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Foreword

Across the OECD, globalisation increasingly tests the ability of regional economies to adapt and exploit their competitive edge, as it also offers new opportunities for regional development. This is leading public authorities to rethink their strategies. Moreover, as a result of decentralisation, central governments are no longer the sole provider of development policies. Effective and efficient relations between different levels of government are required in order to improve public service delivery.

The objective of pursuing regional competitiveness and governance is particularly relevant in metropolitan regions. Despite producing the bulk of national wealth, metropolitan areas are often characterised by unexploited opportunities for growth as well as unemployment and distressed areas. Effective policies to enhance their competitiveness need to address their functional region as a whole and thus call for metropolitan governance.

Responding to a need to study and spread innovative territorial development strategies and governance in a more systematic way, the OECD created in 1999 the Territorial Development Policy Committee (TDPC) and its Working Party on Urban Areas (WPUA) as a unique forum for international exchange and debate. The TDPC has developed a number of activities, among which a series of specific case studies on metropolitan regions. These studies follow a standard methodology and a common conceptual framework, allowing countries to share their experiences. This series is intended to produce a synthesis that will formulate and diffuse horizontal policy recommendations.

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Assessment and Recommendations

A glorious industrial city challenged to switch into an international creative service hub

While Milan has long enjoyed an outstanding industrial past and the radiance of a global city, its expansion has unveiled new prospects. Once a successful industrial city, the regional capital of Lombardy has grown into the core of a wider industrial metropolitan region, Italy's richest urban agglomeration, and a central headland in European networks (Corridor 5, Blue Banana, Pentagon). Even though industrial activities are still created in (or move out to) the periphery and account for a sizeable part of Milan's economy, the core of Milan is progressively veering towards a service centre for a significant share of Northern Italy, thereby making a vital contribution to national competitiveness. Milan's past and present success has been underpinned by the well-educated and relatively young labour market, the vivacious entrepreneurship pool (almost one out of 10 inhabitants is an entrepreneur), and networks of small dynamic manufacturing and service firms. As a result, Milan stands out as a major commercial partner in the European market through particularly dense linkages with Germany and France, which account for almost 25% of Milan's exports and more than 40% of its imports in 2004 (yet signalling a negative trade balance); and Milan concentrates more than 40% of FDI inflows coming to Italy in 2004 (although Italy attracts far less FDI than other OECD countries of similar size and economy). In short, Milan's historical skills endowment and its advantageous location could corroborate its ambition to become a South European and Mediterranean regional capital in the supply of advanced services and new technologies, while preserving its stance as an international capital of fashion and design.

However, both external and internal challenges are seriously questioning Milan's aspiration. On the *external* front, increasing global competition, both among firms (to reap product market shares) and among cities (to attract investment and brains), is putting strains on Milan's competitiveness. Industrial firms (mostly SMEs) are able to adopt and even to generate organisational and product micro-innovations quickly, but – given the upsurge of economies that combine both lower-cost and promising technological capacities – such innovations need to be better connected with each other, valorised by steadily upgraded high-level business services and complemented with breakthrough innovation. At the same time, cities such

as Frankfurt, Munich, Stuttgart, Zurich, Madrid, Lyons, Barcelona, Vienna/Bratislava and Budapest, are increasingly investing in their traditional assets or building new competitive advantages and therefore contesting Milan's ambitions. On the *internal* front, given the continuous urban sprawl and the widening commuting flows, public goods and services (such as transportation) have not kept pace with the pressing need for accrued linkages across the enlarged metropolitan region to support further exchanges of goods and services (and therefore to facilitate the innovation process). Liveability bottlenecks have ensued, at the expense of the region's buzz and capacity to attract knowledge workers. Both external and internal factors are adding concerns over Milan's growth and spillovers on the Italian economy amid a sluggish national economic background: Italy was one of the OECD countries that registered the most severe loss of global export market shares over the 1995-2003 period (-11.0% while Germany and Spain gained by 3.9% and 26.7% respectively). The Milan metropolitan region – extended beyond the province's boundaries, with more than 7 million people – displays disappointing performances: only 30th out of 78 OECD metropolitan regions in terms of GDP per capita in 2002. Moreover, the region's capacity to step up appears hesitant as its labour productivity growth has been negative over the 1999-2002 period in contrast with many European regions (such as Helsinki, Copenhagen, Frankfurt and Lyons).

Milan seems to have lost part of its historical drive and to have exhausted the rent it had built on past investments. Therefore, it may be at risk on the long term. In particular, local actors face growing difficulties in drawing a common diagnosis, building a shared strategy about major growth challenges and co-operating to implement policies addressing mobility, liveability and innovation in the metropolitan region. Of course, Milan could recover lost ground and better exploit its potential to fuel the growth of Italy and of a larger territory with upmarket activities, technologies and services. But it could also fall behind other European regional capitals if it fails in solving its challenges fully and rapidly enough. In view of upgrading Milan into a creative service hub intimately linked with a vibrant industrial fabric, rapid action will be required to: (i) bolster the innovation dynamics and attractiveness; and (ii) support the reform process via more inclusive governance mechanisms.

Milan's underexploited innovation capacity risks to slow down further progress

A major culprit for Milan's waning competitiveness could be its substantial but underexploited innovation capacity. Whilst Milanese SMEs

are progressive enough to produce small spurts of innovation, global competition also increasingly requests faster, breakthrough and more comprehensive innovation. In this respect, Milan has retained a relatively modest profile. First, Milan suffers from the lack of a well-structured and coherent innovation policy for its metropolitan area. Following the restructuring of large companies during the 1980-1990s, Milan's productive fabric has been mostly composed of SMEs (the average size of firms has dropped from a 100 index in 1981 to 73.5 in 2001), which has contributed to delaying investment in R&D compared with European competitors (Lombardy spent consistently less than other leading European regions such as Paris-Ile-de-France, London, Baden-Württemberg and Lyon-Rhône-Alpes between 1998 and 2000). Second, SMEs have perceived few incentives to patent their innovations (Lombardy has generated a much lower amount of patent registrations in high-tech sectors than the above-mentioned leading European regions during the 1998-2002 period).

In the long run, Milan's innovation capacity could be further depleted as the metropolitan area could become less attractive to qualified human capital due to relatively modest wages (Milan offers slightly higher wages than Italy, but Italy remains with a lower level than EU-15 average) and higher cost of living (surpassing Paris, Berlin and Madrid). Milan's prestigious universities already fail to attract foreign students compared with other European universities (*e.g.*, the most attractive Bocconi University only counts about 4% of foreign students), which could presage further drags in the regional innovation dynamics.

Milan could capitalise on its advanced functions to bolster the regional and national innovation dynamics:

Policies to better exploit and diffuse Milan's advanced functions could give a fresh impetus to the regional innovation dynamics and generate important spillovers at the national level. Few areas in OECD countries are able to replicate Milan's well-balanced production framework. The Milan metropolitan region's industrial fabric is both specialised and diversified, which helped compensate the negative effect of sectoral crises. Several networks of specialised and complementary SMEs excel in light industries (furniture, metal engineering, electric equipment, etc.). At the same time, the core area of Milan hosts clusters of knowledge-intensive activities (such as ICT and biotechnology) and fulfils high value-added functions that shape various phases of a product's life and generate spillovers on multiple supply chains. Milan is then confronted with a choice: it could either become a better service provider (by improving the delivery of existing services to the surrounding region), or it could renew itself as a strategic powerhouse for a

large part of Italy and further (by permanently upgrading and refining its creative brainpower). Obviously, the first approach will make Milan dependent from the investment decisions and the industrial strategies of the large fabric of small firms located outside its core, while the second approach will allow Milan to stimulate its wider regional economy and to exert a stronger impact at the national and international level. This challenge is illustrated below along three axes: business services, breakthrough innovation activities, and internationally visible assets.

*by nurturing and upgrading existing
services in the wider region,...*

First, business services could be better diffused and upgraded as innovation not only implies product and process advancement but also organisational improvements. This task is particular relevant in Italy where SMEs produce quality items but they may lack the capacity to reproduce and to upgrade their sophisticated skills in order to maintain their competitive edge and possibly to conquer wider markets. The core area of Milan already generates services that may help improve the skills of SMEs: industrial design thanks to the agglomeration of high-skilled designers; financial services with the headquarters of the largest Italian banks; communication services using marketing and advertising companies, as well as the high concentration of the media industry; promotion and sales services based on one of the world's most competitive exhibition and fair systems with the Rho-Pero new fair built in 2005; management thanks to the high-skilled graduates from specialised universities such as the Bocconi University; etc. However, such services often remain under-diffused. For example, although Milan holds the largest academic system after Rome and some of the most specialised universities in Italy that educate the future producers of high-level services, the impact on the regional economy has remained disappointing because universities perceive very few incentives to collaborate, they generate modest spin-offs and they barely interact with SMEs (even though the latter constitute the bulk of Milan's production framework). The lack of interaction between firms, service providers and training agencies calls for the creation of brokering institutions between suppliers and users of knowledge, not only to help match complementary actors (e.g., guiding manufacturing SMEs towards service firms) but also to induct mechanisms to trigger knowledge spillovers. Further, mechanisms to ensure permanent connections among these brokering institutions and constant upgrades on available services could help Milan progress into a strategic pole.

*...and developing (sometimes creating)
the market of breakthrough innovation,*

Second, measures to build a market for breakthrough innovation could pave the way for future sources of growth. The micro-innovations produced by firms need to be accompanied by breakthrough innovation, which is mostly generated in public and private research centres as well as in universities and needs to be diffused with public support in order to fuel the regional economy and to address a market failure. On the one hand, some firms (especially SMEs) in Milan as elsewhere are unable to express solvable demand for innovation stemming from research institutions and universities, as they are often simply not aware of available innovation. On the other hand, research institutions and universities lack incentives to collaborate with small firms, either due to their prevailing interests in research activities rather than in the diffusion of technology, or due to the higher transaction costs in dealing with small (and often micro) firms. Therefore, policy should not only support R&D investment and the production of innovation but also its diffusion throughout the economy and close linkages between firms, research institutions and universities. Existing structures (notably the Province's Polo di Via Soderini, the Chamber of Commerce's Palazzo dell'Innovazione, and the existing technological centres) offer a promising potential as innovation broker if well connected with each other through a comprehensive strategy. A decisive test for Milan's innovation system will take place in high-tech activities such as biotechnology, which is supported by a well-developed local healthcare sector but must contend with powerful European competitors.

*... without neglecting Milan's most
visible assets on the international arena
(fashion and design)*

Lastly, Milan's advanced activities that enjoy the highest international visibility should remain a safe "brand" on the volatile global market. Some of the most salient examples of such activities are fashion (more than half of Italian turnover in 2003 and constant success of the Milano Collezioni fashion fair) and design (Milan breeds top-class designers and architects). Regarding fashion, the gap between world-renowned brands and less eminent talents should be carefully addressed. Public policies could also reinforce the synergy effects across the fashion supply chain by further facilitating inspiring linkages between stylists and manufacturing SMEs. As for design, Milan has historically acquired a rent thanks to close linkages between design and manufacturing firms, but this rent could run out and

needs to be rebuilt. For this purpose, creative firms should better exploit advanced business services.

Overall, Milan needs to produce a new vision for its future. This vision should be able to catalyse the region's key actors, for example through a branding strategy promoting Milan both internally and externally (*vis-à-vis* citizens and potential investors) as a European metropolis endowed with unique strengths but also confronted with complex challenges.

*Public goods and services have not kept
pace with the requirements of the
innovation and growth process...*

Shifting Milan into a high value-added, conception-oriented and knowledge-intensive service hub requires immediate action to restore the region's connectivity and liveability. Such factors constitute key sources of growth, both exogenous (by attracting knowledge workers) and endogenous (by enhancing internal exchanges of knowledge). Exploiting synergies and complementarities between the manufacturing region and the service-oriented core requires adequate mobility services to facilitate interaction (thereby the production and the diffusion of innovation) and to meet the demand from an extended market for services. The shortage of housing and the ensuing prohibitive costs in the core of Milan pushed out into the periphery hordes of workers, who turned into commuters and soon into car-drivers as the deficit of suburban public transportation infrastructure aggravated road congestion. Milan is now choking under critical transportation bottlenecks even though mobility determines the region's quality of life, attractiveness and competitiveness. Not only is Milan a heavily polluted city, which clouds its future capacity to attract workers and visitors, but its unique potential to build a comprehensive engine for innovation with regional, national and international spillovers may fade out. While the challenge of urban sprawl and gentrification is widespread in the OECD area, renewed global competition points out that Milan cannot ignore the urge to improve mobility of goods and people across the metropolitan region.

*... calling for urgent action supported
by co-operative governance*

A close scrutiny of the erratic transportation framework indicates that little can be solved without reforming governance mechanisms. Infrastructure has converged in the core of the city while suburban connections and suburb-to-suburb connections have remained limited or

saturated, even though they had signalled the most pressing mobility needs. Investment deadlocks have aggravated as a result of blurred responsibilities across levels of government, financial limits and political divergence. Co-operative arrangements to introduce an integrated fare system have been experimented (e.g., the Milan Area Integrated Fare System between the municipal Milan Transport Authority and a few other municipal authorities), but they have covered only part of the mobility needs in the functional region. Intergovernmental agreements that could have offered relief to the transportation plight via joint planning and financing of infrastructure have rarely materialised, while other policy issues have met promising bottom-up collaboration responses (e.g., the province, four municipalities in the north of the province and various economic actors established a local development agency in charge of brownfield restoration, which was renamed Milano Metropoli in 2005 with an enlarged mandate).

Several transportation governance options come into view. First, entrusting the highest and strongest level of government (region) with the responsibility to set up a transportation planning and co-ordination authority (as in Paris and Madrid) could simplify problems of financial resources, but appears inadequate in Milan where mobility needs in the metropolitan region match or slightly exceed the province rather than the whole region. Second, including public transportation in the mandate of a newly created metropolitan government (as in London and Stuttgart) would have the merit of shaping policy responses at the scale closest to citizens' needs. After the success of its 1950s governance model began to crumble in the mid-1960s, Milan reflected on possible governance arrangements aimed at keeping pace with and lending support to its economic expansion. The debate culminated in the province's proposal to be converted into a *città metropolitana* ("metropolitan city"), which a 1990 law offered regions the possibility to create as a new subnational layer of government accumulating provincial and supramunicipal responsibilities. The province's proposal was never put in place due to intergovernmental dissension and the lack of incentives. So a third option would be to create an autonomous transportation authority, which could be coupled with or merged into a multi-purpose metropolitan co-ordinating body if the latter happened to be established next (as it occurred in Montreal and Copenhagen respectively). Considering the existing stipulations of the Italian Constitution that already recognised "metropolitan cities" as a subnational level, further progress could be achieved through a national policy for metropolitan areas.

Milan could better harness its talents to demonstrate its creativity in the global arena...

Milan's competitiveness will depend on its capacity to mobilise the metropolitan region's resources around a shared development strategy. An essential factor to build such a strategy is flagship projects. Improved mobility is a necessary but not sufficient tool to spur the region's attractiveness. Milan hungers after a charismatic enough vision that echoes its panache on the international stage and acts as a magnet for investments and people. Even though the region nurtures a wide variety of high-skilled and inspired experts, their mutual disconnection dribbles their talent away while other cities have understood how to renew themselves (like Turin with the 2006 Winter Olympic Games or Bilbao with the Guggenheim cultural project). Gathering the region's existing brainpower into a "think tank" could help Milan design a facelift strategy and catalyst projects to build a creative and stimulating environment. The province's ongoing "Strategic Project" called "*Città di Città*" has launched a call for innovative proposals and actions. Sliding on this momentum, Milan could perpetuate a brainstorming dynamics via establishing a top-quality incubator of ideas bringing together its best professionals and thinkers. Inspiration could be drawn from other OECD cities that revamped their milieu through ambitious modernisation projects (e.g., Barcelona).

... while building a metropolitan "Milan community" based on trust and collective ownership

Grand projects could hardly materialise without political backup. Milan's proposed vision (an innovative and attractive service hub) and the practical tools to implement this vision (e.g., transportation and housing) both require intergovernmental collaboration mechanisms and adequate financial resources. Milan could exploit the new latitude and additional fiscal resources offered by the recent decentralisation reforms to support its competitiveness roadmap. Based on the educative process initiated by a co-operative experience over transportation issues for example, the region could walk towards a metropolitan "Milan community". The community would use existing levels of government as stepping stones to build an intergovernmental co-ordination body composed of elected local officials (mayors and presidents), led by an executive bureau and supported by consultative structures. Its biggest merit would be to bring together isolated actors and incrementally instil a culture of trust while developing a sense of

collective ownership and the desire to join forces in order to accomplish common aspirations. However, considering the institutional fragmentation and the particular struggle in reaching a consensus in the Milan region, the national government will need to play a proactive role by helping to enforce appropriate mechanisms and appropriate financial resources for the governance of metropolitan areas.

To sum up

Milan remains one of the top-ranked OECD metropolitan regions but the state of bliss could well run out of steam. In the wake of emerging economies with a durable supply of low-cost labour and aggressive potential in labour-intensive light industries, closely watching investors and consumers will expect Milan to measure up with its historic image of industrial forerunner and artistic vanguard. Failure to uphold the innovation process and to stamp out the dereliction of attractiveness could prove costly. With a strong impetus from the national government, co-operative governance arrangements could support deeper synergies and the region's conversion into the powerful pulse of a circuit with regional and national spillovers. Milan's assets could then be fully exploited to reinvigorate Italy's economy on the international arena. The current constraint is that metropolitan governance reforms cannot afford to be further delayed.

Chapter 1

Milan in the global economy

Introduction

Milan has long been a rich industrial city. It has been widely acknowledged as one of the leading cities in Europe, the economic capital of Italy, and especially the driving force of Lombardy and Northern Italy. Milan set up industrial giants, global fashion and design brands, and unique networks of SMEs. It also created a buzz and a panache that many cities envied. Today Milan is confronted with a new self: a city that has expanded into a much larger region of almost 4 million people and even more than 7 million people if less dense commuting flows are taken into account. As in many other OECD metropolitan regions, a new spatial distribution of functions has taken place in the larger Milan. Manufacturing industries have moved out to the periphery or are created there, while specialised high-level services have agglomerated in the core. The new Milan still registers fair economic performances. Yet its future success could be less certain in the globalisation context. The region is increasingly known as “prosperous but unloved Milan”¹. Its economic development was accompanied by substantial costs and bottlenecks in terms of liveability, creating obstacles to knowledge flows. Its previously fertile innovative capacity is now less definite. Milan relies on a larger economic and spatial system in which it needs to find its role. A further slump of attractiveness and innovation might challenge Milan’s unique ability to feed Northern Italy with upmarket services and to foster national growth.

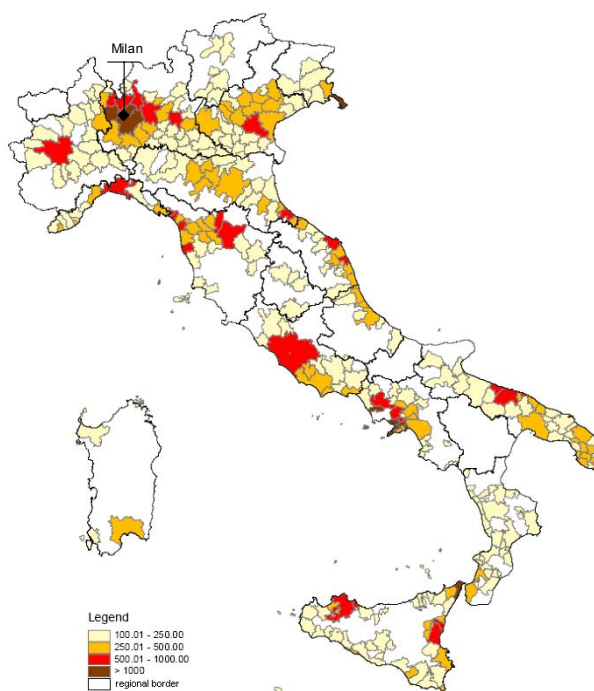
This chapter will focus on (i) assessing Milan’s socioeconomic changes; (ii) identifying its major comparative advantages; and (iii) discussing its key challenges in the global economy.

1.1. From a leading city to a metropolitan region confronted with change

Milan has historically been a leading city on the national and regional scale. On the national scale, Milan is the most densely populated agglomeration and the economic capital of Italy (Figure 1.1). The City of Milan is the first contributor to national GDP among Italian cities (Figure 1.2), but the functional area expands far beyond the City's administrative borders (Figure 1.3). Composed of 189 municipalities (including the City of Milan, 1.3 million inhabitants), the Province of Milan is the largest province in Italy with around 3.7 million inhabitants and the richest in terms of GDP per capita (Figure 1.4, Figure 1.5 and Figure 1.6). On the *regional* scale, Milan has driven the growth of Northern Italy and particularly of the Region of Lombardy. On account of Milan, Lombardy is currently the largest region in Italy with around 9.1 million inhabitants (16.1% of national population), the richest, and the first contributor to national GDP among Italian regions (Figure 1.7).

