

Comparing Economic Systems

Italy and Japan

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MACROECONOMICS AND THE JAPANESE ECONOMY

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Contents

<i>List of Figures</i>	ix
<i>List of Tables</i>	x
<i>Preface</i>	xiii
<i>Notes and List of Abbreviations</i>	xiv
<i>Notes on the Contributors</i>	xv
1 Introduction	1
<i>Andrea Boltho, Alessandro Vercelli and Hiroshi Yoshikawa</i>	
1 Introduction	1
2 Growth, cycles and employment	2
3 External economic relations	6
4 Governance and government	8
5 Concluding remarks	12
Notes	13
References	13
2 Divergences in Corporate Governance Models: The Role of Institutional Shocks	15
<i>Fabrizio Barca, Katsuhito Iwai, Ugo Pagano and Sandro Trento</i>	
1 Introduction	15
2 The diversity of business organizations: a theory of the relevance of institutional shocks	16
3 Continuity and discontinuity in Japan's corporate system	23
4 The United States' 'anti-capitalist' revolution in Japan	27
5 Changes in Italian corporate governance between the wars	29
6 Continuity and change in Italian corporate governance in the postwar period	31
7 Conclusions	36
Notes	37
References	39

3	Economic Growth: The Role of Demand <i>Massimo Di Matteo and Hiroshii Yoshikawa</i>	41
1	Introduction	41
2	The era of 'super growth': 1950-1970	45
3	The oil shocks and after: the 1970s and the 1980s	56
4	Conclusions	60
	Notes	61
	References	62
4	Italy's Financial System: Banks and Industrial Investment <i>Marcello de Cecco and Giovanni Ferri</i>	64
1	Introduction	64
2	Changing patterns in industrial and financial structure	65
3	A real and a 'would-be' merchant bank	74
4	The second tier: <i>commercialisti</i> , local banks and the financing of small firms	76
5	Conclusions	81
	Notes	83
	References	83
5	Japan's Financial System: A Failure of Corporate Governance? <i>Akiyoshi Horiuchi</i>	85
1	Introduction	85
2	Preconditions for the bank-centred financial system	86
3	The shortcomings of governance in bank management	90
4	A vacuum of governance and delayed responses	99
5	Conclusions	101
	Notes	102
	References	104
6	Foreign Trade Performance: From Early Similarities to Present Diversity <i>Andrea Boltho</i>	107
1	Introduction	107
2	Trends	108
3	Some explanations	117
4	An interpretation	122
5	Conclusions	128
	Notes	130
	References	131

7	Labour Market Performance and Job Creation <i>Yuji Genda, Maria Grazia Pazienza and Marcello Signorelli</i>	135
1	Introduction	135
2	Labour market structures and performance	136
3	Job creation and job destruction	140
4	Why has employment performance been so different?	149
5	Conclusions	153
	Appendix: Concepts and data used	154
	Notes	155
	References	156
8	Small Firms and Manufacturing Employment <i>Paolo Carnazza, Alessandro Innocenti and Alessandro Vercelli</i>	158
1	Introduction	158
2	Longer-run trends	160
3	The nature of subcontracting	161
4	The impact of exchange rate changes	169
5	Conclusions	172
	Notes	174
	References	175
9	The Distribution Structure: An Evolutionary Analysis <i>Kiyohiko G. Nishimura and Lionello F. Panzo</i>	177
1	Introduction	177
2	Theory	179
3	Evidence	185
4	Interpretation	188
5	Conclusions	194
	Appendix: Construction of distribution margin ratios and data sources	195
	Notes	196
	References	197
10	Education, Training and Labour Market Structure <i>Giorgio Brunello and Tsuneo Ishikawa</i>	198
1	Introduction	198
2	The stylized facts	200
3	Economic implications	208
4	Conclusions	215
	Notes	218
	References	218

11 The Silk Industry: A Historical Perspective*Giovanni Federico and Kanji Ishii*

1	Introduction	221
2	Main characteristics of the industry	221
3	International competition	223
4	Reasons for differential performances	225
5	Silk and economic development	228
6	Conclusions	236
	Notes	237
	References	238
	<i>Index of Names</i>	239
	<i>Index of Subjects</i>	241
		246

List of Figures

3.1	Population flows in Japan (thousands)	48
3.2	Household formation in Japan (percentage changes; three-year moving averages)	49
3.3	Domestic demand-led growth	50
3.4	South-North migration in Italy (gross flows in thousands)	53
4.1	Establishment and bank size by geographical area	81
5.1	Bank credit/bank notes ratio (percentages)	89
5.2	Commercial banks' capital/deposits ratios	96
5.3	Restructuring in the banking industry: international comparison	99
5.4	The 'Japan premium' (January 1997–October 1999)	100
6.1	Manufactured export market shares (in percentage of world exports of manufactures; three-year moving averages)	110
6.2	Real exchange rates (indices; 1990 = 100; based on relative wholesale prices)	112
6.3	Manufactured imports share in GDP (percentages; three-year moving averages)	114
6.4	Trade balances in high- and low-tech products (in percentage of GDP; three-year moving averages)	116
6.5	R&D expenditure (in percentage of GDP)	121
6.6	Car production and trade (units; log scales; five-year moving averages)	126
7.1	Unemployment rates (in per cent of the labour force)	136
7.2	Employment and participation rates	137
7.3	Job creation and destruction rates by major industry group	144
7.4	Variance of gross job flows	146
8.1	Employment in small units in manufacturing (in per cent of the manufacturing labour force)	159
8.2	Real exchange rates (indices; 1990 = 100; based on relative, normalized, unit labour costs in manufacturing)	170

