by the occupying forces after World War II, but reappeared in the form of industrial groups following the peace treaty.

III. Recent shift to smaller units

In addition to the wide international variance in the size distribution of product, the most important empirical result to emerge from the country reports is that there has been a recent increase in the share of total employment in small enterprises and establishments.[3] In general, the increase has been at the expense of large enterprises and establishments. While the magnitude of the increase varies considerably from country to country and across sectors, its significance rests primarily on

the fact that it signifies the reversal of a substantial downward trend in the employment shares of small units that had prevailed for many decades. Indeed, Tables III and IV show that the time series behaviour of small unit employment shares has followed a "V" pattern in which declines through the late 1960s—early 1970s are reversed and small unit employment shares increase into the 1980s. The "V" pattern is evident both for enterprises and establishments, and for the total economy and manufacturing. What is remarkable about this finding is not that the recent growth in small unit employment shares has been enormous in all countries, but rather that the pattern of decline and then growth is so robust over such a wide sample of countries, sectors, size distributions, and institutions.

The remainder of this section is divided into three parts. The first section discusses the size distribution data in more detail. The next section addresses a series of important issues that arise in the interpretation of these data. The third section summarises and evaluates relevant evidence from the job generation literature.

1. *A more detailed review*

Data on the size distribution of employment vary enormously in coverage and frequency across the six countries. The data are better for establishments than enterprises, and for manufacturing than other sectors. What emerges from these data, however, is a clear picture of a recent general trend toward smaller units of production.

Table III shows enterprise size data at the total economy level and for manufacturing. Despite significant cross-national differences in the size

TABLE III
Time series employment shares by enterprise size (number of employees)

United States	1958	1963	1967	1972	1977	1982	
Total							
S	41.3	39.9	39.9	41.3	40.1	45.7	
S+M	55.1	52.9	53.2	53.5	52.5	58.7	
Manufacturing							
S	20.6	19.1	16.3	16.2	16.2	17.6	
S+M	37.1	34.5	30.4	28.9	29.0	30.3	
Japan	1959	1965	1971	1977	1979	1982	1985
Total							
S[a]	46.7	43.8	45.5	46.5	48.3	49.3	
S[b]			53.3	56.9	57.3	56.6	55.7
S+M[a]	54.6	53.7	55.9	58.9	60.2	60.0	
S+M[a,c]			70.0	72.7	73.6	73.1	73.0
Manufacturing	1919	1935	1949	1955	1972[f]	1979[f]	1983[f]
S	45[d]	48[d]	51[d]	57[d]	43	49	47
S+M	75[e]	83[e]	75[e]	85[e]	63	68	67
France	1971	1979	1985				
Total							
S	39.0	43.4	46.2				
S+M	57.4	60.7	64.5				
Manufacturing							
S	26.4	28.6					
S+M	49.5	50.6					

Table III (Continued)

Germany	1907	1925	1961	1970		
Total						
S[g]	72.9	61.5	54.9	52.3		
S+M[h]	86.2	76.0	70.4	68.8		
Manufacturing[i]	1963	1970	1976	1977	1980	1984
S	13.5	12.0	12.7	15.3	15.0	15.6
S+M	38.5	36.0	36.8	39.0	38.8	39.7
United Kingdom[j]	1971	1973	1976	1980	1983	
Manufacturing						
S	15.5	15.3	17.0	18.8	22.0	
Italy	1951	1961	1971	1981		
Total						
S	60.2	63.5	61.6	69.3		
S+M	73.0	77.1	74.4	81.5		
Manufacturing[k]						
S	50.5	53.2	50.5	55.3		
S+M	67.4	72.0	69.2	73.9		

Notes: S = < 100 employees; S+M = < 500 employees.
[a] *Basic Survey of Employment Structure.*
[b] *Annual Report of the Labor Force Survey.*
[c] 0—299 employees.
[d] 5—99 employees.
[e] 5—999 employees.
[f] From OECD (1985), Chart 13.
[g] 1—199 employees.
[h] 1—999 employees.
[i] 1963—1976 data are *not* comparable with 1977—1983 data due to inclusion of the Handwerk sector only in the latter period. Also, data cover only enterprises with > 20 employees.
[j] From Storey and Johnson (1987), Table 4.
[k] Excludes NACE Divisions 21 and 23.

distribution, the employment share of small enterprises has reversed a downward trend and risen significantly in all nine countries[4] which were part of this study. In addition, the same result has been reported for other countries, such as Canada (Laroche, 1989). Even in countries exhibiting very different size distributions, such as Italy and the United States, the time series behaviour of the small enterprise employment shares have been very similar. Furthermore, small enterprise gains have coincided with large enterprise losses, as the employment shares of medium-sized enterprises have remained fairly stable.

Changes in the total economy size distribution may be influenced significantly by a sectoral recomposition of employment from goods to services production, because average enterprise and establishment size is smaller in the services sector. The best way to examine this issue is to decompose the aggregate change into three parts: across sectors (compositional), within sectors, and an inter-action component.[5] These calculations have been performed for three of the nine countries in our sample. In Japan (1973—1983) and France (1975—1981), 75% and 45%, respectively, of the increase in *very* small (fewer than 29 employees in Japan; fewer than 20 employees in France) enterprise employment shares was due to compositional shifts (OECD, 1985, p. 7). The United States study in this volume reports that just

TABLE IVa
Time series employment shares by establishment size, total economy

	Recent data							
Japan	1969	1972	1975	1978	1981			
S	70.1	71.5	73.8	76.1	77.1			
S+M[a]	83.1	84.2	85.6	87.5	88.3			
United States	1962	1965	1970	1975	1979	1982	1985	
S	51.3	51.5	49.5	54.0	54.1	55.1	55.9	
S+M	77.7	77.6	78.6	79.8				
Germany[b]	1977	1979	1982	1984	1985			
S	47.0	47.9	49.0	50.2	49.6			
S+M	70.4	71.1	71.9	73.0	72.3			
Italy	1951	1961	1971	1981				
S	67.2	61.6	69.3	72.4				
S+M	82.6	82.2	85.0	87.3				
	Historical data							
F.R.G.[a,c]	1882[g]	1895[g]	1907	1925	1933	1950	1970	
S[d,e]	78.0	70.4	62.9	53.3	62.0	56.8	43.6	
S+M[d,f]	88.1	84.4	79.7	69.9	76.4	73.0	63.2	
United States[h]	1909	1919	1929	1933	1939	1947	1967	1977
VS[i]	14.4	10.3	9.8	10.0	9.5	7.2	5.6	6.5
S[j]	37.8	29.2	29.1	30.8	30.0	25.0	23.2	25.3

Notes: VS = < 20 employees; S = < 100 employees; S+M = < 500 employees.
[a] 1—300 employees.
[b] Data from Employment Statistic.
[c] Census data.
[d] Includes the self-employed.
[e] Up to 50 employees.
[f] Up to 200 employees.
[g] No self-employed data for these years.
[h] Manufacturing sector; Census of Manufactures data.
[i] Less than 20 employees.
[j] Less than 100 employees.

under 50 per cent of the shift to small establishments from 1973 to 1984 was due to changes in the sectoral composition of employment. Likewise, Davis and Haltwanger (1989) find significant shifts toward small and medium-sized establishments within the U.S. goods-producing sector from 1974 to 1985, and significant shifts toward middle-sized establishments in several services-producing industries. Therefore, while compositional effects are clearly important, there remains a significant within-sector shift to smaller units.

Another way to see the within-sector changes in the size distribution is to examine the more comprehensive manufacturing enterprise data given in Table III, which also indicates that the shift to smaller enterprises is not a purely compositional effect. Table III shows that, again, while there is enormous international variance in the size structure of manufacturing, the small enterprise employment share has been rising at the expense of large enterprises. The United Kingdom is the most striking example of increased relative

TABLE IVB
Time series employment shares by establishment size manufacturing

Japan	1957	1962	1967	1971	1977	1980	1982	1984
S	59	52	53	51	56	58	56	55
S+M[a]	73	68	69	67	71	74	72	72
United States	1974	1978	1982	1985				
S	24	25	27	28				
S+M	57	58	60	61				
France	1906	1926	1931	1936	1954	1966	1974	1981
S	75	63	59	61	52	48	45	47
S+M	88	81	79	79	75	74	72	73
United Kingdom	1930	1948	1954	1963	1970	1974/75	1983	
S	29	27	24	20	18	20	26	
S+M	62	59	57	50	45	45	53	
Germany[b]	1963	1970	1976	1977	1980	1984		
S	20	19	20	19	18	19		
S+M	48	47	48	48	47	49		
Italy[c]	1951	1961	1971	1981				
S	54	57	55	59				
S+M	75	79	77	80				

Notes:
[a] 100—299 employees.
[b] 1963—1976 data are not comparable with 1977—1984 data due to inclusion of the Handwerk sector only in the latter period.
[c] Excludes NACE Divisions 21 and 23

employment in small manufacturing enterprises. Finally, the most recent Japanese data reveal a modest decline in the employment share of small manufacturing enterprises during the latest recession. More recent data is necessary to determine whether the downturn continued into the subsequent business cycle recovery.

The services data, not shown, are much more anecdotal and fragmentary. The services sector is defined in so many different ways that international comparisons of the size structure are not very meaningful. The time series evidence is even thinner, and does not suggest any clear trend. What is perhaps most notable in the services data is the existence of sectors, such as banking and insurance, where the typical enterprise is quite large, and eating and drinking establishments and personal and commercial services, where most enterprises are quite small.

Establishments are production units, and shifts in their size structure are obviously conceptually distinct from that of *enterprises*, which are ownership units. Which entity is most appropriate depends on precisely what issues are being addressed; more specifically, whether the emphasis is on production or control. The data in the nine country studies indicate, however, that the movement in both cases is toward higher employment shares in small units: enterprises are getting smaller, at least in part, because establishments are getting smaller.

The pattern of international variation in the size structure identified for enterprises also holds for establishments: Japan, Italy and Switzerland have relatively large shares of employment in small establishments, while the United States and Germany have larger shares in medium and large establishments (Table II). The time series data (Table IVa) again display a noticeable "V" pattern for small establishments, as well as a decline in

large establishment employment shares. Early time series data for Germany and the United States show a long and steady decline in small establishment employment shares into the late 1960s — early 1970s, with a significant blip during the Great Depression (more on this latter point below).

The manufacturing establishment size data are the most comprehensive in this study (Table IVb). The evolution of the manufacturing establishment size distribution over time provides the clearest case in the sample for an international "V" pattern. In all the countries the employment shares of small establishments rise in the late 1970s or early 1980s, reversing downward trends in previous periods. The increase is again particularly striking for the United Kingdom. However, in Japan the trend toward larger shares of employment in small establishments was reversed in the early-mid 1980s, which is consistent with the Japanese enterprise level developments reported above. The data from the other countries, at least so far, do not suggest that the reversal is, like the "V" pattern, an international phenomenon in manufacturing.