Figure 1.1 Milan, the most densely populated area in Italy

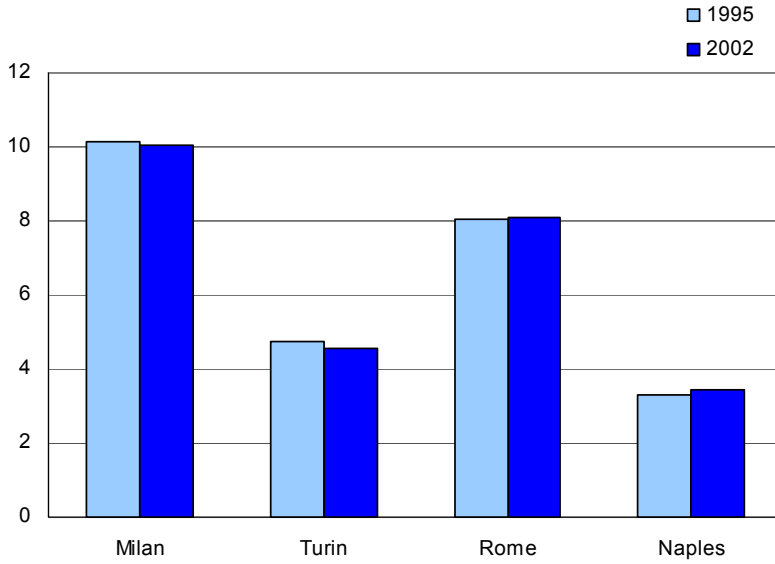
Unit: number of persons/km²



Source: Istat, Census 2001.

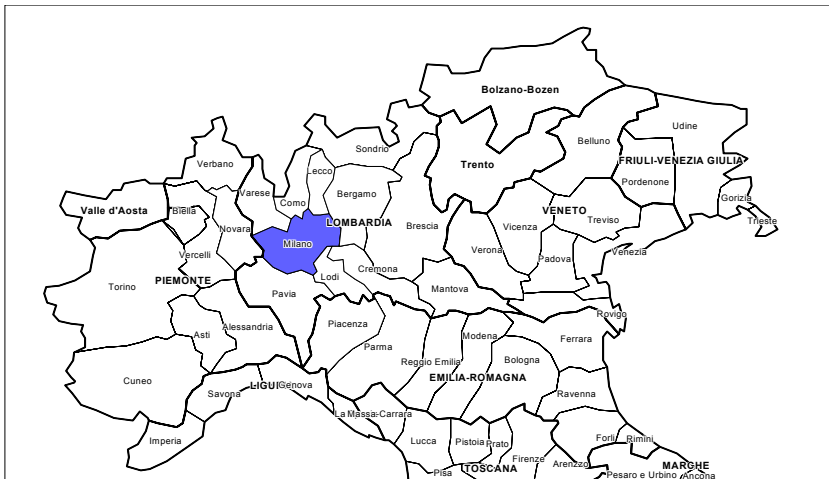
Figure 1.2 Contribution of major Italian cities to national GDP, 1995 and 2002

Unit: % of national GDP



Source: Istat.

Figure 1.3 Location of Milan metropolitan region



Source: OECD Metropolitan Database.

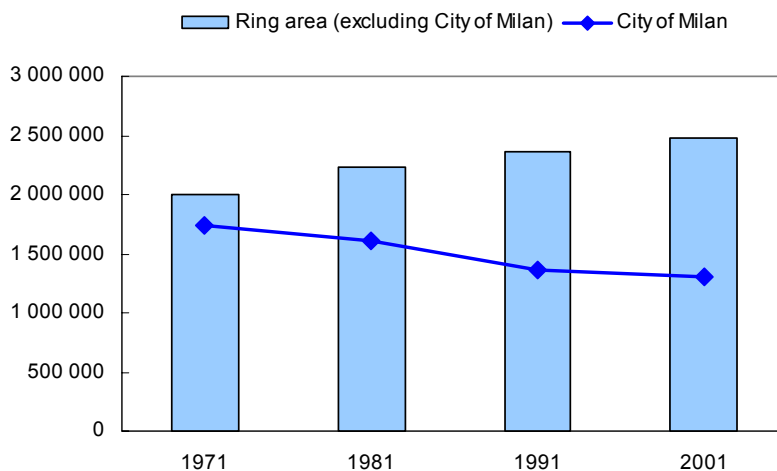
Figure 1.4. **The City of Milan and 188 smaller municipalities compose the Province of Milan**



Source: Province of Milan.

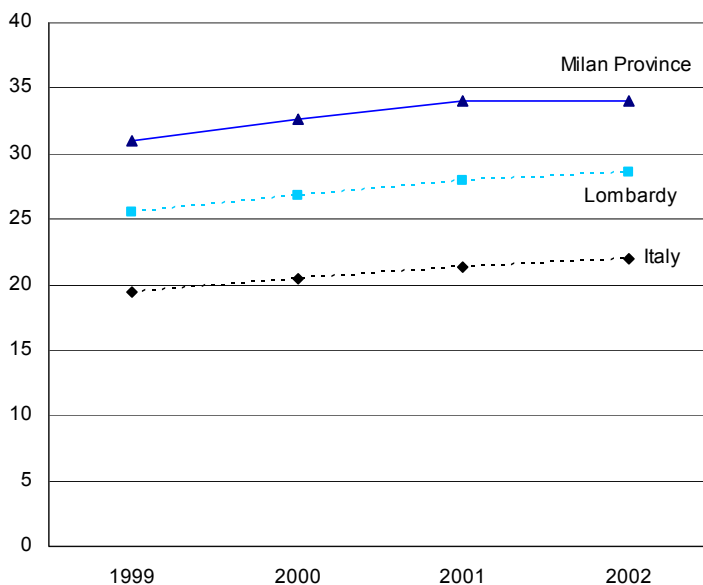
Figure 1.5. **Urban sprawl in the Province of Milan, 1971-2001**

Unit: number of inhabitants



Source: Istat.

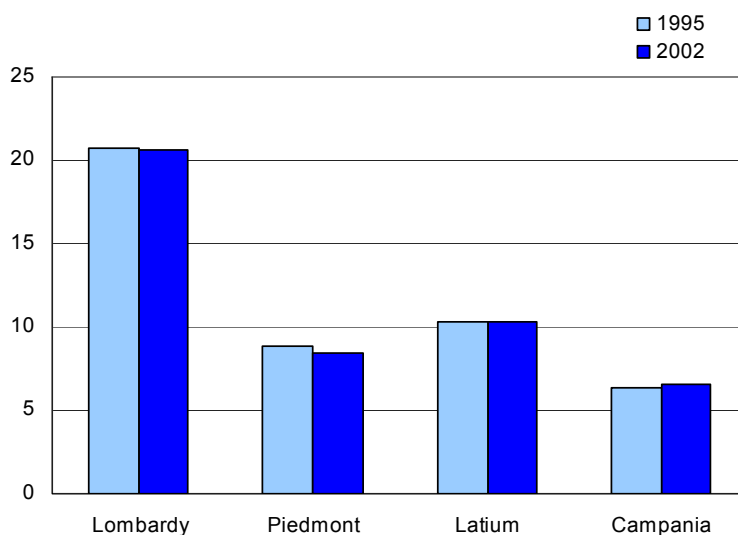
Figure 1.6. GDP per capita in Milan, Lombardy and Italy (1999-2002)
Unit: thousands EUR in market prices (2000)



Source: Istat.

Figure 1.7. Contribution of major Italian regions to national GDP, 1995 and 2002

Unit: % of national GDP

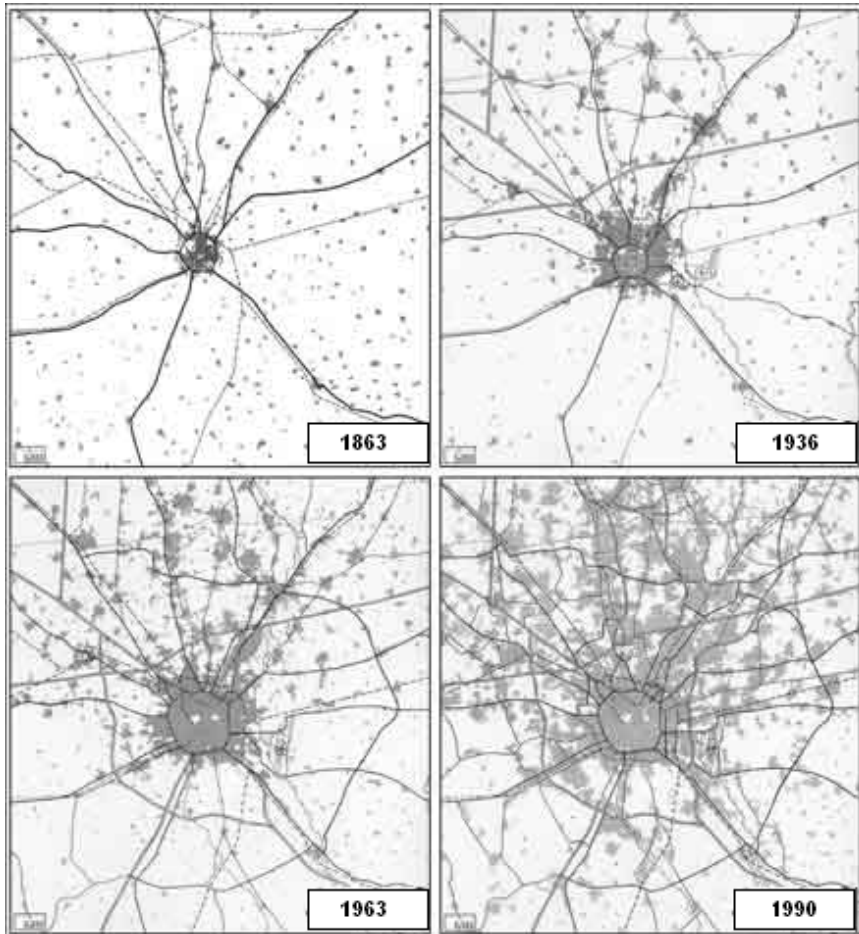


Source: Istat.

Despite its high-profile international reputation, Milan's economic performances may be less buoyant than their surface. Milan has regularly been referenced as one of the "global cities" in the world and one of the leading cities in Europe along with London and Paris. However, Milan has been the locus of significant changes. As in many other OECD metropolitan regions, the spatial expansion of the Milan metropolitan region has accelerated over the last decades. The growth of settlements around the core of Milan has been much more important in recent 30 years (1963-1990) than it had been in a century earlier (1863-1963) (Figure 1.8). Commuting flows suggest that socioeconomic linkages have expanded even farther than the boundaries of the Province of Milan, which then results in a definition of the Milan metropolitan region with more than 7 million people² (Figure 1.9). When only the first extended definition is considered (more than 7 million people), Milan only ranks 30th out of 78 in terms of GDP per capita, i.e. hardly maintaining itself in the first half of the sample (even if its position comes out considerably higher when US metropolitan regions are factored out of the sample)³ (Table 1.1).

According to the model experimented by the OECD to explain the differences between regional performances (see detailed methodology in Annex), Milan's positioning in GDP per capita compared with other metropolitan regions could stem from the combination of three factors: (i) a positive impact of labour productivity (which pushes Milan's GDP per capita up by 4.2% compared with the average GDP per capita of OECD metropolitan regions), and (ii) a positive impact of the local labour market (expressed by Milan's strong employment rate, which pushes the metropolitan region's GDP per capita up by 2.2%), which both compensate for the negative impact of (iii) a relatively small size of the labour force (expressed by the activity rate, which drags Milan's GDP per capita down by 1.9%). Each of the three factors is discussed below.

Figure 1.8. **Spatial expansion of Milan from 1863 to 1990**



Source: Piano Intercomunale per Milano.

Table 1.1. OECD metropolitan database

Ranking by GDP per capita

Rank	Metropolitan region	Country	Population (millions)	GDP pc in PPPs (thousand USD)	Share of Nat. GDP %	Activity rate %	Employment %	Labour productivity (thousand USD)	% Difference in (compared to average)			Differences in GDP pc explained by		
									Labour productivity	Employment rate	Activity rate	Productivity	Employment rate	Activity rate
1	S. Francisco	USA	4.2	62.3	2.2	49.38	95.6	132.1	77.8	2.1	1.0	57.6	2.1	1.0
2	Washington	USA	5.1	61.6	2.7	57.32	96.9	110.9	49.3	3.5	17.2	40.1	3.4	15.9
3	Boston	USA	4.4	58.0	2.2	38.87	95.3	156.6	110.8	1.8	-20.5	74.6	1.8	-23.0
4	Seattle	USA	3.2	54.4	1.5	52.55	95.5	108.4	45.9	2.0	7.5	37.8	2.0	7.2
5	Minneapolis	USA	3.1	53.0	1.4	58.35	95.6	94.9	27.8	2.1	19.3	24.5	2.1	17.7
6	New York	USA	18.7	52.8	8.5	46.69	94.9	119.2	60.5	1.3	-4.5	47.3	1.3	-4.6
7	Denver	USA	2.3	50.8	1.0	52.90	94.7	101.4	36.5	1.1	8.2	31.1	1.1	7.9
8	Philadelphia	USA	5.8	50.5	2.5	49.69	95.3	106.6	43.5	1.8	1.6	36.1	1.8	1.6
9	Dallas	USA	5.7	50.1	2.4	49.83	95.0	105.8	42.4	1.4	1.9	35.4	1.4	1.9
10	Atlanta	USA	4.7	47.8	1.9	50.66	95.1	99.2	33.5	1.6	3.6	28.9	1.5	3.5
11	Houston	USA	5.2	47.4	2.1	46.82	94.4	107.3	44.4	0.8	-4.2	36.8	0.8	-4.3
12	San Diego	USA	2.9	46.8	1.2	44.78	96.0	108.8	46.4	2.5	-8.4	38.1	2.5	-8.8
13	London	UK	7.4	46.2	19.9	48.48	92.8	102.7	42.4	-0.9	-0.8	35.3	-0.9	-0.9
14	Chicago	USA	9.4	45.6	3.7	49.80	94.4	97.0	30.6	0.8	1.8	26.7	0.8	1.8
15	Los Angeles	USA	12.9	45.3	5.0	44.37	95.1	107.5	44.7	1.6	-9.3	36.9	1.5	-9.7
16	Detroit	USA	4.5	44.0	1.7	49.36	92.4	96.6	30.0	-1.3	0.9	26.2	-1.3	0.9
17	Baltimore	USA	2.6	43.3	1.0	50.04	95.7	90.5	21.8	2.2	2.3	19.7	2.2	2.3
18	Paris	France	11.2	42.7	27.9	46.13	90.7	102.0	37.3	-3.1	-5.7	31.7	-3.2	-5.8

Rank	Metropolitan region	Country	Population (millions)	GDP pc in PPPs (thousand USD)	Share of Nat. GDP %	Activity rate %	Employment rate %	Labour productivity (thousand USD)	Differences in GDP pc explained by				
									% Difference in (compared to average)		Activity rate (%)		
Table 1.1.1. OECD metropolitan database (Cont.)													
19	Cleveland	USA	2.1	42.2	0.8	53.26	94.2	84.1	13.2	0.6	12.4	8.9	8.5
20	Portland	USA	2.1	41.8	0.7	48.83	94.7	90.5	21.8	1.1	19.7	-0.1	-0.1
21	St. Louis	USA	2.8	40.9	1.0	50.63	94.5	85.4	14.9	0.9	13.9	3.5	3.5
22	Phoenix	USA	3.7	39.9	1.3	47.45	95.5	88.1	18.7	2.0	17.1	-3.0	-3.0
23	Dublin	Ireland	1.6	38.9	47.6	50.87	95.9	79.7	7.3	2.4	7.0	4.0	3.9
24	Pittsburgh	USA	2.4	38.6	0.8	61.07	94.1	67.1	-9.6	0.4	-10.1	24.9	22.2
25	Tampa Bay	USA	2.6	37.8	0.8	49.35	96.8	79.2	6.6	3.4	6.4	0.9	0.9
26	Vienna	Austria	2.2	37.6	33.7	49.26	92.4	82.6	11.2	-1.3	10.6	0.7	0.7
27	Miami	USA	5.4	37.2	1.7	44.32	96.7	86.9	17.0	3.3	15.7	-9.4	-9.8
28	Stockholm	Sweden	2.2	36.7	31.5	54.27	94.3	71.7	-3.5	0.7	-3.5	11.0	10.4
29	Stuttgart	Germany	2.7	36.4	4.3	53.21	94.1	72.6	-2.2	0.5	-2.3	8.8	8.4
30	Milan	Italy	7.4	35.6	17.2	47.96	95.8	77.5	4.3	2.2	4.2	-1.9	-1.9
31	Lyon	France	1.6	35.2	3.4	43.26	90.9	89.6	20.6	-3.0	18.8	-11.5	-12.3
32	Munich	Germany	6.1	35.2	9.6	52.74	94.6	70.6	-5.0	1.0	-5.2	7.9	7.6
33	Oslo	Norway	1.7	35.0	36.5	53.44	95.7	68.5	-7.7	2.2	-8.1	9.3	8.9
34	Sydney	Australia	4.2	35.0	23.5	52.15	95.3	70.5	-5.1	1.7	-5.2	6.6	6.4
35	Brussels	Belgium	3.8	35.0	44.4	45.07	91.9	84.4	13.6	-1.8	12.8	-7.8	-8.2
36	Toronto	Canada	4.7	34.9	17.7	63.44	93.0	59.1	-20.4	-0.7	-22.9	29.7	26.0
37	Helsinki	Finland	1.8	34.0	42.1	53.54	93.2	68.1	-8.4	-0.4	-8.8	9.5	9.1
38	Frankfurt	Germany	5.6	33.6	8.3	48.57	92.7	74.6	0.4	-1.0	0.4	-0.7	-0.7
39	Copenhagen	Denmark	2.4	33.5	49.5	54.06	94.9	65.3	-12.1	1.4	-12.9	10.6	10.0
40	Zurich	Switzerland	2.5	33.4	33.1	50.19	97.7	68.1	-8.4	4.3	-8.7	2.6	2.6

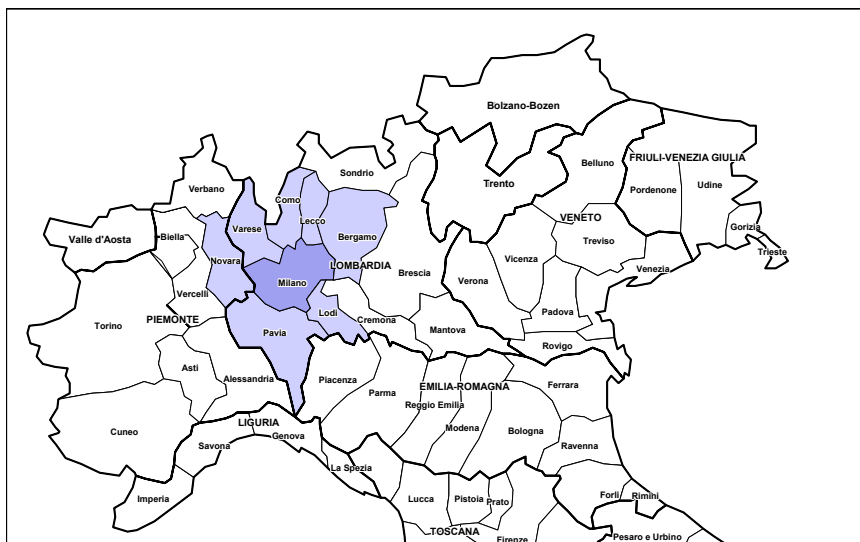
Rank	Metropolitan region	Country	Population (millions)	GDP pc in PPPs (thousand USD)	Share of Nat. GDP %	Activity rate %	Employment %	Labour productivity (thousand USD)	Differences in GDP pc explained by					
									(% difference in (compared to average))					
									Labour productivity	Employment rate	Activity rate	Productivity		
Table 1.1. OECD metropolitan database (Cont.)														
41	Rome	Italy	3.7	33.1	8.1	44.77	92.5	79.9	7.6	-1.2	-8.5	7.3	-1.2	-8.8
42	Randstad-Holland	Netherlands	7.5	32.9	51.3	53.17	95.5	64.7	-12.8	2.0	8.7	-13.7	2.0	8.4
43	Melbourne	Australia	3.6	32.7	18.6	52.49	94.6	65.9	-11.3	1.0	7.4	-12.0	1.0	7.1
44	Vancouver	Canada	2.0	32.0	6.9	61.70	94.3	55.0	-26.0	0.7	26.2	-30.1	0.7	23.3
45	Turin	Italy	2.2	32.0	4.6	44.00	93.9	77.4	4.2	0.3	-10.0	4.1	0.3	-10.6
46	Auckland	New Zealand	1.2	31.2	36.1	55.16	96.2	58.8	-20.9	2.7	12.8	-23.4	2.7	12.0
47	Hamburg	Germany	4.6	30.9	6.4	44.74	90.7	76.1	2.5	-3.1	-8.5	2.5	-3.2	-8.9
48	Tokyo	Japan	34.2	29.3	30.4	51.92	95.2	59.3	-20.2	1.7	6.2	-22.5	1.7	6.0
49	Montreal	Canada	3.4	29.1	10.8	58.29	91.3	54.8	-26.3	-2.5	19.2	-30.5	-2.5	17.6
50	Madrid	Spain	5.6	29.0	16.7	51.42	93.3	60.5	-18.5	-0.4	5.2	-20.5	-0.4	5.0
51	Aichi	Japan	9.1	28.9	7.9	53.10	96.0	56.6	-23.8	2.5	8.6	-27.1	2.5	8.2
52	Birmingham	UK	2.6	27.8	4.2	45.30	93.2	65.7	-8.9	-0.4	-7.4	-9.3	-0.4	-7.6
53	Leeds	UK	2.1	27.5	3.4	48.25	95.5	59.6	-17.3	1.9	-1.3	-19.0	1.9	-1.3
54	Rhine-Ruhr	Germany	13.4	27.4	16.4	45.03	90.2	67.4	-9.2	-3.7	-7.9	-9.7	-3.7	-8.2
55	Lisbon	Portugal	2.7	27.1	37.9	50.96	92.4	57.6	-22.4	-1.3	4.2	-25.4	-1.3	4.1
56	Osaka	Japan	17.0	26.8	13.8	50.04	93.9	57.1	-23.1	0.2	2.3	-26.2	0.2	2.3
57	Manchester	UK	2.5	26.6	3.9	46.23	95.6	60.2	-16.6	2.0	-5.5	-18.1	2.0	-5.6
58	Barcelona	Spain	4.9	26.0	13.1	51.71	89.6	56.1	-24.5	-4.3	5.7	-28.1	-4.4	5.6
59	Prague	Czech Republic	2.3	25.6	34.7	52.33	95.4	51.4	-30.8	1.8	7.0	-36.9	1.8	6.8