8 Small Firms and Manufacturing Employment

Paolo Camuzza, Alessandro Innocenti and Alessandro Vercelli

1 Introduction

Italy and Japan have the highest share of manufacturing employment in small firms (hereafter, SFs) among the major industrialized countries. In the early 1990s the percentage of workers active in small manufacturing establishments or firms was of the order of 60 per cent in these two countries, as against figures ranging from only 20 to 40 per cent in economies such as Germany, the United Kingdom, the United States or France (OECD, 1996). In both Italy and Japan, the occupational weight of manufacturing SFs, after declining in the 'Golden Age' period of the 1950s and 1960s, increased in the 1970s, as it did in most other advanced countries. While this upward trend continued in Italy and elsewhere over the subsequent decade and a half (Storey, 1994), there was a reversal in Japan, where the SF share has shown a moderate but almost continuous decline (Figure 8.1). This chapter aims to provide an explanation for this divergent behaviour, by comparing some structural features of the two countries' manufacturing sectors, as well as the evolution of their international trade performance.

Section 2 sets the scene, by looking at the development of the occupational weight of SFs over the longer run. Section 3 examines a structural feature that differentiates the two economies (the nature of the prevailing subcontracting arrangements), while Section 4 looks at the different responses of Italian and Japanese industry to changes in their exchange rates. As briefly summarized in the conclusions, the interaction between these two factors provides a major explanation for the reduction of the occupational weight of SFs in Japan and its increase in Italy in recent years.

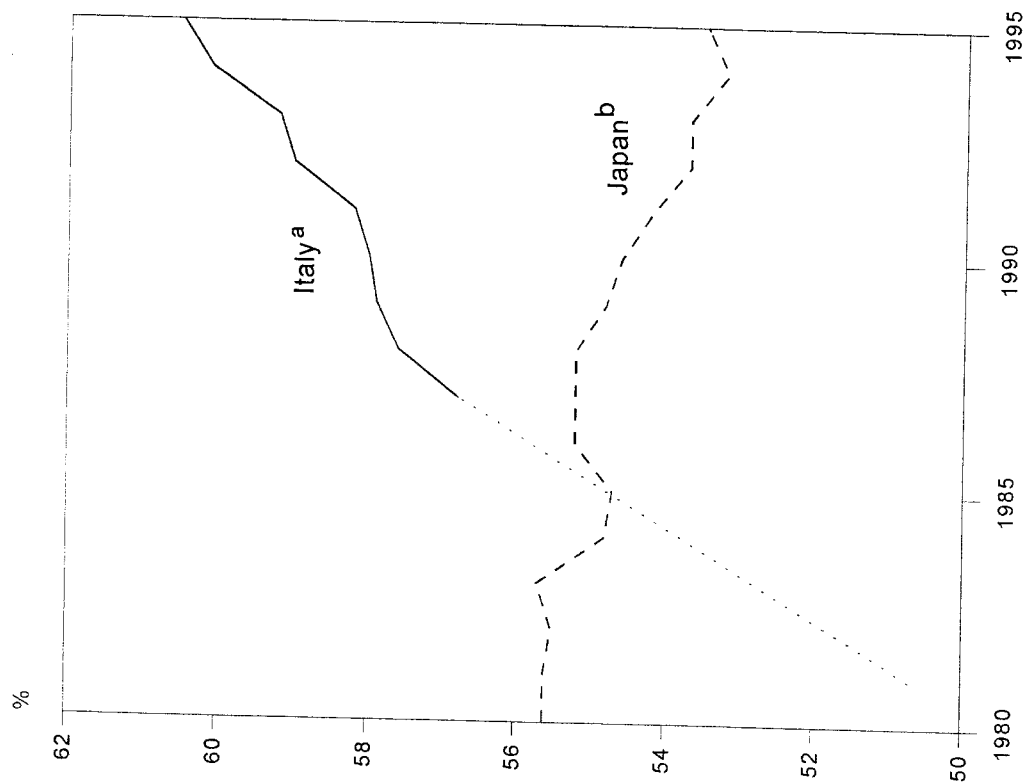


Figure 8.1 Employment in small units in manufacturing (in per cent of the manufacturing labour force)

a. Firms with between 1 and 99 employees.

b. Establishments with between 4 and 99 employees.

Sources: INPS, *Serie storiche* for Italy; *Japan Statistical Yearbook* (various issues) for Japan.

2 Longer-run trends

In the 1950s and 1960s it was common opinion amongst most economists that the economic importance of small firms¹ in industrialized countries was in an inevitable decline. In particular, it was expected that their share of aggregate employment would fall inexorably, as had happened in the primary sector. The sizeable role still played by SFs in economies like Italy and Japan was interpreted as a sign of these countries' economic backwardness, which would be wiped out in the process of development. For a number of years, the available evidence seemed, on the whole, to confirm this picture. Thus, the average size of manufacturing firms, measured in terms of employment, increased in the 1950s and 1960s in the OECD countries (Sengenberger et al., 1990). In Italy and Japan, the available data suggest that the occupational weight of small firms declined – or, at best, remained constant – during that period (Table 8.1).

