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**THE EMILIAN MODEL REVISITED:
TWENTY YEARS AFTER**

by
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Abstract

In the early 1980s the development of Emilia-Romagna drew wide attention as a case of successful industrialisation based on small and medium-sized firm clustered in industrial districts intermingled with social cohesion and integration assured by the hegemonic role played by the Italian Communist Party (PCI) in the region. Twenty years after, the Emilian economy seems to have been able to regenerate its competitive advantage in the face of the challenges of globalisation and ICT revolution. This resulted from important changes involving both the industrial structure and socio-political context. As to the former, a selective restructuring of local industry led to a reduction in the number of manufacturing firms and employment; the emergence of new hierarchies; the rise of lead firms; a differentiation in the evolution path of the various districts; an intermingling of old and new technical competencies. As to the latter, new social contradictions emerged. The fading of traditional social identities eroded the cohesion of the regional society, while the transformation of the ruling party from the PCI into the PDS and then the DS brought about an increased involvement of business associations in both formulating and managing industrial policies. As a result, these shifted towards a market-driven approach, focused on more structured firms rather than industrial districts.

JEL Codes: N94, R58, O18

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The discovery of the 'Emilian model'

Twenty years ago Brusco (1982) drew wide attention to the development of Emilia-Romagna – the most successful region in the 'Third Italy'¹ – that for its peculiarities he labelled the 'Emilian model'. The model stressed the essential features of the economic and social development of this region and became a common reference in international literature on post-fordism and local development (e.g. Piore and Sabel, 1984; Scott and Storper, 1986; Goodman and Bamford, 1989; Best, 1990; Storper and Harrison, 1990; Pyke, Becattini and Sengenberger, 1990; Pyke and Sengenberger, 1992; Harrison, 1994; Amin, 1994; Amin and Thrift, 1994b; Bagnasco and Sabel, 1995; Cossentino, Pyke and Sengenberger, 1996; Cooke and Morgan, 1998a; Amin, 1999; Whitford, 2001).

According to Brusco, since WW2 – and especially in the 1970s – Emilia-Romagna had gone through a rapid process of industrialisation which had radically transformed the physiognomy of the local economy from mainly agricultural into industrial and tertiary, and enabled it to become the highest per capita income region in Italy. The protagonist of the industrial take-off in the region were small and medium-sized firms. More significantly, the relationships among such firms had evolved in such a way as to give rise to particular production systems called industrial districts. Firms were frequently clustered in relatively small zones according to their product and configured monocultural areas in which all firms had a very low degree of vertical integration and the production process was carried out through the collaboration of a number of firms. In these areas only a proportion of the small enterprises actually produced finished goods while the others worked as subcontractors for the former. Examples of industrial districts were knitwear in Carpi, ceramic tiles in Sassuolo, farm machinery in Reggio Emilia, engineering in Modena, packaging machinery and motorcycles in Bologna, tomato canning and ham in Parma, and buttons in Piacenza.

Moreover, scholars emphasised the role of the embeddedness of economic tissue in the network of social relationships. The basis of Emilia-Romagna success laid in the way market and non-market forces associated with enlarged families and close-knit communities combined, leading to a special balance between competition and cooperation characteristic of the labour market and the industrial structure. People in the districts shared a cultural homogeneity which lubricated social relations among economic actors, reinforced consensus and group loyalty among both entrepreneurs and employees, ensured the social ostracism of rule-violators, provided a common language to speed innovation and information exchange, and established the basis for trustful behaviour (Trigilia, 1986; Bagnasco, 1988; Putnam, 1993; Capecchi and Pesce, 1993).

In this respect, the paramount characteristic of Emilia-Romagna was the presence of a dominant Communist political subculture. Since the end of WW2 almost all local governments had been controlled by the Italian Communist Party (PCI). As stressed by Capecchi (1990), one of the features of the PCI in Emilia-Romagna, which differed it from the Communist parties in France and Spain and even from the PCI itself in other parts of the country, was that it legitimised not only waged labour, but also the creation of small firms by workers wishing to become self-employed and set up a business of their own. The local administrations controlled by the party undertook effective policies to support such a path of development: at first the realisation of industrial parks for small and medium-sized firm settling and then, since the late 1970s, the setting-up of real service centres to local firms².

¹ The 'Third Italy' includes the Centre and North-East regions of the country, characterised by recent industrialisation led by small and medium-sized firms as compared with the North-West, whose industrial take-off dated back in the first decade of the XX century and was based on larger firms, and the backward South (Bagnasco, 1977).

² The provision of real services involved offering companies the services they needed, rather than financial incentives, to prompt innovation. Typically such services concerned corporate strategy; organisational development and management; financial and administrative systems; production and service management; research activities; management of human resources; information technology and systems; marketing and corporate communications. For a detailed analysis of the real service policy implemented in Emilia-Romagna, see Brusco and Righi (1989); Brusco (1990; 1992); Bellini, Giordani and Pasquini (1990); Bellini and Pasquini (1998) and Bellini (2000).

The structure of alliances established by the party in the region gathered together, into a heterogeneous coalition, the urban working class, the peasantry and agricultural workers, and urban entrepreneurial and middle class won over by administrative efficiency and relatively good services as compared with those available elsewhere in Italy. Around this coalition, the party was able to gather consensus in favour of a model of economic and social development based on progressive government, social integration, and entrepreneurial success. Stability and efficiency of local government policies were expressions of the firm base of ideological consensus which showed itself in a high level of membership in mass organisations (such as trade unions and cooperatives) and political militancy in the party. Such a circumstance relieved the Communist administrators of the haphazard task of finding answers to specific and sectoral political questions and put the PCI in a position of undisputed pre-eminence in its relations with partners (especially the Socialists) in local government coalitions (Bellini, 1990).

Moreover, the PCI promoted the creation of a range of extra and intra-firm institutions – the artisan and small business association CNA, credit cooperatives, marketing and purchasing consortia, local systems of industrial relations – which, originally conceived as ‘transmission belts’ of the party’s policy, changed their nature over time and turned out to act as surrogates of managerial hierarchies for organising interfirm governance, working as a kind of collective entrepreneur which promoted cooperation, enforced social norms of fair play and stimulated economic growth (Best, 1990).

Thus, the party was able to exercise a ‘network’ influence within the regional society through the common set of beliefs and values shared by its voters and activists. The party’s ‘network’ influence helped to secure consensus up and down the hierarchies of the region’s powerful ‘red’ economic organisations, unions, voluntary associations and recreation clubs. Cross-membership, inter-personal familiarity, and the frequent rotation of the party elite through senior positions in the various organisations served to sediment social cohesion as well as nurture a diffuse organisational culture of consultation and compromise (Amin, 1999).

The performance of the Emilian economy twenty years after

What happened to Emilian economy in the two decades following the discovery of the model?

With a population of nearly four million residents (7% of the national population), in the late 1990s the region accounted for 8.9 per cent of national GDP, surpassed by Lombardy, Lazio and Veneto, but still had the highest per capita income among the 20 regions of Italy (Unione Regionale delle Camere di Commercio dell’Emilia-Romagna, 2000: 1-5). However, as shown by table 1, the regional GDP growth rate decreased from 4.1 per cent a year in the 1970s (a figure higher than both the national average and that of all the other major industrial regions in Italy) to 1.7 per cent in the 1980s (the lowest figure in the table for this decade), while a slight upswing increased it to 1.9 per cent in the 1990s (a value higher than the Italian average and lower only than that of Veneto, the most dynamic region in this decade).

Table 1 - GDP growth rates in some selected Italian regions

	1971-80	1981-89	1990-99
Emilia-Romagna	4.1%	1.7%	1.9%
Piedmont	2.8%	2.0%	1.1%
Lombardy	3.2%	2.7%	1.2%
Veneto	3.7%	3.1%	2.2%
Tuscany	3.3%	1.9%	1.1%
Italy	3.8%	2.3%	1.4%

Source: Unione Regionale delle Camere di Commercio dell’Emilia-Romagna (2000: 6).

The region accounted for 8.2 per cent of national employment, had the second highest rate of employment and the third lowest rate of unemployment (4.5 per cent, compared to a national average of 11.4%), surpassed only by Valle d'Aosta and Trentino Alto-Adige in the far North of the country. Its good economic performance was confirmed by its share of 12.0 per cent of Italy's exports, placing it in fourth position after Lombardy, Veneto and Piedmont.

However, disparities across the region persisted. In 1997 the three wealthiest provinces (Bologna, Modena and Parma) surpassed the three poorest ones (Forlì, Ferrara and Rimini) by 25 per cent with regard to GDP per capita and by 95 per cent as concerns exports per capita. At the same time, the average unemployment rate in the former was only 3.9 per cent as compared with 6.7 per cent in the latter (Istituto per il Lavoro, 2000: 49-50).