Rank	Metropolitan region	Country	Population (millions)	GDP pc in PPPs (thousand USD)	Share of Nat. GDP %	Activity rate %	Employment %	Labour productivity (thousand USD)	% Difference in (compared to average)			Differences in GDP pc explained by (%)		
									Labour productivity	Employment rate	Activity rate	Productivity	Employment rate	Activity rate
Table 1.1. OECD metropolitan database (Cont.)														
60	Lille	France	2.6	23.7	3.6	46.10	87.3	59.0	-20.6	-6.8	-5.7	-23.0	-7.1	-5.9
61	Budapest	Hungary	2.8	23.5	45.6	45.43	95.5	54.3	-26.9	2.0	-7.1	-31.4	2.0	-7.4
62	Warsaw	Poland	3.0	23.1	16.2	43.01	88.5	60.7	-18.3	-5.5	-12.0	-20.2	-5.7	-12.8
63	Fukuoka	Japan	5.1	22.3	3.4	48.79	94.1	48.5	-34.7	0.5	-0.2	-42.6	0.5	-0.2
64	Valencia	Spain	2.3	22.2	5.2	50.12	89.3	49.6	-33.2	-4.7	2.5	-40.3	-4.8	2.5
65	Busan	Korea	7.9	21.9	18.9	46.59	96.5	48.7	-34.4	3.1	-4.7	-42.2	3.0	-4.8
66	Berlin	Germany	6.0	21.3	5.7	51.91	81.6	50.2	-32.4	-12.9	6.2	-39.2	-13.8	6.0
67	Athens	Greece	3.9	20.1	37.6	45.17	90.9	48.9	-34.1	-2.9	-7.6	-41.8	-3.0	-7.9
68	Seoul	Korea	23.5	19.1	48.6	48.35	95.8	41.1	-44.6	2.3	-1.1	-59.1	2.3	-1.1
69	Monterrey	Mexico	3.2	19.0	6.1	41.08	98.8	46.8	-37.0	5.5	-16.0	-46.1	5.4	-17.4
70	Naples	Italy	3.1	17.1	3.4	36.32	81.1	58.0	-21.9	-13.4	-25.7	-24.7	-14.3	-29.7
71	Mexico City	Mexico	18.4	14.3	26.7	39.21	98.3	37.0	-50.2	5.0	-19.8	-69.8	4.9	-22.1
72	Guadalajara	Mexico	3.5	13.4	4.8	42.73	98.9	31.8	-57.2	5.6	-12.6	-84.9	5.5	-13.5
73	Puebla	Mexico	2.1	13.1	2.8	39.54	98.5	33.7	-54.6	5.2	-19.1	-78.9	5.1	-21.3
74	Daegu	Korea	2.5	12.3	3.4	48.20	95.8	26.6	-64.2	2.3	-1.4	-102.7	2.2	-1.4
75	Krakow	Poland	2.1	11.2	5.6	46.42	83.7	28.8	-61.2	-10.7	-5.1	-94.7	-11.3	-5.2
76	Istanbul	Turkey	11.4	10.9	27.1	40.42	87.9	30.7	-58.6	-6.2	-17.3	-88.3	-6.3	-19.0
77	Izmir	Turkey	3.4	10.0	7.3	42.61	89.2	26.2	-64.7	-4.8	-12.9	-104.3	-4.9	-13.8
78	Ankara	Turkey	4.0	9.6	8.3	38.63	89.0	27.8	-62.6	-4.9	-21.0	-98.4	-5.0	-23.6

Note: This ranking by GDP per capita should be interpreted carefully. Due to data availability, there are a number of cities that have been included in the sample of 78 metropolitan regions that were over- or under-estimated.

Source: OECD Metropolitan Database

Figure 1.9. Definition of the Milan metropolitan region



Source: OECD Metropolitan Database.

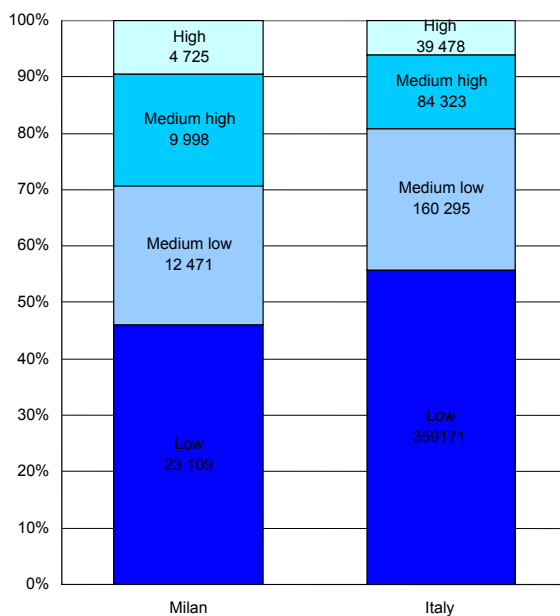
(i) *A positive impact of labour productivity.* Milan's labour productivity is 4.3% higher than the average of the 78 OECD metropolitan regions. Labour productivity is linked with the region's specialisation in high value-added sectors. Milan is the pillar of Italy in high-tech/knowledge-intensive activities, both in manufacturing and services sectors⁴ (Table 1.2). Milanese manufacturing firms are about 10% more specialised in high and medium-high technology than average Italian manufacturing firms (Figure 1.10). Milan hosts almost 12% of the Italian high-tech firms, with a remarkable specialisation in pharmaceuticals (33% of the national industry). Milanese service firms are also around 10% more specialised in knowledge-intensive services than average Italian service firms (Figure 1.11). Milan alone hosts 10.8% of the national knowledge-intensive services. In terms of labour force, Milan's labour market is more specialised in high-tech/knowledge-intensive activities (45.9% of employees versus only 32.1% in Italy) (Table 1.3).

Table 1.2. **Number of firms in high-tech/knowledge-intensive sectors in the Province of Milan, 2004**

	Manufacturing	Services
High knowledge and technology	<i>High-technology industries</i>	<i>Knowledge-intensive services</i>
	Pharmaceuticals (206)	Posts and telecommunications (1 131)
	Office, accounting and computing machinery (467)	Finance and insurance (9 160)
	Medical, precision and optical instruments (2 933)	Business services (excluding property services (32 206)
	Radio, television and communication equipment and apparatus (1 119)	Instruction (1 308)
	<i>Medium-high technology industries</i>	Health care sector (1 790)
	Electrical machinery and apparatus	Informatics (10 102)
	Motor vehicles, trailers and semi-trailers	R&D (385)
	Other transportation (298)	
	Chemicals excluding pharmaceuticals	
	Machinery and equipment (5 176)	
Low knowledge and technology	<i>Medium-low technology industries</i>	<i>Low knowledge-intensive services</i>
	Rubber and plastics products (1 716)	Wholesale and retail (88 875)
	Coke, refined petroleum products (69)	Hotels and restaurants (13 526)
	Other non-metallic mineral products	Transportation and storage (17 459)
	Basic metals and fabricated metal products (9 533)	Real estate and renting (35 703)
	<i>Low technology industries</i>	Other services (15 501)
	Recycling (178)	<i>Other activities</i>
	Wood (except furniture), pulp, paper products, printing and publishing (7 705)	Agriculture, fishing, forestry, mining and quarrying (5 793)
	Furniture, other manufacturing industries (5 635)	Utilities (269)
	Food products, beverages and tobacco (3 278)	Construction (43 500)
	Textiles, textile products, leather and footwear (6 313)	

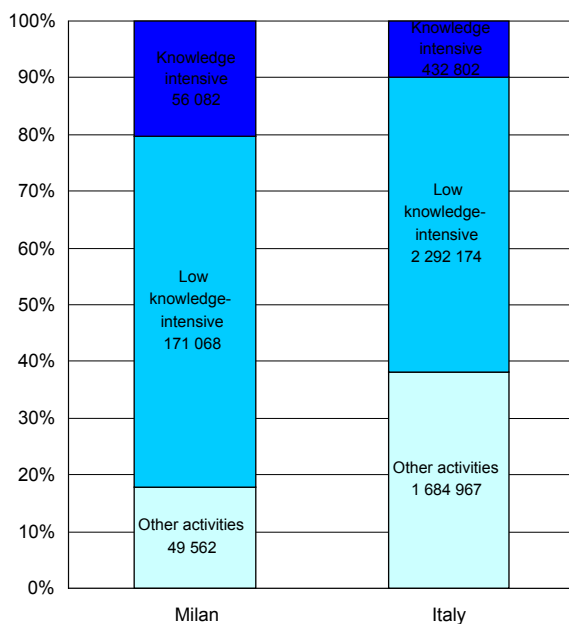
Source: data from Infocamere (as of 2001), arranged following the methodology proposed by OECD/STI (2003).

Figure 1.10. Breakdown of manufacturing firms in Milan and Italy by the level of technology, 2004



Source: Infocamere, Istat.

Figure 1.11. Breakdown of service firms in Milan and Italy by knowledge intensity, 2004



Source: Infocamere, Istat.

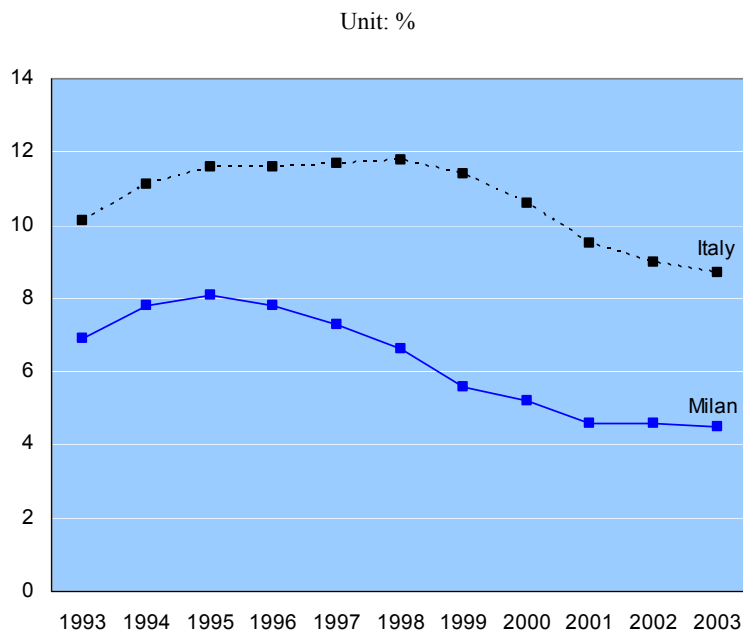
Table 1.3. **Specialisation of the local labour market in Milan, Lombardy and Italy, 2002**

	Employees			In %		
	Milan	Lombardy	Italy	Milan	Lombardy	Italy
High knowledge activities	869 688	1 413 936	5 401 605	45.9	38.8	32.1
High tech. manufact.	285 503	537 650	1 762 028	15.1	14.8	10.5
High tech. manufact.						
Medium-high tech. manufact.	285 503	537 650	1 762 028	15.1	14.8	10.5
Knowledge intensive services	584 185	876 286	3 639 577	30.9	24.0	21.6
Low knowledge activities	1 023 246	2 230 600	11 413 874	54.1	61.2	67.9
Low tech. manufactures	288 302	817 642	3 284 141	15.2	22.4	19.5
Medium-low tech. manufact.	113 204	377 946	1 332 604	6.0	10.4	7.9
Low tech. manufact.	175 098	439 696	1 951 537	9.3	12.1	11.6
Knowledge non-intensive services	614 269	1 086 195	6 183 584	32.5	29.8	36.8
Other low tech. activities	120 675	326 763	1 946 149	6.4	9.0	11.6
Total	1 892 934	3 644 536	16 815 479	100.0	100.0	100.0

Source: Istat.

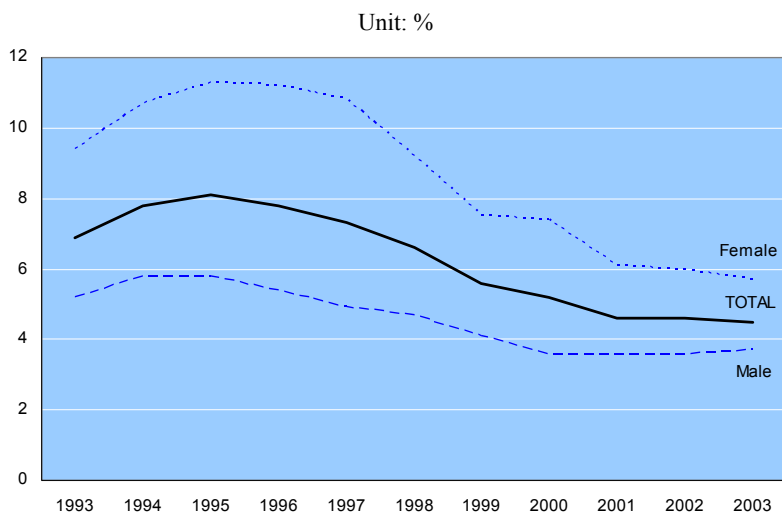
(ii) *A positive impact of the local labour market (strong employment rate).* Milan's employment rate is 2.2% higher than the OECD average. Milan has consistently registered much lower unemployment than the national average (Figure 1.12). Decreasing unemployment seems largely linked to the introduction of labour flexibility in 1997 ("Pacchetto Treu"⁵), which has contributed to a significant drop in female unemployment in particular (Figure 1.13). Male unemployment can be considered close to a frictional level (3.7% in 2003).

Figure 1.12. Unemployment rates in Milan and Italy, 1993-2003



Source: Istat.

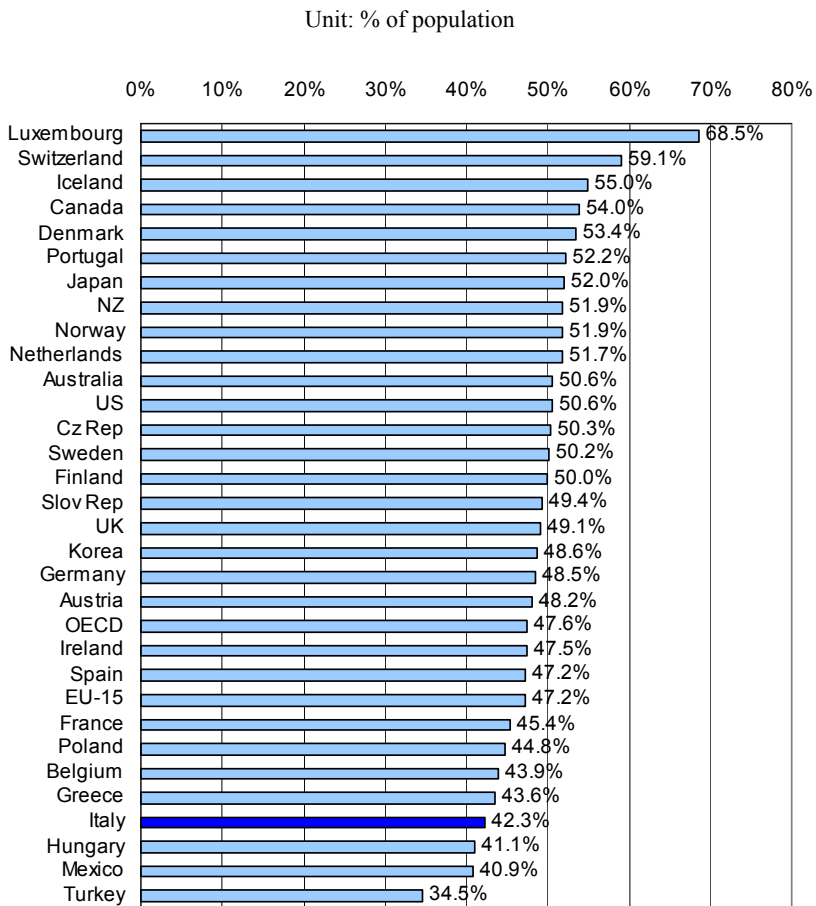
Figure 1.13. Female and male unemployment rates in Milan, 1993-2003



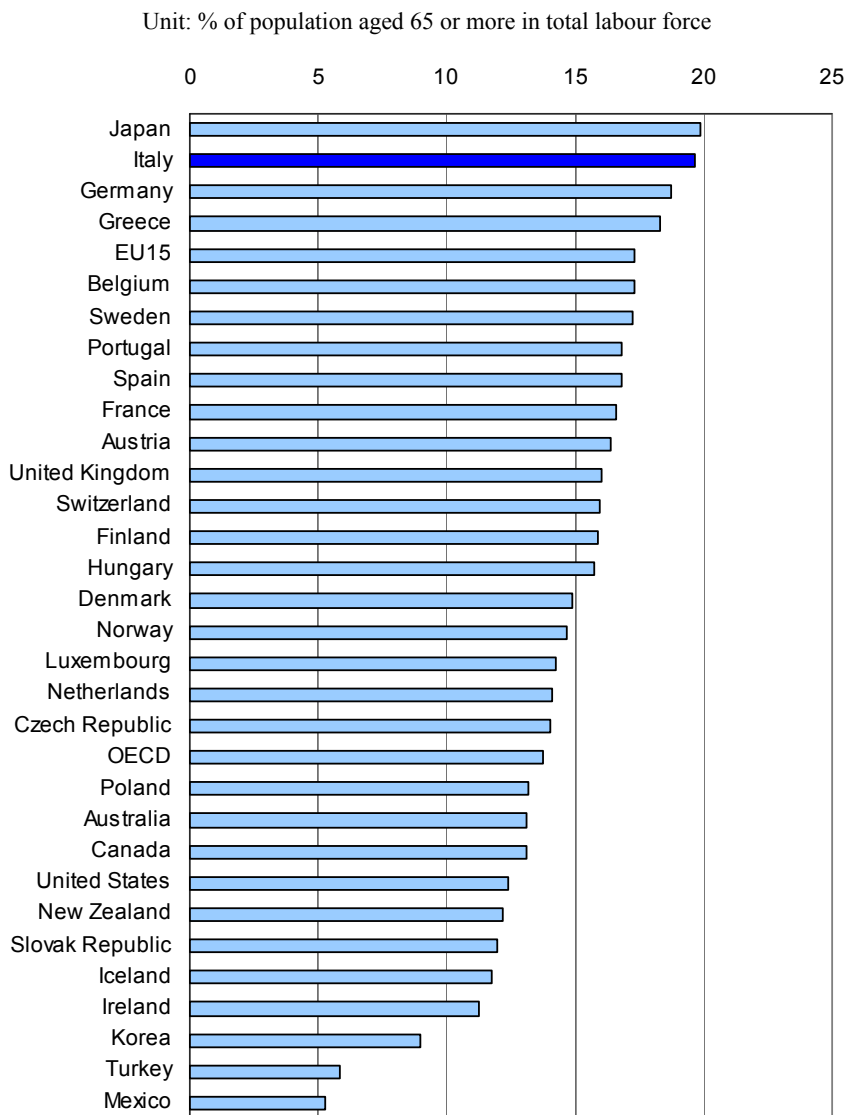
Source: Istat.

(iii) *A negative impact of the relatively small size of the labour force (low activity rate).* Milan's activity rate is 1.9% lower than the OECD average. This reflects the impact of national trends since Italy registers one of the lowest activity rates among OECD countries (Figure 1.14). Two main limits have held back the activity rate in Italy: the population ageing trend (Figure 1.15) and the weak female activity rate (37.1% versus 61.2% for the male activity rate in 2003). In terms of female activity rate, Milan is performing slightly better than Italy but the difference remains modest (Figure 1.16).

Figure 1.14. Activity rates in OECD countries, 2004

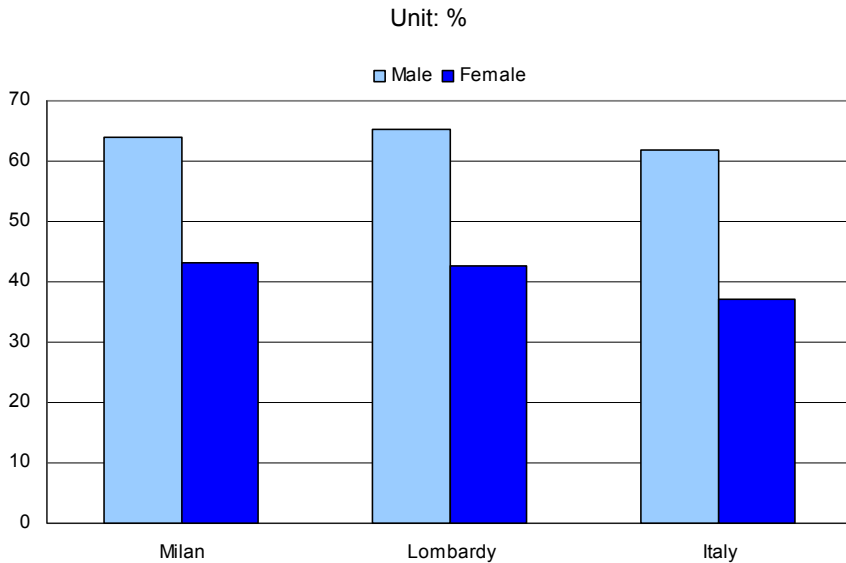


Source: OECD Regional Database.

Figure 1.15. **Concentration of elderly population in OECD countries, 2005**

Source: OECD Factbook 2006.