Various factors contributed to reduce the share of employment in SFs in both economies. Among these was the rapid creation of a national market and of national tastes, particularly in many of the traditional sectors – such as food products, textiles, clothing and furniture. This process (which was importantly helped by the spread of television) led to a sharp reduction in the number of small handicraft firms operating in very limited geographical areas. In addition, the adoption of US technologies

Table 8.1 Manufacturing employment by establishment size class (percentage shares)

Number of employees	Italy					Japan					
	1951	1961	1971	1981	1991						
1–99	54.5	57.0	52.8	59.1	67.8	1–99	57.8	52.7	51.8	58.2	56.6
100–499	20.4	21.5	23.2	21.2	19.2	100–499	18.0 ^a	21.8	22.6	21.2	23.1
> 500	25.1	21.5	24.0	19.7	13.0	> 500	22.1 ^a	25.5	25.6	20.6	20.3

a. 1954.

Sources: Brusco and Paba (1997) for Italy; Statistical Bureau, Management and Co-ordination Agency, *Historical Statistics of Japan* (Vol. 2), Tokyo, 1987 and *Japan Statistical Yearbook* (various issues) for Japan.

put a premium on economies of scale and this effect was reinforced by the two countries' process of internationalization: European integration, in the case of Italy, MITI's industrial policies in the case of Japan, forced or encouraged increases in the average size of firms, designed to raise external competitiveness.

However, and quite surprisingly, the almost unanimous prediction that such trends would continue unabated, was not confirmed by the experience of the 1970s and 1980s. The employment share of SFs, after mildly declining in the 1950s and 1960s, began to increase in most industrial countries in the 1970s, and this upward trend has not yet been interrupted, at least in manufacturing (in many service activities, on the other hand, average firm size has continued to fall). Changing tastes and changing technologies are, in this instance too, likely to be among the more important reasons for this inversion in trend. Thus, consumers' tastes have tended to become more personalized and differentiated, and this process has been helped on the supply side by new technologies (in particular, numerically controlled machine tools) that have made small-scale production more economical. A further factor, specific to Italy, has been the imposition by legislation in the 1970s of labour market rigidities that affected primarily large-scale firms. This, together with a sharply rising tax burden in the 1980s, encouraged the growth of SFs, since these were less constrained by legislation and often operated in the 'underground' economy.

Yet, while the weight of SF manufacturing employment since the war seems to have followed a broad U-shape in most countries, this has not been the case in Japan. After declining in the 1950s and 1960s and rising again in the 1970s (as happened elsewhere), the occupational weight of small-scale establishments began to fall again from the early or mid-1980s (figure 8.1). The decline has been modest, but it stands in sharp contrast to the continuing and rapid increases recorded in, for instance, Italy.² Understanding the reasons for this contrasting behaviour may help to better assess the role of SFs in sustaining employment in manufacturing. This role is clearly dependent on an economy's industrial structure as well as on its performance in foreign markets.³

3 The nature of subcontracting

Subcontracting relationships exist in all countries and SFs are, obviously, deeply involved in them. Italy and Japan are no exception, even if the importance of subcontracting and its role in economic growth have been mainly emphasized by Japanese rather than by Italian economists. It has

been argued that this lack of balance in the literature might be explained not only by the different sizes of the phenomenon, but also by the rather different nature of the two countries' subcontracting arrangements – in Japan, SFs are very dependent on, and often exploited by, larger firms, while in Italy they are much more likely to maintain an independent status. When Piore and Sabel (1984) originally applied their 'flexible specialization model' both to Italy and Japan, they pointed out that, while Italian SFs operated primarily in so-called 'industrial districts' in which flexible networks of relationships improved small plant productivity, the bulk of Japanese SFs belonged to a hierarchical system in which mass production prevailed and in which subcontractors had little autonomy and were technologically and commercially dependent on their contractors.

As is well known, from the 1950s the Japanese productive system was based on the domination of the large *keiretsu* – these organized vertical chains of suppliers and created a dual industrial structure, characterized by significant wage differentials between small and large firms (Watanabe, 1970; Friedman, 1988; Koshiro, 1990) and by the dependence of subcontractors on contractors.⁴ A notable feature of this system was the dominance of 'capacity' over 'specialized' subcontracting. By 'capacity' (or overflow) subcontracting is meant a system in which the contractor hands over to the subcontractor responsibility for the supply of a product, or part of a product, only when the contractor himself has insufficient capacity to deal with a temporarily high volume of orders. 'Specialized' (or expert) subcontracting, on the other hand, denotes a relationship in which the contractor relies on the subcontractor for the supply of a specific input for which there is no in-house supply. Clearly, a much higher degree of control is exercised over the subcontractor in the first system – as, indeed, captured by the Japanese expression *shita-uke kankei*.⁵

Although much of the debate on subcontracting might be subject to a wide gap between reality and image (Miwa, 1995), it has been argued that, especially in the 1950s and 1960s, large firms exercised their monopolistic power by using SFs as a buffer in the course of the business cycle. To some extent, this pattern was an inheritance of the *zaibatsu* domination that re-emerged little changed after 1945 with the *keiretsu* system, in view of the American occupation's failure to dismantle the old corporate structure.⁶ But it was also a consequence of the pattern of development pursued after the war. This was characterized by a strong emphasis on rapid industrial recovery in a situation of labour surplus and capital shortage. Such a policy imposed a concentration of financial and R & D resources in a relatively limited number of main companies, those

that were at the apex of vertical groups of subcontractors. Public support to small firms was, inevitably, delayed to the 1970s.