TABLE V
Number of establishments and average establishment size, United Kingdom

	100 largest firms		All firms	
	Ave. no. estabs.	Ave. estab. emp.	Ave. no. estabs.	Ave. estab. emp.
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

Source: Sengenberger, Loveman and Piore (1990).

Finally, the existence of comparable enterprise and establishment data is important for consideration of a closely related issue: namely, decentralisation of production within large enterprises. Declining large enterprise employment shares are not sufficient to address this issue, since they are consistent with a declining number of increasingly large establishments. However, if the dynamics of establishment and enterprise size distributions of employment in an industry both favour smaller units, then the hypothesis of decentralisation within large firms gains further credence. The data, in fact, support such a hypothesis for most cases where comparable data exist; e.g., Japan, Italy, the United States, France, Germany and Britain. Nonetheless, to make the case conclusively requires data on the average number of establishments per large enterprise, since otherwise the true results may be lost in aggregation. The British report provides such data for the 100 largest firms from 1970 to 1983 (Table V). These data show an increase in the average number of establishments per large enterprise and a decline in average employment per establishment, thus demonstrating decentralisation of large enterprises in Britain.

2. *Problems in interpretation of the employment share evidence*

The employment share data provide fairly conclusive evidence of a relative shift in employment to smaller units in recent years, but this method of empirical inquiry has a number of shortcomings with respect to gaining a rich understanding of actual changes in industrial organisation. The fundamental problem arises in the inability of share data to inform explicitly on both changes taking place in existing firms over time, and changes introduced by the dynamics of firm births and deaths. These changes, which are identifiable using longitudinal data, are obscured almost entirely in share data. Examples are many, but consider the following problems. The same rise in the employment share of small enterprises may result from employment decline among large firms but constant employment in existing small firms, births of small firms and stable employment in large firms, employment growth among existing small firms at a rate exceeding that of large firms, and substantial employment loss among several large enterprises that over time move through the size distribution into the small firm sector, etc. Of course, a small firm employment share decline can result from dynamic growth of small firms through the size distribution. These examples illustrate the point that exactly the same employment share changes can be generated by vastly different phenomena having widely varying implications for

new industrial organisation. The problems in this regard are very similar to those of job generation studies, but in the latter case the data permit the research methodology to control more carefully for these factors.

A closely related empirical problem, that has increased in importance significantly in recent years, is that large enterprises often have very many legally independent subsidiaries. While the subsidiaries are *de jure* independent, they are *de facto* part of the large enterprise and should be accounted for accordingly. The relationship between the ostensibly independent firms is virtually impossible to track in current large samples, but the failure to do so may seriously jeopardise inferences drawn from the unadjusted data. Bade (1983), for example, found that in 1983 the 32 largest German manufacturing enterprises had in excess of 1,000 legally independent subsidiaries, and the number grew by almost 50% from 1971–1983. Developments of this sort have obvious implications for the sort of conclusions that might be drawn from a more superficial review of the data presented in this overview. If the phenomenon identified by Bade is international, the results discussed above must be seen as an *upper bound* on the true movement to smaller enterprises.

A further important consideration is that, after all, employment is only one of many potential dimensions by which to analyse changes in industrial organisation, and the dimensions which are most relevant for empirical work should be derived, or follow, from a well articulated theory of industrial organisation (Acs and Audretsch, 1990). Of course, in the end, the empirical work is always constrained by data availability, but this fact should not impede the understanding that a theory may suggest that other indicators are best, or more appropriate, for testing hypotheses. In the United States, for example, the declining manufacturing employment share is considered by many to be evidence of deindustrialisation, while for others it is the logical, and desirable, result of a rate of productivity growth exceeding that of other sectors. It may be that changes in industrial organisation are best captured by changes in the size distribution of profitability, value-added, capital investment, unit labour costs, innovation (patents), in-process inventories, or a myriad of other non-employment variables. If, for example, a large enterprise reduces employment but increases its capital stock so as to keep output constant, this is obviously a different development in terms of industrial organisation than if large enterprise employment declines because *production* is actually shifting to smaller firms. The country reports contain a variety of important non-employment data that is very useful in understanding national developments in the size structure. Unfortunately, comparable data are not available in enough countries to permit international comparison.

For better or worse the employment share data are the most comprehensive available in this project for the purposes of international comparison, so it is important to now weigh critically what can be learned from them. Perhaps the most significant cause for concern that the increasing small unit employment shares does not reflect any fundamental changes in industrial organisation favouring smaller units is that there is compelling evidence in the data that the "V" pattern may be generated largely by the *counter-cyclicality* of small firm employment shares. If these shares rise in recessionary periods as large firms reduce employment, there is an employment decline in industries like durable or capital goods which are produced primarily by large units, and new and small firm employment rises (part-time work, subcontracting, etc.), this is a much different matter than if there is a *trend* increase in small firm employment.

The best way to investigate this issue, given the available data, would be to regress the employment shares on cyclical variables to determine if a trend exists and, if so, in what direction. The United States study in this volume includes such an analysis. The small manufacturing establishment employment share is regressed on cyclical variables and a time trend for the period 1969 to 1984. The results indicate an important, statistically significant counter-cyclical relationship *and* a positive trend. The similar regression for large establishments yields a statistically significant cyclical relationship and a negative trend. The shift to small establishments, therefore, remains after controlling for the effect of the business cycle.

In the absence of this type of analysis for the other countries, the time series data must be examined to consider whether cyclical effects have played a large role. A first pass at this procedure

suggests that there are at least three reasons for thinking that cyclical factors have been important. First, the "V" pattern crudely fits the prosperous 1960s/stagflation 1970s experience, and individual country data often fit rather closely with even the more detailed cycles in the 1970s/early 1980s. In other cases there is evidence of a cyclical effect around a positive trend similar to what was found in the regression analysis of the United States data. This can be seen by looking at first differences of the British manufacturing enterprise time series.

For most other countries the time series are inadequate to test for cyclical influences, but in the case of Japan the data are adequate yet give mixed results. On the one hand, the Japanese data up to 1980 do not seem to display much cyclical sensitivity. This may be due in part to the superior macroeconomic performance of Japan over the period but, in fact, this makes the Japanese small unit experience even more outstanding. Industrial employment growth from 1970 to 1983 was higher in Japan than in any of the other eight countries and GNP growth exceeded the OECD average throughout the period, yet the small unit share grew steadily and substantially. On the other hand, the most recent time series data for total economy enterprises and manufacturing enterprises and establishments reveal a reversal in the trend toward smaller enterprises since roughly 1980. Output and rate of return on capital data in the Japanese report also show a sharp deterioration in the relative profitability and output of small enterprises and establishments since 1980. While the overall Japanese experience cautions against extrapolating these recent results to other countries, the recent Japanese and United States data raise questions about the sustainability of the trend to small units during the recent recovery.

A third reason for concern about cyclical influences stems from data from the Great Depression. In French manufacturing establishment data, German economy establishment data, and Japanese total economy enterprise data, there are very large increases or blips, coincident with the Great Depression during what are otherwise significant negative trends in small unit employment shares. Thus, there is a historical precedent for the claim that increased small unit employment shares are a product of bad times.

One commonly cited cyclical explanation for small firm growth appears not to have played an important role: self-employment. Self-employment and new firms started by the self-employed are generally considered to be a significant countercyclical response to rising unemployment. However, a recent study by the OECD (1986) concludes that the level of self-employment is insensitive to the business cycle. It is not, therefore, likely to have affected the size distribution of employment.

In sum, this section has raised several issues that counsel caution in interpretation of the employment share data. The data are, unfortunately, inadequate to permit a more rigorous empirical analysis that would control for the business cycle, sectoral recomposition, etc. and calculate what portion of the shift to smaller units was a "genuine" change in industrial organisation. These shortcomings do not, however, imply that nothing can be learned from the data, or that nothing substantive has happened. Indeed, the fact that a long-standing trend toward larger units has ceased and generally reversed in all nine countries spanning such a wide range of size structures, institutions, levels of economic performance, etc. suggests that something quite important and fundamental has taken place. Furthermore, the fact that a shift to smaller units was coincident with bad economic times need not by any means imply that the shift was part of a stable relationship between the business cycle and the size structure, supported by an unchanged regime of industrial organisation. Quite the contrary, the bad times might have been symptomatic of institutional crisis and flux, of which change in the size structure of business organisations was an important part. Alternative explanations for the shift to smaller units of employment are considered in the following section.

3. *Job generation*

a. *Evidence from the United States.* Much of the attention devoted to small firms in recent years resulted from research, beginning with Birch (1979) in the United States, claiming that small firms were responsible for creating a disproportionate share of new jobs. The process of job generation is indissolubly connected with the

evolution of employment shares, but there is no unique mapping between the former and periodic observations of the latter. The job generation methodology is based on longitudinal data that tracks enterprises or establishments over time, whereas employment shares are simply cross-section snapshots of the size distribution at different points in time. The aim of job generation studies is to account for employment changes by size class, distinguish between employment changes from firm births and deaths and *in situ* expansion or contraction, and to control properly for movements of firms across size boundaries. Changes in employment shares over time can be the result of an infinite number of combinations of these factors. Thus, longitudinal job generation studies are necessary to attribute employment changes explicitly to firms of different sizes.

Unfortunately, job generation studies, such as those of Birch (1979) suffer from very severe methodological problems, including:

- failure to properly adjust for example selection bias resulting from firm deaths;
- inadequate and biased sectoral representation in the sample over time;
- biased reporting of employment by firm.

A detailed critique of the job generation methodology is not pursued here, but may be found in the literature discussed below. What follows is a brief review of the empirical findings from the job generation literature, with a general caveat that the results, particularly Birch's results, are highly controversial. For this reason, the analysis in this paper is based on the more conservative employment share evidence.

Birch's (1979) pioneering study stimulated so much additional work, at least in part, because of its strong claims for the job generation performance of small firms. For the period 1969—1976, Birch claimed that small enterprises contributed 82% of net job growth in the United States private economy. While Birch (1979) referred to his results in terms of enterprises, the data were actually drawn from establishments, and no effort was made to link establishments to enterprises. This is one obvious source of an upward bias in Birch's results. Subsequent work by Armington and Odle (1982) using the same data base, first for Brookings and later for the United States Small Business Administration (1985), found small enterprises responsible for 39% and 53% of net job creation for the periods 1978—1980 and 1976—82, respectively. Studies of the American case suggest that the superior job generation performance of small firms was due to both higher *in situ* growth and greater job creation by new firms. Small firms are reported to have been better job creators across a wide range of industries, but to have performed relatively best in terms of job growth in declining industries. Birch argues that the employment dynamic of individual firms is quite volatile with "winners" and "losers" often exchanging positions in consecutive years. Teitz *et al.* (1981) point out that, in California, small firm job generation was concentrated in only a few firms, while most experienced very modest employment changes.

Birch (1987) provides updated and far more comprehensive United States job generation results. The data for 1981—1985 are consistent with his earlier findings: 88% of net job creation was in enterprises with 1—19 employees, and small enterprises with fewer than 100 employees accounted for essentially all net job creation. Small firms were again found to be superior both in terms of *in situ* expansion and job creation from start-ups and closures. In the latter case, very small firms created more than half the total, but very large firms (more than 500) were also important contributors. Large firms are less likely to die, but more likely to contract. Job creation by medium and large firms was particularly erratic, while it varied much less among small firms.