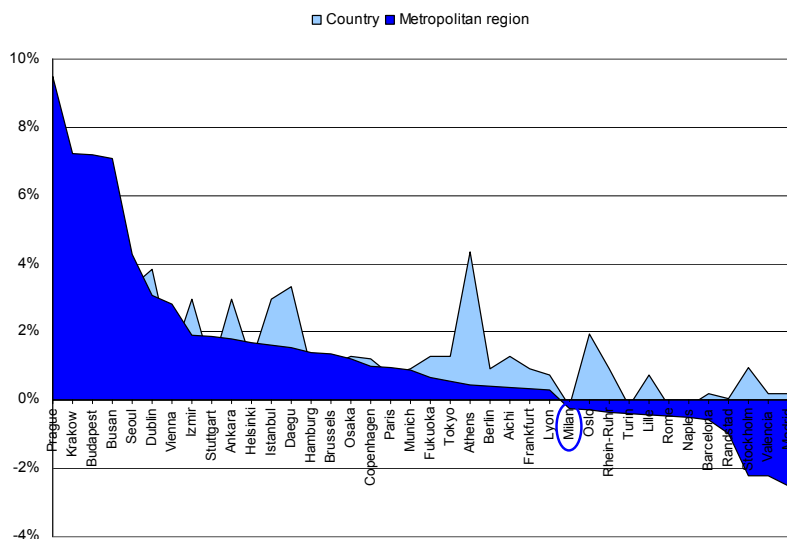
Figure 1.16. Male and female activity rates in Milan, Lombardy and Italy, 2003



Source: Istat.

Milan's future success in the global economy is not a given on the long term. Milan has certainly enjoyed a glorious past as an industrial pioneer in Italy and in Europe. This heritage has contributed to maintaining Milan among the outstanding regions during the early years of globalisation when trade liberalisation and increased mobility opened access to new markets, skilled human resources and advanced technology. At the same time, globalisation has accelerated international competition and industrial restructuring. Milan's relatively lower international ranking in terms of GDP per capita is not necessarily an alarming signal *per se*⁶. But despite caveats, GDP per capita remains one of the few indicators that can provide a basis for international benchmarking of economic prosperity. The fact that the "new and larger Milan" (previous Figure 1.9) has declined below the metropolitan regions of Vienna, Stockholm or Stuttgart may suggest instructive clues on Milan's strengths and challenges to remain competitive in a globalised economy. Milan's capacity to stick with top-ranked OECD regions appears less certain as its productivity growth has been negative over the 1999-2002 period while regions such as Helsinki, Copenhagen, Frankfurt and Lyons registered positive growth (Figure 1.17).

Figure 1.17. Average annual labour productivity growth in selected OECD metropolitan regions and countries, 1999-2002



Source: OECD Metropolitan Database.

Milan's evolution is currently testing the region's ability to win new challenges. Milan has not only acquired a larger population size and a lower income per capita. By brushing against previously separated productive systems and absorbing them over time, Milan currently stands at the core of a broader productive system in which demand and supply relationships stretch over a much larger territory and a wider variety of sectors. Milan has started to operate as a pivotal provider of high value-added and conception-oriented services in connection with a multitude of manufacturing firms (mostly SMEs). This has two implications. First, Milan could exploit its peerless position as the upper segment of numerous supply chains to fuel the growth of Northern Italy and therefore the growth of Italy. Second, the performances of Milan and its periphery are so closely intertwined that a slowdown in Milan's innovation capacity could surely impede on Northern Italy's vitality, just as an economic blow to Northern Italy would hamper Milan's competitiveness. In order to preserve and develop its ability to act as a magnet and an engine of growth in the globalised economy, Milan not only needs to identify its comparative advantages but also to understand the threats hanging over them⁷.

1.2. Long-established comparative advantages...

Milan has built a series of distinctive comparative advantages. These advantages mainly result from the region's industrial success since the 1950s and they constitute strong assets to support Milan's competitiveness in the global economy: (i) an already internationalised economy; (ii) a strong production framework, based on a mix of industrial districts and knowledge-intensive clusters; and (iii) a high innovation potential.

1.2.1. *An already internationalised economy*

Good accessibility

Milan's international accessibility could be a major asset in the globalised economy. Three international airports allow a large number of daily connections with major metropolitan regions in the world (Table 1.4). The international airport of Malpensa is one of the largest Italian airports in terms of passenger traffic volume. In 2004, Malpensa has registered high increases both in passenger traffic and freight traffic (respectively 5.3% and 12.5%). Located at around 50 km from Milan city downtown, it hosts 33 operating airlines and serves 69 destinations around the world. The airport of Linate is located very close to the City of Milan and ensures mostly domestic flights but also international flights to European destinations. A third airport called Orio al Serio ensures an important traffic of charter flights. In total, Milan's airports have received a transit of 29 million passengers in 2004, which represented an increase of 4.3% compared with 2003. However, international competition is harsh and Milan ranks below most major European cities in terms of passengers and freight (Table 1.5). Milan also registers good connections by rail and road in Europe. The region is involved in two major forthcoming European corridors (Lisbon–Kiev and Genoa–Rotterdam) and its international accessibility is expected to improve even further in the next few years. Milan is integrated in a huge European area that includes major cities and regions such as London, Paris, Lyons, and the Rhine area in Germany. Its multimodal accessibility was assessed as particularly encouraging among European regions.

Table 1.4. **Milan's three international airports**

Airport	Distance from downtown	Connection with downtown	Number of airline companies	Passengers traffic volume (number of people)	Freight traffic volume (tons)
Malpensa	48 km	Railway	33	17 514 720	319 513
Linate	8 km	Bus	20	8 755 971	24 551
Orio al Serio	49 km	Bus	19	2 843 500	128 686

Source: SEA, SACBO (2004).

Table 1.5. **Top 20 EU airports in terms of total passengers and total freight carried in 2004**

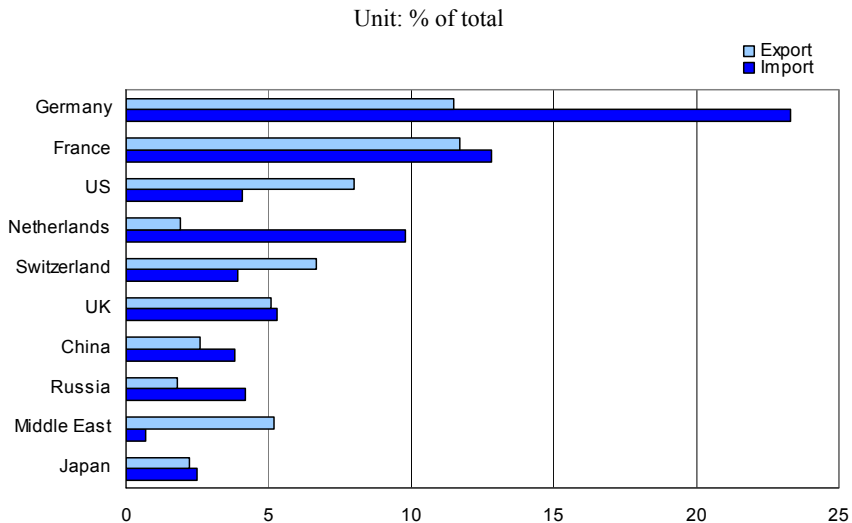
Passengers			Freight		
Airport	Thousand	Growth rate	Airport	Thousand	Growth rate 2003/2004
London Heathrow	67 110	6.2	Frankfurt am Main	1 827.3	11.2
Paris Charles de Gaulle	50 951	6.1	Amsterdam Schipol	1 467.0	8.4
Frankfurt am Main	50 700	5.6	London Heathrow	1 412.0	8.6
Amsterdam Schipol	42 425	6.6	Paris Charles de Gaulle	1 275.8	6.9
Madrid Barajas	38 155	7.9	Brussels National	660.4	8.9
London Gatwick	31 392	5.0	Cologne-Bonn	621.9	17.3
Rome Fiumicino	27 160	6.6	Luxembourg	616.6	2.3
Munich	26 601	11.1	Milan Malpensa	360.6	13.3
Barcelona	24 354	8.3	Madrid Barajas	352.8	19.1
Paris Orly	24 049	7.1	East Midlands	277.2	16.8
Manchester	20 970	7.4	London Stanstead	239.0	17.9
London Stanstead	20 909	11.7	London Gatwick	226.9	-2.8
Palma de Majorca	20 363	6.5	Munich	192.4	17.8
Copenhagen	18 889	7.6	Vienna	158.1	24.5
Milan Malpensa	18 419	5.4	Manchester	153.3	21.9
Dublin	17 032	7.9	Rome Fiumicino	139.6	-14.8
Stockholm	16 467	7.7	Bergamo Orio la Serio	129.6	1.3
Brussels National	15 445	2.3	Helsinki Vantaa	118.0	33.9
Dusseldorf	15 092	6.8	Genoa Sestri	111.4	.
Vienna	14 711	15.7	Athens	104.1	-20.8

Source: Eurostat.

Dynamic international trade

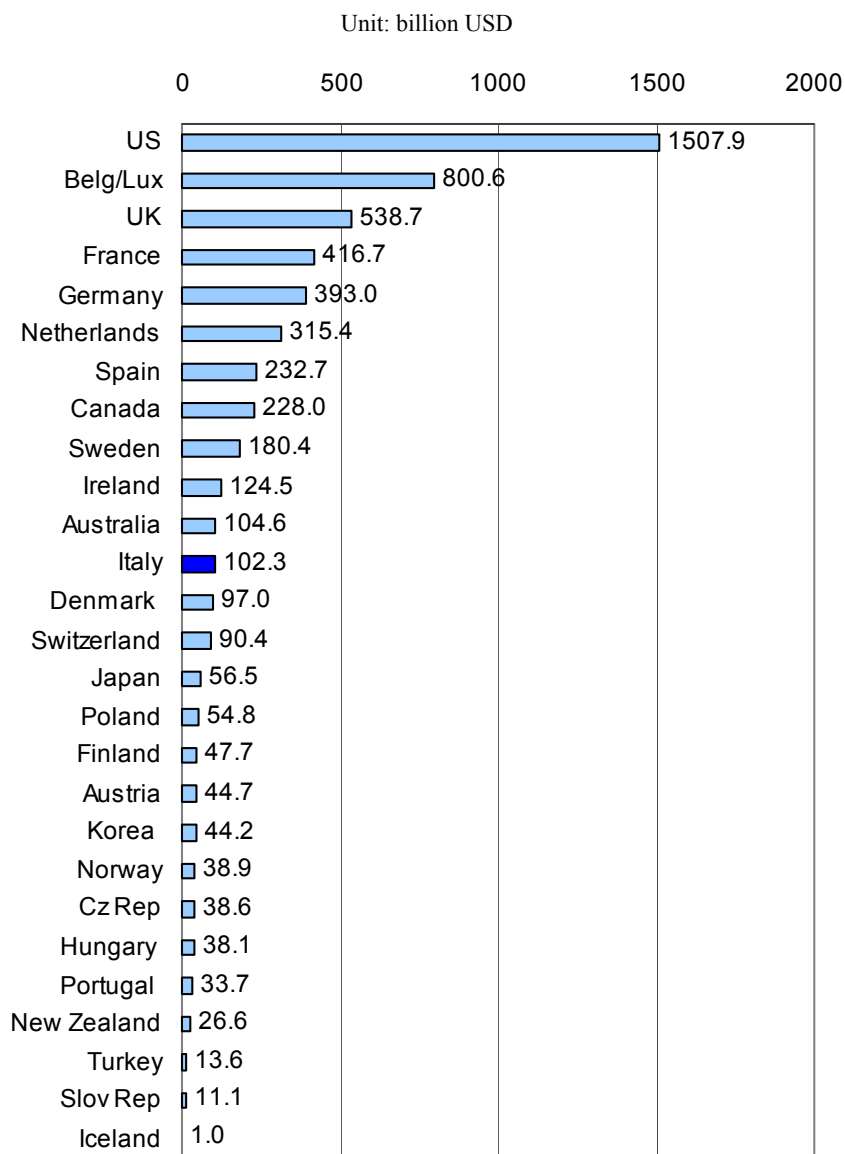
Milan stands out as a major commercial partner in the European market. It has built very strong linkages with Germany and France, two of the main European economies, which account for almost 25% Milan's total exports and of more than 40% of imports in 2004 (yet signalling a negative trade balance) (Figure 1.18). Milan's strong linkage with European market is confirmed by foreign direct investment (FDI) dynamics, both in terms of passive FDI and active FDI⁸. Concerning passive FDI, Milan concentrated more than 40% of inflows coming to Italy (Table 1.6). The bulk came from EU countries (57.2%), followed by the US (26.7%), Switzerland (6%) and Japan (5.8%). However, Milan's attractiveness should be nuanced in absolute terms as Italy receives much lower FDI inflows than other European countries such as the UK, France, Germany and Spain (Figure 1.19). Compared with OECD countries that have a similar size and a similar economy, Italy receives the lowest amount of FDI. Concerning active FDI, Milanese firms have invested 17.4% of the national total. Compared with the Italian average, Milanese firms have a lower propensity to invest in low-cost labour countries (*e.g.*, East Europe and North Africa) while their presence in EU countries is stronger. In 2004, Milan's investment was mainly directed to the EU with almost 50% of the total.

Figure 1.18. **Milan's main commercial partners, 2004**



Source: Istat, Chamber of Commerce of Milan (2005).

Figure 1.19. Cumulative FDI inflows in OECD countries, 1990-2003



Source: OECD Factbook 2005.

Table 1.6. **Active and passive FDI of Milan and Lombardy, 2004**

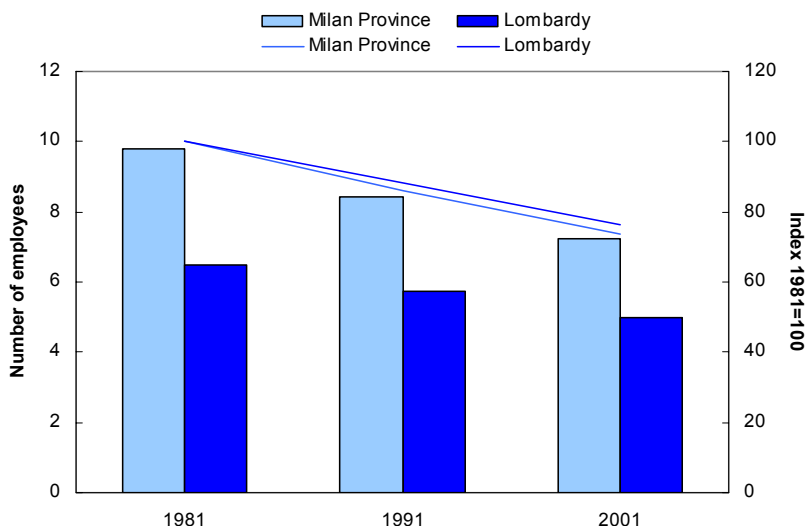
	Milan Total		Control participations		Lombardy Total		Control participations	
	Number	% of Italian total	Number	% of Italian total	Number	% of Italian total	Number	% of Italian total
Active FDI								
Foreign investors (firms)	947	17.5	827	17.9	1 915	35.3	1 655	35.9
Participated firms	3 245	21.6	2 644	20.6	5 428	36.0	4 452	34.7
Workers	212 551	19.2	162 671	18.5	387 410	34.9	276 044	31.4
Revenues (million EUR)	41 610	15.7	32 663	15.4	72 926	27.5	56 812	26.8
Passive FDI								
Participated firms	3 027	42.0	2 873	43.5	3 740	51.9	3 523	53.3
Establishments	717	18.3	656	18.9	1 376	35.2	1 242	35.8
Workers	340 086	36.2	311 574	38.6	438 104	46.7	398 325	49.4
Revenues (million EUR)	144 960	40.6	133 243	44.1	169 274	47.4	154 216	51.1

Source: Polytechnic of Milan.

1.2.2. A promising production framework: a mix of industrial districts and conception-oriented clusters

Few cities in the OECD area could replicate Milan's production framework, based on the combination of industrial districts and conception-oriented activities. Milan and Lombardy used to host some large competitive companies specialised in heavy industries (*e.g.*, Pirelli, Montecatini Edison, Alfa Romeo, etc.). These companies have left progressively between the 1980s and the 1990s to relocate in other regions. Milan's production fabric has changed into a web of smaller firms as the average firm size in Milan and Lombardy has decreased steadily from 1981 to 2001 (Figure 1.20). These firms now hold competitive advantages in: (i) some dynamic industrial districts in vertical sectors (mainly specialised in light industries such as furniture, metal engineering, electric equipment, etc.); (ii) conception-oriented activities in horizontal services (services that aim at devising the conceptual blueprint of products and often intervene at the top of various sectoral supply chains, such as industrial design).

Figure 1.20. Average size of firms in Milan and Lombardy, 1981-2001



Source: Istat.

The heritage of industrial districts

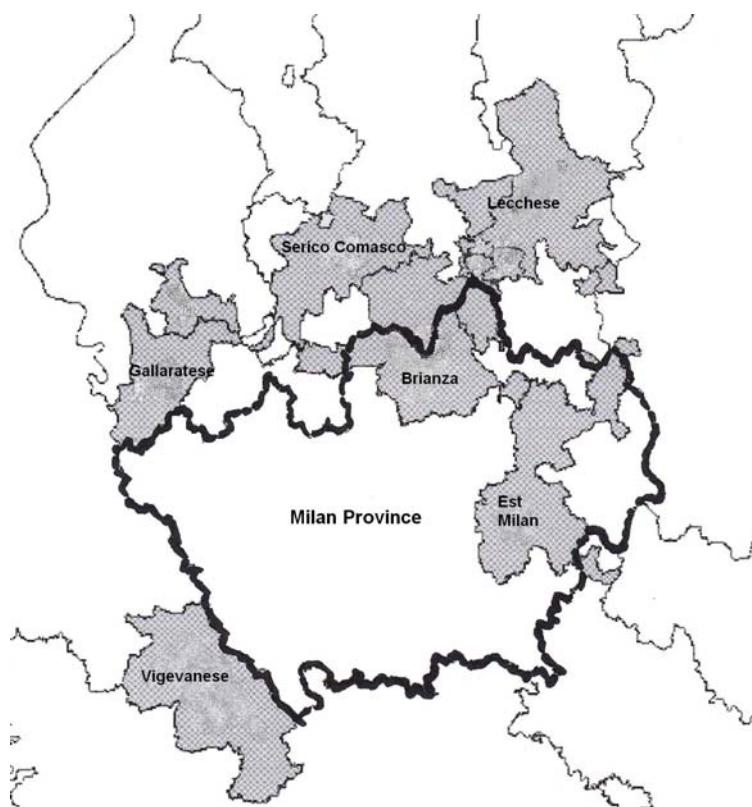
Milan could capitalise on the unique experience of its industrial districts. Industrial districts are a form of industrial organisation based on a mix of specialised, complementary and competitive relationships among SMEs. Industrial districts made a significant contribution to the economic prosperity of Italy (Box 1.1). SMEs in Milan organised themselves into strong industrial districts on the basis of the tremendous innovation spillovers from the large companies that used to be located in the highly industrialised core of Lombardy. Among the various industrial districts, three have specifically benefited from their territorial proximity to Milan: Brianza, East Milan and Lecchese (Figure 1.21).

Box 1.1. Industrial districts in Lombardy

The industrial district model is gaining new interest in the policy agenda due to globalisation and the harsh competition from new countries (mainly China) in traditional manufacturing sectors. Industrial districts are productive systems based on strong relationships between firms (trust and co-operation) and characterised by the geographical agglomeration of a large number of firms (usually small firms) that are involved at various stages in the production of the same or similar final product. Industrial districts act as if a single firm had been split up into several sub-firms or several departments. The “split-up firm” system can only function under certain conditions: the manufacturing process must be divisible into distinct phases, these phases do not have large economies of scale, and the demand of final products is neither stable nor predictable.

Industrial districts represent an essential feature of the Italian production framework, accounting for over 40% of employment in national manufacturing and exports. In 1991, Italy implemented a law (No. 317) to regulate and support its industrial districts. The regional government of Lombardy established its own criteria to identify industrial districts and finance development programmes. Initially, 21 industrial districts were singled out. In 2000, a new regional law revised the criteria and the number of industrial districts was reduced to 16. Two criteria were taken into account for each municipality in Lombardy: the *industrialisation rate* (the ratio between manufacturing workers and resident population) and the *specialisation rate* (the ratio between the workers of every branch of the manufacturing industry and resident population). Industrial districts were defined through the aggregation of neighbouring municipalities with an industrialisation rate higher than 18.5% (which represents the regional average rate increased by 30%) and a specialisation rate higher than 20% of the regional average. A general principle of *geographical proximity* was applied: some municipalities were included in the districts even if their rates were lower than the threshold. For some provinces that had a lower industrialisation rate (Pavia, Lodi, Cremona, Sondrio), the threshold was set at the pure regional average rate of 14.2% (instead of increasing it by 30% to 18.5%) and the specialisation rate was used as the priority indicator. The 16 industrial districts in Lombardy include 302 municipalities belonging to 10 provinces. Among them, 7 are specialised in textile/clothing industry, 3 in metal production and processing industry, 2 in footwear industry, 1 in furniture industry, 1 in wood industry, 1 in electric/electronic equipment industry, and 1 in plastic/rubber industry.

Figure 1.21. Industrial districts in Milan



Source: Istat.

Table 1.7. Industrial districts in the Milan metropolitan region, 2001

	Sector	Surface	Number of firms	Number of employees	Average size of firms (employees / firm)
Brianza	Furniture	258 km ²	38 750	160 000	4.13
Lecchese	Metal production & processing	310 km ²	3 631	35 583	9.8
East Milan	Electric, electronic & medical equipment	250 km ²	427	n.a.	n.a.