A 1970 MITI White Paper (MITI, 1970) on small and medium-sized enterprises may be considered the starting point of a radical change in the direction of policy. It also opened a wide debate on whether the dual economy was gradually disappearing. One particular issue that received much attention was the question of whether the earlier hierarchical arrangements between contractors and subcontractors had remained broadly unchanged in what MITI called a 'new dual structure', or whether the traditional pattern of inter-firm relations had been abandoned in favour of mutually beneficial and longer-term relationships between 'parent' and 'supplier' firms.⁷

The same problem has been analysed by Italian economists in connection with the restructuring of the chain of suppliers to large firms, especially in the car industry, that took place in the 1980s. It is not, however, an issue that would seem very relevant to a discussion of the subcontracting relationships that exist in Italy's industrial districts. These, as mentioned earlier, have always been characterized by a certain degree of independence of subcontractors from their contractors. According to Brusco (1982, 1989), this relative independence was achieved in the industrial districts by the existence of a large number of subcontractors constituting horizontal networks without any leading companies. While this interpretation may not provide a full picture,⁸ it does point to a fundamental difference between the Italian and Japanese systems that may well have increased in importance in the 1980s, a period in which the volume of subcontracting in the Italian economy appears to have grown.

The aim of the next two sub-sections is to look in greater detail at these two (quantitative and qualitative) differences in the two countries' subcontracting relationships and to see to what extent they have been changing over the last decade.

3.1 Changes in the extent of subcontracting

Quantifying the extent of subcontracting is no easy task even within one economy, let alone when comparisons are attempted with another,⁹ and the shortcomings of the underlying statistical base must be borne in mind in what follows. The main source of information on the evolution of subcontracting in Italian manufacturing is provided by sample data regularly collected by Mediocredito Centrale over the period 1968–94. Unfortunately, the series is not homogeneous because both the number of firms and the selection criteria have changed through time. To give an idea of the non-comparability of some of the data, it is sufficient to note

that the number of firms considered in the 1984 survey was more than double that considered in other years. On the other hand, the last two sets of observations, covering 1991 and 1994, examined a broadly similar panel of firms, thereby offering better evidence on more recent patterns. For Japan, the data provided by the *White Paper on Small and Medium Enterprises in Japan*, edited by the Small and Medium Enterprises Agency (SMEA) and published annually by MITI, are more reliable because they cover a homogenous sample.

A comparison of these sources for the 1980s (Table 8.2) shows that first, and as might have been expected, the weight of subcontracting in the Japanese economy is significantly higher than it is in the Italian one – the figures, as argued earlier, are far from comparable, but the differences between the two countries are so large that they are bound to reflect some genuine diversity. Second, it is interesting to note that, over the period, the changes that have occurred in the importance of subcontracting moved into opposite directions.

In Italy, there was a sharp rise in the proportion of firms that were involved as subcontractors,¹⁰ especially in branches such as textiles, clothing, leather products and general machinery, which are characterized by the presence of industrial districts; conversely, there was almost no

increase in the transport equipment sector, a sector that is well known everywhere for its heavy reliance on subcontracting arrangements. In Japan, on the other hand, the importance of subcontracting seems to have modestly declined, and this in every sector of activity. The declines were well below average in two sets of industries, both highly dependent on subcontracting – the traditional textiles, clothing and leather product branches and the two engines of Japan's industrial strength (electric machinery and transport equipment).

More recent evidence confirms that the aggregate trends in evidence between the turn of the 1970s and the mid- or late-1980s have continued over the subsequent decade in both countries. In Italy, for instance, the share of subcontracting firms in the total number of enterprises rose by some 6 percentage points between 1991 and 1994. The intensity of subcontracting also increased, with the share of firms in which subcontracting accounted for less than 10 per cent of total sales falling by about 12 percentage points. For Japan, the continuing decline in the extent of subcontracting activity was confirmed for more recent years by various issues of the *White Paper on Small and Medium Enterprises in Japan*. The survey for 1995, for instance, showed a significant fall in orders for subcontractors, mainly due to two features – poor sales by the main contractor (cited by nearly two-thirds of the respondents) and the main contractor's expansion overseas (cited by some 40 per cent) (SMEA, 1996a, p. 78). In particular, the sharp increase in FDI by Japanese firms (including a significant number of SIs), a phenomenon particularly pronounced in the automobile industry, transformed erstwhile suppliers of standardized components from net exporters to net importers. More generally, the domestic production of less sophisticated components declined considerably in the 1990s and reduced employment in subcontracting SIs.

3.2 Changes in the characteristics of subcontracting

The above evidence, however imperfectly comparable across both time and space, suggests, nonetheless, that over the last decade or so subcontracting activity has risen in importance, if from a small base, in Italy and has declined in importance, if from a much larger base, in Japan. An explanation for these changes requires an examination of changes in the character of the subcontracting relationships in the two countries, changes which may well have gone in the direction of a greater convergence in this area between Italy and Japan.

For Italy (and for other European economies), information on the characteristics of subcontracting has been made available by the European Network for SME Research (ENSR, 1996), which has examined the

Table 8.2 The importance of subcontracting in selected sectors (percentage shares)

	Share of small firms/establishments ^a engaged in subcontracting		
	Italy		Japan
	1978	1984	1987
Foodstuffs	4.5	14.8	17.5
Textiles	18.3	54.9	84.9
Clothing	18.7	43.2	86.5
Wood and furniture	4.5	16.2	49.6
Leather products	8.1	30.7	68.8
Metal products	12.0	54.4	78.6
General machinery	12.1	34.1	84.2
Electric machinery	11.2	23.3	85.3
Transport equipment	12.6	16.6	87.7
Precision machinery	17.5	28.7	80.9
Total manufacturing	9.5	30.1	65.5

a. SIs are defined as firms with less than 250 employees in Italy and as establishments with less than 300 employees in Japan.