Finally, Birch (1987) stresses the tremendous turbulence experienced by firms of all sizes during this period. He finds that big losers in previous periods have the highest odds of being big winners in subsequent periods, and vice versa. As in Teitz *et al.* (1981), it is the few big winners that create the majority of the jobs: from 1981—1985, the 18% of firms that grew fastest created 86% of the net new jobs.

In addition to a variety of other detailed methodological criticisms, the job generation literature was recently called into question by Jonathan Leonard's (1986) work in the United States. Leonard argues that firms have long-run, or equilibrium configurations from which they may be temporarily disturbed. Thus, they occasionally

find themselves somewhat larger or smaller than their long-term mean employment. The process of transitory fluctuation around this mean has an inherent statistical bias with respect to job accounting of the Birch variety, as transitorily small firms will gain jobs during their path back to equilibrium, and vice versa for temporarily large firms. The argument is, therefore, that "regression to the mean" will generate high rates of job creation (loss) for small (large) firms, but the result is, in fact, a statistical artifact of the equilibration process. In a period of rapid structural change, when there is a significant shift from old to new industries, the small unit employment share will rise as old firms are shrinking below their optimum and young firms have not yet reached their optimum.

Leonard tests this stochastic model using United States longitudinal data on firms in existence from 1974—1980 (i.e., excludes births and deaths). His results suggest that, if his model of optimum firm size is appropriate, the conventional finding of a negative relationship between employment growth and size is nothing more than regression to the mean. Brownyn Hall (1986), conversely, estimates a similar model and rejects "regression to the mean" for a different manufacturing sector sample. She argues instead that differences in investment and R&D outlays explain truly superior job creation performance by small firms. Thus, this new dimension of the debate is by no means resolved, either.

Leonard makes a related point using his longitudinal data on employment shares. The employment share analysis presented earlier in this section compared cross sections wherein enterprise/establishment employment shares were defined in terms of the current year size class. An alternative method is to compare shares calculated using base or terminal period size classes; e.g., 1980 employment by 1980 size class versus 1974 employment by 1980 size class. Using this technique Leonard finds that, while *establishments* that are small tend to grow, *establishments* that are small tend to have shrunk. This is another implication of regression to the mean.

Evans (1987) uses United States manufacturing data from 1976 to 1982 to estimate the relationship between employment growth, firm size and age. He finds that employment growth decreases with size *and* age, and these results are robust to alternative assumptions regarding sample censoring (exit firms) and functional forms of the growth relationship. Evans' finding that growth decreases with size given age, and vice versa, is consistent with Birch's (1979, 1987) similar results, despite very different methodologies. Thus, while young firm growth is abnormally high, small firms continue to grow faster than large firms even after many years. The life-cycle model of firm growth is therefore applicable, but does not tell the entire story in the United States.

Finally, the most comprehensive analysis of a United States manufacturing job growth by establishment size is conducted by Dunne, Roberts and Samuelson (1989) using the longitudinal data set of all manufacturing plants present in the 1967, 1972, 1977 and 1982 Census of Manufacturers. They find a tradeoff between growth rates and survival rates, and variance across ownership types:

> When compared with small plants, large plants have lower failure rates and lower growth rates if they survive. Large multi-unit plants have both lower failure rates and higher growth rates if successful than large single-unit plants. The latter plants have negative growth rates even when they survive (Dunne *et al.*, 1987, p. 31).

However, the failure rate is substantially higher for smaller plants: The average failure rate for plants with 5—19 employees is 12.7%, 34.4% and 104.7% higher than for plants with 20—00, 100—249, and more than 250 employees, respectively.

b. *International evidence.* Following Birch's work, job generation studies have been undertaken in many OECD countries, and the results of many of these studies are summarised in Sengenberger, Loveman and Piore (1990), OECD (1985), and Storey and Johnson (1987). Storey and Johnson summarise the SME employment creation literature for the United Kingdom, Germany, and France; and Table VI, taken from their paper, gives an overview of the more important empirical findings. Note that the figures are percentages of base year employment, so that a given growth rate translates into many fewer jobs for small firms than for large firms.

Hence, despite the relatively strong performance of SMEs, the job losses of large enterprises

TABLE VI
Job generation studies in Europe

Country area	Time period	Coverage	Annualized % change in employment (% of total base year employment) size of firm/establishment					
			20	20—49	50—99	100—499	500+	Total
United Kingdom								
	1968/1975							
East Midlands								
	1965/1976	Manuf.	+0.4	+0.3	+0.2	−0.3	−0.9	−0.3
Northern England								
	1976/1981	Manuf.	+0.2	+0.1	+0.0	−0.1	−1.0	−0.8
Northern England								
	1972/1975	Manuf.	+0.2	−0.0	−0.2	−1.6	−3.8	−5.4
United Kingdom								
	1971—1981	Manuf.	0.0	0.0	0.0	0.0	−0.1	−0.1
United Kingdom								
	1982/1984	All sectors	+0.8	−0.1	−0.0	−0.1	−1.4	−0.7
United Kingdom								
	1971/1981	All sectors	+2.0	+0.3	−0.0	−1.0	−2.2	−0.9
Northern Ireland		Manuf.	+0.1	−0.0	−0.2	−1.2	−1.9	−3.2
F.R. Germany								
F.R.G. (sample)*								
	1974—1981	All sectors	+0.2	+0.2	+0.2	+0.2	−0.5	+0.3
F.R.G. (4 regions)*								
	1974—1980	All sectors	+0.8	+0.7	−0.0	−0.2	−0.5	+0.8
Northrhine-Westfalia								
	1978—1984	Manuf.	−0.2	−0.3	−0.3	−0.9	−1.3	−3.0
Ruhr and Frankfurt								
	1975—1980	All sectors	+1.1	−0.4	−0.4	−0.5	−0.5	+0.3
France								
Poitions-Charentes								
	1972—1984	All sectors	+1.0	+0.7	−0.1	−1.9	+0.5	+0.2
France								
	1981—1983	All sectors	+0.0	−0.1	−0.1	−0.4	−0.4	−1.0
Ireland								
Ireland								
	1973—1980	Manuf.	{	+0.7	}	+0.3	−0.3	−0.2	+0.6

Source: Storey and Johnson (1987).
* Survivor analysis only.

were sufficient to dominate aggregate employment performance. Thus, despite employment gains among SMEs, total employment fell in nearly all samples that include firm closures. While these figures are not comparable to those of Birch, it is now easy to see how SME job creation can be simultaneously modest in absolute numbers, and very large as a percentage of net job creation.

Storey and Johnson cite two important caveats to the results. First, the distribution of job gains

and losses within size groups is far from uniform: a large proportion of new jobs (job losses) comes from a small number of firms. Table VII, also taken from Storey and Johnson (1987), shows that very few of the firms that started the period in the smallest size category grew past the very small size group by the end of the period. However, the vast majority of new jobs were created by the few firms that did expand substantially. Second, Storey and Johnson point out that, given the minor (major) job losses from the contraction or closure of small (large) firms, it is relatively easy (hard) for a few "winners" to compensate for the losers. Thus, there is a natural bias favouring small firms in this sort of job growth accounting.

Hull's (1986) review of German job generation studies supports these points, but is more skeptical about the evidence for small firm dynamism. Hull disagrees with Birch's finding that size, and not age, is the key factor in job growth. Regression analysis of a sample of 458 small independent manufacturers in Northern Germany suggests that "it is more the youth of small firms than their size which 'makes' them grow" (p. 24).

Additional information on job creation in the Federal Republic of Germany is provided by Fritsch's (1989) study of 3,300 industrial establishments. It shows that for the period from 1975 to 1986, the percentage of net employment growth was inversely related to establishment size. By far the largest net increase was recorded in establishments with fewer than 20 employees. Since the data include only the survivor firms, and the failure rate is higher for small firms than for larger ones, caution is required in inferring from the data that smaller firms are more successful in job creation.

The Italian report reviews the recent important work of Contini and Revelli (1987). The Italian data indicate that across a wide range of geographical regions, time periods, sectors, and methodologies, SMEs are creating jobs at a time when large enterprises have experienced declining employment. The Italian job generation story is

TABLE VII
Jobs created in expansions of small firms*

	Employment size group at end year						
	0	1—19	20—49	50—99	100—499	—500+	Total (n)
UK 1982—1984							
% of firms	10.6	87.7	1.2	0.3	0.1	0.02	560,250
% of jobs							
In expansion	—	0.0	23.1	19.7	22.0	28.3	550,000
France 1981—1983							
% of firms	30.5	64.7	4.5	0.2	0.09	0.005	22,200
% of jobs							
In expansion	—	0.0	57.0	16.1	23.5	3.2	15,805
Poition Charentes 1972—1984							
% of firms	61.9	33.3	4.2	0.5	0.06	0.06	1,682
% of jobs							
In expansion	—	0.0	47.8	14.5	6.6	31.1	2,483
Ireland 1973—1980							
% of firms	25.9	65.5	6.2	1.7	0.7	0.0	1,980
% of jobs							
In expansion	—	na	na	na	na	na	34,587

Source: Storey and Johnson (1987).
* 'Small firms' defined as less than 20 employees, apart from Ireland — less than 25 employees.

very much like that of Birch in the United States, but the results are even more striking for very small Italian firms.

In sum, a conservative review of the job generation literature suggests that small firms account for at least their share of employment creation, but the net new jobs result from a very dynamic process of expansion and contraction within the small firm sector. Large employment gains occur only in a few small firms, as most small firms start and remain small throughout their existence.

The job generation studies show that the employment dynamic accompanying new firm formation and business closures is very important to the net employment contribution of small units. Data in several country reports suggest that small firm employment share gains may have come, in part, from net additions to the stock of firms in recent years. Time series evidence for Germany, France, Japan, and Hungary shows that the population of enterprises has risen significantly in the first half of the 1980s. In general, the increase has resulted from a rise in new firms more than offsetting an increase in closures. Storey and Johnson (1987) draw the same conclusion from their sample of EC countries.

Hull, however, cites very interesting German data on new firm registrations which suggest that simple measures of firm births and deaths may not correspond to economically meaningful changes in the population of firms. A sample of new firms registered in 1981 and 1983 shows that roughly 25% of "new firms" were in fact takeovers or other continuations of existing business, and another 25% were not their founder's sole source of livelihood. Thus, only approximately 50% of the registrations were for "genuine start-ups providing the founder's sole source of livelihood" (Hull, 1986, p. 18). In the United States, new business data are further suspect because of the frequent and growing use of a variety of "paper corporations" for purposes of tax and litigation avoidance. Therefore, data suggesting recent increases in both the population of firms and their volatility must be interpreted rather cautiously.

The country reports also include a variety of measures of enterprise formation by sector. In all cases new firm formation is proportionately highest in the services and wholesale and retail trade sectors and, more specifically, branches such as catering. Manufacturing and construction have below average rates of firm births.