In sharp contrast with the trend towards service-led growth in the dynamic core regions of the advanced economies, food and agriculture, and the manufacturing industries remained extremely important to the Emilian economy. In 1999, although agriculture employed only 6.7 per cent of the region's workforce, sectors such as cereals, fruit, vegetables, and especially meat and dairy products, placed the region squarely among Italy's food producing regions and earned the region a considerable volume of export revenues. Manufacturing (excluding constructions) continued to employ 36.2 per cent of the region's workforce (as compared with 32.6 per cent at the national level), and accounted for over 10 per cent of the nation's output in the sector. The manufacturing industries accounted for a staggering 97.1 per cent of the region's total exports, dominated by electrical and mechanical engineering (55.8% of total exports), ceramics and other non metallic mineral products (12.6%), fashionwear (9.3%), chemicals (6.5%), food and beverages (6.4%), furniture (1.9%), and print and publishing (1.0%) (Unione Regionale delle Camere di Commercio dell'Emilia-Romagna, 2000: 95).

The industrial structure

Significant transformations took place in the region's industrial structure. Some of them can be grasped by observing the data reported in tables 2 to 10.

Table 2 - Firms and employees in manufacturing industry in Emilia-Romagna, by size of the firm, 1981

	Firms		Employees	
	N.	%	N.	%
Up to nine employees	61,473	85.80	153,173	26.87
10-49	8,598	12.00	156,118	27.39
50-99	838	1.17	58,104	10.19
100-499	664	0.93	123,714	21.71
500 and more	75	0.10	78,857	13.84
Total	71,648	100.0	569,966	100.0

Source: ISTAT (1981).

Table 3 - Firms and employees in manufacturing industry in Emilia-Romagna, by size of the firm, 1991

	Firms		Employees	
	N.	%	N.	%
Up to nine employees	44,924	80.86	135,819	25.93
10-49	9,334	16.80	171,402	32.73
50-99	693	1.25	47,635	9.10
100-499	542	0.98	104,844	20.03
500 and more	66	0.12	63,990	12.22
Total	55,559	100.0	523,690	100.0

Source: ISTAT (1991).

Table 4 - Firms and employees in manufacturing industry in Emilia-Romagna, by size of the firm, 1996

	Firms		Employees	
	N.	%	N.	%
Up to nine employees	41,998	80.04	124,185	24.32
10-49	9,196	17.53	170,041	33.30
50-99	651	1.24	45,553	8.92
100-499	564	1.07	108,103	21.17
500 and more	61	0.12	62,704	12.28
Total	52,470	100.0	510,586	100.0

Source: ISTAT (1996).

Table 5 - Firms and employees in manufacturing industry in Emilia-Romagna, by juridical form of the firm, 1981

	Firms		Employees	
	N.	%	N.	%
Owner-run firms	46,812	65.34	124,282	21.81
Partnerships	17,534	24.47	113,515	19.92
Stock companies	5,502	7.68	293,525	51.50
Cooperatives	1,682	2.35	35,794	6.28
Others	118	0.16	2,850	0.50
Total	71,648	100.0	569,966	100.0

Source: ISTAT (1981).

Table 6 - Firms and employees in manufacturing industry in Emilia-Romagna, by juridical form of the firm, 1991

	Firms		Employees	
	N.	%	N.	%
Owner-run firms	27,889	50.20	78,788	15.04
Partnerships	18,710	33.68	122,464	23.38
Stock companies	7,829	14.09	294,740	56.28
Cooperatives	1,024	1.84	27,196	5.19
Others	107	0.19	502	0.08
Total	55,559	100.0	523,690	100.0

Source: ISTAT (1991).

Table 7 - Firms and employees in manufacturing industry in Emilia-Romagna, by juridical form of the firm, 1996

	Firms		Employees	
	N.	%	N.	%
Owner-run firms	22,910	43.66	60,422	11.83
Partnerships	18,542	35.34	115,846	22.69
Stock companies	10,101	19.25	314,119	61.52
Cooperatives	861	1.64	19,743	3.87
Others	56	0.11	456	0.09
Total	52,470	100.0	510,586	100.0

Source: ISTAT (1996).

Table 8 - Firms and employees in manufacturing industry Emilia-Romagna, by sector, 1981

	Firms		Employees	
	N.	%	N.	%
Food, beverage and tobacco	11,535	16.10	83,293	14.61
Textiles and garment	18,413	25.70	80,018	14.04
Tanning, leather and footwear	2,167	3.02	19,554	3.43
Wood and furniture	8,344	11.64	37,359	6.55
Paper and printing	2,136	2.98	20,468	3.59
Chemicals, petrol and rubber	2,715	3.79	28,132	4.94
Non metal minerals	2,330	3.25	62,588	10.98
Engineering	22,705	31.69	232,039	40.71
Others	1,303	1.82	6,515	1.14
Total	71,648	100.0	569,966	100.0

Source: ISTAT (1981).

Table 9 - Firms and employees in manufacturing industry Emilia-Romagna, by sector, 1991

	Firms		Employees	
	N.	%	N.	%
Food, beverage and tobacco	6,520	11.74	68,637	13.11
Textiles and garment	12,519	22.53	72,851	13.91
Tanning, leather and footwear	1,560	2.81	14,292	2.73
Wood and furniture	3,061	6.39	15,415	2.94
Paper and printing	2,584	4.65	23,962	4.58
Chemicals, petrol and rubber	1,798	3.24	27,310	5.21
Non metal minerals	1,854	3.34	44,995	8.59
Engineering	21,521	38.74	235,502	44.97
Others	3,652	6.57	20,726	3.95
Total	55,559	100.0	523,690	100.0

Source: ISTAT (1991).

Table 10 - Firms and employees in manufacturing industry in Emilia-Romagna, by sector, 1996

	Firms		Employees	
	N.	%	N.	%
Food, beverage and tobacco	7,167	13.66	66,224	12.97
Textiles and garment	8,992	17.14	57,126	11.19
Tanning, leather and footwear	1,275	2.43	13,099	2.57
Wood and furniture	3,061	5.83	14,346	2.81
Paper and printing	2,637	5.03	22,214	4.35
Chemicals, petrol and rubber	1,909	3.64	28,293	5.54
Non metal minerals	1,916	3.65	49,128	9.62
Engineering	21,565	41.10	239,244	46.80
Others	3,948	7.52	20,912	4.10
Total	52,470	100.0	510,586	100.0

Source: ISTAT (1996)

Manufacturing firms dropped from 71,648 in 1981 to 55,559 in 1991 and to 52,768 in 1996 (-26.8% overall) while in the same period total employees decreased from 569,966 to 523,690 and to 510,586 (-10.4% overall). The fall affected particularly microfirms with fewer than ten employees, whose number diminished by nearly one third and their workforce by nearly one fifth over the 15 year considered. In the 1981-91 period, microfirm reduction benefited exclusively the immediately upper class of size (from 10 to 49 employees), that increased in both absolute terms and as a percentage in the region's industry, while the weight of all classes with 50 employees or more diminished. In the 1991-96 period changes in firm size were less pronounced; microfirm share kept on contracting, even though at a slower pace, but this time principally to the advantage of

medium-sized firm from 100 to 499 employees. In practice, a selective restructuring of the region's industry took place as a larger minimum efficient scale appeared to be necessary: weaker firms, often consisting of just one or two partners and a few employees were swept away by competitive pressure and wind up; conversely, more successful companies grew in size, adopted more complex organisational forms and tended to cluster in the 10-49 and 100-499 classes.

Such an insight seems to be underpinned by looking at the staggering increase in the number of stock companies (more than doubled) as compared with the decrease in owner-run firms (more than halved), while partnerships remained substantially stable.

Engineering strengthened its role as the main and structuring sector in local industry, accounting for 41.1 per cent of the enterprises and 46.8 per cent of the total workforce in 1996. Also chemicals, petrol and rubber, and paper and printing increased their shares in the region's employment, while those of the remaining sectors diminished. The drop was particularly sharp in the cases of textiles and garment (from 18,535 to 8,992 firms and from 80,018 to 57,126 employees) and wood and furniture (from 8,344 to 3,551 firms and from 37,359 to 14,346 employees). The non metal minerals sector underwent a radical restructuring in the 1981-91 period, with a considerable fall in both companies and employees, while in the following five years it returned to expansion and both companies and employees increased.

In addition to the 'quantitative' changes illustrated in tables 1 to 10, the Emilian production systems matured two 'qualitative' significant transformations which had an important influence on the development path of the region: the internationalisation of production and the emergence of new local linkages. Strategies for the extension of the range of products were implemented by firms not only internally, but also through mergers, takeovers or the setting-up of new businesses. As a result, more than in the past, many enterprises and often their networks became simultaneously characterised by both global and local relationships, and this deeply affected their linkages with the territory in which they originated. Territorial and sectoral boundaries of local production systems became not so precise as in the past. In fact, knowledge and quality content of artefacts became an increasingly important competitive factor for the region's production systems. This made them need complementarities, which only in some cases emerged within existing industrial districts, by the development of specialised supply or service providers. When it was not the case, this pushed local firms to establish closer relationships with complementary production systems located outside the region (Russo *et al.*, 2000).