Sources: Mediocredito Centrale, *Indagine sulle imprese manifatturiere, 1978 and 1984* for Italy; SMEA (1996a) for Japan.

evolution of subcontracting in the country on the basis of a number of case studies. The main points highlighted by this report deserve being quoted extensively:

Subcontracting is developing in every country, although it is subject to the influence of growth cycles. In most European countries, it is notable that while speciality subcontracting is increasing, capacity subcontracting is decreasing.

... The increase of speciality subcontracting supports the generally accepted assumption that subcontracting relationships tended to move from 'supplier/customer' relationships in which the subcontractor is heavily dependent on the principal to strategic partnerships in which there is a greater interdependency and a more equal relationship.

... There has been a clear tendency by principals to get back to their core activity, to reduce their number of subcontractors and to 'delegate' a greater part of the development phase to their first tier subcontractors. (*ibid.*, pp. 149–50)

Fieldwork carried out in Italy confirms this picture and in addition suggests that the growth in specialized subcontracting prevalent since the 1980s has followed two distinct patterns. First, in many industrial districts firms have increasingly allocated part of the production process to outsiders, either by providing the finance needed to acquire machinery by their own previous workers, or by moving specific elements of the production process out of the district. Second, in those industrial sectors dominated by large-scale firms, since the 1970s there has been considerable outsourcing of production towards small subcontractors (and this was a major reason for the sharp decline in employment in such firms). These two trends have gradually raised the specialization of subcontractors for both technological and commercial reasons.

At the technological level, it is increasingly the case that many new techniques involve activities requiring different capabilities at various stages of the production process (see, for instance, Håkansson, 1987; and von Hippel, 1988). Therefore, subcontracting firms can find technological niches that the main firm cannot easily fill itself. This trend increases the degree of interaction between SIs and larger firms, giving rise to vertical structures characterized by many tiers of subcontracting, stable relationships and a lower number of subcontractors for each contractor. Interestingly, it also increases interactions between SIs themselves, particularly in the industrial districts. Turning to commercial causes,

these are related to interactions with final demand. A feature of the early growth of industrial districts in the 1970s was their fragmentation and the ensuing inefficiency of their distributive organization. At the time, this was eased by specialized middlemen – the buyers – who provided some coordination between dispersed and anonymous SIs and the market. More recently, however, competition for market share has been increasingly based on factors other than price, such as product quality, flexibility in meeting volatile consumer demand, and services to customers. To comply with these changes and to become more visible in the customer's eye, some firms have specialized in interacting with final markets, thereby further developing their subcontracting production networks.

It is very difficult to document any of these trends with hard data. The Mediocredito Centrale surveys point, however, to structural features of Italian subcontracting that indirectly support some of the statements just made. In particular, Table 8.3 shows a rather uniform distribution of subcontractors by firm size and by importance of turnover. If anything, smaller companies were less involved than larger ones. Even more interestingly, SIs outsourced more work than did larger firms, supporting the idea that a significant part of the increase of subcontracting in the country concerned SIs on both sides and probably involved extensive co-operation between partners of similar size. Though no figures on the same basis seem to be available for Japan, all that one knows about the Japanese system suggests a very different pattern.

According to SMEA reports, it is only recently that the structure of Japanese subcontracting has begun to change in the direction of greater partnership between the various participants. Thus, subcontractors have attempted to raise their profiles by improving product quality, by raising sales capacity and, in particular, by trying to diversify themselves away from one main contractor. The changes reported in this area have been

Table 8.3 Selected data on Italian subcontracting, 1994

Size classes	Share of firms providing subcontracting	Share of subcontracting activity in turnover	Share of firms using subcontractors for > 30% of turnover ^a
11–50	28.9	22.9	12.1
51–250	35.2	23.1	9.6
> 250	29.5	21.1	8.2

a. 1991.

Source: Mediocredito Centrale, *Indagine sulle imprese manifatturiere, 1991 and 1994*.

striking (Table 8.4). In as short a time-span as three years, the percentage of subcontractors engaged in exclusive contracts with only one parent company was halved, while the perceived importance of establishing contracts with a larger number of buyers increased by more than 20 percentage points.

This evolution is clearly linked to a technological up-scaling of smaller firms, as also confirmed by SMEA (1996b). In particular, significant changes have occurred in the importance placed by main firms on the various criteria used in selecting their subcontractors. Thus, demands for 'thorough cost reduction', 'greater quality and precision', or 'quality assurance' double their importance when compared with the early 1980s and now rank first. Conversely, the more traditional preoccupations with 'stable quantities of parts and finished products', 'fixing delivery time' and 'volume production' drop sharply in significance. Similarly, main firms increasingly take into consideration the availability among subcontractors of 'specialist technologies' or the 'ability to perform technical development', while the proportion of contractors expected to choose their partners on the basis of an 'existing business relationship' declines considerably. This changing nature of subcontracting is clearly leading to a more horizontal network of inter-firm relationships that goes beyond the vertical *Keiretsu* structure and to a rearrangement of the traditionally rigid Japanese supply chain (Lakshmanan and Okumura, 1995).

In both countries, therefore, the nature of subcontracting relationships has been changing. In Italy, the substitution of specialized for capacity

subcontracting is a process that goes back to the 1980s and was continued in the 1990s. In Japan, capacity subcontracting, traditionally a good deal more extensive than in Italy, continued to dominate for longer. Yet, by the early 1990s, Japan had also begun to experience a shift to new forms of partnership between large and small firms and towards a greater role for specialized subcontractors.