Source: Istat.

The Brianza industrial district is the oldest and most competitive Italian furniture district. It hosts 38 750 companies and 160 000 employees distributed in 45 municipalities (from the Province of Como and the Province of Milan). It represents 18.5% of total domestic production of furniture and 5.2% of the European production. The international success of the Brianza district is based on a number of competitive advantages. First, the “*Scuola d’Arti e Mestieri*” (school of arts and trade, founded in 1882) was able to codify local know-how and to spread it around. Second, the fair “*Esposizioni Permanenti*”, which was created at the end of the 19th century, facilitated the match between producers and buyers. Finally, research centres specialised in various fields⁹ were created during the 1980s and improved the local endowment in specialised services. Other assets were the quality of the furniture finish, the high quality of design and the synergies developed between furniture, mechanical and textile industries. Brianza has been hit by the direct competition of Asian countries, notably China. Firms have managed to exploit their localisation advantages and to maintain their competitive position by investing in updated machinery and by developing linkages with the fashion industry.

The Lecchese industrial district holds historic expertise in the metal-engineering industry. The local specialisation was based on the abundance of metalliferous veins, wood, coal and watercourses supplying energy to operate the machines. With 3 631 firms and 35 583 employees, the district has become a strong industrial manufacturer that exports about 30% of its products to Europe, America and Asia. In order to overcome the general crisis in the iron and mechanic sector, Lecchese firms have focused on high value-added products while outsourcing low value-added ones (mostly input goods) to emerging countries, which is illustrated by Milan’s growing imports from China in this sector. Currently, the district’s competitive advantages reside in the technical reliability of its firms, high quality in production and processing, and high specialisation in niche markets. The presence of research centres and of a university pole in the district also contributes to the innovation dynamics.

The East Milan district has emerged as a young district specialised in the production of electric, electronic and medical equipment. Its 427 firms are distributed across the provinces of Milan, Bergamo, Lecco and Lodi. The district encompasses three productive segments: office equipment and computers; electric apparatuses and equipment; medical and surgical equipment, precision apparatuses and optical instruments. East Milan is a relatively young industrial district. It developed mainly thanks to FDI and the location choice of two giants in ICT (IBM and ST Microelectronics). The concentration of strong foreign firms encouraged the creation of many SMEs specialised in related activities and in outsourcing services. Other

firms were set up as spin-offs of large companies that relocated, partly or entirely, their activities out of Milan. The most important productive poles are located quite close to the core of the City of Milan in the eastern ring (municipalities of Peschiera Borromeo, Vimercate, Cernusco sul Naviglio and Pioltello). The district is confronted with increased global competition, mainly coming from Asian countries where high-skilled workers can be hired for lower wages.

Conception-oriented activities

Milan fulfils a unique function of specialised high-level services provider. While the “ring belt” around the Province of Milan is the place of industrial districts, the core of the Milan metropolitan region concentrates small firms (sometimes micro-firms) specialised in advanced functions and conception-oriented high-level services such as industrial design. These firms agglomerated in the centre of Milan due to the proximity to specific codified knowledge provided by universities and related research centres (especially important for biotechnology and ICT industries for example) and to the vibrant environment that helped generate and spread tacit knowledge (particularly useful for design and fashion industries). Those specialised services are sold to a vast market of manufacturing SMEs scattered across Northern Italy. Milan’s service firms are not only geographically concentrated but they have developed close functional interactions. Among the different services, four could constitute particular cornerstones for Milan’s economy: fashion, design, fair and biotechnology.

Fashion

Milan holds a long-established localisation advantage in fashion. Milan has historically enjoyed the image of international “capital of fashion” by giving birth to global brands such as Armani and Prada. Milan is also specialised in many segments of the fashion supply chain other than clothing. For instance, the Ticinese area (bohemian-style neighbourhood of the City of Milan) concentrates styling and design activities, while the medieval area of the city hosts luxury retail activities the so-called *quadrilatero della moda*. Overall, the fashion supply chain represents more than 60 000 workers in the Province of Milan, with 6 695 production firms and 6 176 retail firms¹⁰ (including the textile sector). Milan’s total turnover (EUR 11 billion in 2003) is twice as large as the Italian average turnover. Milan’s styling and design activities alone produce more than half of the national total turnover (EUR 535 million out of EUR 1 billion)¹¹.

Specific assets have supported the development of Milan’s fashion cluster: (i) excellent organisational capacity of firms (e.g., high quality of

management and co-operation between design and production processes); (ii) networks of SMEs that formed a flexible production framework able to produce niche goods and adjust to change; (iii) a strong local textile sector that provided good “raw material” to designers and generated a constant flow of information; (iv) the localisation of specialised services, such as publishing and printing (which played an important role to present Milanese products in magazines all over the world) and especially fair services¹².

Design

Design acts as a powerful driver in Milan’s economy. It is based on shifting but constant demand from the local production framework, including the automotive industry, the furniture sector, the fashion sector (accessory goods such as glasses, watches, etc.) and the communication sector (advertising and other forms of mass-communication). During the post-war period, Milan was home to some of the most inspired architects and designers of the world (such as Giò Ponti and Ettore Sottsass) who strongly influenced the local cultural environment. The local specialisation is supported by the presence of high-level design schools. Milan hosts the first design faculty in Italy (the Politecnico di Milano) and other important institutions as the IED (European Institute of Design) and the Domus Academy. Milan also organises the “Triennale”, an exhibition founded at the beginning of the 20th century and fully dedicated to architecture and design. Precise data about the number of actors and their geographical concentration are not available, but Milan’s design cluster is known as one of the largest and the strongest in the world. Most actors are designers and entrepreneurs at the same time. They are free to express their creativity and to launch new experiments while they run their own business. Fragmentation is counterbalanced by a tight clustering dynamic supported by their spatial agglomeration in the bohemian area of Navigli (in the Ticinese neighbourhood) and the Gioia-Garibaldi area.

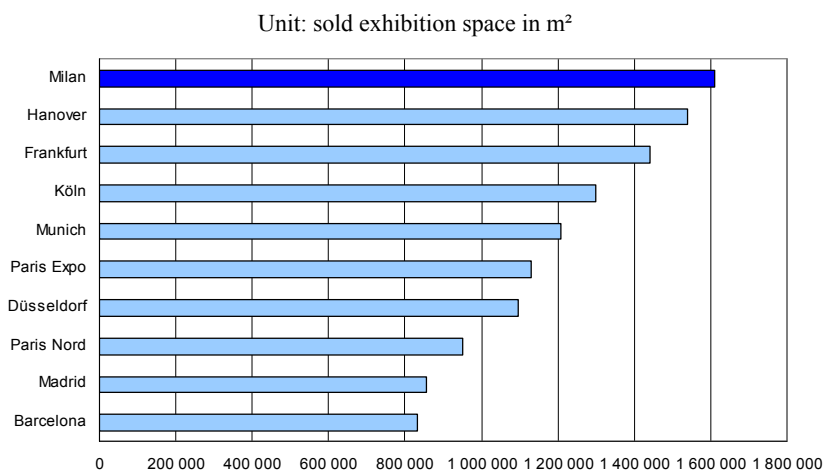
The fashion cluster and the design cluster benefit from very close interactions. The bulk of firms involved in the design and styling of textile, clothing, shoes, jewellery and furniture is clustered in the area of Navigli in the Ticinese neighbourhood. The average size of these firms is relatively small (2.44 workers per firm according to the 2001 Census of the Istat). The spatial concentration and the small size of firms have encouraged the production of relational capital and increased trust. Clients become friends; friends and neighbours become clients. Service providers rely on word of mouth to find new clients and retailers enjoy a direct relationship with the street via their shop window. The fashion cluster and the design cluster have been able to fully exploit mutual complementarities and synergy effects: the first focuses on the “emotional aspect” of the product (creativity and artistic

sensitiveness) while the second meets the “functional aspect” (operational capacity and minimised costs). Public policies have encouraged further integration between the two clusters during the 1990s by launching renovation programmes to convert old craftsman shops into new artisan productions and to recycle industrial sheds into lofts for example. The interactions between the two clusters have also encouraged the creation of entertainment and cultural services (restaurants, bars, night-clubs and specialised shops), *i.e.*, local private goods that generated a “buzz” environment and free exchanges of innovative ideas.

Fair

Milan has become a top-notch international fair capital. It has the largest and most popular fair system among large OECD cities in terms of sold exhibition space (Figure 1.22). In 2005, Milan enhanced tremendously its facilities by building a new large-scale exhibition area in the Rho-Pero municipalities (on the border of the City of Milan), which enjoys good connections with the city centre by the subway. The size and the first-class quality of the new Rho-Pero fair are expected to bolster even further Milan’s competitiveness in fair services. Fairs have successfully showcased the label “Made in Italy” and helped the local supply to adapt rapidly to the international demand. A striking example is the world-renowned Milano Collezioni (fashion fair), which attracts thousands of visitors and tourists twice a year.

Figure 1.22. **Major fair cities in Europe, 2001**



Source: Assolombarda.

Fairs not only reflect Milan's international attractiveness but also provide local SMEs with an indispensable networking service. While fairs were initially introduced to support Milan's heavy industry in the early 20th century, they have kept pace with the evolution of the local production framework and now serve a variety of sectors besides high-tech sectors. They have provided a unique platform for local SMEs to strengthen their networks both with their clients and with their suppliers. The high participation of local exhibitors (from Milan and Lombardy) to Milan fairs confirms the dense linkages within the productive framework (Table 1.8).

Table 1.8. **Breakdown of exhibitors by geographical area and by sector, 2000**

	Milan Province	Lombardy (excluding Milan Province)	Italy	Foreigners	TOTAL
High-tech	3 082	1 499	8 598	1 738	14 917
Consumer goods	1 191	920	8 007	999	11 117
Fashion	723	597	4 082	1 102	6 504
Culture & costume	972	423	2 816	491	4 702
Fair events	1 005	105	2 424	396	3 930
Furniture	475	389	2 111	384	3 359
Mifed (film & documentaries)	14	3	70	699	786
TOTAL	7 462	3 936	28 108	5 809	45 315

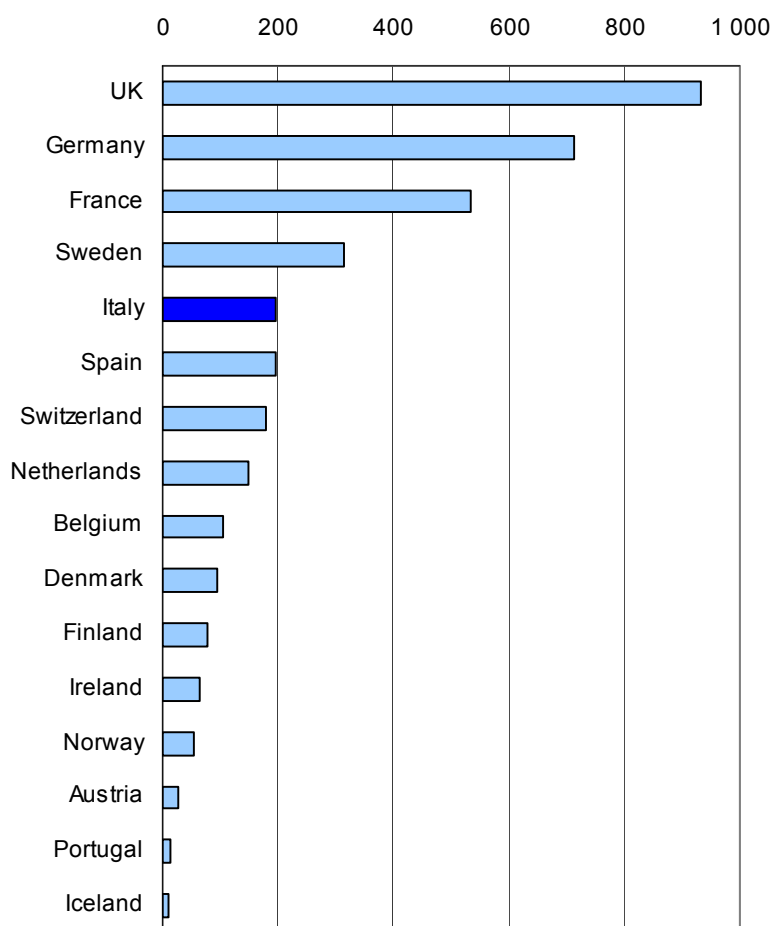
Source: Assolombarda.

Biotechnology

Milan has recently developed a biotechnology cluster. Italy ranks 5th in EU-15 (plus Switzerland) in terms of the number of biotechnology organisations (Figure 1.23). Lombardy alone concentrates 63% of Italian biotechnology firms, which are mainly located within the Province of Milan. The local specialisation is due to three factors. First, major pharmaceutical multinational groups used to establish their research centres in Milan to take advantage of its historic specialisation in pharmaceuticals. When these multinational groups relocated their activities out of Milan during the early 1990s, the Italian government incited them to allow the small firms that used to be their suppliers to continue using the registered patents and to carry on with research. The government also provided financial aid to support the survival of small firms. Second, local academia has generated highly skilled researchers and workers. Milan University, Bicocca University and San Raffaele University (a private hospital which was transformed into a university campus) offer biotech-related courses and they have recently opened incubators to promote entrepreneurship among

students and professors. Some of these initiatives have been successful in creating university spin-off firms. The Polytechnic of Milan has also offered technical support to firms and encouraged linkages with related sectors (such as bio-informatics). Finally, the local health care sector provided the downstream market for the cluster. Milan has highly specialised and world-renowned hospitals (especially in oncology). These hospitals sometimes finance biotech firms, which in turn focus on clinical biotech. The recent concentration of investment on the health care sector has enhanced the specialisation and the competitiveness of the local health sector and of local biotech.

Figure 1.23. **Number of organisations active in biotechnology in EU-15 and Switzerland, December 2000**



Note: Organisations include firms, public research organisations, and divisions.

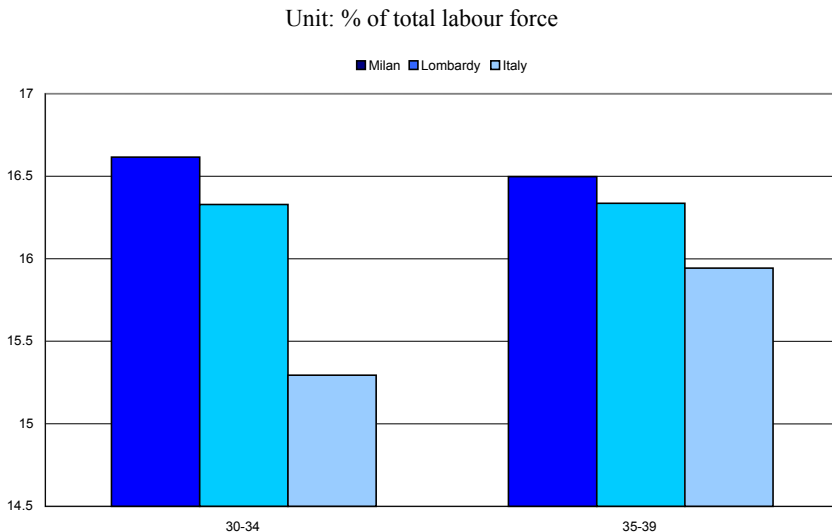
Source: Pammolli and Riccaboni (2001).

1.2.3. High innovation potential

Young high-skilled workers

The concentration of young and high-skilled workers in Milan holds great promises in terms of innovation potential. The Milanese labour market is younger than the Italian one on average. In particular, Milan hosts a higher percentage of 30-39 year-old workers than Lombardy and Italy (Figure 1.24). Considering that young workers are inclined to supply a higher quantity of labour than older segments of the labour force, their concentration is expected to influence the labour productivity rate positively. Milan also concentrates high-skilled workers. This is because Milan supplies high-level academic knowledge to SMEs networks all over the country. With 7 universities and 180 000 students (in the Province), Milan is the second academic pole of Italy only after Rome. The prestigious “Bocconi University” has bred generations of entrepreneurs that have led the growth of the Third Italy and of Lombardy’s industrial districts. The Politecnico di Milano has educated the most famous Italian designers and architects, who acted as the pillars of Milan’s industrial success during the 1950s.

Figure 1.24. **Young workers (aged 30-39) in Milan, Lombardy and Italy**

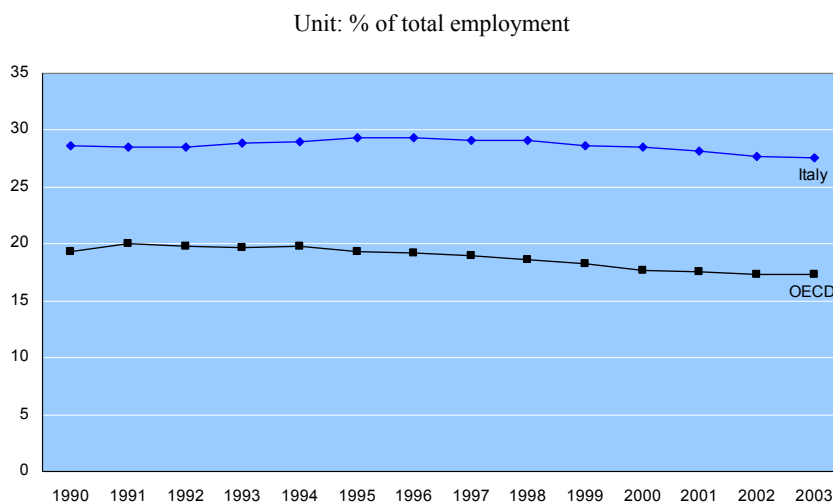


Source: Istat, Census 2001.

Strong entrepreneurship

Milan's innovation potential is supported by an outstanding entrepreneurship pool. Entrepreneurship is a long-established tradition in Italy and especially in Lombardy and Milan. Self-employment data provide evidence of the entrepreneurial spirit. Italy has constantly enjoyed a far higher proportion of self-employment than the OECD average (Figure 1.25). Almost one out of 10 inhabitants is an entrepreneur in Milan. These entrepreneurs often manage very small firms or even micro-firms. Italy has one of the highest shares of employment in small firms among OECD countries but also the highest share in the production of value-added by these small firms (Figure 1.26). Milanese small firms remain efficient because they act as sub-firms integrated within the “split-up firm” system. They manage to overcome the drawbacks of fragmentation by cultivating relational capital.

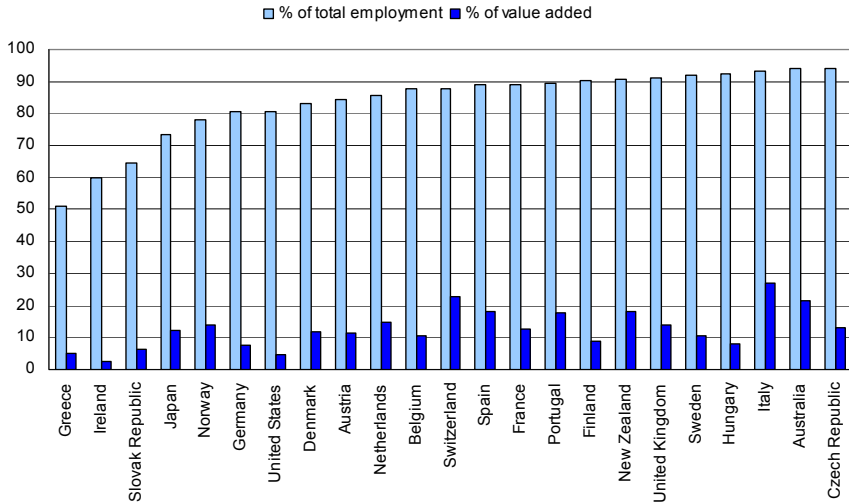
Figure 1.25. **Self-employment rate in Italy and OECD average, 1990-2003**



Source: adapted from OECD Factbook 2006.

Figure 1.26. **Employment and value-added of small firms in OECD countries, 2002**

Unit: % of total employment or value-added



Note. Small firms are firms with less than 20 employees.

Source: OECD Factbook 2006.

Efficient financial market

Milan's economy is irrigated by a dynamic financial market. Joint-stock companies are more than twice as numerous in Milan as in Italy, which points to the presence of a more efficient capital market (Table 1.9). Conversely, individually- or family-owned firms in Milan are roughly 20% less numerous than those in the country. Milan hosts the most important Italian stock exchange and the headquarters of major banks (including Unicredit Banca, Banca Intesa, etc.).