Takeovers in Emilia-Romagna

Figures provided in tables 2 to 10 are drawn from census data, which refer to juridical firms without considering the formal or informal links that might exist among them. In this respect, research showed evidence of a significant growth in firms acting as part of larger groups linked together by either formal ties of equity ownership or informal social ties and norms. The main thrust in this direction came from the wave of takeovers which from the mid-1980s and throughout the 1990s reshaped the physiognomy of local industrial structure (Bianchi and Gualtieri, 1990; Lorenzoni, 1994; IDSE-CNR, 1999).

As a result, in 1998 about 23 per cent of firms operating in the region were part of a group and gathered 51 per cent of the total workforce. In fact, among 48,492 enterprises whose ownership structure was known, 11,401 were found to belong to 3,921 groups (with an average of 2.9 firms per group). This reflected a growing influence of larger firms, as in Emilia-Romagna groups made up of a remarkable number of businesses were characterised by the presence of one or very few large enterprises tied to a number of small and even very small firms. An important influence on the grouping phenomenon was exerted by an increased need for greater coordination among businesses, involving long-term relations, facilitating an ability to diversify, adapt, and plan long-term strategic action.

Among 3,921 groups operating in the region, only 129 were controlled by foreign

multinationals and accounted for 38,209 employees. Conversely, there were 99 groups led by Emilian firms (12.6% of Italian multinationals) that had carried out investments abroad establishing 245 subsidiaries which employed a workforce of 52,613 people overall.

Thus, contrary to Harrison's (1994) argument, the main factor shaping change in the structure of Emilian industrial production systems was not the acquisition of local firms by foreign multinationals disrupting the region's industrial districts, but the emergence of business groups led by local firms tending to organise an increasing amount of the districts' activity. This was the consequence of both internal (through the setting-up of subsidiaries) and external (through take-overs) growth strategies pursued by the most dynamic firms. As a result, new business groups rose – gathering firms located both inside and outside of the districts – most of which were controlled by regional capital.

Multinationals' incursions played only a minor role, even if their presence became paramount in some areas such as biomedical equipment production in Mirandola and food-processing in Parma (Brusco *et al.*, 1996; Biggiero, 1999). Moreover, in many cases local firms taken over by multinationals, despite acquisition, retained strong links within their districts and continued to display creativity in dealing with increasing competitive pressure (Bellandi, 1992; Dei Ottati, 1994; Whitford, 2001). Foreign multinational came to Emilia-Romagna not in search for low labour costs – as wages in the region were among the highest in Italy – but for the quality of subcontracting networks, the skilled workforce available and, sometimes, the good quality of life. In fact, as global competition tended to nullify traditional comparative advantages and expose companies to the best rivals from around the world, a growing number of multinationals were shifting their home bases to more vibrant clusters, often using acquisitions as a means of establishing themselves as insiders in a new location with the aim to foster new synergies between their global networks and the local ones (Porter, 1998).

The creation of business groups considerably increased market concentration within a number of districts in the region as compared with the early 1980s. Thus, by the end of the 1990s, the five biggest groups of Sassuolo ceramic tile district captured 45 per cent of the district's turnover and the biggest ten 61 per cent; in Mirandola biomedical equipment industry the four largest groups sold 70 per cent of the district's output; in Bologna machine packaging production system the four biggest groups accounted for 43 per cent of the industry's turnover. Moreover, concentration proceeded quite a lot in the cases of food processing in Parma, wood-processing in Rimini, and machine tools in Piacenza, but only a little or not at all in the cases of knitwear and garment in Carpi (where the five largest firms seized only 13 per cent of the district's production and the biggest ten no more than 23 per cent), motorcycles in Bologna, farm machinery in Reggio Emilia and wood-processing machinery in Carpi (Brusco *at al.*, 1996; Lazerson and Lorenzoni, 1999; Bursi, Marchi and Nardin, 1999).

The rise of lead firms

The creation of business groups was part of wider process showing the emergence of network lead firms in the region's economy. Such lead firms tended to play a paramount role in orchestrating the districts' economic activity, both in term of quantity and quality. They provided the local production systems with much of their progressive characters, benefiting from extensive external sources of information about changes in markets and technologies that they transmitted to their subcontractors through relatively well-defined networks (Lazerson and Lorenzoni, 1999). In fact, the more structured districts with a higher presence of lead firms were in general those exhibiting the better economic performance (Paniccia, 1999).

Lead firms mostly rose among those businesses whose exports boomed following the devaluation of the Italian lira in 1992. After significantly increasing their sales in foreign markets, such enterprises moved to control distribution networks abroad by establishing commercial subsidiaries, partnerships and dealerships, especially in the largest EU countries and North America

(Unione Regionale delle Camere di Commercio dell'Emilia-Romagna, 1997); this marked a significant shift from traditional small firm organisational culture centred on production and was consistent with one of the effects of globalisation, namely the need to gain access to the markets of competitors (Cooke and Morgan, 1998b).

In contrast to district businesses of the past, lead firms acted as system integrators, offering a portfolio of related goods fashioned and assembled through a series of product-specific subcontracting networks. Their role was to provide international market access, strategic leadership, and resources, respectively through their extensive commercial experience and presence, investment in appropriate managerial and technical expertise, and command over financial and other resources. Their own development seemed crucially dependent upon fostering strategic capability and a matching adaptive capacity, so that markets could be anticipated and shaped and the organisational architecture and culture of their business network became experimental and problem-seeking. The lead firms became more like larger advanced corporations elsewhere at the head of intricate subcontracting networks and managing the benefits of alliance-based forms of business organisation (Amin, 1999).

In some respects, lead firms showed signs of 'learning by monitoring', that is to develop a strategic and reflexive rationality designed towards anticipating, influencing and shaping the economic environment, while in canonical district firms learning was fundamentally a matter of incremental adaptation in the face of market shifts that were alleged to constitute an environment unmalleable by local firms (Sabel, 1994).

However, by the late 1990s even some very dynamic lead firms failed to develop long-term strategic collaborative relationships with their subcontractors, fundamentally because of a persistent shortage of shared organisational and relational competencies. As a consequence, lead firm networks seriously lacked one of the most important elements of 'learning by monitoring': the surge of those first-tier subcontractors called 'super suppliers'³.

Thus, in the province of Modena – one of the most successful areas of district-based industrialisation in the region – research found evidence of only one company having developed long-term strategic collaborative relationships with its subcontractors consistent with the 'super supplier' model: this was the case of Tetrabrik, a Swedish-owned multinational which transferred two-thirds of its packaging-machinery production and a division of its world research and development headquarters to Modena. All the other firms surveyed were still referring to traditional relationship models with their suppliers, which involved a lower degree of long-term exchange of information between the parties (Fiorani and Golzio, 1999; Garibaldo, 1999).

More generally, by the end of the 1990s subcontracting networks in the region were often unable to meet the needs of large customers demanding the supply of semi-finished products or groups of components. In many cases the short-term orientation characterising some of the end-producers, on the one hand, and a local subcontracting system often incapable of producing, unless supplied by detailed specification, on the other, led to the onset of major obstacles to the implementation of a reorganisation strategy enabling local subcontractors to run such orders and evolve as first-tier 'super suppliers' managing their own networks of second-tier subcontractors. As a consequence, a number of lead firm had to take direct control of those stages of the production process for which they did not locally find external suppliers fitting their needs or resort to larger suppliers located outside the region (Istituto per il Lavoro, 2000)⁴.

³ In more structured production networks such 'super suppliers' are involved in the codesign of the components or modules they have to produce, do the majority of the engineering for current model parts, have won more than one award for supply excellence and have at least two customers in order not to rely on a single client while, at the same time, having a better chance to upgrade their quality, learning and problem-solving capacity by being infusing of ideas and insights from multiple sources (Helper, MacDuffie and Sabel, 2000).

⁴ The existence of difficulties for local subcontractors to evolve as first-tier 'super suppliers' is proven by the fact that some important regional end-companies which externalise consistent quotas of production and utilise the *free pass* modality (i.e. a system of access without controls for those components and semi-finished goods produced by subcontractors recognised as reliable by the contracting company) conceded such a recognition prevalently to companies located outside the regional territory. A recent survey showed that the percentage of *free pass* Emilia-

The emergence of distant networks

Another major structural change was the decentralisation of some production stages outside the region's districts, evoking an important issue as to whether the local districts were disintegrating as homogeneous self-contained production systems. In the late 1990s, Emilia-Romagna testified to the high degree to which district firms were buying from or subcontracting to 'outside' firms, both inside and beyond Italy's borders, apparently influenced by some diversifying firms seeking specialised suppliers not available locally, and by other firms wishing to take advantage of lower labour costs (Pyke and Sengenberger, 1996).

Practically all the local production systems increased the volume of their operations carried out outside the region. There were only a few exceptions: the shoe industry in Fusignano and San Mauro Pascoli, the biomedical industry in Mirandola, and upholstered furniture in Forlì. All the others moved a share of their processing activities outside their localities, often even outside the region, probably in search of lower labour costs (Brusco *et al.*, 1996).

Such a shift was particularly relevant for Carpi knitwear and garment firms that came to outsource 38 per cent of work to non-district subcontractors, located primarily in the neighbouring regions of Veneto and Lombardy, but also in the more distant Marches and Apulia, even though foreign outsourcing remained relatively marginal to the industry, accounting for only 3 per cent of total production (Lazerson and Lorenzoni, 1999).