The precarious prospects for the survival of new enterprises, the vast majority of which are small, are well known, and are reflected in the fact that the probability of survival rises significantly with size. The longer odds faced by small firms are evident in Birch's (1979) findings that the percentage of U.S. firms existing in 1969 that survived to 1976 was 40, 65, 70, and 80 for very small, small, medium, and large enterprises, respectively. Similarly, in the United Kingdom two-thirds of new businesses fail in their first two-and-a-half years, and in Germany 37% of 1985 insolvencies were in firms less than four years old. However, Birch (1987) reports that in the United States from 1981—1985, the odds of an *establishment* closing were essentially constant across size classes.

The British report shows that firms that do persevere in the early years often have very long lives: for example, firms active at least seven years in 1970 had median ages ranging from 19 years in retail and motor trades to 22 years in manufacturing and 69 years in construction. This apparently bi-modal life expectancy distribution resulted in a median age at death of nearly four years for all sectors of the British economy in 1981. In addition, Marsden notes the surprising uniformity of this statistic across individual sectors.

The young average age of most business failures explains part of the correlated rise of both births and deaths in recent years, since many of the latter follow with a short lag from the former. Furthermore, Hull (1986) argues that many recent births in Germany have been induced by poor economic conditions in general and high unemployment in particular, and those undertaken as "last-ditch" attempts to provide livelihood to the founder may rest on especially shaky ground. The failure rate among these firms might therefore be expected to be abnormally high as either good times draw the entrepreneur back into dependent employment or bad times topple the weak firm.

In reviewing the new firm formation data the implications for small unit employment creation bear repeating, ambiguous though they may be. First, it seems clear that internationally the vast majority of small new firms either remain small

indefinitely or fail. Thus, their contribution to employment creation is modest. The few remarkably successful new small firms account for much of the total increase among small firms. Second, some studies (United States Small Business Administration, 1985; Gallagher and Stewart (United Kingdom), 1984) suggest that employment growth rates for new large firms are roughly equal to those of small firms, thus perhaps yielding a substantial number of jobs despite fewer new firms. Third, many of the thorny empirical problems discussed above also apply here.

Finally, the notion of *net* job creation is also very elusive in the case of new firms. If new firms reflect a redistribution of production from existing firms, as would be the case with subcontracting, entries not involving significant innovations or new products, or entry into industries with inelastic demand, the employment gains of new firms certainly have ambiguous welfare implications. Consequently, even settling the apparently unresolvable empirical debate may not provide a clear answer to the more substantive questions about the role of new and small firms in raising aggregate welfare.

IV. Labour compensation, working conditions and industrial relations

If there is indeed a shift to production by smaller enterprises or establishments, the relative compensation and working conditions offered by SMEs are critical, since a new industrial organisation entailing a deterioration in job quality is not an attractive development. If workers had homogeneous tastes, an appropriate way to compare two jobs would be to ask whether workers with equal marginal products, or abilities, preferred one job over the other. However, it is extremely difficult to make such a comparison in practice, since many job and worker characteristics are not observable, workers have heterogeneous tastes over the range of job characteristics, and particular jobs may be part of a training or search process yielding important non-wage benefits. Keeping in mind, nonetheless, what would be an ideal comparison, there is a variety of indicators which suggest that, on average, remuneration and working conditions are, and have historically been, inferior in small units.

Table VIII shows that *wages* are an increasing

TABLE VIII

Average wages by enterprise and establishment size (percentage of wages in largest employment size group)

Country	Year	10—99	100—499	500+				
France[b]	1978	83	86	100				
Germany[c]	1978	90	92	100				
Italy[c]	1978	85	93	100				
Japan[d]	1982	77	83[e]	100[f]				
United States[g]	1983	57[h]	74	100				
		5—29	30—99	100—499	500+			
Japan[i]	1984	59	70	83	100			
		10—49	50—99	100—199	200—499	500—999	1000	
Germany[j]	1978							
Blue collar		80	79	80	82	86	100	
White collar		64	74	79	80	85	100	
		25—49	50—99	100—199	200—499	500—999	1000—1999	2000+
United Kingdom[k]	1980							
Semi-skilled		76	86	85	91	94	97	100
Skilled		82	88	86	94	95	97	100
Clerical		82	86	87	89	89	89	100
Middle management		82	85	85	87	92	89	100

Table VIII (Continued)

		Time series data					
		5–29	30–99	100–499	500+		
Japan[l]	1965	65.9	78.3	86.7	100		
	1970	64.9	76.2	85.8	100		
	1975	64.9	75.6	86.2	100		
	1980	61.7	72.7	83.6	100		
	1984	59.3	70.0	83.4	100		
		<20	20–29	100–249	250–499	500–999	+1000
United States[n]	1974	78	71	71	73	80	100
	1976	69	69	71	72	80	100
	1978	65	66	68	70	79	100
	1980	65	66	69	71	80	100
	1982	62	65	68	71	79	100
	1984	60	63	66	69	77	100
		25–99	500+				
United Kingdom[l]	1970	85[m]	100				
	1980	93[m]	100				

Notes:

[a] Italy, the first German series, and the second United Kingdom and United States series are for establishments; all others are for enterprises.

[b] Hourly pay, manual manufacturing workers.

[c] Hourly pay, male manual manufacturing workers.

[d] Monthly scheduled earnings for regular employees in private non-agricultural sector.

[e] 100–999 employees.

[f] 1000+ employees.

[g] Usual weekly earnings for wage and salary earners in private non-agricultural sector.

[h] 1–99 employees.

[i] Average monthly cash earnings of regular employees in all industries except services.

[j] Total labor cost per hour in manufacturing, mining, and construction.

[k] Workplace industrial relations survey for whole economy, establishments.

[l] Average weekly earnings for manual workers in engineering firms.

[m] 25–99 employees.

[n] Annual payroll per employee in manufacturing establishments.

function of enterprise and establishment size. In some cases, such as small firms in the United States and very small firms in Japan, wages are just over half those of large firms. Wage differentials are much narrower in the Federal Republic of Germany where comprehensive industry-wide bargains are often applicable to all employers, including industries with many small firms.[6] While Table VIII shows that small firms in Germany pay male workers in manufacturing approximately 90 per cent of what large firms pay, another study which examined monthly incomes for the years 1980–1981 showed little difference between establishments with fewer than 50 employees and those with more than 50 employees. Female workers could gain more than male workers from employment in large plants. Controlling for gender, education, seniority, and working time, establishment size had a positive and significant effect on wages. Again, the size effect was larger for female than for male workers (Brüderl and Preisendörfer, 1986).

The figures in Table VIII differ substantially in definition and coverage, but two important international conclusions are nonetheless clear from the data. First, small firms pay lower average

wages than large firms in all countries in the sample. Second, wage gaps between large, medium and small enterprises/establishments differ substantially across countries. The time series evidence is much more limited. The Japanese report presents three time series by firm size: average monthly regular pay; average monthly cash earnings (shown in Table VIII); and average hourly earnings. It is interesting to look at these three series together, since they show how regular pay, bonuses, and hours worked interact to affect wage differentials by size of enterprise. The regular pay and cash earnings series display very similar fluctuations for each size group from 1965—1984, but the differentials in the latter case are substantially larger because bonuses are primarily a large firm phenomenon. The differential for total hourly earnings is even larger for very small firms, owing to longer hours worked, but is roughly the same as monthly cash earnings for firms with 30—499 employees. The pattern in differentials over time in all cases is a trend increase, with temporary declines in the oil-shock recessions of the 1970s. The differentials have risen substantially since the late 1970s and are at historically very high levels. The fluctuation and increase in differentials has been much more pronounced for small versus medium-sized firms. The United States manufacturing data also display a steady increase in wage differentials by establishment size. Differentials widened for all size groups below 1,000 workers from 1974 to 1984, but the increase was especially large for very small establishments.

The only other intertemporal evidence comes from a comparison of 1970 and 1980 average weekly earnings for mutual workers in small engineering firms in Britain. These data show a very significant decline in the differentials, suggesting a relative shifting out (back) of labour demand curves for small (large) firms, since the small firm employment share rose coincidentally with small firm relative wages.

Supporting evidence for a decline in wage differentials comes from an attempt in the Japanese report to adjust differentials for differences in worker age, education, occupation, and experience. This method is in the spirit of the "ideal comparison" outlined above, and it shows a significant narrowing of differentials in monthly regular pay for male manufacturing workers from 1961 to 1972, and further from 1972 to 1984. It also shows that there are significant differences in the career profile of earnings by firm size, with the adjusted small firm differential being small if not negligible for workers under 40, but quite significant for workers over 50. This result may be due to the fact that many blue-collar workers in small firms achieve white-collar or ownership status around age 40. Indeed, the ability of some small firm employees to earn "entrepreneurial-like" incomes introduces considerable variance into the earnings distribution of small firm employees. The Japanese report shows that while the low tail of the small firm earnings distribution lies well below that for large firms, the high tail lies substantially above the highest earnings in large firms.

The adjusted differentials for Japan, nonetheless, almost undoubtedly understate the true size of compensation differentials. By using regular monthly pay rather than total hourly earnings, the adjustment fails to capture the higher bonuses and shorter hours in large firms. United States studies using more sophisticated techniques have consistently found that observationally equivalent workers in similar jobs earn considerably less in small firms. In a systematic review of American data, Brown and Medoff (1989) show that differences in labour quality can explain no more than one-half of the total establishment size differential. This differential is estimated to be roughly 10% across establishments one standard deviation below the average size to one standard deviation above. Furthermore, Brown and Medoff find independent positive effects of enterprise and establishment size. Alternative explanations for the differentials — differences in working conditions, product market power, and union avoidance — are found to contribute little empirically. Hence, much of the United States size differential remains unexplained.

However, even this is an understatement of the pecuniary disadvantage of small firm employment, since it fails to account for non-wage compensation such as medical insurance, pension benefits, etc. There is little doubt that fringe benefits are much higher for large enterprise employees. While this may be due in large part to more extensive unionisation of large firms, the OECD (1985, p. 79) reports that in the United States the differential by size is even more pronounced for

non-union firms. Comprehensive data on fringe benefits is notoriously hard to find. However, the Japanese and British reports document substantially lower non-wage compensation in small enterprises establishments, and Table IX taken from OECD (1985) shows that in the United States and Japan compensation differentials are very large, and may perhaps be even wider than wage differentials in these countries. The table also suggests that the preponderance of part-time workers, who are typically exempt from fringe benefits, in small firms may explain part of the difference.