4 The impact of exchange rate changes

Both Italy and Japan experienced significant real exchange rate changes in the 1980s and early 1990s (Figure 8.2). Italy went, first, through a long-drawn-out phase of currency appreciation between 1980 and 1992, as periodic downward realignments within the EMS were not sufficient to offset a continuing inflation differential with its major trading partners. The September 1992 EMS crisis then led to a steep depreciation which was further reinforced in 1994-95 by political uncertainties. All in all, the real value of the lira rose by some 11 per cent between 1980 and 1991 and then depreciated by 20 per cent in the five years to 1996. Japan, on the other hand, went through two phases of very sharp appreciation. The first one (after the 1985 Plaza agreements) lifted the yen's real value by 41 per cent between 1985 and 1988. Following a few years of relative stability, the yen then rose again, by a further 35 per cent from 1992 to 1995, before falling back to somewhat lower levels in the recent past.¹¹ Inevitably, these sharp exchange rate gyrations have had a significant impact on the activity and employment of SFs in both countries.¹² For Japan, in particular, it has been estimated that the negative effects of the yen's rise between 1991 and 1995 were much more pronounced for SFs than they were for larger enterprises (EPA, 1996).

The appreciation of the yen triggered off a process of structural change in Japanese manufacturing which is bound to have reduced the occupational weight of SFs or, at least, to have contributed to its stabilization. More specifically, the car and home electronic industries – which had been the stars of Japanese industrial efficiency and competitiveness in the 1970s and 1980s – lost much of their comparative advantage after 1985 (Yoshitomi, 1996). There was, as a consequence, a drastic reduction in the volume of exports and a concomitant increase in Japanese foreign direct investment into countries with lower labour costs, particularly in Asia (Nakamura and Matsuzaki, 1997). As a result, local labour was substituted for Japanese labour and the importance of foreign production soared.¹³

The effect of this on subcontractors differed depending on the latter's specialization. In the car industry, for instance, domestic suppliers of

Table 8.4 Changes in the nature of Japanese subcontracting (small and medium-sized establishments^a)

Type of contract	Share of subcontractor	
	1987	1990
Exclusive contract ^b	34.5	15.8
Semi-exclusive contract ^c	38.6	36.8
Semi-dispersed contract ^d	24.5	38.0
Dispersed contract ^e	2.4	9.4

a. Establishments with 1 to 300 employees.

b. One contractor only with more than 90 per cent of subcontracting turnover.

c. 2 to 5 contractors with more than 90 per cent of subcontracting turnover, or one contractor only with less than 90 per cent of subcontracting turnover.

d. 2 to 5 contractors with less than 90 per cent of subcontracting turnover, or more than 5 contractors with more than 70 per cent of subcontracting turnover.

e. More than 5 contractors and less than 70 per cent of subcontracting turnover.

Source: SMEA (1996a).

technologically more sophisticated components (such as engines and brakes) were now able to maintain their subcontracting links by exporting their products to the newly established foreign operations of the main company or, at times, even shifting their operations abroad; on the other hand, suppliers of more standardized components (such as tyres, lead batteries or seatbelts) were not only unable to supply Japanese plants abroad (where small local subcontractors were substituted for Japanese ones), but also found themselves having to compete with imported products at home. The increasing difficulties suffered by SFs and their declining occupational weight in the first half of the 1990s can, at least in part, be linked to these developments (SMEA, 1996a).

These shifts were accompanied by two further important structural changes. First, Japan's export composition shifted towards higher value products, including sophisticated capital goods (such as industrial robots) and components (such as liquid crystal displays and other devices for computers and telecommunication equipment). This shift mitigated the decline in net exports: the share of high-tech products in Japan's total exports in the period 1985-95 rose sharply, at the expense of capital-intensive but medium-technology goods (such as cars, steel and home electronics) (Yoshitomi, 1996). Second, this switch towards more sophisticated products was, at least in part, responsible for the sort of changes in subcontracting that were discussed in Section 3 above. More specifically,

the demands made by main contractors on their subcontractors are becoming increasingly sophisticated. In other words, subcontractors are being called on to provide products of higher quality and greater precision. Moreover, ... there has today been a very clearly discernible decline in the use of traditional and technical development strengths. (SMEA, 1996a, p. 85)

While yen appreciation almost certainly contributed to the fall in the employment share of Japan's SFs in this period, the lira's (relatively modest) appreciation in the 1980s may, paradoxically, have had almost opposite effects on the occupational weight of SFs in Italy. This appreciation was perceived by many entrepreneurs as a structural phenomenon, likely to persist in the longer run. As a result, numerous SFs, operating within the industrial districts, launched a vigorous reaction by upgrading their production and by devoting resources to a better understanding of consumer needs. Such strategies, mainly carried out in the so-called 'sophisticated traditional goods' sectors,¹⁴ have led to