However, to infer that outsourcing to distant areas was emptying and destructuring the local production systems in the region seems hazardous. The transfer of production elsewhere proceeded apace in most Emilian districts, but this decentralisation was not necessarily a bad thing. In fact, it was reported that higher value adding and strategically important activities in the production cycle were often retained locally. This was what happened in Carpi, where capital-intensive activities, such as weaving and embroidering, were mainly undertaken locally, as well as design, sample and prototype preparation, or the final, high-quality phases of ironing, inspection and packaging. Knitwear products with short production runs and frequent style changes were to a higher degree produced locally than standardised, year-round clothing items, such as tee shirts, jeans and underwear, manufactured in large batches for inventory (Brusco and Bigarelli, 1995; Lazerson, 1995; Lazerson and Lorenzoni, 1999).

The Emilian districts today

Despite the literature on Italian local development treated industrial districts as a homogeneous unit of analysis (Becattini, 1987; Brusco, 1989), it is clear from the foregoing that a single model for such production structures is no longer existing in Emilia-Romagna.

Districts in the region became more differentiated, in terms of both organisational structure and performance. Many districts extended downstream to channels and customers; laterally to manufactures of complementary products and to companies in industries related by skills, technologies, or common inputs; and upstream to include suppliers of specialised inputs such as components, machinery, and services.

Moreover, there is a tacit assumption in the literature on industrial districts to treat individual firms belonging to such production systems as relatively homogeneous agents whose dynamics is driven by that of the production system they are part of. Thus, scholars' interest focused on such subjects as local institutions and broader socio-structural features which

Romagna subcontractors was, in some important sectors having an elevated presence of licensing companies utilising advanced systems of monitoring of the outsourcing quotas upon entry, about half of the percentage of extra-regional subcontractors (both national and foreign) to which was granted the same formula as the fast-lane access (Bardi and Garibaldi, 2001: 36)

undoubtedly kept on shaping and constraining economic behaviour within industrial districts also in recent years. Yet, in the last couple of decades the evolution patterns of a number of Emilian districts was shaped by individual firm agency to a larger extent than it had been the case in the past, which led to the emergence of increased differences both within each district's firms and between firms belonging to different districts.

Such districts went through a significant structural evolution. Lead local firms adopted internationalisation strategies, not only for penetrating new markets but also for the relocation of their production activities; local interfirm relations lost some of their original informality; the typical hub-spoke network structures became more informal; network hierarchies emerged, with hub firms playing a more important role in organising the activities of intermediate producers. According to scholarship (Paniccia, 1998; Lazerson and Lorenzoni, 1999; Gottardi, 2000; Whitford, 2001), the processes at work had the following principal features: 1) Increases in the complexity and variety within the various districts, accompanied by internal selection processes; 2) Differentiation of various districts, not only in product and process, but also in the structure of organisations; 3) Due to horizontal and vertical differentiation processes, a shift of the internal value chain to a 'value-system'; 4) The formation of great stock of interactive and cooperative knowledge.

In particular, the reorganisation patterns of the most dynamic districts can be described as a hierarchical evolution of local networks. This tendency was determined by the need for effective control of new strategies, such as total quality and quick response, founded on the improvement of service content, requiring a high level of coordination along the value chain. Here, the emergence of lead firms triggered a process of cognitive division of labour among firms. Within these industrial district some firms used their resources to perform routine activities (which were usually subcontracted by the final assembler). Other firms, more strategically placed, specialised their activities in the production of intermediate components and often develop a crucial competence for the final assemblers. Lastly, the final assemblers (lead firms) devoted much of their resources to the more creative tasks of product design, engineering, marketing, innovation, and new product development. In such districts lead firms were at the centre of the cognitive division of labour and typically specialised in the less routine activities. In fact, innovation capabilities in such districts came to depend greatly on them. On the one hand, they were responsible for the absorption of external knowledge which always needed to be adapted quickly to local conditions and socialised by the firms belonging to the networks of subcontractors and specialised producers. On the other hand, they were able, given their position in the chain of interactions between producers and final users (with their antennas in markets that put them in direct contact with the consumer needs), to make original innovations (Belussi and Gottardi, 2000).

Moreover, in the last couple of decades industrialisation spread to locations in the region that had not been touched by it in the past, with the consequence of blurring the boundaries between previously distinct districts. As a result, a new type of production system emerged. This is characterised by the presence of productive settlements, inter-firm networks and knowledge spillovers spreading in much wider areas than the very local ones typical of industrial district. Such systems can be considered as sectoral clusters: critical masses of unusual competitive success distributed along various towns and territories in the region. This is, for example, the case of most engineering branches such as motorvehicles and their components (Modena, Cento, Bologna and Reggio Emilia), farm machinery (centred in Reggio Emilia, with significant settlements in Modena and almost all the other provinces of the region as well), packaging machines (centred in Bologna, with an important presence in Modena and Piacenza too), and numerous food-processing activities (such as dairies and wineries, which are found almost everywhere in the region's plain and hills) (Regione Emilia-Romagna, 1999; Bardi and Garibaldi, 2001).

There were also some districts that were affected by a serious decline. This was the case of the motorbike industry in Bologna and the upholstered furniture production in Forlì. Both districts went through a deintegration which was not due to an increased decentralisation outside of the region but to the loss of the most important phase of the production chain, that is product design. Thus, it was not the case here of final firms holding the market and decentralising processing

phases; rather, it was just the opposite: the local production systems had lost their final firms and had simply turned into manufacturers of components (Brusco *et al.*, 1996; Belussi, 1999; Istituto per il Lavoro, 2000).

The role of ICT

ICT revolution had a pivotal role in shaping the transformations occurred in Emilian production systems in the last twenty years.

In the years from the end of WW2 to the late 1970s, industrialisation in Emilia-Romagna was fundamentally due the action of an entrepreneurial class made up of workers and technicians who had decided to go into business on their own. They (and their employees) generally had a low degree of formal education and their skills were to a large extent based on a tacit and informally transmitted practical knowledge which was continuously refined through learning by doing and learning by using on the shopfloor.

In the last couple of decades, ICT revolution strongly challenged such a development pattern. As Zuboff (1988) pointed out, ICT differs from traditional manufacturing technologies (mechanic, textile, and so on) as it does not simply give programmed instructions to machine tools, but also generate information about the underlying and administrative processes through which an organisation accomplishes its work. Therefore ICT has an informing capacity which can be fully exploited only by radically reconfiguring the nature of work and the social relationships that organise productive activity. Skills relying on practical experience must be integrated by symbolic abstract functions which involve an explicit knowledge of the theoretical and scientific principles on the basis of which the new technology is constructed. Moreover, as Kaplinsky (1984) pointed out, the binary logic shaping the architecture of ICT gives it a previously unknown capacity to integrate the various business functions and effectively monitor and coordinate groups of firms located all over the world.

The advent of ICT revolution demanded the local production systems of Emilia-Romagna to modify the 'network of competencies' their success had been based upon in the past. More precisely, they had to face the challenge to integrate craft and tacit competencies associated to traditional manufacturing activities with explicit and codified competencies proper to ICT.

In fact, with the introduction of automation, operators work increasingly from a symbolic representation of the production process, in coded language form. A symbolic system of data representation is set up between the operators and the automated installation. The operators must learn how to code and decode the data which adds to their traditional craft skills as part of their stock of knowledge. They are now confronted by several types of information – visual, aural, symbolic – which accentuated the intellectual dimension of their work.

Evidence showed two characteristic trends in workers' competencies emerging as a consequence of the automation of production processes. The first trend is a growing complexity and variety of technologies; workers have to cope with information systems which are increasingly difficult to master. The second trend is the lasting, unresolved contradiction between the increased formalisation of work and the existence of breakdowns, unforeseen incidents and errors. Automation introduces formal work preparation procedures (e.g. programming) using algorithms. But these alone do not ensure the successful operation of automatic control systems. Various unpredictable problems do crop up, the handling of which becomes part of workers' exercise of skills. Thus, the main characteristic of ICT introduction in manufacturing industry is to produce a symbiosis between the formal, programming, computer languages and the informal tacit skills rooted in operators' experience (Cavestro, 1989; Lorenz, 1992; von Tunzelmann, 2000).

Competencies concerning ICT are still less rooted in the Emilian society than those related to traditional mechanic, textile and food processing technologies. It is possible to identify three groups of firms in the region in relation to ICT adoption: 1) Firms that successfully introduced ICT; 2) Firms that made an effort to equip themselves with ICT but failed to fully exploit the potential of

the new technology; 3) Firms that, for a lack of knowledge and/or capital, introduced ICT in a limited extent or even did not attempt to introduce it at all. The new lead firms came from group (1); by the end of the 1990s they operated as global corporate groups all over the world and relied much more than in the past on codified knowledge. Most of them had established R&D departments having repeated interactions with the scientific community. Conversely, firms belonging to groups (2) and (3) lost ground and/or became increasingly subordinated to the former.