Skill composition data in a few of the country reports suggest that compensation differentials are not likely to follow from an *overall* lower skill level in small firms. The French report gives detailed occupational data by firm size for 1979 and 1983, which indicate that small firms employ roughly the same proportion of skilled production workers, but proportionately more white-collar workers and fewer unskilled workers than large firms. The difference narrowed somewhat from 1979 to 1983, as large firms reduced their share of unskilled workers quite significantly. The British report shows that small engineering firms (25—99) have a much higher share of skilled workers than large firms, and the difference increased from 1970—1980. The small firms also have a slightly higher share of unskilled workers, but the large firms have a much greater share of semi-skilled workers. Similarly, Storey and Johnson (1987) cite evidence that the skill level of manufacturing employees is higher in small enterprises in the United Kingdom and Federal Republic of Germany. In Germany, 76% of male manual small firm workers are rated as skilled, as opposed to 60% in large firms. There is no difference in the share of workers rated as unskilled workers, but the proportion of those rated as semi-skilled is much higher in large firms. A study based on social security data shows that larger establish-

TABLE IX
Nonwage compensation by firm size

	Enterprise size (number of persons employed)					
United States	1—24	25—99	100—199	500—999	1000+	
Health insurance coverage (%) 1983	35.4	64.9	75.1	79.1	86.3	
Pension or retirement plan coverage (%) 1983	17.3	40.7	63.9	74.3	87.9	
Japan	1—29	30—99	100—299	300—999	1000—4999	5000+
Average cost per regular employee of obligatory welfare services[a] (%) 1982	..	70.5	71.8	81.2	92.6	100.0
Average cost per regular employee of non-obligatory welfare services[b] (%) 1982	..	28.7	30.4	41.6	60.5	100.0
Retirement allowance at mandatory retirement (%) 1982	..	22.1	---46.7---		---100.0---	

Sources: United States, data supplied by BLS based on the May 1981 Special Pension Supplement to the Current Population Survey; Japan, Ministry of Labour, *Yearbook of Labour Statistics* and Bureau of Statistics, *Labour Force Surveys*.

[a] Employer payments for pension schemes, health insurance, etc.

[b] Company housing, canteens, recreational facilities, etc.

ments employ greater shares of highly educated personnel, but also larger proportions of unskilled workers (Cramer, 1987).

The dimension of working conditions for which the best, and perhaps only, international comparative data exist is *hours worked.* The Japanese, French and British country reports contain data suggesting that small firm employees work more hours than large firm employees, but the discrepancy has narrowed in recent years. While total hours worked have declined in the past 15 years for all workers, the decline has been significantly greater in small firms. There remains, however, a substantial differential between small and large firms, but the differential is rather modest between medium and large firms. In Japan the longer hours for small firm employees result from more work days per week, more hours per day, and fewer holidays and vacation days.

From the perspective of understanding the growth of small units, the compensation and working hours data are also interesting in so far as they shed light on the important issue of differences in *unit labour costs* by firm size. Unit labour costs are, of course, a function of compensation and productivity, and little is known about how they vary by firm size. The British report gives labour productivity data showing significant advantages for large establishments, which appear to have increased in recent years. If so, compensation differentials may be insufficient to give smaller firms any significant current unit labour cost advantage. Sengenberger (1987) shows that labour productivity is an increasing function of establishment size in Britain, France, Italy, and the Federal Republic of Germany. In addition, the Japanese report shows that unit labour costs were a monotonically decreasing function of establishment size in Japan in 1978. The inferior labour productivity of small establishments, due in large part to much lower capital-labour ratios, were sufficient to more than offset substantially lower wages.

The differences in compensation and working conditions are reflected in a very strong positive relationship between size and *unionisation rates.* The French, British and Japanese reports contain data on trade union coverage by enterprise/establishment size, all of which show that small unit employees are covered by collective bargaining agreements to a much lesser extent than are large unit employees. For example, in Japan in 1985 the unionisation rates in the private sector were 60, 24, 7 and 0.5 for firms with 500+, 100—499, 30—99, and 1—29 workers, respectively; only 25% of British private sector establishments with 1—24 workers recognised trade unions in 1980, while the equivalent figure for establishments with 200+ workers was 91%; and in France in 1985, 9.1% of workers in establishments with 11—49 workers were not covered by a *texte de branche, ou un accord d'entreprise ou d'établissement,* while all workers in establishments with 500+ workers were covered. In Germany, where union density declines with establishment size as well, the frequent extension of collective agreements to the entire industry means that small unit coverage is not much below that of large units, but in the United States the difference is quite large.

One obvious reason for the less extensive unionisation of small firms is their concentration in industries which have historically been relatively less organised. The Japanese report shows that unionisation rates in wholesale and retail trade, services, and construction are well below those of industries for which the size structure favours large firms. French data from 1985 show that four times as many tertiary workers were "uncovered" than were industrial workers.

Time series data in the French and Japanese reports give conflicting results on changes in unionisation rates in recent years. In France there was a decline of well over half the percentage of "uncovered" workers in small units from 1981—1985, as small units participated strongly in the general trend that resulted in the percentage of uncovered workers in all size units falling from 11 to 4.4%. In Japan, on the other hand, private and public sector unionisation rates have fallen since at least 1970, and the decline has been at least as strong overall for SMEs as for large firms.

Finally, there is evidence that industrial disputes, as manifested by *strikes*, are less common in small firms. British data on work days lost, and number of stoppages, per employee, show both series rising significantly with manufacturing plant size for 1971—1973. Prais *et al.* (1981) report a similar positive relationship for the United States and the Federal Republic of Germany for 1965—1975, but with less significant size-related differ-

ences. The British report points out that the differences in the level of industrial disputes may have important relative cost-of-production implications favouring small firms, observable in the form of larger buffer stocks and excess capital in large firms.

While these results can be summarised cautiously by saying that — on a statistical basis — workers are largely less well off in smaller enterprises and establishments, the question again is whether this is inevitably so. Is the quality of work and employment necessarily related to organisational size? And would a further expression of small-unit employment inescapably entail a downward slide deterioration in the conditions of labour?

It can be plausibly argued that it is not the size as such that matters. A union's capacity for mobilising workers and gaining organisational strength may not be crucially related to enterprise or establishment size. In fact some of the most effective union organisation in the United States can be found in small-scale industries such as printing, trucking, construction and ladies' garments (Piore and Sabel, 1984). In many countries the earlier strong base of trade unions was in the craft sector and it frequently was not at all easy for unionism to set foot in the large-scale mass production industries.

Internationally, there are instances where unions cover small business. In Sweden many small and even very small firms in metal-working and other manufacturing industries are highly union organised and wages are approximately on a par with those paid by large producers. This, of course, is mainly the outcome of very high national and industrial union density, solidaristic wage policies and the related emphasis on egalitarian wage structures that have been followed in Sweden over the past 30 to 40 years. The highly uniform wage standards across economic sectors, regions and firm size groups has squeezed the inefficient small firms, with a lower capacity to pay, out of the market.

There is also a serious issue of how certain statistical indicators of job and employment quality are to be interpreted. For example does the lower job stability found in smaller firms and establishments, as measured by job tenure or accession and separation rates, necessarily mean more insecurity to the worker? It often does, but it also depends on whether or not institutions exist to remedy the social consequences of the instability; or even better, that make arrangements under which instability or discontinuity at the level of individual firms is not translated into employment insecurity. If there is some central labour market agency, such as a hiring hall (as in United States construction) that redistributes the workers who lose their jobs as a result of a shrinking or disappearing business, the loss of a job in a particular firm may not be a disaster. Likewise, if there are well established occupational-type labour markets with standardised skills that act as channels of inter-firm mobility, then fairly high rates of job changes may be conducive to the efficiency of the market. Inter-firm mobility may help the worker to accumulate skill and experience and at the same time help the firm to adjust its labour volume to changing market conditions, as well as enrich its human resources.

Nevertheless, it is probably safe to say that effective employment security is weaker in smaller firms than in large firms. This may be seen, among other things, as the result of establishing or extending internal labour markets in large enterprises in the course of a sustained period of employment growth and stable demand in the post World War II period. Employment protection legislation was built or extended on the basis of this development, at least in Europe, with the result that the effective protection of workers from the risk of dismissal was increasingly dependent on the workers' employment in a particular firm or plant. This again could be seen as a particular historical configuration rather than a sort of structural inevitability linked to particular types of firms.

To take a final example, several of the country studies report much lower strike activity (incidence of days lost through work stoppages) in small compared to large enterprises (establishments). Should this be interpreted as a sign of less "muscle" for workers in small firms, indicating an inability of workers to voice problems and have their interests represented? Less open militance and conflict may not say very much about the true strength of worker representation, just as frequent strikes may indicate both strength and weakness of the union *vis-à-vis* the employer. It is also useful to

look at the pattern of work stoppages more closely. In Italy, for instance, it has been found that workers in the small firm industrial districts go on strike more frequently than the average Italian worker, but the stoppages are typically of short duration.

It is likely that the variation in wage payments, fringe benefits and the physical working environment is larger in the small firm sector than it is among the big firms. It is also more likely to find the sweat-shop among small firms merely because of the lower visibility of small firms. But at the same time, some of the best employment standards and working conditions are found in small firms. Surveys about job satisfaction in various countries have repeatedly produced the result that satisfaction levels are inversely related to establishment size. Some of the country reports (e.g., Britain and Germany) also indicate that the average skill level of workers (at least for blue-collar workers) is higher than in the large firms. In several countries, small firms are engaged in apprenticeship training more than large firms. So the extensive heterogeneity of social standards and conditions in the small firm sector is in itself an argument that speaks against a "natural" law of inferiority of small firms.

V. Why the shift to smaller units?

Despite important methodological caveats, the nine country studies taken together present a convincing case for a shift in employment to smaller units of production. The fact that such a shift has occurred across a wide sample of industrialised countries is a new and surprising finding in most quarters, and accordingly little attention has been devoted to formulating explanations. A variety of hypotheses are discussed in the context of the individual national experiences, but these hypotheses have not been tested rigorously at the national level, nor have they been considered in terms of their explanatory power across countries. There is, however, considerable uniformity in the types of explanations put forth in the country studies, and they fall roughly into the following groups:

A. No real shift — statistical fallacy.
B. Transitory shift from business cycle, but no structural change.
C. Small firm cost advantages.
D. Government and managerial liberalisation.
E. Flexible specialisation.

A. *Statistical fallacy*

The most skeptical argument is that the observed shift to smaller units is merely a statistical illusion arising from one or more of the factors discussed above; in particular, sectoral recomposition and transitory deviations from optimum size (regression to the mean). Advocates of this position would argue, furthermore, that non-employment indicators are necessary to substantiate the case for a reorganisation of production favouring smaller units. Implicit in this position is the adherence to optimum efficient size, as determined strictly by the production technology and factor prices, as the sole determinant of an equilibrium size distribution of production. A case for a shift to smaller units would therefore have to be built on evidence of a change in technology favouring smaller units.

The country reports do not support this interpretation, for many reasons. First, what is perhaps the most striking empirical result from this study is the shift to smaller units of employment across such a wide range of institutions *and* existing size structures. The existence in the first place of a wide variance in the size structure which, we have argued, is often a function of factors other than optimum scale, is not supportive of the skeptical position. Indeed, the long-term existence of such a large share of small units alongside very large units in many industries is anomalous to this viewpoint. Furthermore, the persistence of differences in compensation and in working conditions suggests a large role for factors other than unique optimum size. The country reports, moreover, often include a variety of non-employment data by size which suggest that employment share gains are not alone as measures of a shift in organisation. Finally, admittedly modest attempts to adjust for purely statistical effects such as changes in sectoral composition suggest that a substantial "pure" effect remains.