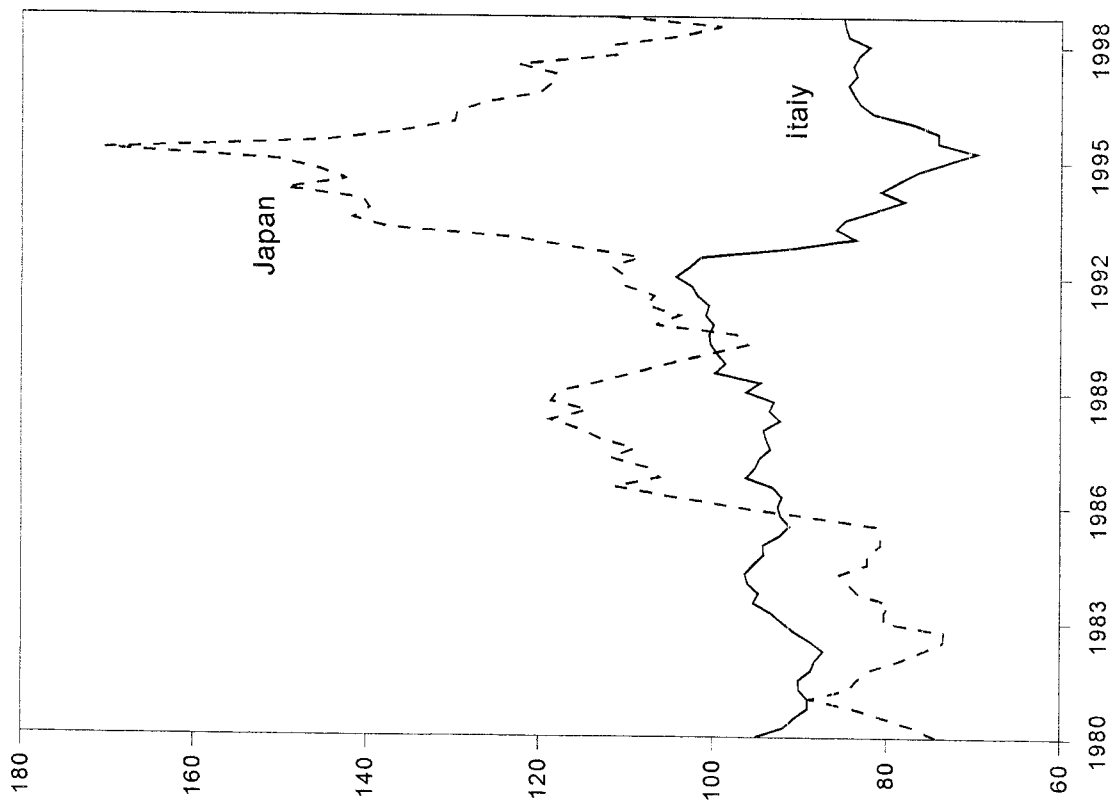


Figure 8.2 Real exchange rates (indices; 1990 = 100); based on relative, normalized, unit labour costs in manufacturing
Source: IMF, 'International Financial Statistics Data Bank'.

significant export successes, despite lira appreciation (between 1984 and 1993, for instance, the share in total exports of the furniture and mechanical sectors increased from just over 20 to 30 per cent) (Fortis, 1996).¹⁵

The lira's sharp and unexpected depreciation in September 1992 was probably perceived by the majority of SIs belonging to the 'sophisticated traditional goods' sectors as a temporary phenomenon. They thus continued to search for lasting improvements in efficiency, while maintaining or even increasing their shares in the 'specialized' markets they serve – markets that are, in any case, relatively inelastic to exchange rate variations. On the other hand, the devaluation had a strong favourable impact on SIs producing simple traditional goods and on large firms producing standardized ones.

To summarize, exchange rate changes have had important effects on the occupational structure of SIs in both economies in the 1980s and in the first half of the 1990s.¹⁶ The clearest and best documented impact has been on Japan, where the strong appreciation of the yen clearly contributed to the reduction in the share of employment in SIs. It also caused a general increase in industrial efficiency through a significant change in subcontracting relationships (towards a greater stress on technological factors and a significant reduction in capacity subcontracting), and a further shift in Japan's export composition towards higher-value and higher-technology products.

In Italy, by contrast, there has been little change in the nature of comparative advantage as a result of the lira's appreciation in the 1980s – if anything, the 'traditional' sectors reinforced their international competitiveness (though it should be borne in mind that the technological sophistication of many of the firms operating in these sectors defies any simple categorization between high- and low-tech products). Depreciation from 1992, on the other hand, was particularly beneficial to SIs in less competitive industries. Throughout the period, therefore, exchange rate changes may well have contributed to raise the share of employment in small Italian enterprises, while doing the opposite in Japan.

5 Conclusions

The contrasting behaviour of the occupational weight of SIs in Italy and Japan in the period 1985–95 may be partly explained by the different structures of subcontracting and by the different reactions of the manufacturing sectors to the evolution of the terms of trade in the two

countries. There is, of course, a close link between these two factors. Japan's large firms have traditionally relied on 'capacity' subcontracting. This has been a key factor in their successful export sectors, characterized, on the one hand, by fairly standardized medium-technology products and, on the other, by a number of high-tech goods. The prevalence of 'specialized' subcontracting in Italy, on the other hand, arises from the importance of the 'sophisticated traditional goods' which have been the backbone of the country's exports in this period.

The reaction of both countries' manufacturing sectors to currency appreciation in the period here considered has been that of developing or strengthening sectors characterized by non-price competitive advantages in international markets – high-tech goods in Japan and sophisticated traditional goods in Italy. The success of this strategy relied on a continuing important role for capacity subcontracting in Japan and for specialized subcontracting in Italy. In Japan, however, given the magnitude of the currency's appreciation, foreign capacity subcontractors were substituted for domestic ones. In Italy, on the other hand, this process of substitution was much weaker, partly because the lira's revaluation was more modest and partly because specialized subcontracting in the production of sophisticated traditional goods could not easily be transferred abroad. The stagnation of the Japanese economy in the period since 1992 has further depressed the activity of domestic capacity subcontractors, while Italian SIs, particularly those working as specialized subcontractors, were able to weather the 1992–94 recession better than large firms.