Industrial relations

Brusco (1982) argued that the field of industrial relations in Emilia-Romagna was divided into two segments by the size of the firms. In the 'primary' sector, including almost all larger enterprises with more than 30 employees, the trade unions had two main characteristics. Firstly, they were strong: their labour legislation was almost always respected; trade union representatives were recognised on the shopfloor; plant bargaining yielded wages above those negotiated at the national level, and had some success in influencing the organisation of work within firms. Secondly, the unions were generally 'reasonable': they did not bid up wages too strongly in plant bargaining and were flexible in enforcing contractual provisions concerning layoffs, overtime, and health and safety regulations.

The strength of the unions and their flexibility – and their acknowledgement by business organisations – guaranteed, at the same time that the negotiations produced a satisfactory result for both employers and employees, and that the terms of the agreements would be enforced without subsequent flare-ups of localised conflict or idleness among the workers.

In the 'secondary' sector, including small and artisan firms with fewer than 30 employees, the unions were generally weaker. There the dispersion of wages was extremely high, depending fundamentally on the level of demand for the product, the intensity of labour, and the level of skill. In this sector, unions in Emilia-Romagna attempted to regulate wages by making collective agreements with the artisan associations, which in turn pressed their members to regularise the working conditions of their employees to respect the contracts.

Yet, since then the unions showed signs of weakness, even in larger firms, as a loss of ideological consensus together with technological, labour market and organisational changes resulted in a reduction of membership over the years. It was persistently argued, by business associations and right-wing political parties, that these 'high-wage' union relations and the system of social services existing in the region involved excessive costs for firms, so that Emilia-Romagna, as against competing regions, would run into economic disaster (Russo *et al.*, 2000).

Nevertheless, the 1990s showed a positive trend as regards decentralised bargaining at the firm level. In the period from 1994 to 1997 contracts were signed so as to involve 2,200 companies accounting for about 250,000 employees, that is 48 per cent of the workforce in the region as compared with 32 per cent in the previous four year term (Cainelli, Fabbri and Pini, 2002).

In recent years, the most innovative aspect of firm bargaining in the region was that – in addition to traditional wage, work organisation, and information right provisions – an increasing number of contracts included the establishment of formalised participation channels such as bilateral committees including both firm and union representatives. This novelty was more pronounced among larger and lead firms. In fact, if the setting-up of such committees was provided for by 20 per cent of the contracts signed in the region, the corresponding figure rose to 50 per cent for those involving enterprises with more than 250 employees (Istituto per il Lavoro, 2000). More generally, performance-related pay and pay for participation schemes diffused significantly (concerning 60 per cent of agreements), even though traditional forms of bargaining on economic matters (compensation, in particular), not explicitly linked to the company's performance persisted within the remaining 40 per cent of agreements (Cainelli, Fabbri and Pini, 2002).

The point to be grasped in order to explain such a pattern of evolution in collective bargaining in the region is that the information asymmetries weighing upon employment relations

are not always to the disadvantage of the worker, but they concern the labour contract for many of its contents (suffice to think of the issues of product quality or the worker's tacit skills). The reason for the revival of attention for participation in its different versions should be attributed precisely to this fact: in a world with information asymmetries between employers and workers, and with a risk of post-contractual opportunism, effective cooperation can be advantageous for both parties (Sadowski, Backes-Gellner and Frick, 1995; Cella, 2000).

Changes in the local political subculture: from the PCI to the DS

The international attention paid to the Emilian model was due not only to its economic success, but also to its blending economic development with social integration and a wide-scale network of social services (such as public transport, health care, gymnasiums, infant day centres, and low-cost housing) realised by the PCI-controlled local governments.

In the last twenty years some contradictions internal to the social model have emerged. Since the demise of the Italian Communist Party and its transformation firstly into the Democratic Party of the Left (PDS) in 1991, and then the Democrats of the Left (DS) in 1998, a Communist dominant subculture has not been existing any longer. The new party has retained the control of most local governments (even if with a lower share of the vote – see table 11 – and in alliance not only with other left-wing parties but with some Catholic and centre groups as well) but important changes have occurred in the nature of the party itself.

Table 11 - Elections for the regional council in Emilia-Romagna

	1980		1990		2000 (*)	
	Votes (%)	Seats	Votes (%)	Seats	Votes (%)	Seats
Italian Communist Party (PCI)	48.2	26	42.1	23	-	-
Christian Democrats (DC)	25.6	13	23.4	13	-	-
Italian Socialist Party (PSI)	10.3	4	12.4	6	-	-
Italian Social-Democratic Party (PSDI)	4.7	2	1.9	1	-	-
Italian Republican Party (PRI)	4.4	2	4.8	2	0.9	0
Italian Liberal Party (PLI)	2.1	1	1.5	1	-	-
Italian Social Movement (MSI-DN)	3.2	1	3.0	1	-	-
Proletarian Unity Party (PdUP)	1.4	1	-	-	-	-
Greens	-	-	4.9	2	2.7	1
Proletarian Democrats (DP)	-	-	0.8	0	-	-
Antiprohibitionists	-	-	1.0	0	2.6	0
Northern League	-	-	2.9	1	3.3	1
Democrats of the Left (DS)	-	-	-	-	36.2	16
Forza Italia (FI)	-	-	-	-	21.2	10
National Alliance (AN)	-	-	-	-	11.4	4
Communist Refoundation Party (PRC)	-	-	-	-	5.8	2
Democrats	-	-	-	-	4.7	2
Italian Popular Party (PPI) and Dini List	-	-	-	-	3.0	1
Italian Communists (PCdI)	-	-	-	-	2.1	1
Christian Democratic Centre (CCD)	-	-	-	-	2.0	1
Christian Democratic Union (CDU)	-	-	-	-	1.7	0
Italian Democratic Socialists (SDI)	-	-	-	-	1.2	0
Others	0.1	0	1.3	0	1.2	0
Total	100.0	50	100.0	50	100.0	39

Source: 1980 and 1990: Leonardi (1990, tab. 2.1); 2000: Ministero dell'Interno (2000).

(*) In 2000, 39 of 50 seats in the regional council were attributed to party lists according to a proportional representation; 10 of the remaining seats were assigned to the winning coalition while one seat was reserved to the leader of the losing coalition. The winning coalition was the Centre-Left (DS, PRC, Democrats, PPI-Dini List, PCdI, Greens, SDI) with 56.5% of the vote, while the losing one was the Centre-Right (FI, AN, Northern League, CCD, CDU) with 40.3% of the vote.

The party abandoned the perspective of socialism and its ideology fundamentally became a liberal and social-democratic one. Such a change was accompanied by a sharp fall in political militancy: the party's members in the region more than halved in the last decade (dropping from 373,437 in 1989, before the fall of Berlin wall, to 162,861 in 2000) and its chapters were cut by three quarters⁵.

The growing emphasis laid by the party – at both the national and the regional levels – on the virtues of market and private enterprise, in addition to the emergence of new social contradictions and the action by an opposition no longer constituted by the Christian Democratic Party (whose policy was strongly inspired to Catholic solidarity values) but by populist and neo-liberal forces such as Berlusconi's party 'Forza Italia', the Northern League and the post-Fascist National Alliance, eroded, in many respects, that governing style which had been one of the cornerstones of the Emilian model in the previous years.

We witnessed some frictions in the local society which were unknown in the past. The economic success of the region brought about an ever-growing presence of immigrants from foreign countries (especially from North Africa and East Europe) who work in harmful jobs in building and foundries or in less qualified jobs as cleaning and household help. There is a harsh exploitation in respect of such foreign workers, many of them are housed in substandard conditions, which adds to social tensions and hinders their integration in the local community.

There was also a remarkable increase in micro-criminality – by both Italians and irregular immigrants – previously considered to be typical only of metropolitan areas. This engendered a widespread sense of insecurity and a request for law and order among a part of the local population. This was one of the reasons that led in 1999 to fall of the Centre-Left government in the municipality of Bologna and to the election of a Centre-Right mayor.

From the social point of view, there was a simultaneous erosion of traditional identities and a process of secularisation (a drop in the level of political participation and in the normative centrism of the ruling party). Thus, the social cohesion of the regional community of people faded, which made it more difficult for intermediaries crossing civil society boundaries to foster common solidarity and understanding. As a result, collective organisations became less capable of unifying and aggregating interests, and acting as effective vehicles for social participation and mobilisation (Bonora, 1999).

The role of business associations

In the face of such transformations, the party tried to take a two-pronged approach to contain the relationships of the regional institution in respect of those who could guarantee or threaten the administrative capacity of the region from within.

This containment was principally aimed at subjects in the civil sphere. It meant, above all, a complex operation to involve different types of business associations in policy-making.

The PCI's governing style was originally based on a 'monist' conception of the representation of economic interests. According to this model, interests were selected and ordered by virtue of their 'nearness' or 'distance' from the working-class according to the party's analysis of the characters of Italian capitalism.

The whole of the first phase of the Emilian model, up to the early 1980s, may basically be said to have been based on this model. There were a number of elements which were a constituent part of the party's power system (trade unions, 'red' artisan associations, cooperatives); there were also other sections of society on the outside of the party's power system (especially larger firms' and landlords' organisations), with whom relations - and alliances - were occasionally structured according to a consociative formula, and where the PCI played a hegemonic role in the Gramscian

⁵ These data have been provided to the author by Maurizio Degli Esposti, the official responsible for the party's organisation within the DS's Regional Federation in Emilia-Romagna.

sense.