B. *The business cycle*

The business cycle has almost certainly affected

the size distribution, but the evidence suggests that:

(i) the business cycle alone does not account for the shift to smaller units;
(ii) higher employment shares have remained for small units well into the expansion in the 1980s;
(iii) the shift took place in countries with widely variant macroeconomic conditions, such as Japan, the United Kingdom, and Hungary;
(iv) the recent business cycle downturn was coincident with an institutional crisis. Therefore, the coincidence of changes in the size structure with recession does not necessarily imply a stable historical response by the size structure to business cycle fluctuations.

The evidence does not, therefore, favour an exclusive, or dominant, role for the business cycle.

C. *Cost advantages*

The country studies present considerable evidence that labour costs are lower in small units. The time series data, where they exist, suggest increased differentials in recent years. While most of the data fail to adjust for worker characteristics, it is almost certainly true that similar workers earn less in small units, particularly when non-wage compensation is accounted for (flexibility is discussed below). Furthermore, decentralisation and subcontracting from large to small units may be a means for evading labour standards, and many conglomerations of small firms have arisen in regions where such abuses have been widespread. Consequently, lower labour costs are an obvious candidate explanation for the growth of small units. While this hypothesis, too, has not been tested rigorously, there are many reasons for doubting that it has been the central factor.

First, in most countries wage differentials were wide many years ago, and in some cases increasing, while small unit employment shares fell. Second, there is no obvious relationship between the size of the differential and the growth of small unit employment shares. Italy, for example, has relatively small wage differentials and relatively large employment share gains by small units. Third, there has been a decentralization of employment within large enterprises, despite equal wages across establishment sizes. Fourth, and perhaps most fundamentally, it is very hard to argue for a central role for wage differentials without first having a good understanding of why the differentials have existed historically. In the United States, at least, the persistence of large unit wage premia — and even larger compensation premia — for observationally equivalent workers, along with the persistence of inter-industry wage premia, remain as unsolved mysteries.[7]

There is no doubt that lower labour costs favour the use of labour over capital in small units, and *vice versa* in large units, and this clearly works in the direction of the observed changes in employment shares. Unit labour costs, however, do not always favour small units because higher capital/labour ratios in large units increase large unit labour productivity. In fact, in many countries change in unit labour costs favour large units (e.g., see the French and United Kingdom reports in this volume). In sum, these lower labour costs may have had something to do with relative employment gains by small firms, but the evidence in the country reports suggest that the differentials were, at most, facilitators to other, more fundamental factors.

D. *Liberalisation*

During the period of increasing small unit employment shares, many countries, under conservative leadership, undertook a variety of tax reduction and deregulation initiatives. Many observers credit these policies with unleashing the entrepreneurial spirit of small firms, and thus enhancing their relative growth. The premise in this line of thought is that small firms are innately dynamic, or beautiful, and that government intervention has historically impeded their performance, perhaps to a greater extent than large firms. Liberalisation, therefore, is seen as a boon to small firms.

A related argument, advanced most notably by Bluestone and Harrison (1982) in the United States, is that production by smaller units is part of a broad managerial initiative aimed at reducing worker power and lessening the influence of unions via decentralisation. Decentralisation may involve the shrinkage of establishments owned by large enterprises, or subcontracting to small firms work formerly done in-house. The data cited

above from the United Kingdom, for example, support the notion of decentralisation within large firms, although the causes are not yet fully understood. A similar view, popular in business schools, is that breakthroughs in management science, which are best applied in small units, are making small units both more attractive and more prosperous. In Europe — and in the United Kingdom report specifically — it is often noted that the recession and labour market slack of recent years has facilitated a reassertion of managerial control which has resulted in a down-sizing of organisational units.

Again, research in this field has not progressed sufficiently to weigh carefully the merits of these positions. However, the weight of the international evidence does suggest that a fundamental force, cutting across widely varying legal, political and institutional structures, is at work in influencing the size distribution. These supply-side and managerial factors may be relevant in specific instances, but they do not have the uniformity and timing necessary to fully explain the data. (For example, the beginning of the shift to small units in countries such as the United States (mid 1970s) preceded most of the events cited above.)

E. *Flexible specialisation*

The explanation for the shift to smaller units that is most pervasive and persuasive in the country reports involves the Piore and Sabel (1984) notion of a crisis in the institutional structure based on mass production and a movement toward an alternative based on flexible specialisation.[8] Flexible specialisation, it is argued, is being pursued both by independent small firms and by the decentralisation of large enterprises. Mass production depended on stable and growing markets to profit from reduced unit costs associated with production by highly specialised, dedicated labour and capital inputs. Large hierarchical firms emerged as organisations to coordinate the specialised vertical relations, while small, more flexible firms served a variety of less stable, more idiosyncratic markets.

Slowed growth, greater international competition and increased uncertainty in product and factor markets in the 1970s made specialised goods and more flexible techniques preferable to mass production. Final demand also changed, as consumer tastes increasingly favoured customised goods and services. Italian analysts argue that during this period large firm cost structures had become quite rigid, particularly with respect to labour costs and industrial relations.

Flexible specialisation was not new to small firms, but in large firms radical reorganisation was needed to create smaller, more horizontally coordinated organisational units in which the establishments owned by the corporation behaved more like associations of independent small firms. Small unit employment share gains therefore result both from the dynamism of small enterprises, and the down-sizing of establishments owned by large enterprises. (See Loveman (1989) for an empirical analysis of the shift from mass to flexible production in the United States, the United Kingdom and Germany.) It is important to note, however, that in this story decentralisation is not a "low road" premised on cost reduction and labour sweating — as described above — but rather is a "high road" effort to reinvigorate large enterprises by combining the dynamism of small entities with the labour standards, compensation, R&D, etc. of large enterprises.

On the supply side, the reports argue that technological change, particularly in micro-electronics, has reduced or eliminated small firm disadvantages in production costs by making competitive capital goods available at prices affordable to small firms. Indeed, the new breed of "flexible' capital equipment is considered to be especially well suited to a small firm strategy favouring small batches of customised products. Moreover, Becattini argues in this volume that the location of the most productive R&D activities has moved from large private corporations to universities and governments. R&D has thus increasingly become a public good — or has become less costly — to small firms, which has enhanced the competitive position of small firms.

Flexible specialisation requires an institutional structure much different from that associated with mass production. The most salient characteristics of this structure are akin to those observed in industrial districts, and they may apply both to small firms and decentralised large enterprises:

(i) technological dynamism;

(ii) the combination of extensive co-operation and vigorous competition;
(iii) location within a community or social structure, which may be based on the family, unions or political parties, or the corporation.

At least superficially, there seems to be no simple relationship between the degree of development of such institutions and changes in the size distribution of production. Britain, for example, would perhaps rank among the lowest in terms of the institutional structures outlined by Piore and Sabel, yet it has had one of the most significant shifts to smaller units. This is, of course, due in large part to the very serious problems experienced by large firms in the United Kingdom, but it nonetheless points out the difficulties in trying to develop some sort of mapping between institutions and small firm performance. Italy, conversely, is considered to have extensive inter-firm co-operation and organisation, and the shift in employment to smaller units has been quite significant. The Italian report discusses the argument often made in Italy that the highly successful Italian industrial districts are largely the result of an unreplicable historical accident: the districts inherited peculiar circumstances from existing agricultural and industrial structures that are very conducive to the development of industrial districts.

Relations between large and small firms have also changed as a result of the new economic environment. There is evidence of increased use of subcontracting by large firms to small firms, and the Japanese report discusses at some length the pros and cons of such a development. If large firms simply use small firms as insulation from business cycles, exploit their cheaper labour to reduce costs, make them bear unwanted inventory costs, or otherwise keep them in a state of dependency, an increase in sub-contracting is unlikely to be a desirable phenomenon for small firms. If, instead, large firms enter into long-term collaborative arrangements with subcontractors wherein the goal is to improve product design and quality via shared expertise and experience, the effect on small firms is much more favourable. At this point anecdotal evidence exists for both cases and it is not possible to discern a dominant international trend in either direction.

VI. The choices for SME development

The previous discussion of the issues leaves us with a two-edged argument. On the one hand there are numerous indications that:

(i) the economic performance of small enterprises is, on average, inferior to that of large enterprises; productivity levels as well as profit rates appear to be lower, the capacity for innovation and technological improvement smaller;
(ii) the average social standard of the qualtiy of jobs and the conditions of work are inferior in the small firm.

On the other hand, we have argued that there is nothing inevitable or inescapable about this result; it is not the outcome of some natural law that links the economic and social performance to the size dimension of business. Rather, to the extent that lower quality employment is found in small firms it is the effect of a particular historical and institutional configuration under which large firms have fared more favourably.

Actually, there is a substantial variation and heterogeneity of competitiveness and economic vitality as well as social standards among small firms, both within and across national economies. Thus, there are sweat-shops as well as highly flexible, stable, innovative and independent categories of small firms, often with polyvalent workforces, good pay and extensive autonomy for the worker. The business strategy of these firms is often based on product quality or differentiated products, or on flexible specialisation. It normally requires a skilled workforce and well developed occupational labour markets. The small firms or communities of small firms with good economic and social performance suggest that there is, in terms of competitive strategy, a real alternative to the low cost/low productivity/poor social standard configuration in which many small firms find themselves.

A key to understanding the wide variance in small firm performance and development lies in their "competitive strategy", notably in their links to other firms or institutions. Due to their limited economic, financial, personnel and political resources, small firms, acting alone, are rarely in a position to pursue the strategic behaviour often

employed by large companies, and therefore they require some sort of supportive structure that allows them to compensate for their lack of resources. Basically there are three ways of overcoming this shortcoming: (1) special protection, privileges or support transferred to them by the state or some other public authority; (2) a foster relationship with a large enterprise, or an intermediary organisation (such as a bank, university, etc.) which provide various types of resource transfers; (3) creating a community of small firms which, through collective self-organisation and co-operation, may compensate for the weakness endemic to individual small firms. Each of these support systems creates a particular "social organisation" of the market. They tend to shape the ultimate social position of the small firm in the economy: its role in the division of labour, its degree of autonomy and dependence, and its hierarchical position in the industrial structure.

The country reports indicate that each of the types of support systems is relevant, but it also appears that particular support structures are more developed in some countries than in others. Moreover, each of them has historical predecessors so that it is possible to speak of a heritage of historical solutions to the resource and control problems. These support systems are considered in turn.