Table 1.9. **Breakdown of firms by legal type in Milan, Lombardy and Italy, 2001-2004**

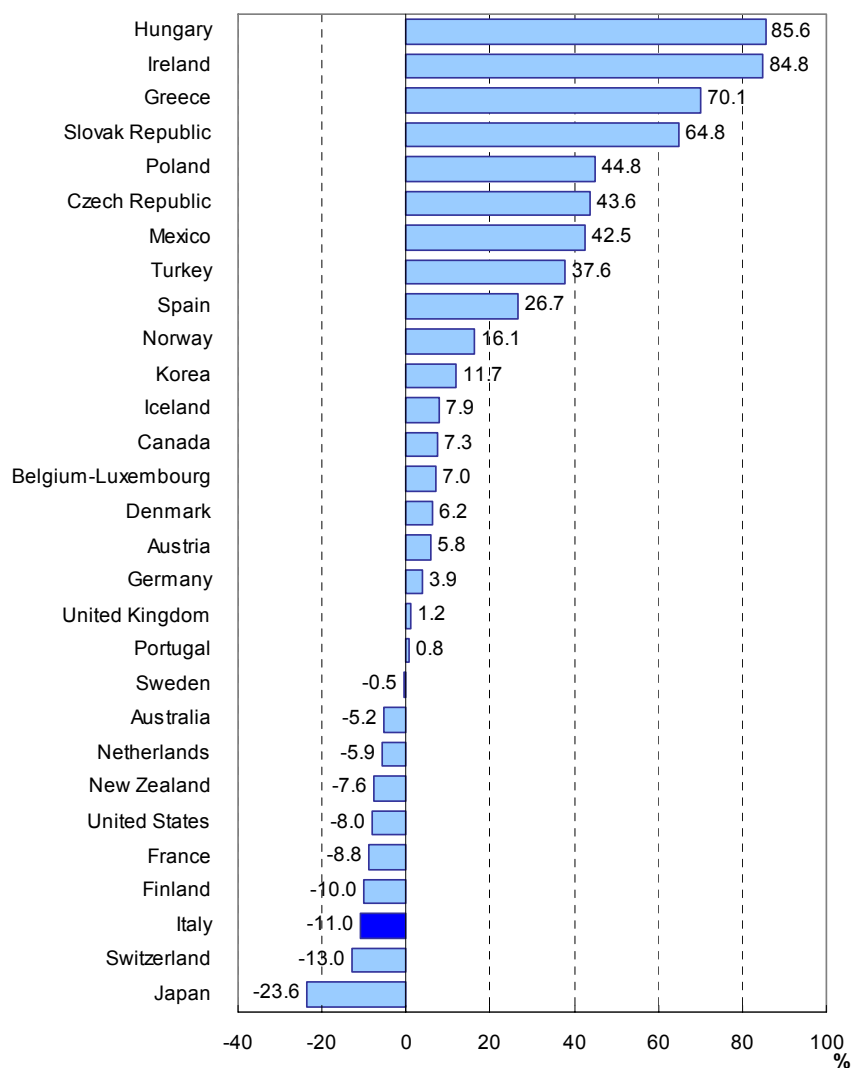
	Milan				Lombardy				Italy			
	2001	2002	2003	2004	2001	2002	2003	2004	2001	2002	2003	2004
Joint stock companies	27.3	28.0	28.3	28.7	19.6	20.3	20.8	21.2	10.8	11.5	12.0	12.5
Partnerships	22.7	22.4	22.1	21.7	23.2	22.9	22.6	22.2	18.0	17.9	17.8	17.7
Individually owned firms	47.6	47.1	47.0	47.1	55.4	54.8	54.6	54.5	69.3	68.6	68.1	67.8
Other	2.4	2.5	2.5	2.5	1.9	2.0	2.9	2.1	1.9	2.0	2.0	2.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: data from Infocamere.

1.3....affected by globalisation challenges

The global economy has put Italy and Milan under strain. Italy was hit hard by globalisation and may lose part of its competitive advantages, which gives some indications on Milan's performances. During the 1995-2003 period, Italy was one of the OECD countries that lost the highest export market shares (Figure 1.27). Italy also lost export shares in China and Hong Kong (Figure 1.28). Finally, Italy's trade balance registered a deterioration of its surplus in goods and a shift of its surplus into a deficit in services (Figure 1.29 and Figure 1.30). Few similar comparative data exist at the subnational level to assess precisely how globalisation has affected Milan and other large OECD metropolitan regions. However, some indicators suggest that some of Milan's long-established assets could be eroded, questioning its future role in the international division of labour. As assessed earlier, Milan holds location advantages¹³ including high-level services and high-skilled human capital. But these advantages could be put at risk in the near future: (i) Milan's innovation capacity is not fully exploited; (ii) its local human capital may be weakened; and (iii) Milan's liveability has collapsed in recent years.

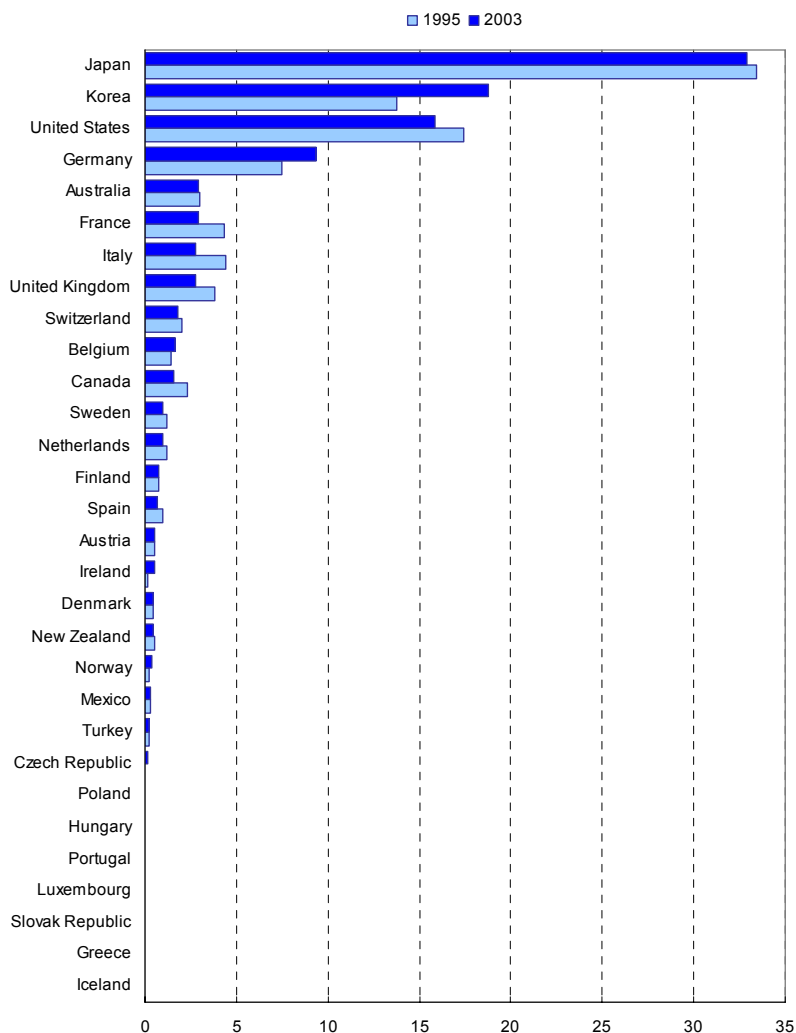
Figure 1.27. **Growth of OECD countries export market shares in goods and services, 1995-2003**



Source: OECD Economic Globalisation Indicators (2005).

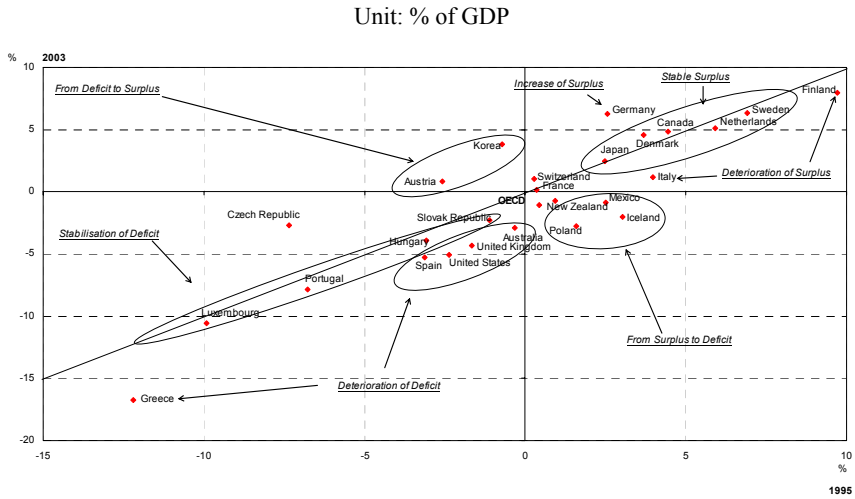
Figure 1.28. OECD countries' export market shares in goods and services into China and Hong Kong, 1995-2003

Unit: % of China and Hong Kong's domestic market



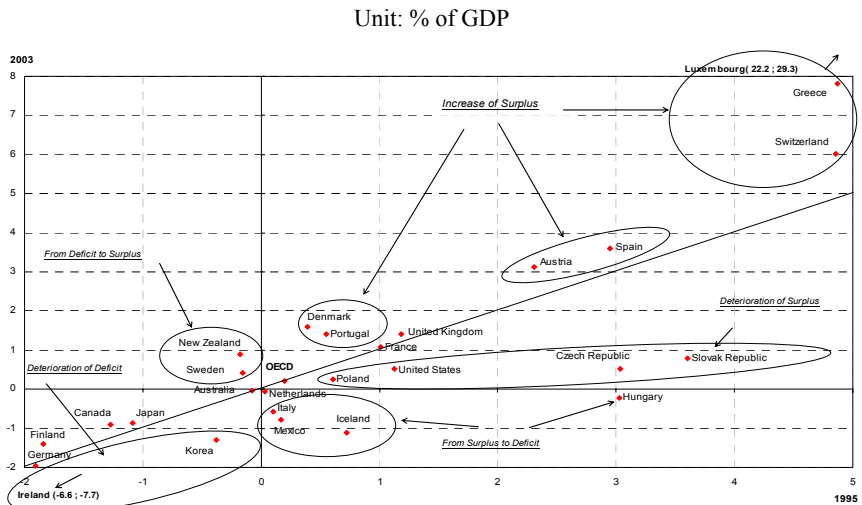
Source: OECD Economic Globalisation Indicators (2005).

Figure 1.29. OECD countries' trade balance in goods in 1995 and 2003



Source: OECD Economic Globalisation Indicators (2005).

Figure 1.30. OECD countries' trade balance in services in 1995 and 2003

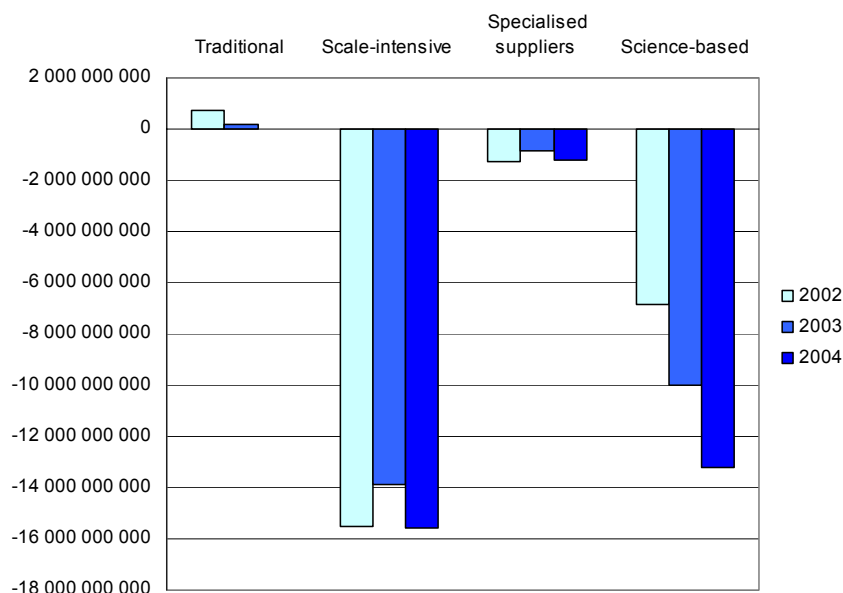


Source: OECD Economic Globalisation Indicators (2005).

1.3.1. Underexploited innovation capacity

A major cause for the decline of the manufacturing sector in Milan could be the lack of innovation. Milan is importing information and technology from other locations rather than producing and exporting knowledge. Its trade balance in the manufacturing sector remains positive in traditional goods but it registers a significant and growing deficit in science-based goods (Figure 1.31). Milan's traditional strength in some manufacturing industries (*e.g.*, textile) has been directly threatened by new competitors in emerging economies such as China. Italian firms have reacted to increased international competition by reducing production value and specialising in high value-added niche markets (Figure 1.32). However, the SMEs specialised in textile have long been unable and reluctant to engage into innovative activities. Italy has registered the lowest R&D intensity in the textile and clothing sector among OECD countries, both in 1990 and in 2000 (Table 1.10). Milan has developed service firms specialised in the high value-added segments of the supply chain.

Figure 1.31. Trade balance in manufacturing sector in Milan, 2002-2004

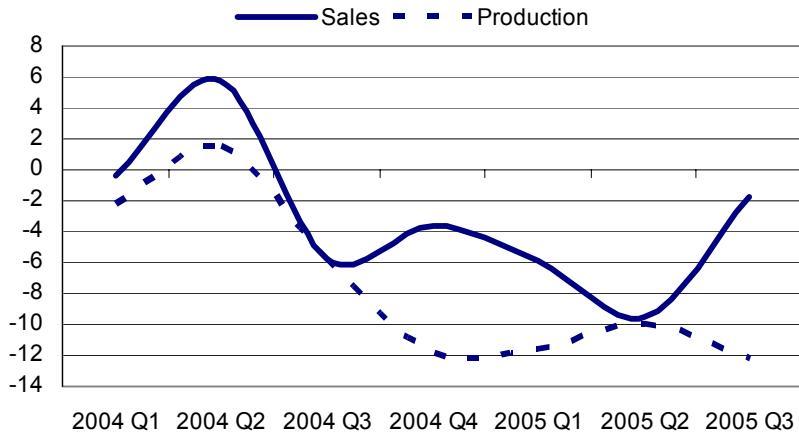
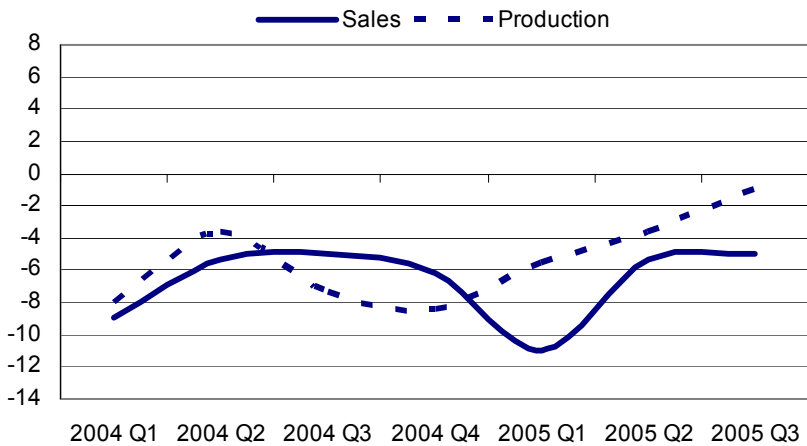


Note. The four categories follow the Pavitt taxonomy.

Source: Istat.

Figure 1.32. Trends in Italian fashion industry

Unit: yearly growth rate in % by quarter

Producers (clothing, shoes and leather)**Suppliers (textile and tan)**

Source: Camera Nazionale della Moda (National Chamber of Fashion).

Table 1.10. **R&D intensity in textile and clothing in OECD countries, 1990-2000**

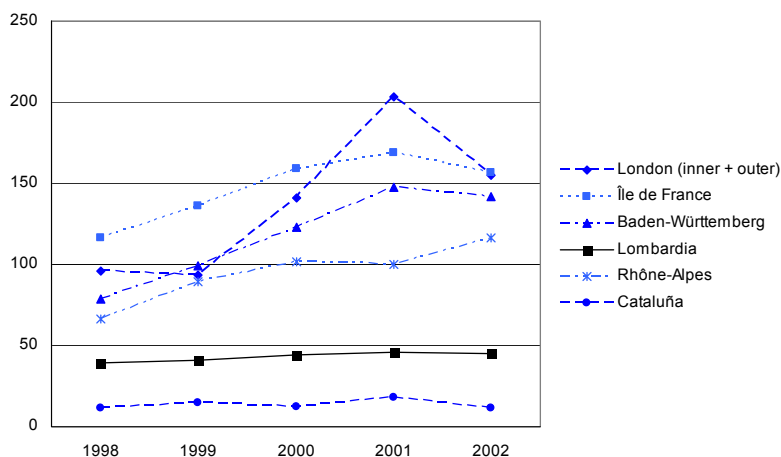
Unit: direct R&D expenditures as % of gross output

	1990	2000
Belgium	1.2	2.2
Canada	0.7	1.0
Denmark	0.4	0.9
Finland	1.1	2.4
France	0.4	0.9
Germany	1.5	2.0
Ireland	2.0	2.8
Italy	0.0	0.1
Japan	1.6	2.1
Korea	0.6	0.9
Netherlands	0.7	1.3
Norway	0.9	1.9
Spain	0.1	0.6
Sweden	1.5	1.1
UK	0.3	0.4
US	0.6	0.5
OECD area	0.9	1.4

Source: OECD (2004c) A New World Map in Textiles and Clothing: Adjusting to Change.

Milan's stagnant innovation capacity could further jeopardise its position in high-tech and knowledge-intensive activities. Two possible indicators of innovation capacity could be patent registrations¹⁴ and R&D expenditure. In terms of patent registrations, few comparative data exist at Milan's level but Lombardy has consistently lagged behind major European regions such as Lyon-Rhône-Alpes, Baden-Württemberg, London and Paris-Ile-de-France during the 1998-2002 period (Figure 1.33). Lombardy also consents lower R&D investment than the same European regions (Figure 1.34). Lombardy accounts for a major part of national R&D expenditure (around 23% in 2001). The private sector is very active in R&D but its contribution is counterbalanced by low public investment (Figure 1.35). Low R&D investment trends are confirmed at the national level. Italy ranks among the OECD countries with the lowest R&D expenditure as a share of national GDP and with the lowest share performed by the public sector (Figure 1.36 and Figure 1.37).

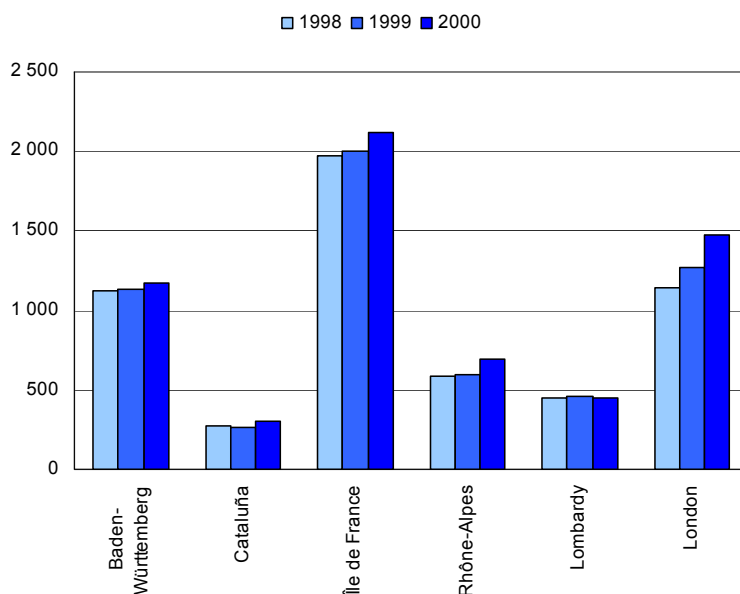
Figure 1.33. **European patent registration in high-tech sectors in selected European regions, 1998-2002**



Note. Computer and automated business equipment, micro-organism and genetic engineering, aviation, communication technology, semiconductors, laser
Source: Eurostat.

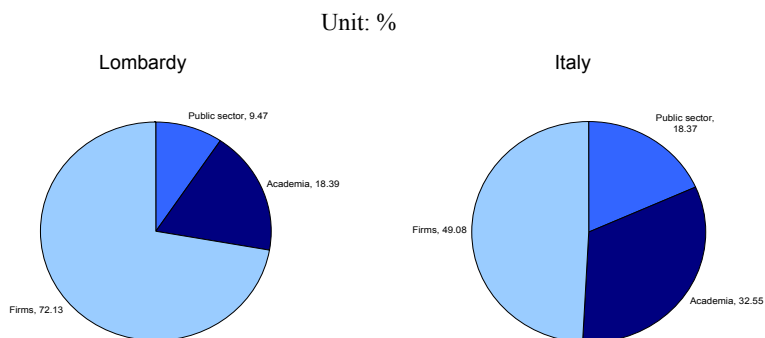
Figure 1.34. **R&D investment in European leader areas, 1998-2000**

Unit: thousand of EUR



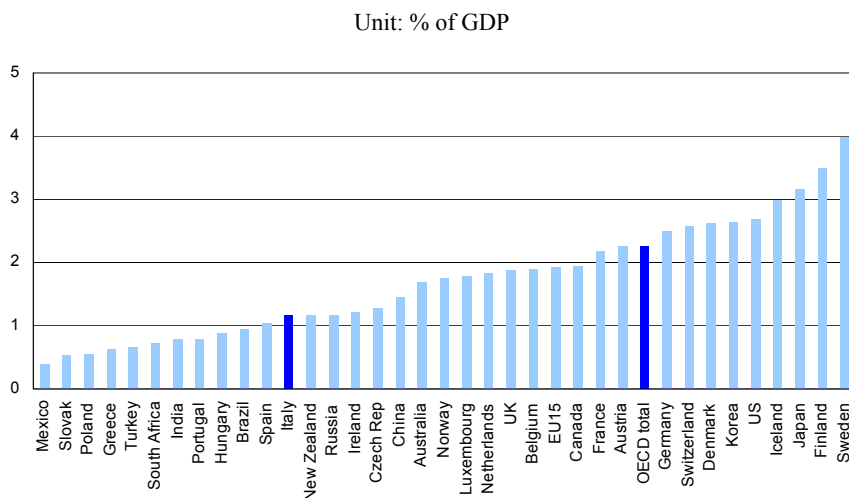
Source: Eurostat.