Since the mid-1980s, the PCI tried to open up its own internal system of representation of interests. In practice, it was an attempt to homogenise the various procedures for mediating interests: those governing the 'confrontational' relationship with capitalist associations and those governing the relationship with entities 'organic' to the party's system of alliances. It was devised a system for representing interests whereby a number of constituent units – the business associations present in the region, both internal and external to the PCI's traditional power system – were recognised by the regional government a given monopoly of representation within their respective categories in exchange for respecting the codes of conduct in formulating their demands and giving legitimation to the party's industrial policy (Bellini, 1990).

ERVET's (the Region's development agency) real service centres were a case in point. Quite apart from their strictly economic nature and technical competence, there was the inescapable aspect that the regional leadership changed their political outlook. At first, the centres began as a form of support for local industrial districts to demonstrate the PCI's political leaning in favour of small and against large firm. In such a perspective, their setting-up was conceived as a coherent development of the PCI's traditional anti-monopoly line (Brusco and Pezzini, 1990). Yet, the success of such centres, attracting some larger, medium-scale firms in addition to the expected small and artisan ones, led to a stress on the sectoral rather scale aspects and cooperation with the whole spectrum of economic interests rather than defence against big firms. In due course, the administration boards of the centres were redefined by virtue of the official presence of various associations ranging from Confindustria (mainly representing larger firms) to artisan organisations.

Thus, changes in the region's political subculture prompted a slow and difficult process marked by a change in the way interests were mediated. The ruling party - more or less consciously - embarked on a model of governance similar to the neo-corporative systems of Northern Europe (Bellini, 1990; Cooke and Morgan, 1998b).

At the same time, in addition to playing a more pronounced political role, business associations increasingly turned into service providers – rather than simply industry representatives – partially overlapping ERVET's real service centres. This was the case of services aimed at providing firms with information about new production and quality standards and certification processes, adapting their managerial structure to new market trends, or having access to targeted research funds managed by the EU or the Italian State (Mazzonis, 1996).

As a consequence of the new way of mediating economic interests, the local governments in the region increasingly deferred to business associations in formulating and managing economic policy strategies rather than seizing the initiative. In such a context, the regional government established a Standing Conference of Economy and Labour (including ERVET; the Chamber of Commerce; the main business, artisan, farmer and cooperative associations; and trade unions operating in the region) to promote dialogue amongst leading economic and social actors about the region's general development aims and to encourage them to participate in strategic decision-making. The purpose of the Conference was to identify areas of agreement among these actors and the regional government, settle conflicts and divergences of interests, and create extensive social reciprocity. In other words, the Conference intended to establish an institutional basis for regulation. This involved the promotion of negotiatory tables, the facilitating of the signing of agreements and the identification of appropriate forms of cooperation and coordination. The purpose was to build a sphere of public interest whereby the pursuit of areas of common agreement (whether in respect of the environment, services to companies, welfare, or industrial relations) served to achieve prosperity throughout the social system (Cossentino, 1996).

Vocational Training

The practice of deferring to private interest organisations in defining and managing economic policy actions often resulted in a less than efficient use of public resources. Such an

outcome was particularly apparent in the field of vocational training where almost every business association, trade union, religious group, chamber of commerce, ERVET system's real service centre and several town administrations received funds to operate their own teaching program (Mengoli and Russo, 1998).

All of these actors established their own vocational education centres – in 1998 there were about 40 centres in Emilia-Romagna, located in more than 140 accredited places in the regional territory – financed largely out of public funds (national and EU) obtained through the regional government and provincial administrations. The six main centres had a regional dimension and included about 40 per cent of all training places. The rest operated at a provincial or municipal level. The centres' internal staff consisted of administration workers, trainers and planners, while teachers were taken almost entirely from firms or professions (Russo *et al.*, 2000).

Data concerning the quality of teachers and the amount of funding of the regional training centres are lacking. As regards the quality of the services offered, only in 1998 the government gave its approval to the discipline for accrediting teachers employed in the regional vocational education system. As to funding, Italian legislation establishes that vocational education centres have to account only for individual projects, instead of company balances from which the financial solidity of each of them could be gauged.

In fact, even if in the absence of balances it is difficult to demonstrate, it is well known that the funds earmarked for the courses were also used to cover the running costs of the centres. The latter certainly provided training services, but it cannot be ruled out that the objective of upgrading the available training offer might have been relegated to a second place by the need of the centres to tap a substantial flow of financial resources (Mengoli and Russo, 1998).

As a consequence, evidence showed a lack of coordination among different teaching centres, resulting in both program duplication and poor quality control. Regrettably, the local governments administering the monies received from the European Social Funds had been unable to effectively restructure the regional vocational education system and eliminate most of these parallel centres, even though a new regional law more markedly oriented in this direction was passed in 1997 (OECD, 1997).

Te reform of ERVET

The new model of governance inspired the reforms introduced in the early 1990s to refocus the role of ERVET and its wider network of service centres. In 1993, after considerable pressure from the region's Confindustria, the regional government decided to reform ERVET in a market-oriented sense. The size of the management board was slimmed down, the number of staff was reduced by a third, public sector funding was cut, while ERVET's shareholding in real service centres was reduced below 50 per cent to the advantage of business associations (Amin, 1999).

The aim of the reform was to reorganise ERVET in order to focus its action on three principal activities: innovation, finance and internationalisation. ERVET's strategies had to continue with the real service policy, but:

- 1) Begin to focus mainly on providing services with greater innovative content, configuring the service centres increasingly as specialised agencies in a complex system of service provision. It would have become increasingly important to focus the ERVET's system on areas that the market had not moved into, or where the business associations were not already operating nor propose to do so;
- 2) Increasingly integrate the services offered by ERVET into a regional network of business services provided by various public organisations (including ERVET itself, the provincial chambers of commerce and the universities) and the private sector, including firm and business associations, in a common effort to raise the effectiveness of their actions by pooling their experiences⁶;

⁶ In this respect, two examples were CITER's (the centre for textile industry) agreement with several training

- 3) Encourage an influx of resources to the region by helping local firms participate in European projects and tenders, and by developing activities aimed at attracting foreign investment (Mazzonis, 1996).

Among the practical implications of ERVET's reform was a change in the Agency's relations with firms. Given the innovative nature of its services, only more knowledgeable and sophisticated firms – namely lead firms – were expected to actually use them. In fact, the idea was that ERVET had to act as a second-tier structure, providing services to business associations, chambers of commerce and private sector organisations that in their turn provided services to most enterprises.

The review also entailed a radical shake-up of real service centres operating in the region. Some centres were closed⁷, others were merged, while the most effective ones (e.g. ASTER, CITER, and Democenter) were reinforced. In this context, such centres pursued a strategy aimed at deregionalising, and even internationalising, their activities, which involved the possibility that they might find that their interests began to diverge from those of the local districts they were set up to sustain. As a matter of fact, it was not just Emilia-Romagna's lead firms that were thinking about rebalancing their activities as between the region and the wider world: parts of the regional institutional apparatus were also considering the same option. (Cooke and Morgan, 1994).

A radical change occurred in the way the Agency and its network of real service centres were financially supported. This concerned not only the reduction of ERVET's budget but also the destination of its expenditure: established by law, the Agency's and real service centres' financing became mainly project-oriented from a variety of sources, including the EU. The bidding regime (so as to improve efficiency and accountability) had wide strategic limits and, on this basis, only short-term projects directly involving individual firms and/or business associations could be undertaken, thereby linking the funding of the centres to that of individual private actors. This had the consequence of reducing the scope for programme-based strategic policy-making (due to cuts in capacity, project-driven fragmentation, and commercial legitimation), as the provision of innovative services would imply an acceptance of high levels of uncertainty which could not be borne without increasing the degree to which such activities were financed by public money. This tended to undermine ERVET's role as the region's think-tank and to sever its vitally important role as a key intermediary among the region's institutions because its slimmed-down management board could not bridge a wide range of interests as it was the case in the past (Bellini, 1996; Mazzonis and Ennals, 1999).

ERVET's reform illustrates the limits involved in the new model of governance adopted in the region: 'A narrow concern with cost-effective delivery of client-determined projects seems to be emerging, in keeping with general neo-liberal trend world-wide towards lean and task-specific institutions. Such specialisation, in terms efficiency of delivery of services to clients, can be seen as a move towards more effective organisations. But, precisely at a time when a broader, goal-driven agenda needs to be considered [especially if there is agreement that an industrial revolution driven by ICT is under way], such a "slimming down" risks eroding strategic capacity [and that] for path-shaping or goal-setting policy formulation' (Amin, 1999: 400).

New institutional settings: implementing the Bassanini law

A major institutional change occurred in recent years in Italy is the process of administrative decentralisation envisaged by the Bassanini law of 1998, which implies a transfer – from the State

organisations to provide a combined range of services to the textile industry and a number of international projects run jointly by ASTER (the technology transfer centre) and the chambers of commerce (Mazzonis, 1996: 137).