1. *State intervention*

The state may intervene in multiple ways to lend support to small business: attribute special rights or privileges, or supply resources or subsidies. One prominent type of state support is certification; i.e., a sort of exclusive right to particular firms, trades, or professions to perform particular tasks or services, or to produce particular goods, justified usually by reference to some public interest in exclusive treatment.[9] Historically, perhaps the most important small firm sector that benefited from public protection was the *crafts* and guilds. State intervention has not been the only support structure for crafts. Often the craft system is based on collective self-organisation (see below) and there are numerous examples where the crafts came to depend on larger organisations for their survival. This happened, for example, when the crafts, due to their limited financial capacity, could not afford to buy new expensive machinery and equipment or, as was the case with silk weavers, purchase expensive materials in advance. In these instances, which were especially frequent at the early stages of industrialisation, the crafts became subject to the putting-out system and lost part of their previous autonomy.

Throughout the Middle Ages, and even today, craft organisation has been built on a varying mix of public regulation and self-organisation, the latter often being dependent on the former. In medieval times, public authorities accorded the privilege of exclusive production and servicing in particular domains — food production, for example — to particular craft organisations. In return, the crafts were held accountable for ensuring the proper supply and care of the entire population at reasonable prices. The satisfactory organisation of these tasks was left to them. There existed a kind of *contract social* between the governments and the crafts, based on an exchange of rights of jurisdiction and "satisfactory" services.

As a result of this (external and internal) regulation there was a twofold restriction of entry into the market: one in the product market concerning the restriction of entry to licensed firms, and one in the labour market limiting access to employment to apprenticed workers. The latter was normally part of the rules set by the crafts in order to ensure a certain level of skill and craftsmanship deemed necessary for the quality of the product or service and to restrict supply. According to a frequent rule, masters could have only one apprentice at a time to ensure proper training. Essentially, the blend of state regulation and self-organisation in the craft sector prevails to the present day, even though the exclusive rights given to the crafts were cut back as a result of nineteenth century business liberalisation laws.

In some areas there is an almost permanent struggle by crafts to regain some of the earlier exclusive rights. This can be observed in Germany where, among the countries in this project, the craft sector is still numerically most significant, employment more than four million workers (or one in six of the total labour force). In manufacturing the majority of firms are craft firms, and their share in the total shows remarkable stability through the business cycle.

There are no strict rules today according to which the crafts are forced to employ exclusively apprenticed workers. But, in fact, they generally do so anyway, knowing well that the quality of labour is essential for the quality of their product or service as well as their versatility; criteria on which their competitiveness *vis-à-vis* products of industrial producers are grounded. The state, however, assists the crafts (and also industry) in the generation and maintenance of occupational-type labour markets with a kind of enabling law, as well as public institutions, that design and readjust curricula for vocational training. Practical implementation is done under the influence of employers' associations and labour unions, both of which have formal rights of representation in the craft chambers (*Handwerkskammern*) set up under public law. There is no doubt that this regulation favouring standardised comprehensive vocational training and occupational labour markets throughout the country is one of the key reasons why the craft have retained importance in West Germany (as well as in East Germany, Switzerland, Austria, Denmark and some other countries).

To safeguard or improve their position in the product market many crafts tend to continuously call upon the government to extend their rights of exclusivity. For example, in certain services, such as automobile maintenance and repair, the craft association argues that it would be in the public interest of road safety that this business be left exclusively to "qualified" firms and their fully trained, competent workers. In fact, the crafts have succeeded here and there in gaining quasi-monopolies or exclusive rights and jurisdiction in some areas, but, by and large, they currently have to rely on effective self-organisation to maintain their competitive edge through supplying "trademark" commodities and services. The state accords the craft firm the title "Master Firm", but leaves it to the craft to generate and reproduce superior "products" through adequate organisation.

State intervention, of course, is by no means limited to the craft sector. The country reports document a new debate and a number of recent legislative and administrative activities intended to support the small firm in general. In terms of policy there appear to be various crucial issues in this regard. Should the public support consist of direct financial assistance or "real services" in the sense of creating or supporting institutions and organisations that potentially favour small business (such as consultation, technology transfer, etc.)? Furthermore, should small firms be exempted from obligations and duties in order to improve their competitive position? The latter issue is often debated against the background of almost continuous allegations by small entrepreneurs and small firms associations that at present the state, through regulation and subsidies, puts the small firm at a disadvantage (this charge is especially widespread in Switzerland).

While the question of public small business promotion is not a central issue for this project, it could, nevertheless, be hypothesised that "money" alone will not ultimately assure economically vital small firms. To the extent that the reports address this issue, the message is that effective "social organisation" — that is, grounding small business in a co-operative social network and typing to it social relations — appears to be more important for their competitiveness. Monetary assistance, such as tax exemptions (in general, or in the early years of new firms), may produce the undesirable effect of increased turnover of small firms, with resulting heightened employment instability. This might occur if the monetary assistance entices more people to establish firms which lack the competence and financial stamina to sustain themselves in the long run.

In recent years, small firms have been key targets of government action, with the aim of freeing them from existing protective rules and social obligations, and creating more flexibility. The effect of such labour market "deregulation" measures for the economic performance of small firms are, however, ambiguous. While they may effectively save costs and enhance the short-term flexibility of firms, they are also likely to lower the wage standard or other terms of employment. This implies that it will become more difficult for the small firm to recruit and retain skilled and motivated workers. Qualified labour, however, appears in many quarters to be a crucial asset for many small enterprises in realising their specific advantages, namely high quality and differentiated products, quick adjustment to market changes and flexible specialisation. Low wage levels often induce an exodus of managerial talent and com-

petent workers, therefore making new-firm settlements more difficult.

Deregulation may turn out to be counter-productive in yet another way. To the extent that it actually allows for a larger differential of wages and other labour costs and enables small firms to operate with a low labour cost strategy, it may breed complacency on the part of the entrepreneur or manager. He may rest on the cost advantage instead of directing his efforts into innovation, new products and new markets. In other words, lower labour costs may be followed by lower performance standards and end up in higher unit labour costs, instead of the expected superior performance. Indeed, there is evidence of a close correlation in the wage gap between large, medium-sized and small enterprises and a corresponding productivity gap. In countries with large wage dispersion by enterprise size we find correspondingly large differences in efficiency levels (Sengenberger, 1987, p. 238).

Finally, widened labour-cost differentials may encourage large firms to use the small firms as "buffers" for fluctuating demand, and to step up their volume of subcontracting and outsourcing because small firms can produce more cheaply. While this may create more employment in the small-firm sector, it will do so at the expense of large-firm employment. It will, therefore, not improve the overall level of employment or efficiency as long as the small firm shows no better economic performance.

2. *Foster relations with large firms*

In place of state support, large, resourceful and politically influential enterprises, or other organisations, such as universities, may lend support to the economic existence or subsistence of small firms. These organisations can transfer various kinds of resources, such as financial capital, technical know-how, equipment, materials and human resources. To the extent that the large firm makes such "investments" it will develop an interest in the continuity and stability of the small firm, and a more long term co-operative relation may emerge.

A foster relationship is likely to generate dependence of the small firm, possibly even subordination, but domination is not an inevitable outcome for big firm/small firm relations. There exists a large array of relationships, ranging from clearly paternalistic relations to mutual dependence and symbiotic exchange on approximately equal footing. There is evidence that to a greater or lesser extent large firms do shift costs and risks — for example in testing new technology, or the risk of declining demand — to dependent firms down the line in the vertical production chain. The French report mentions that the resistance of firms to this kind of negative externalisation is the weaker, the further the firm is away from final demand, or the end producer.

Yet, as argued above, buffering is not an inescapable outcome of tight business relations between large and small firms. Outright exploitation or "milking" of the small firms often turns out to be self-defeating for the large enterprise, for if the small firm fulfills some useful function or service to the large firm, there will be a clear interest in having the small firm survive and be capable of adjustment and innovation. The counter-productive results of aggressive exploitative policies towards the small firms could be observed in the automobile and electrical appliance industry, when through widespread "second sourcing" tactics and very rough, cut-throat price competition the market of suppliers was ruined by excessive turnover.

Large corporations may also come under public pressure to use their resources to maintain or recreate employment in particular areas, especially if they have produced redundancies on a large scale. For example, British Steel is reported to have assisted a number of smaller firms in the Midlands to get off the ground; in France Renault has helped to set up 20 new firms, staffed by former employees, some of which now operate as subcontractors (International Labour Office, 1986, pp. 46—47).

As is frequently the case, competition and co-operation exist very closely side by side in the relationship between large and small firms. There is good evidence of this in Japanese manufacturing, where very often small subcontracting and supplier firms are highly dependent on large parent companies. The relationship of the small suppliers, which are typically organised in a multi-layered hierarchy, to the large customer, is characterised by vigorous competition, but also by long-

run relations of those firms that perform well. Many large firms have developed exclusive and sophisticated rating systems through which they continuously test, assess and control the performance of their suppliers, and rank them accordingly on the basis of criteria such as product quality, defect-rates, reliability, and on-time delivery. Those firms that do not satisfy the standards are squeezed out of the market while those doing well in the rating system are likely to develop long-run and stable links with the parent company.

The inter-firm relations of producers and suppliers (of parts or components, which they design and market themselves) or subcontractors (which merely manufacture parts or components predesigned and specified by the orderer) seems to have entered a new stage of development with the advent of modern logistical concepts of production facilitated by micro-processor-based information and communication technology. Just as with intra-plant material flow and inventories, inter-firm sourcing can be made much more efficient — i.e., inventory, storage costs, and flow periods reduced, scheduling made more precise, and personnel saved — by linking the data processing systems of the various organisations that are part of an inter-firm, vertically integrated production chain. A faster flow of inputs to the final producer requires a better and faster exchange of information, and the data processing requires compatible systems in the various units.

Computerised on-line data exchange and data-based integrated manufacturing have already progressed in a number of industries, e.g., in the automobile sector, yet large companies foresee a tremendous further potential for rationalisation in this area (Ebel and Ulrich, 1987, pp. 76—83). Right now, it is difficult to make any reliable projections about the consequences of this process for the (smaller) supplier and subcontractor firms. What is clear, however, is that many of them, especially the hitherto independent ones, are afraid of much greater transparency and direct access by their customers to their technical know-how. They fear the risk of becoming fully exposed to and "governed" by some external directive hand, thereby losing their managerial autonomy.

In addition to technical control there are other means of control that can become part of large firm strategies and which appear to be important for the shift to smaller units of employment in the recent past. Large firms may use smaller units for fragmenting production and services into smaller establishments within their ownership, and into small firms that are independently owned but economically dependent.

In accordance with a study by Shutt and Whittington (1984, p. 13) *fragmentation strategies* may be categorised as follows:

(i) *Decentralisation of production*
Large plants are broken up, but retained under the same ownership, by division into smaller plants or by creation of new subsidiary companies. The reports provide evidence of this strategy in various countries. In Britain, for instance, there is evidence that firms have been growing larger in this century, but plant sizes have grown more slowly. Between 1973 and 1981, amongst the top 100 manufacturing firms, average employment per establishment has fallen faster than average employment by enterprise. The number of establishments in this group has increased greatly. There have also been important decentralisation moves in Italy during the 1970s, after the trade unions had been unusually successful in influencing the labour process in the large industrial companies in northern and central Italy. Decentralisation by relocation or break-up was seen by management as a countermeasure to evade trade union power and to enlarge opportunities to adjust production capacities more easily by closures or workforce reduction (for example, Murray, 1983).