Figure 1.35. Sources of R&D expenditure



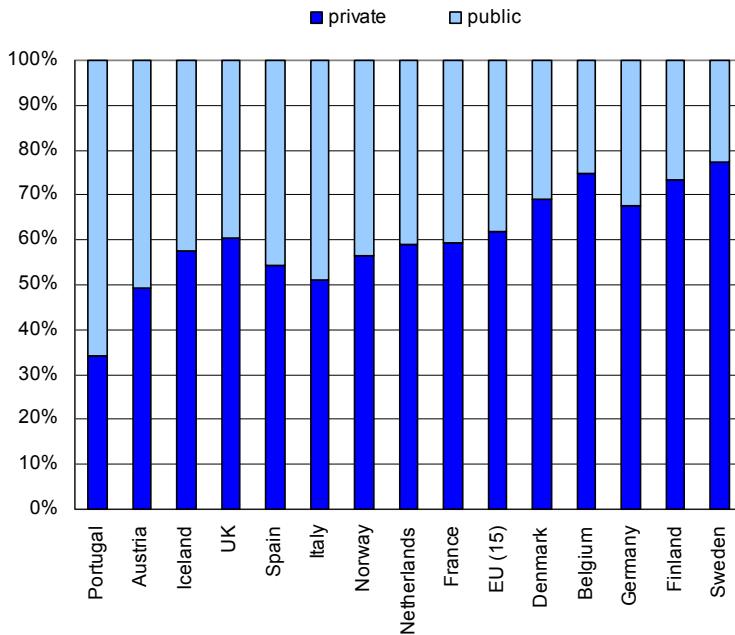
Source: Istat.

Figure 1.36. R&D expenditure in OECD Member and non-Member countries, 2004



Source: OECD Factbook 2006.

Figure 1.37. **Breakdown of R&D expenditure in OECD Member and non-Member countries, 2002**



Source: Eurostat and OECD.

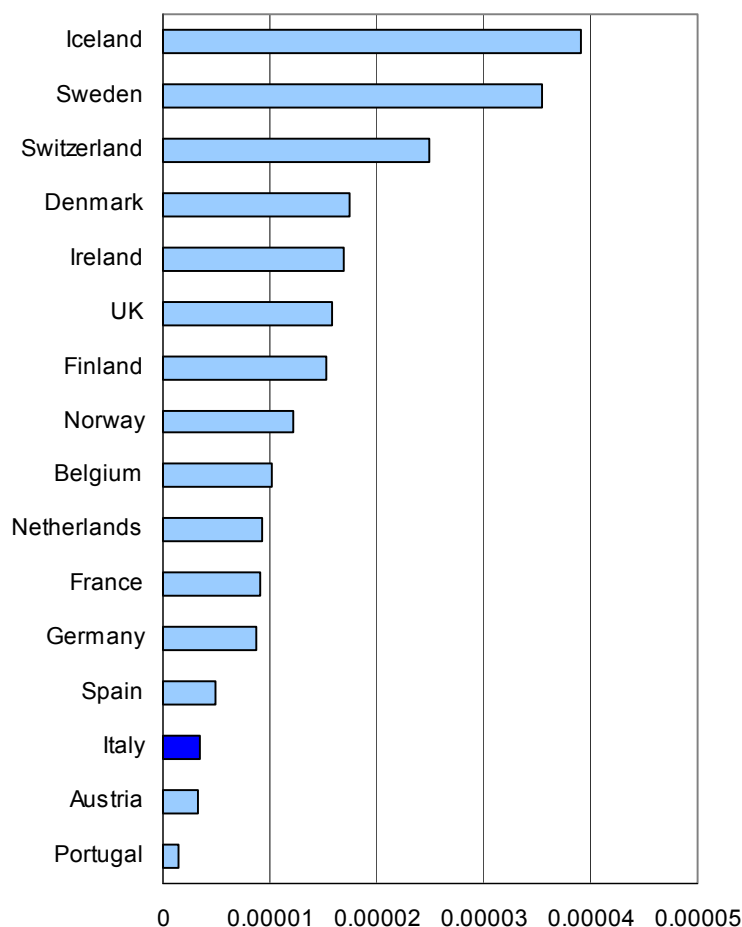
Sluggish innovation could perpetuate a vicious circle in the Milanese production framework. Most innovative metropolitan regions in the world generated or attracted large companies specialised in knowledge-driven activities (sometimes called “global players” due to their high internationalisation). Large companies produced the bulk of innovation because they were able to internalise costs of the innovation process. They triggered spillovers on the SMEs around them (suppliers and subcontractors), which in turn could yield innovative feedback. This scheme applied to Milan during the 1950-1960s, with one large company fuelling a cluster of SMEs in the furniture sector for example¹⁵. Today Milan has lost most of its large companies and SMEs seem unable to carry on the innovation dynamics.

This could be detrimental for the knowledge-intensive activities emerging or already well-established in Milan. For example, Milan’s biotechnology cluster faces several limits despite its promising appearance. Milan accounts for the bulk of the national biotechnology sector but Italy remains a modest player in Europe considering its demographic size (Figure 1.38). Milan’s biotech cluster has developed later than in other European regions. It is also located relatively close to one of the most successful biotech parks in Europe (Biovalley, a cross-border

project between France, Germany and Switzerland), which could easily divert investment and talents from Milan (Figure 1.39). Finally, the local downstream market (health care sector) only supports clinical research and it is too small to sustain an endogenous process of growth. In this fragile context, Milan's biotech cluster is unlikely to leap forward without substantial innovation. A similar threat hangs over Milan's design cluster. While abundant scientific knowledge is available in the local system, most of the firms are micro- or individually-owned firms that choose "artistic" research over R&D and are losing their capacity to ensure the industrial design of mass production goods for complex projects.

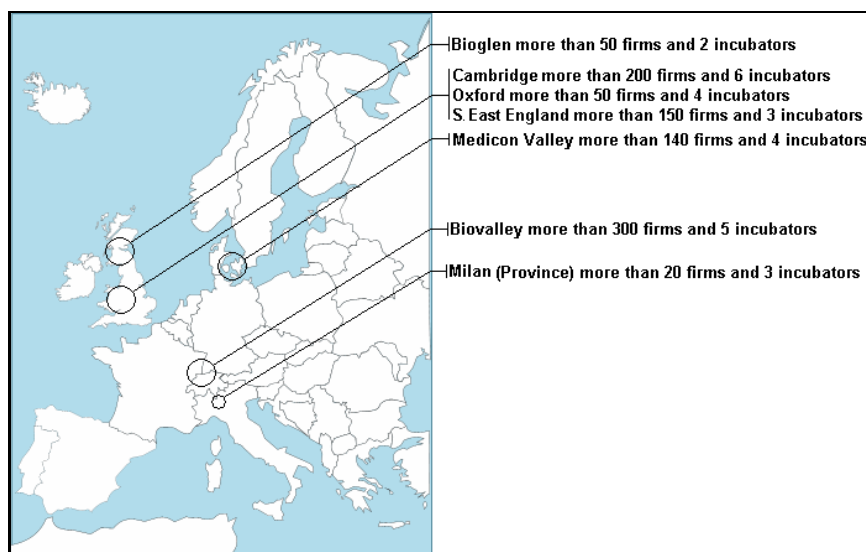
Figure 1.38. **Biotechnology in Europe, 2000**

Unit: ratio biotech institutions/population



Source: Pammolli and Riccaboni (2001).

Figure 1.39. Major biotechnology poles in Europe



Source: Blossom Associati – Assobiotech (2006).

1.3.2. Threats to local human capital

Milan's innovation capacity could be further reduced due to threats to local human capital. Milan's attractiveness *vis-à-vis* high-skilled workers could be reduced due to: (i) labour precarity (low wages and short-term contracts); (ii) an underexploited academic system; and (iii) lack of incentives to attract innovative workers.

Labour precarity

Low real wages and short-term contracts may act as deterrents to the development of local human capital. High real wages are a necessary (though not sufficient) condition to agglomerate human capital in a given region. In the globalisation context of higher labour mobility, a region offering low wages not only risks losing its attractiveness but also its capacity to retain its best local workers. Milan proposes the highest annual wages per capita in Italy, but the Italian hourly labour cost ranks below those of most European leading countries and below the EU-15 average (Table 1.11 and Figure 1.40). Between 1980 and 1995, labour productivity increased by 2% but wages per employee decreased by 1%. The share of employees' wages in value-added decreased by 12% during the same period. Real wages are eroded by the exceptionally high cost of living in Milan, which stands far above other European regions

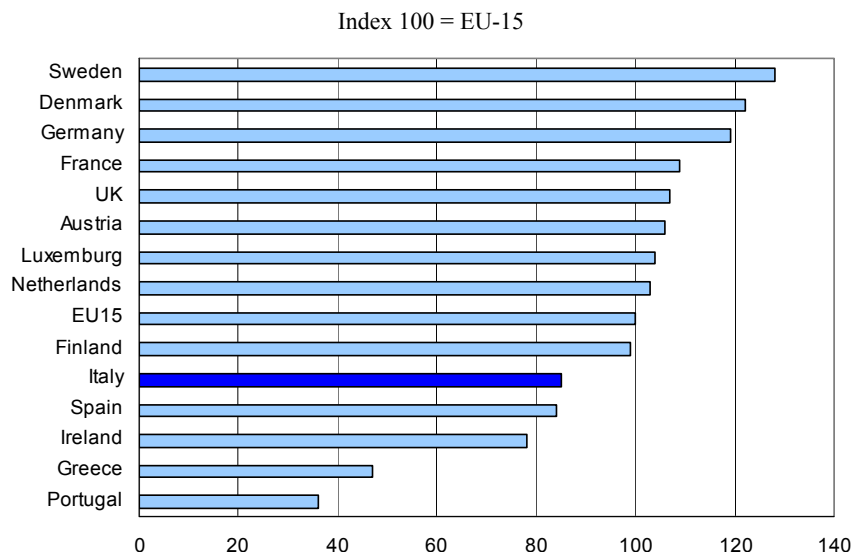
(Figure 1.41). White collars and especially young skilled workers have lost purchasing power¹⁶. The low level of compensations is mainly due to the use of short-term contracts in Milan. Flexibility was introduced in the Italian labour market in 1997 with the “Pacchetto Treu”¹⁷. Firms have relied on short-term contracts to hire low-skilled workers, but mostly young workers, women and foreigners (Table 1.12).

Table 1.11. Annual wages per capita in Milan, Lombardy and Italy, 1995-2002

Values in thousand of EUR	1995	1996	1997	1998	1999	2000	2001	2002
Milan	15 128	15 640	16 375	16 784	16 831	17 130	16 962	17 751
Lombardy	14 018	14 500	15 085	15 535	15 660	15 906	15 830	16 642
Italy	12 895	13 367	13 857	14 469	14 461	14 700	14 594	15 183
Milan (Italy = 100)	117.3	117.0	118.2	116.0	116.4	116.5	116.2	116.9
Lombardy (Italy = 100)	108.7	108.5	108.9	107.4	108.3	108.2	108.5	109.6

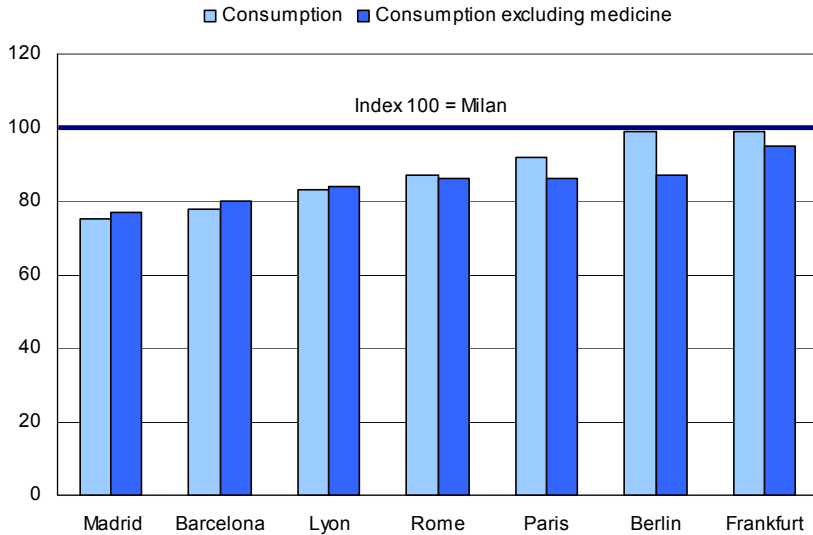
Source: INAIL.

Figure 1.40. Hourly labour cost in EU-15 countries, 2004



Source: Chamber of Commerce of Milan.

Figure 1.41. Cost of living in main European cities, 2004



Source: L. Campiglio (2004).

Table 1.12. Type of contracts in the Province of Milan (2003-2004)

	Number of workers in 2004	% of total in 2003	% of total in 2004
Open-end contracts	132 189	42	32
Temporary contracts	101 475	27	39
<i>average age</i>	33.9 years		
<i>women</i>	46.8%		
<i>foreigners</i>	22.3%		
Other contracts (e.g., internships)	83 445	31	29
TOTAL		100	100

Note: Workers can have more than one contract during the same year

Source: Province of Milan (2005).

Underexploited academic system

Milan's prestigious academic system has remained underexploited. Lombardy has the largest academic system in Italy (245 000 students, *i.e.*, 13.6% of the national total) and Milan accounts for 77% of it (187 000 students, *i.e.*, 10.4% of the national total). Universities offer a mix of general courses and highly specialised courses (Table 1.13). Despite their size and specialisation, local universities seem to lag behind most international top-class universities. For example, Lombardy attracts only a low number of foreign students compared to other European universities¹⁸ (Figure 1.42). The

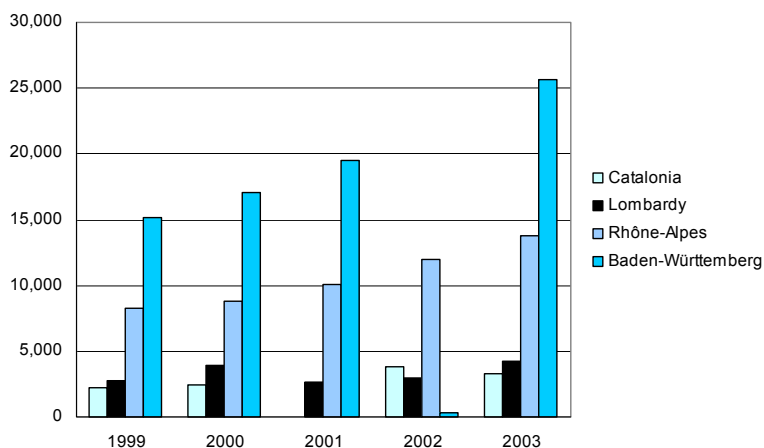
high cost of living and the lack of a university campus (or an adequate student housing area) have contributed to Milan's low attractiveness.

Table 1.13. **Student graduates by university and field of study in 2003-2004**

	Total	Human & social sciences	Medicine	Natural sciences	Technical sciences
Milan - State University	7 096	2 533	1 173	1 704	1 686
Milan - Bicocca - State University	2 554	1 115	296	400	743
Milan - Polytechnic	8 355	0	0	0	8 355
Milan - Catholic University "Sacro Cuore"	6 482	4 729	880	189	684
Milan - Commercial University "L. Bocconi"	2 468	2 401	0	0	67
Milan - IULM	1 674	1 641	0	0	33
Milan - University Life-Health San Raffaele	153	28	125	0	0
Province of Milan (%)	100	43.25	8.60	7.97	40.19
Bergamo - State University	1 176	891	0	0	285
Brescia - State University	1 843	616	518	0	709
Pavia - State University	446	302	0	0	144
Castellanza - "Carlo Cattaneo" University	978	221	282	193	282
Varese - University of Insubria	4 110	1 622	836	391	1 261
Lombardy (%)	100	43.12	11.00	7.71	38.17
Italy (%)	100	47.26	13.04	8.48	31.22

Source: Ministry of Education, Universities and Research.

Figure 1.42. **Number of foreign students, 1999-2003**



Source: Eurostat.

The modest participation of local academia could slow down the regional innovation dynamics. There is a lack of incentives for universities to engage into innovation activities. Italian university professors were allowed to own their patent registrations only in 2001. They also receive little financial support to afford the cost of patent registrations. It will take some time for Milan to move from a system in which professors collected no royalties from their patents towards another system in which they would be supported by their universities to exploit their innovative capacity. University spin-offs seem to have remained relatively moderate in Milan.

Lack of incentives for “creative” people

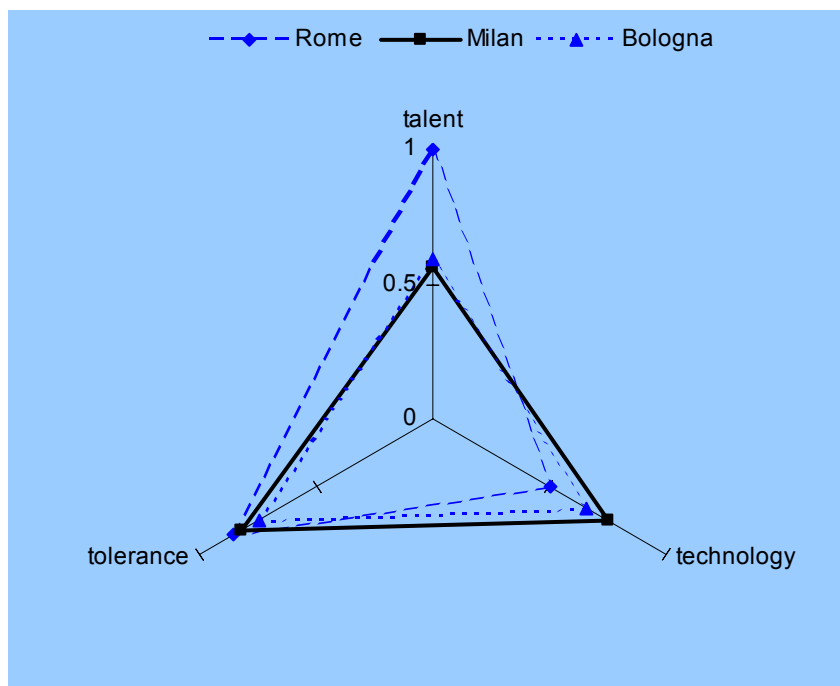
Milan’s capacity to generate or to bring “creative” people together seems to be slowing down. Well-known studies have emphasised that successful regions are often characterised by a high concentration of the so-called “creative class”¹⁹. A “country effect” exists as the macroeconomic environment depends on national policies (such as immigration rules or R&D investment). Italy ranks below most OECD countries in terms of “creativity index” (Table 1.14). Compared with Rome and Bologna, Milan registers stronger endowment in technology but weak performances in talent (Figure 1.43).

Table 1.14. **The creativity index**

Rank	Country	Score
1	Sweden	0.81
2	US	0.73
3	Finland	0.72
4	Netherlands	0.67
5	Denmark	0.58
6	Germany	0.57
(7)	Belgium	0.52 (tie)
(7)	UK	0.52 (tie)
9	France	0.46
10	Austria	0.39
(11)	Ireland	0.37 (tie)
(11)	Spain	0.37 (tie)
13	Italy	0.34
14	Greece	0.31
15	Portugal	0.19

Source: Florida and Tinagli (2004).

Figure 1.43. Talent, technology, and tolerance in Milan, Rome and Bologna



Source: Florida and Tinagli (2004).

1.3.3. Deteriorating liveability

Milan's attractiveness has suffered from a striking deterioration of liveability in recent years. Liveability has become a key determinant for the competitiveness of metropolitan regions. Innovative workers remain sensitive to high wages but they seem particularly attracted by a vibrant environment²⁰. Milan used to be known as a lively and sparkling place, symbolised by the motto "*Milano da bere*"²¹. Recently it has ranked consistently lower than most OECD metropolitan regions in terms of quality of life and investors' locational preferences (Table 1.15 and Table 1.16). While its economy was soaring, Milan has paid a significant price in the quality of its urban environment. In particular, three critical weaknesses could hamper Milan's liveability and competitiveness: (i) weak regional transportation infrastructure; (ii) housing shortage and social segregation; and (iii) underexploited amenities.

Table 1.15. A tentative ranking of 52 cities for their quality of life, 2003-2005

City	Country	2005	2004	2003	City	Country	2005	2004	2003
Geneva	Switzerland	1	1	2	Hamburg	Germany	27	24	26
Zurich	Switzerland	2	1	1	Helsinki	Finland	28	24	26
Vancouver	Canada	3	3	2	Honolulu	USA	29	24	23
Vienna	Austria	4	3	2	San Francisco	USA	30	24	20
Frankfurt	Germany	5	5	5	Brisbane	Australia	31	24	31
Munich	Germany	6	10	10	Oslo	Norway	32	31	31
Düsseldorf	Germany	7	12	12	Paris	France	33	31	31
Auckland	New Zealand	8	5	5	Singapore	Singapore	34	33	36
Bern	Switzerland	9	5	5	Tokyo	Japan	35	33	26
Copenhagen	Denmark	10	5	5	Lyon	France	36	35	39
Sydney	Australia	11	5	5	Yokohama	Japan	37	35	31
Amsterdam	Netherlands	12	10	10	Boston	USA	38	41	39
Brussels	Belgium	13	12	12	London	UK	39	35	39
Melbourne	Australia	14	12	15	Kobe	Japan	40	38	36
Berlin	Germany	15	15	15	New York	USA	41	38	44
Luxembourg	Luxembourg	16	15	15	Madrid	Spain	42	38	44
Stockholm	Sweden	17	15	15	Portland	USA	43	41	39
Toronto	Canada	18	15	12	Barcelona	Spain	44	44	50
Wellington	New Zealand	19	15	15	Washington	USA	45	.	.
Ottawa	Canada	20	20	20	Winston Salem	USA	46	43	39
Perth	Australia	21	20	20	Lexington	USA	47	44	44
Nordberg	Germany	22	20	26	Osaka	Japan	48	44	47
Dublin	Ireland	23	23	23	Pittsburgh	USA	49	44	47
Montreal	Canada	24	24	23	Seattle	USA	50	44	36
Adelaide	Australia	25	24	31	Chicago	USA	51	49	47
Calgary	Canada	26	24	26	Milan	Italy	52	49	62

Source: Mercer (2006).