These various changes in subcontracting systems were a contributing factor to the divergent behaviour of the occupational weight of SIs in the two countries. In Japan, the external shock represented by the yen's appreciation led to a process of substitution away from domestic capacity subcontractors and towards outward direct investment. At the same time specialized subcontracting, needed to cope with the shift of many firms' production towards higher-technology lines of activity, increased. This, however, was insufficient to preserve the former levels of employment in SIs, because the reduction in the large population of capacity subcontractors was only partially compensated by the growth of specialized ones. In Italy, on the other hand, the growth of industrial districts led, throughout these years, to a growth in subcontracting relationships characterized not only by an increasing reliance on specialized suppliers, but also on the creation of horizontal networks of SIs. Combined with the efforts made by many of these SIs in upgrading their technology and competitiveness, this allowed the aggregate employment share of SIs to

rise, a phenomenon that was then further reinforced by the lira's depreciation after 1992.

Notes

1. The concept of a small firm is by no means crystal clear and no accepted definition, from either an economic or a statistical point of view is available. The size of firms can be measured in different ways, focusing on output (such as turnover or value added) or on production factors (labour or capital). The choice depends on the aims of the analysis – since this chapter's main purpose is that of studying the evolution of the employment share accounted for by SFs, the size of firms will be measured by the number of their employees. Where exactly to set the thresholds between small, medium, and large firms is far from obvious, and any such threshold may require periodic downward revisions given the continuous growth of labour productivity. Japanese accounts, designed in the 1950s, define SFs as having less than 300 employees; most of the Italian data used here, set the threshold at 250 employees. A further important difference between the two countries is that Italy's data usually cover firms, while Japan's data cover establishments. This is likely to overestimate the level of employment in small units in Japan compared to Italy. On the other hand, most of the available Japanese data omit information on very small establishments with less than four workers, a factor which works in the opposite direction. It is impossible to say in which direction the net bias operates.
2. Absolute employment in SFs rose in both economies between the mid-1980s and the mid-1990s, but the increase was much more pronounced in Italy than in Japan.
3. The share of tradable production in value added is, of course, particularly large in an economy's manufacturing sector; in the early 1990s this share was of the order of 63 per cent in Italy and 34 per cent in Japan.
4. Such a dualistic view of the Japanese economy has been the focus of debate among researchers for a long period. For a contrasting view on this, see Miwa (1996).
5. This term is usually used for the case where an ordering firm has some degree of control over a supplying firm in the production relations between them. This gives 'subcontracting' a meaning beyond the simple commissioning by one firm of work from another, instead of producing in its own factory. (Hoburn and Takashima, 1992, p. 103)
6. See Chapter 2 by Barca et al. in this volume for an account of this story.
7. Thus, in the 1970s, the weight of subcontracting changed cyclically, even in Italy's industrial districts. During periods of expansion, contractors usually subcontracted additional demand, but they resumed in-house production in phases of recession. In other words, subcontracting SFs were dependent on the capacity decisions of their contractors (Innocenti, 1998).
8. Arguably, this was not the case for 'just-in-time' forms of subcontracting.

Though such methods greatly improved the performance of the manufacturing sector, they were imposed by large firms on SFs. They are thus not discussed in this chapter whose aim is to highlight the specific contribution of small firms to subcontracting relationships.

9. There are at least two major reasons for this. First, international statistics employ a variety of definitions of the phenomenon. Second, different schools of industrial economics tend to devise different terminologies to describe what are basically similar facts – see, among others, the 'flexible firm' or the 'boundaryless firm' (Atkinson and Meager, 1986), 'flexible specialization' (Piore and Sabel, 1984), 'the independent subcontractor opposed to dependent subcontracting' (Brusco, 1989), 'the shift from hierarchy to contract' (Colling, 1995) or the implications of the Japanese word *shita-uke kankai* discussed in note 5 above.
10. Some of the increase shown in the table may, however, reflect the much larger coverage of the 1984 survey data mentioned above.
11. Its trend rate of appreciation over the decade was of the order of 4½ per cent per annum.
12. In Japan exports accounted for perhaps 20 per cent of SFs' value added in the early 1990s (OECD, 1997); in Italy for some 25 per cent of their turnover in 1994.
13. Thus, between 1980 and 1995 the share of overseas production (expressed as a percentage of domestic plus overseas output) of the automobile sector, for example, rose from 4 to as much as 37 per cent (OECD, 1996).
14. This sector includes fashion goods, furniture and 'Mediterranean diet' products, as well as the manufacture of machinery for the textile, food and leather industries. Many of these goods can be considered quite sophisticated in view of the various technological improvements and product innovation processes that have been adopted by Italian firms.
15. It is, of course, true that not all such exports come from industrial districts, particularly so in the case of mechanical products.
16. There are, of course, further factors which may explain the different behaviour of the occupational weight of small manufacturing firms in Italy and in Japan over the period examined here. To name just one, the significant increase in unemployment experienced in Italy since the early 1980s has clearly provided a strong incentive to self-employment, including the start up of new businesses. There has been nothing comparable in Japan, where the rate of unemployment has remained exceptionally low throughout these years (see Chapter 7 by Genda et al. in this volume).

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9 The Distribution Structure: An Evolutionary Analysis*

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1 Introduction

The distribution sector is of significant economic importance.¹ Thus, retail and wholesale trade alone accounted for between one-fifth and one-quarter of total employment and 14 to 17 per cent of value added in Italy, Japan and the United States in 1990 (Table 9.1). In spite of its importance, however, there has been little research on the role of distribution in long-run economic growth and international competitiveness. This may be due to the fact that the sector is very heterogeneous: the distribution of agricultural products, for example, is very different from that of machinery. Such heterogeneity requires careful disaggregate analysis, but detailed and internationally comparable disaggregated data are not easily available in most countries.

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