(ii) *Devolvement*
Large firms cease to own units directly, but retain revenue links with them, such as licensing or franchising. This fragmentation strategy allows the large enterprise to transfer responsibilities of ownership to smaller firms while still benefiting from a guaranteed income stream for themselves. Franchising was originally developed in the motor trades and brewing industry but spread quickly to other areas, like retail, fast food chains, printing, cleaning, repair and maintenance services, etc.

(iii) *Disintegration*
Fragmentation into separate units of ownership. Again, there exists a variety of forms (like subcontracting and management and worker buy-outs) the common element of which is the shifting of responsibilities of ownership on to small firms while large firms retain ultimate control either through market or contractual power. For example, subcontracting takes work out of the stable and expensive internal labour markets of large firms and reallocates it into insecure, low-wage and non-union employment of small firms. It also gives large firms flexibility in the face of fluctuations in demand. Another form of fragmentation along ownership lines has been the splitting of enterprises into separate legal units. The activity has increased recently in Germany (following a reform of the profit tax law in 1977) through the division of companies into separate legal entities: an "ownership" and a "production" unit. This division allows tax savings, reduces responsibilities and liabilities (in case of insolvency or mass dismissal) and weakens or evades obligations of employers under the German system of co-determination and work participation.[10] In Japan, the abolition of cumulative sales taxes and the introduction of value added taxes also created incentives for more subcontracting.

These fragmentation strategies naturally carry with them the likely effect of (greater) dependence and subordination of the small units and their use as "buffers" for costs and risks. Whether they do in fact produce satellite-type relations depends essentially on a number of institutional background factors which are discussed below. Large firms may use the small unit to externalise costs and risks, such as the risk of fluctuating demand or testing new technology, but there are also occasions in which the small firm benefits. Licensing of maintenance and repair by large automobile manufacturers to small craft firms in Germany, for example, often amounts to a loss of autonomy in organising the business (including the work organisation and payment methods). But at the same time, the licensed firm benefits from some protection through the large firm, when, for example, the producer firm limits the number of competitors in an area.

3. *Communal support structures*

As an alternative to protection and resource transfer from the state or large enterprises, small firms can look for other small firms to build a joint support system. By forming communities or congregations, small firms can overcome the kind of deficiencies which they face as individual market agents acting entirely on their own. Again there is a wide variety of historical and modern communal support structures, ranging from co-operatives to industrial districts, science parks, craft combines, and ad hoc co-operations. What makes this type of supportive institutions especially interesting is the claim that they have been spreading in recent years. Piore and Sabel (1984) list examples of communal organisation of small business in various countries which provide the social underpinning of "flexible specialisation".

In the literature as well as in the country reports one finds two interconnected rationales by which communal organisation can resolve the resource deficiency problem of small firms: economic and socio-political. The *economic rationale* essentially says that by grouping together, small firms can obtain economies of scale and scope similar to those of large enterprises. In the Italian report, which elaborates a great deal on the resurgence of industrial districts over the past two decades, the scaling-up effect in these districts is described as "marshallian", pointing to Alfred Marshall's analysis of external economies of scale. Higher efficiencies can be gained by joint design of products, purchase of raw materials and energy, joint use of equipment, office space, and transport vehicles, joint production, financing, marketing, advertising, distribution, organisation of exports, research and development, training, and so forth. In addition to joint purchase and joint utilisation of resources there may also be efficiency gains through bunching and spatial agglomeration of firms, which reduces transport costs and facilitates various sorts of inter-enterprise exchanges of information and other resources. The spatial conglomeration of small firms, at the extreme, may come close to the spatial concentration exhibited by big integrated plants. Sometimes entrepre-

neurial networks develop spontaneously, but frequently they are built into existing social networks. In some cases there is public support given, as for example in some of the Italian provinces which provided a public infrastructure for small business development; or under the two successive pieces of legislation of 1982 and 1983 in France which provide a legal foundation for decentralisation coupled with various kinds of local logistic assistance, such as buildings, real services and counselling.

Concentration in a locality may not merely be significant for the pooling of resources and for their exchange, but also for the process of diffusion of innovation and new technology. The industrial districts (just like occupational markets) do live on an egalitarian principle that in this case requires a rapid assimilation of all firms in the group.

Density of demand and supply is also an important functional requirement of occupational labour markets that rest on the easy substitution and mobility of workers with the same skills across firms. There must be enough employers and workers in the local market to enforce the "law of large numbers", which forms the basis for quantitative and qualitative adjustment in this labour market structure. Further, the work sites must be close enough geographically to avoid undue mobility costs.

The economies flowing from communal relations pertain to both co-operating firms in the same industry or product area and firms operating in different branches. In other words, the efficiency gains of small firm communities can be built on the principles of industrial and spatial grouping. Some of the best known examples of industrial communities can be found in the shoe, textile, leather and clothing industries in Italy, France, and the United States.

Firms with different products, product market affiliations and technologies may profit little from exchange relations and transfer, as far as the specific product is concerned, but may still benefit from co-operation and co-ordination; e.g. through joint procurement or use of resources, such as energy supply, office capacity, and various services.

The second principal rationale for communal organisation is more *social or political* in nature. Joint organisation and representation of firms may strengthen their "voice" *vis-à-vis* various levels of government. For example, for the industrial districts in Sweden, their bargaining power *vis-à-vis* the local public authorities is said to be at least as important for their economic welfare as the benefits accruing from the efficiency gains of grouping together.

There are often less tangible resources of communal organisation that stem from existing residential ties, kinship, religious affiliation, political parties, social class, ethnic group and other sorts of coherent and socially integrated structures. These resources provide a "sense of belonging"[11] as well as trust, which again form the basis for mutual exchange and co-operation. If people are bound to live together for a long time, there is little space for the opportunistic behaviour typical of short-lived, causal market relations. Both the Italian report, which analyses the social fabric of industrial districts, and the United States report, which investigates cases of effective communal organisation in garments and construction in New York City based on ethnic or religious ties or on immigration links, point to the close interplay of social and business organisation. Becattini defines an industrial district as the "thickening" of interdependencies among several firms, and between this group and a population of workers or other people within a common and relatively circumscribed location.

In fact it may ultimately be the social control feature of organisation, in particular the power of sanctioning "unsocial" economic behaviour through a tight social group which constitutes the common thread to all kinds of success stories of large and small firms. Still, by far not all well-integrated social organisations produce effective economic organisation, and a key question for research may be under what circumstances "social resources" are tapped and mobilised for economic ends. Obviously, one of the effective mechanisms of social organisation lies in the reduction or even elimination of short-run competition. This appears often to be required for acquisition and efficient use of resources, both within firms as well as across firms. In some cases, "internal product markets" exist within which competition exists, but is regulated to meet the collective interests of the community. For example, in Germany, the Federal

Cartel Office and the courts responsible for acting in anti-trust cases have viewed inter-firm co-operation critically, especially where it begins to lead to the fusion of the co-operating firms and toward corporate concentration. But in fact, a lot of spontaneous and organised types of co-operation have taken place, especially among small industrial firms and in the craft sector.

VII. Conclusions

Public debate about small and medium-sized enterprises today is marked by a wide spectrum of viewpoints and attitudes. Many predict a great future for these enterprises, while others see them on the road to decline. Assessments of their performance vary from "highly flexible and efficient" to "backward and exploitative".

Neither unbridled enthusiasm nor complete scepticism is appropriate when considering the future development of SMEs. The size of enterprises or establishments does not crucially determine business performance measured either in economic or social terms. Instead, business performance depends decisively on organisational structure and on the public and private policies which influence their development. This is evident in the international comparisons, which demonstrated clearly the effect of institutional structures on the size distribution of employment and size-related earnings differentials.

There are many reasons to examine SME development. First, after many decades of decline, the employment share of SMEs began to increase in the 1970s, though at different rates in different countries and sectors. But even in the absence of this job growth, it is important to look into the SME sector simply because the large majority of business units are small, and they employ significant, although internationally widely varying, proportions of workers.

From the empirical evidence gathered in the various countries under review it appears that the employment gains in the SME sector are neither merely the results of sectoral change toward the service sector, nor the effects of the business cycle. Rather, they are to a significant extent a function of industrial restructuring of two kinds: one is the decentralisation and vertical disintegration of large companies; the other is the formation of small new business communities, as exemplified by industrial districts and other local or regional small firm agglomerations. The two types of development represent different, but possibly inter-related, responses to changes in product and labour markets during the past two decades. These changes include increasing consumer demand for more differentiated, or customised, goods and services; heightened product market competition for standardised goods; the spread of micro-electronic production and communication technology, and changing labour force composition.

Both public and private policies have an important role to play in promoting the SME sector. However, deregulation of the labour market and wage cutting are not promising routes. What small firms need most of all are some kind of support systems to compensate for the inferior resources available to individual small business. In this respect, there are two principal choices: first, small firms may benefit from the power and resources of large companies, a solution which is likely also to generate the unilateral dependence of the small firm in a hierarchically-structured relationship. The other main solution is a communal organisation under which the small firm looks for other small firms to associate with and to build a more permanent, mutually constructive network of joint support and resource sharing, possibly with the co-ordinated specialisation of each firm in the network. This model is likely to produce more egalitarian relations among autonomous firms. The choice, then, is one between "top down" versus "bottom up" control of inter-firm relations, or between "kingdom" and "republic".

Notes

[1] This paper is a revised version of the introductory chapter to *The Re-emergence of Small Enterprises — Industrial Restructuring in Industrialized Countries*, edited by the Authors and Michael Piore, and published by the International Institute for Labour Studies, Geneva, 1990. The paper draws heavily on country reports for Japan, the United States, the United Kingdom, France, the Federal Republic of Germany, Italy, Norway, Hungary and Switzerland. The first six reports are included in the book.

[2] Throughout this paper the term "enterprise" relates to a separate legal entity, while "establishment" means a single place of work which may be part of a larger multi-establishment enterprise. The term "firm" is used synonymously with enterprise. "Unit" is used to refer to either enterprises or establishments.

[3] The OCED size definitions are the standard used throughout this volume. However, there are many deviations on a country-by-country basis, so the reader is advised to consult the many notes to the tables.

[4] The three other country reports not included in the paper (Hungary, Norway, Switzerland) are available from the authors upon request.

[5] This is commonly termed "shift-share" analysis.

[6] Differentials are likewise narrower in the Nordic countries.

[7] See Gibbons and Katz (1989) for a very good empirical and theoretical discussion of inter-industry wage premia in the United States.

[8] This argument is presented in much greater detail in Piore (1988) and is only summarised here.

[9] Typical examples are doctors, lawyers, pharmacists, i.e., instances in which health and safety are at stake.

[10] In Germany, the 1968 reform of the turnover tax law — the introduction of the net turnover tax — provided incentives for a greater degree of subcontracting. It eliminated the promotion of corporate concentrations resulting from the previous cumulative taxes.

[11] This term is used by Beccattini in the Italian report.

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