⁷ This was the case of SVEX whose services openly overlapped well-consolidated export-promotion activities of the chambers of commerce, RESFOR (the centre for subcontracting), CETAS (the centre for the training of less developed countries' technicians), and SPOT (the centre for the promotion of metalworking industry) that failed to meet their goals (Bellini and Pasquini, 1998: 266).

to regional governments – of new competencies, but also of assets and financial resources. These changes led the regions to rethink their role and their policies in support of local economies. In 1999 Emilia-Romagna was the first region in Italy that approved a law to reorganise its new competencies as envisaged by the national law. According to the new regional legislation, the resources for the intervention of the region's industrial policies are pooled in a common fund. This is not administered by different sector laws, but by a single Regional Three-Year Plan (RTYP), updated on an annual basis, which was approved in November 1999 (Regione Emilia-Romagna, 1999).

The RTYP strongly speeded up the shift towards a market-driven industrial policy that had been inaugurated by ERVET's reform in 1993. In particular, in the RTYP real service centres disappeared as a strategic axis of the region's industrial policy⁸. ERVET's centres and private ones were considered to be equally relevant to the plan, as if they had the same nature and could carry out the same functions. The idea seems to be that – as far as real services are involved – anything that can be provided by publicly-controlled bodies can be provided by private actors as well. In other words, the philosophy inspiring the RTYP is that market is the best suited institution to identify and fulfil enterprises' innovation needs. This marked a sharp discontinuity with past experience as the region's real service provision in the 1980s was just conceived as a response to a perceived market failure⁹. The new approach risks to seriously undermine the region's capacity to pursue a proactive industrial policy because, contrary to the assumptions of the RTYP, the function of publicly-controlled real service centres is very different from the job of private service providers (consultants or business associations). In fact, a private provider 'works for an individual company, has all the relevant information at his fingertips, helps the entrepreneur to draw up a credible strategy, and is paid a fee commensurate with the work he has put in. The real service centre does not aim to assist individual companies: its sights are on a group of companies. Put in another way, the real service centre focuses on collective needs rather than individual needs' (Brusco, 1992: 191).

The goals of the RTYP were to foster a growth of firm size, innovation and quality and were pursued by resorting to a toolbox made principally up of 'classical' financial incentives to individual enterprises, characteristic of the industrial policies undertaken by the Christian-Democrat national governments in the 1960s and 1970s.

Such goals were defined around six axes of intervention:

- 1) *Support to investment in innovation and competitiveness.* This axis provides for funding to integrated company projects for the purchase of manufacturing machinery, computer equipment and software and the payment of services. Thanks to an agreement signed by the regional government, companies may apply for such funding directly through a bank. The regional government acts as a guarantor for credit provided, and the companies are eligible for favourable interest rates and other interest account benefits for certain types of expenditure, as

⁸ In the one hundred pages constituting the plan service centres are mentioned only twice and are never associated with any specific expenses items. The only centre that appears to be relevant to the region's industrial policy is ASTER, which has been recently refounded as a consortium gathering the four universities located in Emilia-Romagna, the regional branches of CNR (National Research Council) and ENEA (National Agency for Alternative Energy), the regional government and business associations. The new ASTER was attributed the task to coordinate all innovation initiatives carried out in the regional territory and especially those aimed to foster technology transfer from research centres to enterprises (ASTER, 2001).

⁹ In Brusco's words, there were 'a number of reasons why the market does not produce the [real] services required. First, the expertise needed to supply the real services in question is not to be found in the social environment in which the industrial district operates, and therefore has to be drafted in from outside. Secondly, even when [...] the appropriate expertise is present within the district's social environment, very considerable investment is needed to produce the services required, and returns on this investment may take a long time to materialise. This is due to the fact the patchy expertise available does not easily create much demand for the services or goods that it may eventually manage to provide. Thirdly, it may be that the very nature of an "information market" can make it difficult for private firms selling information on a commercial basis to become established. Information has in some respects the nature of a "public good" [which] may be enjoyed by the individual person or organisation free of charge. It follows [...] that since no-one is entitled to derive profit from the sale of such goods, no-one [among private actors] is prepared to commit the resources necessary for their production' (1992: 187-188).

provided by Italian legislation. Secondly, the axis finances the cost of certification of quality and the adoption of complex quality control systems, in particular for subcontracting company networks. Thirdly, in an attempt to bring together manufacturing industry and the research field, the axis introduces a tax bonus for consultancy investment, as well as training courses or the temporary employment of university researchers by small and medium-sized companies. Finally, funding is made available for consortia consisting of small and medium-sized companies together with public/private joint-ventures, and set up with the aim of jointly handling strategic questions of company development.

- 2) *Promotion of new entrepreneurship and new employment opportunities.* This axis aims to foster the construction of new manufacturing plants or the setting-up of new companies (especially in the high-tech sector), the turnover of the labour force, and the creation of cooperatives. Furthermore, an effort is being made to support the 'second generation' self-employed and professional categories. Hence the support for investment in new manufacturing plant, in the form of tax bonuses, as well as for investment in new business enterprises, in the form of credit guarantees: likewise, funding is available for spin-off projects from high-tech industries or from research centres and universities, utilising complex funding where necessary, and for the generation changeover in craft industries and small/medium sized companies. The self-employed are offered special loans, technical assistance projects are funded and the meeting of supply and demand is encouraged.
- 3) *New funding for business enterprises.* This axis aims to improve the relationships between banks and industrial firms and define proper measures with regard to the capitalisation of the firms. It intends, on the one hand, to strengthen the region's traditional support to credit guarantee consortia¹⁰ and, on the other, provide its own guarantee funds and establish agreements with credit institutions to support loans for particular aims. In particular, the regional government is to set up a special fund with trusty consortia as surety against consolidation operations, as well as implement Italian law 237/93, which has so far not be used and which provides for the creation of a revolving fund for the granting of advances to finance companies and other credit institutions for the temporary purchase of minority shareholdings in the venture capital of small and medium-sized companies.
- 4) *Support for the internationalisation of the production system.* Despite regional companies have been actively present in foreign markets, small and medium-sized firms have found it rather difficult to gain access to the national funding and insurance coverage operations managed by SIMEST (Italian Society of Companies Abroad) and SACE (Institute for Foreign Trade Insurance Services). For this reason, this axis involves, on the one hand, the setting-up of a regional office for internationalisation, thanks to an agreement between the regional government of Emilia-Romagna, the Ministry for Foreign Trade, the ICE (National institute for Foreign Trade), SACE and SIMEST; on the other hand, the supplementing of nationally-available funds with regional finances. The office is due to guarantee a regional presence of the proposed national bodies, designed to furnish enterprises with information and assistance in order that they may utilise national and regional promotional, financial and insurance instruments to the best possible effect. Furthermore, it provides the important link between regional and national promoting planning.
- 5) *Support of local production systems.* This axis aims to foster the development of local production systems by introducing special area programs. Such an approach presents two principal novelties. The first one is that the back-up measures are not elaborated separately for each sector, but on a territorial basis. Each program contains a wide range of measures aimed to strengthen the weak points and consolidate the strong points of each area. The second one is that

¹⁰ Such consortia have been mushrooming in Emilia-Romagna since the early 1980s. These structures are financed by the region, the business associations, the chambers of commerce and associated firms and act as a guarantor of loans that the firms apply for at the bank, often with the possibility of achieving favourable rates. In 2000, 54 consortia, with the capacity to provide financial support up to 570 million euro a year, were operating in the region (Russo *et al.*, 2000: 80)

projects are elaborated through a method of negotiated planning involving both the region and the collective actors operating in each area. By the year 2000, eight area programs had been initiated. They covered two major municipalities requalifying their urban areas; two mountain areas of the Apennines; and four areas with special problems, such as the Adriatic coast towns, a thermal site, the port of Ravenna and the setting-up of a new industrial estate where to locate the expanding facilities of the motor producers of Bologna and Modena. These programs provided for the investment of public resources equal to 117 million euro at the expense of the region and 165 million euro at the expense of local and territorial governments, during the three-year period 1998-2000. Private funding in excess of 620 million euro was added to this.

- 6) *Improving the relationship between companies and the public administration.* This axis aims to push each municipality to activate its own 'one-stop-shop', designed to guarantee a fixed term for the various bureaucratic procedures involved in obtaining planning permission for new plant, as well as for extensions and modifications to existing plants, and to improve small and medium-sized companies' access to public records, information and services via computerised networks.

Tab. 12 – Funding of the RTYP by type of beneficiary in 1999-2000 (values in million euro)

	National resources	Regional resources	Total
Axis 1	51.10	18.29	69.39
<i>Individual companies</i>	44.90	16.01	60.91
<i>Company networks</i>	-	2.07	2.07
<i>Business Consortia</i>	6.20	-	6.20
<i>Others *</i>	-	0.21	0.21
Axis 2	5.16	4.23	9.39
<i>Individual companies</i>	5.16	3.12	8.28
<i>Business associations</i>	-	0.31	0.31
<i>Others **</i>	-	0.80	0.80
Axis 3	1.55	1.78	3.33
<i>Individual companies</i>	1.55	1.55	3.10
<i>Others ***</i>	-	0.23	0.23
Axis 4:	0.83	3.51	4.34
<i>Individual companies</i>	-	1.55	1.55
<i>Export Consortia</i>	0.83	-	0.83
<i>Others ****</i>	-	1.96	1.96
Axis 5	-	4.80	4.80
<i>Area programs</i>	-	4.80	4.80
Axis 6	-	1.55	1.55
<i>Local governments</i>	-	1.03	1.03
<i>Business associations</i>	-	0.52	0.52
Total	58.64	34.16	92.80
<i>Individual companies</i>	51.61	22.23	73.84
<i>Company networks</i>	-	2.07	2.07
<i>Consortia</i>	7.03	-	7.03
<i>Business associations</i>	-	0.83	0.83
<i>Area programs</i>	-	4.80	4.80
<i>Local governments</i>	-	1.03	1.03
<i>Others</i>	-	3.20	3.20

Source: Regione Emilia-Romagna (2001).

* Service centres, business associations, business combines; ** Local governments, chambers of commerce, business associations, universities, research centres, investment funds, banking foundations, joint-projects; *** Banks, investment funds, business associations, venture-capital companies; **** Chambers of commerce, regional trade-fair system, regional office for internationalisation.

In fact, the first four axes of the RTYP are principally directed to individual enterprises¹¹, the sixth one aims to improve the efficiency of the public administration, while only the fifth one is specifically conceived for geographically-clustered production systems. Moreover, as far as the latter is concerned, the emphasis is no longer on industrial districts; in fact, the plan 'adopts local production systems and not industrial districts as its target because of the wide variety of production systems present in the region which can be subject to different development trajectories depending, among other things, on the relationships and complementarities that the region's industrial policy aims to foster' (Regione Emilia-Romagna, 1999: 47).

These insights are confirmed by the report of the first year of implementation of the RTYP (see table 12).

First of all, it is worth stressing that axis 1 alone accounted for 75% of the money made available by the RTYP (69.39 out of 92.80 million euro). Such a percentage rises to 87% if national funding only is considered, while it amounts to 53.5% as far as regional funding is concerned. Conversely, the remaining axes appear to have been assigned marginal resources.

Furthermore – what seems more important – the bulk of the money went to individual companies; in fact, this type of beneficiary accounted for a staggering 80% of total funding (73.84 out of 92.80 million euro). The remaining funding was earmarked to business and export consortia (7.6% of the total); the promotion of area programs (5.2%), the upgrading of company networks (2.2%); and a number of other beneficiaries (5.5%).

The change in the region's industrial policy with regard to past experience could not emerge more clearly: even if one limits the analysis to the allocation of the regional resources, it results that 65% of funding went to individual companies, while only a minor share was assigned to actors operating – at various levels – as 'integrators' of the local production systems: consortia, business associations, chambers of commerce, local governments, research centres, or to foster the implementation of area programs. Even in this respect, almost nothing went to ERVET's real service centres.

The 'Regional System for Industrial Research, Technology Transfer and Innovation'

The research institutions available in Emilia-Romagna certainly had a strong impact on the regional production system. However, although R&D expenditure, R&D staff, and patents held by Emilian firms increased significantly – and at a faster pace than the national average – in the late 1990s, these two worlds continue to have problems to communicate.

This is perceived by the region as a particularly critical point for helping local firms to maintain and develop their competitive advantage through technological and organisational innovation. Establishing a system which positively matches the services offered by research institutions with the firms' needs requires the definition of specific activities facilitating the transfer of knowledge. In fact, research organisations are not immediately available to meet the firms' problems owing to a lack of organisation and competencies. In the same way, what is needed is not only to be able to respond to the immediate innovation demands expressed by firms, but also to identify trends in technological development. Only then it will be possible to promote research activities and orient research institutions in those directions that are envisaged as strategically important for the industrial system. Thus, to actually foster local development requires the establishment of specific activities able to make innovations usable by firms (Russo *et al.*, 2000).

To achieve these goals, in 2001 ASTER (the region's technology transfer centre) was

¹¹ The only relevant exception is measure 1.2-action C which supports projects for company networks, understood as aggregations between small and medium-sized firms set up with the purpose of co-makership or as supplier networks. The projects provide for the achievement of such objectives as the pursuit of the best productive capacities, the realisation of common service activities and the upgrading of the network (Regione Emilia-Romagna, 1999: 60-61).

refounded as a consortium which gathers the four universities located in Emilia-Romagna, the regional branches of CNR (National Research Council) and ENEA (National Agency for Alternative Energy), the regional government and business associations. The new ASTER is due to prompt collaboration among these institutions to foster technology transfer from research centres to enterprises, organise training courses for researchers and technicians, and carry out industrial research projects (ASTER, 2001).

In 2002, a regional law was passed with the aim to promote an upgrading of the 'Regional System for Industrial Research, Technology Transfer and Innovation'. The goal of this law is to strengthen the links between local production systems and research institutions by creating effective channels for technology transfer; furthermore, research institutions should act as promoters of new entrepreneurial activities (through academic spin-off) especially in high-tech sectors.

The ambition of the law is to generate a systemic effect that would benefit the entire economy of the region, passing from the current episodic and often haphazard forms of collaborations between business community and research organisations to institutionalised and long-term synergies based upon the joint development of multi-annual innovative projects.

The law provides a special fund earmarked to finance technology transfer contracts and grants to young scholars involved in research activities expected to generate spin-offs or be of interest to established firms. A wide variety of actors are entitled to apply for regional funding: industrial and service firms, research centres, consortia, service centres, business consultants, universities, laboratories, innovation centres, technology transfer centres, vocational training centres, and close-end funds. In this context, ERVET's real service centres other than ASTER are due to be reconfigured in such a way as to bring to a completion their transformation into market-driven agents. In fact, the law does not draw any distinction between their role and that of the other centres operating in the region: all of them are entitled to present their projects to regional funding on the same basis. Moreover, ERVET's stake in the centres will be further reduced with the perspective to soon arrive at their complete privatisation. ERVET's presence should be replaced by universities, research centres and business associations (Regione Emilia-Romagna, 2002).

Strengthening the links between research institution and manufacturing firms is certainly essential to regenerate the competitive advantage of the region. However, the choice to heavily rely on universities to foster technology transfer appears to be very risky, as such actors are a new comer and lack expertise in this field. Furthermore, such a technology transfer policy is likely to end up being principally, if not exclusively, directed to larger companies, and especially lead firms, as only these are endowed with resources, staff and competencies enabling them to directly interact with universities and research centres. It is a line of intervention deriving from a fundamentally neo-liberal approach which puts the firm at the centre of the analysis and aims to favour the emergence of lead firms as these are assumed to have 'sufficient strategic capacity to overcome the coordination and scale difficulties endemic to a diffuse production model without giving up the flexibility that so favoured the districts in the past' (Whitford, 2001: 52)

However, such a policy risks to neglect the needs of small and micro firms which continue to constitute the majority of enterprises operating in the region. A different kind of initiatives seems to be better suited to promote technology transfer towards these companies, for example, the 'demonstration' activities organised by Democenter, thanks to which every year a few thousand artisans and small entrepreneurs can observe the functioning of the more advanced machinery available in their sector. But such an activity cannot be organised on a market basis as no artisan would pay to leave his workshop for a couple of hours and go to Democenter to assist at a demonstration. This must by its very nature be funded by public money, which clashes with the region's approach to get real service centres (including Democenter) financed through short-term projects directly involving private actors (Sitta, 2001).

Conclusions

The Emilian economy, after the slowdown occurred in the 1980s, returned to higher growth rates in the following decade. Thus, the region seems to have been able to regenerate its competitive advantage. This appears to be coherent with the thesis strongly emphasised by some scholarship according to which enduring competitive advantages in a global economy are often heavily arising from a concentration of highly specialised and locationally specific assets (Amin and Thrift, 1994a; Storper, 1997; Porter, 1998).

However, the physiognomy of the region is very different from twenty years ago, when the 'Emilian model' was discovered. On the one hand, significant transformations took place in the industrial structure. These concerned most particularly a reduction in the number of manufacturing firms and employment; the emergence of new hierarchies, with the rise of lead firms, business groups and distant networks; an increased divergence in the performance of the various production systems; an intermingling of old and new technical competencies in the face of ICT revolution.

On the other hand, new social contradictions emerged, with the consequence that the adequacy of the collective and local governmental institutions was challenged. The fading of traditional social identities and the process of secularisation in social attitudes eroded the cohesion of the regional society. At the same time, the transformation of the ruling party from the PCI into the PDS and then the DS brought about a change in the governing style marked by an increased involvement of business associations in both formulating and managing industrial policies. As a result, these progressively shifted towards a market-driven, neo-liberal approach, focusing on more structured firms rather than on industrial districts. Yet, the limits involved in this model of governance risk to undermine the region's capacity to undertake an effective industrial policy for artisan and smaller firms – which would need it the most to upgrade their technological and organisational capabilities – and, more generally, proactive and path-shaping policy formulations.

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