Table 1.16. **Locational preferences of investors, 1990-2005**

Cities	Rank			Weighted score 2005
	1990	2004	2005	
London	1	1	1	0.87
Paris	2	2	2	0.60
Frankfurt	3	3	3	0.33
Brussels	4	4	4	0.30
Barcelona	11	6	5	0.28
Amsterdam	5	5	6	0.24
Madrid	17	7	7	0.24
Berlin	15	9	8	0.19
Munich	12	8	9	0.18
Zurich	7	10	10	0.18
Milan	9	11	11	0.15
Dublin	-	12	12	0.14
Prague	23	13	13	0.14
Lisbon	16	16	14	0.12
Manchester	13	14	15	0.12
Düsseldorf	6	18	16	0.10
Stockholm	19	15	17	0.10
Geneva	8	17	18	0.10
Hamburg	14	19	19	0.09
Warsaw	25	20	20	0.09
Budapest	21	23	21	0.09
Glasgow	10	24	22	0.08
Vienna	20	22	23	0.07
Lyon	18	21	24	0.07
Copenhagen	-	26	25	0.06
Rome	-	25	26	0.05
Helsinki	-	28	27	0.04
Moscow	24	27	28	0.03
Oslo	-	30	29	0.03
Athens	22	29	30	0.03

Notes: 1) Base: 501. 2) In 1990, only 25 cities were included in the survey.

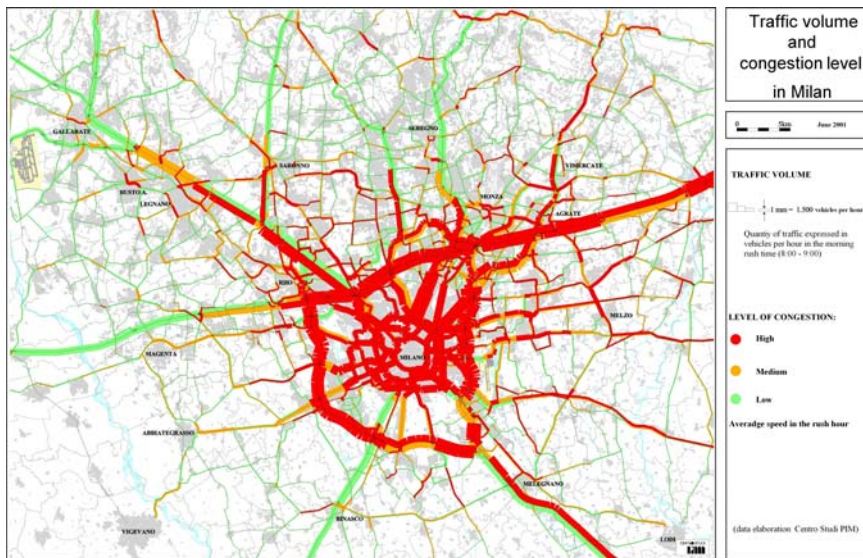
Source: Cushman & Wakefield (2005).

Weak regional transportation infrastructure

Critical bottlenecks in transportation could reduce agglomeration economies. High demand for mobility and severe congestion constitute recurrent problems in large OECD metropolitan regions. Faced with similar challenges as other regions, Milan seems to lag behind in designing solutions. Both private and public transportation systems register poor performances compared with other regions. Concerning private transportation, the average speed in the Milan Province during the rush hour is only 28 km per hour, while Greater London registers 24.14 km per hour with twice as large a population. Roads connecting different parts of the Milan metropolitan region have reached a saturation level. For example, the traffic/capacity ratio of the Milan-Bergamo highway is higher than 150%,

and that of the eastern ring road ranges between 100% and 150% (Figure 1.44). Regarding public transportation, the Region of Lombardy ranks 71st out of 135 EU regions in terms of railway equipment and 91st for road equipment (Assolombarda, 2003). Milan was perceived as the 22nd city out of 30 cities for the quality of its internal transportation (Cushman and Wakefield, European Cities Monitor 2005). It has only a limited number of subway lines and they serve only the core of the city, while suburban connections remain incomplete.

Figure 1.44. Volume of traffic in Milan



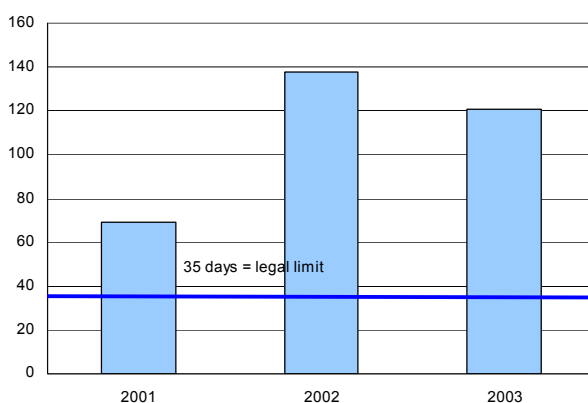
Source: Piano Intercomunale di Milano.

Transportation bottlenecks have caused major pollution concerns. Investors regularly reference Milan as the most polluted city in Europe after Moscow (Table 1.17). Although air quality has slightly improved over the past few years, concentrations of ozone (O₃) and small particles (PM₁₀) have reached alarming levels. Daily average PM₁₀ concentrations have persistently exceeded the legal limit (Figure 1.45). Air quality in Milan remains poor throughout the year because O₃ levels exceed the limit during the summer while PM₁₀ concentration levels rise during the winter due to stationary sources (heating equipment).

Table 1.17. **Best cities in terms of freedom from pollution, 2004-2005**

City	Rank 2005	Rank 2004
Stockholm	1	1
Oslo	2	2
Zurich	3	4
Geneva	4	3
Helsinki	5	5
Copenhagen	6	7
Dublin	7	9
Munich	8	6
Vienna	9	12
Barcelona	10	10
Amsterdam	11	8
Lisbon	11	11
Hamburg	13	12
Glasgow	14	14
Lyon	15	19
Prague	16	17
Manchester	17	18
Düsseldorf	18	16
Brussels	19	15
Berlin	20	19
Madrid	21	25
Budapest	22	23
Frankfurt	23	22
Rome	23	26
Warsaw	25	27
Paris	26	21
London	27	24
Athens	28	29
Milan	29	28
Moscow	30	30

Source: Cushman & Wakefield (2005).

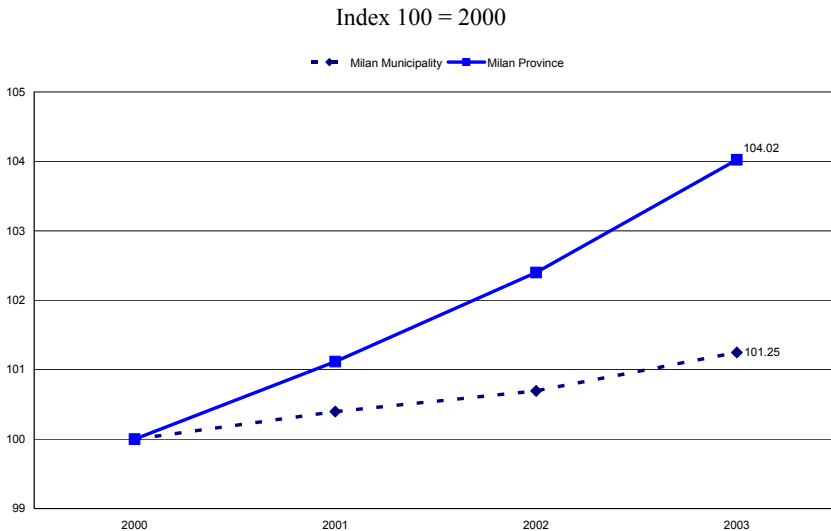
Figure 1.45. **Days of PM10 concentration in the City of Milan**

Source: Assolombarda.

Housing shortage and social segregation

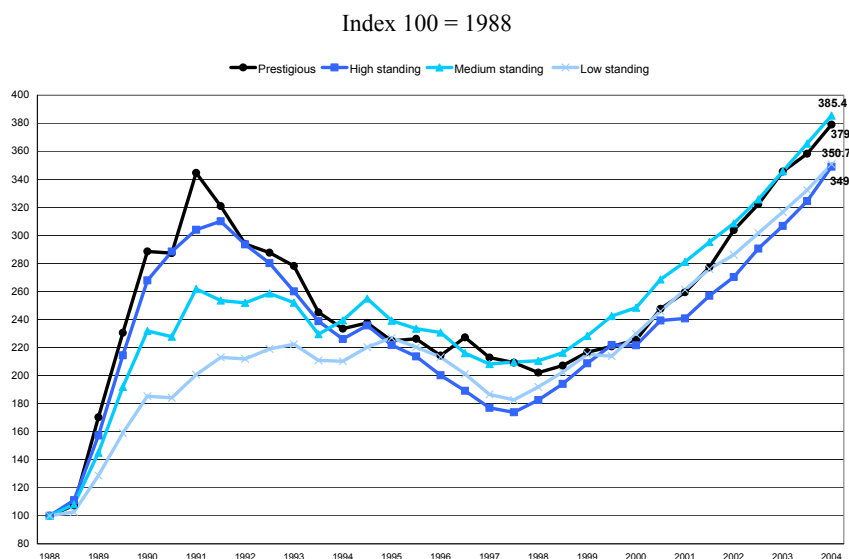
Milan suffers from housing shortage. It is estimated that 50 000 households lack adequate housing in the core city of Milan. This Figure is expected to remain stable as the residential housing stock has experienced only modest increases over the last three years in the core city while the province was performing better (Figure 1.46). Public housing estates offer very few allotments (less than 500 per year in the city of Milan). The housing shortage has engendered spatial polarisation and social segregation (which tend to reinforce each other). While comparative data across OECD regions are not available, the prices of all residential housing categories have rocketed in the city of Milan during the 1988-2004 period (Figure 1.47).

Figure 1.46. **Residential housing stock in Milan, 2000-2003**



Source: Assolombarda.

Figure 1.47. Residential housing market prices in the City of Milan, 1988-2004



Source: Assolombarda, Nomisma.

Underexploited amenities

Milan has not fully exploited its cultural amenities. Milan does not seem to be appreciated as a tourism place. Most visitors arrive in Milan for business purposes or special events, usually related to fashion or other fairs. Their average journey time is only 2.4 days per year. Like many other Italian cities, Milan enjoys a remarkable endowment of sacred and medieval art. Among other amenities, it hosts one of the largest cathedrals of the world (Duomo), a UNESCO World Heritage site (Leonardo da Vinci's *Cenacolo Vinciano*) and a famous 14th-century castle (*Castello Sforzesco*). Many museums also possess famous paintings from the Italian Renaissance era (e.g., the *Pinacoteca di Brera*). Museums and galleries in Lombardy collect a much higher income than in Tuscany or in Latium with a much lower quantitative endowment (Table 1.18). However, cultural amenities are unevenly distributed between the core city and the surrounding area and their accessibility is badly affected by congestion.

Table 1.18. **Museums and galleries in Lombardy, Tuscany and Latium (2002)**

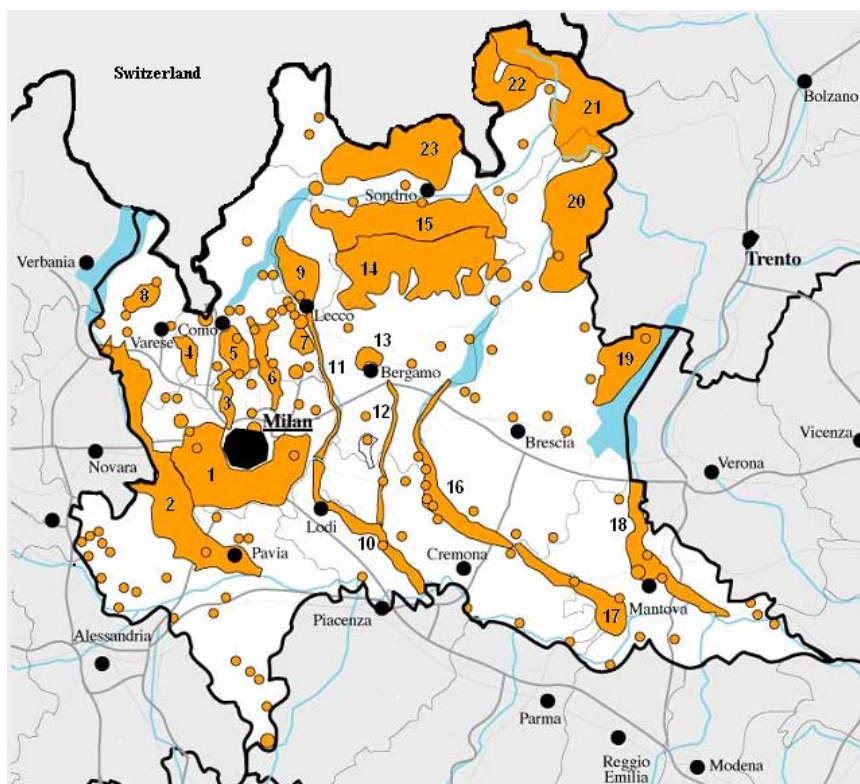
	Number of institutions	Number of visitors	Revenues (EUR)	Income per visitor (EUR)	Income per institution (EUR)
Lombardy	3	869 584	3 246 306	3.73	1 082 102.00
Tuscany	26	4 238 594	18 311 144	4.32	704 274.77
Latium	26	2 207 096	3 430 132	1.55	131 928.15

Note. Only institutions that charge an entrance fee were taken into account.

Source: Istat.

Natural amenities remain underexploited due to their poor accessibility. Lombardy has a fair endowment of natural parks and green areas. The Province of Milan includes seven regional parks, which account for 36.23% of the total provincial surface (Parco delle Groane, Parco Nord Milano, Parco Agricolo Sud Milano, Parco Lambro, Parco Brughiera, Parco Adda Nord, and Parco Valle del Ticino²²). The Province also has natural reserves and protected areas, including six local parks that pass through several municipalities (Figure 1.48). These amenities remain scarcely connected with the urban core through public transportation, which hampers their contribution to Milan's attractiveness. They are not connected to each other either, which prevents Milan from proposing an integrated green tourism offer.

Figure 1.48. Main protected areas of Lombardy



- | | |
|-------------------------------------|---|
| 1. Parco Agricolo sud Milano | 2. Parco del Ticino |
| 3. Parco delle Groane | 4. Parco Pineta Appiano Gentile e Tradate |
| 5. Parco della Brughiera | 6. Parco della Valle del Lambro |
| 7. Parco S. Genesio Colle Brianza | 8. Parco Campo dei Fiori |
| 9. Parco delle Grigne | 10. Parco Adda Sud |
| 11. Parco Adda Nord | 12. Parco Serio |
| 13. Parco dei colli di Bergamo | 14. Parco delle Orobie Bergamasche |
| 15. Parco delle Orbie Valtellinesi | 16. Parco dell'Oglio Nors |
| 17. Parco dell'Oglio Sud | 18. Parco del Mincio |
| 19. Parco dell'Alto Garda Bresciano | 20. Parco dell'Adamello |
| 21. Parco dello Stelvio | 22. Parco Livignese |
| 23. Parco della Bernina | |

Source : <http://www.parks.it>

Notes

- 1 This was the evocative title of an article published last January 25th 2001 in *The Economist* print edition.
- 2 Minor commuting flows also take place between this larger Milan metropolitan region and two provinces in the south (Cremona and Piacenza), and taking them into account would make the Milan metropolitan region even larger.
- 3 The OECD launched a pilot exercise of cross-country comparison on large metropolitan regions. A sample of 78 metropolitan regions was selected according to four criteria (minimum population size of 1.5 million people; minimum population density of 150 people per km²; contained labour markets with a maximum net commuting rate of 10% of the resident population; and one city that is under the threshold of 1.5 million people but which accounts for more than 20 % of their national population, *i.e.* Auckland [Luxembourg and Reykjavik have been left out as they are extreme cases that represent outliers in many of our rankings]). There are a number of cities that have been included in the sample of 78 metropolitan regions that were over- or under-estimated. For instance, London has been defined as a metro-region considerably smaller than the actual commuting zone around the city. Since data at the appropriate level (TL4) are not available for the surrounding regions of Greater London, the alternative would have been to largely over-estimate the metro-region using entire counties such as Essex, Kent or Oxfordshire among others to account for a part of these regions that may be argued to constitute part of London's labour market based on commuting patterns. In contrast, Busan has been slightly overestimated taking into account the entire regions of Ulsan and Gyeongsangnam-do whose large parts of them are effectively conurbated. Similarly, it could be argued that Milan and Zurich have also been overestimated. However, commuting flows and their net rates for Busan and Milan support our definition. Zurich along with the Turkish cities (Ankara, Istanbul and Izmir) were not defined using net commuting rates as flows are not available for them; instead the definition relies in previous studies. Finally, Canadian, Mexican and US cities are already defined by their national authorities and data has been calculated using the corresponding statistical information accordingly. Although the database is supported by a solid methodology and make extensive use of previous studies and definitions, there are caveats to bear in mind, particularly for the cases of Busan and London.
- 4 For methodological purposes, the local manufacturing system was categorised in four groups according to the level of technology used in the production process. The services sector was also divided in two groups according to the level of embedded knowledge (OECD/STI, 2003
<http://www1.oecd.org/publications/e-book/92-2003-04-1-7294/PDF%5CD91.pdf>).

- ⁵ The Pacchetto Treu (Law no. 196) introduced labour market flexibility in 1997. It allowed firms to hire workers for a limited period and a specific task.
- ⁶ A comparison exercise on GDP per capita has limits. First, results can vary according to the sample taken into account. Milan's performances look much better when the comparison exercise is restrained to a more homogeneous sample (e.g., OECD metropolitan regions larger than 6 million people). Second, GDP per capita is not an indicator of competitiveness *per se*. Regional/city competitiveness is a broad concept and can be measured in many different ways. For example, the International Institute for Management Development has developed indicators in four categories: economic performance, government efficiency, business efficiency and infrastructure. The UK Office of the Deputy Prime Minister focused on economic diversity, quality of life, skilled labour force, internal and external connectivity, innovation in firms and organisations, strategic decision-making capacity, etc.
- ⁷ Due to the uneven availability of data, the rest of the data in this chapter refer to the Province of Milan unless otherwise specified.
- ⁸ Active FDI refers to the investment Milan/Lombardy firms make abroad (outflows), while passive FDI refers to the investment made by foreign firms in Milan/Lombardy (inflows).
- ⁹ Several institutions were created: “*Ente Qualità Cantù*” (development centre), the CLAC (*Centro Legno Arredo Cantù*) for the wood and furniture business, the “*Galleria del Design e dell'Arredamento*” (design and furniture gallery), and the “*Centro di Formazione Professionale per il Mobile*” (professional training centre for furniture industry).
- ¹⁰ Data are available only for the Province of Milan. But as mentioned earlier, the textile industrial district encompasses a territory larger than the Province.
- ¹¹ Data are from the Chamber of Commerce of Milan.
- ¹² See specific section below.
- ¹³ Once a region has reached a certain level of specialisation, it generates location advantages that attract other firms. Location advantages depend on several factors, including the concentration of good suppliers and producers (backward and forward linkages), local availability of specialised workers (efficient labour market), and information flows (intellectual spillovers). Location advantages are expected to help firms enhance their competitiveness (in terms of productivity, costs, innovation capacity, etc.) compared with competing firms located in other regions. Globalisation has emphasised the importance of location advantages by accelerating the mobility of investment and labour.

- 14 Patent registrations can provide a proxy of innovative capacity only in the industries where firms are able to and inclined to patent their inventions. It is often the case in high-tech and knowledge-intensive industries such as ICT or biotechnology, where patent registrations constitute a major source of income for firms.
- 15 For example, part of the success of Milan's furniture cluster is attributable to a large company called Montecatini Edison. In 1953, this Milanese chemical company sponsored the research activities of Professor Giulio Natta, who invented a revolutionary thermoplastic material. Montecatini took in charge the industrial application and the commercialisation of the material under the name Moplen. Milanese SMEs started to use Moplen to produce reasonably priced and attractive objects that were sold all over the world and contributed to the global supremacy of Milan's furniture sector.
- 16 Between 2000 and 2004, white collars in Milan lost 10% of their purchasing power. In 2004, their pay rise (1.9%) was lower than national average. The average gross salary of a new university graduate in Milan declined from EUR 23 381 per year in 2002 down to EUR 23 159 in 2004. The average gross salary of a university graduate after 4 years of working experience decreased from EUR 28 286 per year in 2002 to EUR 26 370 in 2004 (data from Od&M Consulting, 2004).
- 17 See earlier note on the Pacchetto Treu.
- 18 The most attractive university in Milan and one of the first ones in Italy, Bocconi University, only attracts 4.35% of foreign students. In contrast, the University of Michigan (10th most attractive university in the US) had 11.74% of foreign students (Irene Tinagli, Richard Florida, *L'Italia nell'era creativa*, Creativity Group Europe, 2005).
- 19 According to the work of Richard Florida and other academics, the "creative class" refers not only to highly educated workers (codified knowledge) but also workers who are able to design innovative solutions for complex problems (tacit knowledge). The creative class includes entrepreneurs, public and private managers, researchers, specialised professionals (lawyers, doctors, architects, engineers, etc.), artists, and specialised technicians.
- 20 "Creative" workers are supposed to be attracted by various factors including good technological endowment (e.g., availability of WiMax), low social control, cultural and natural amenities, etc.
- 21 "*Milano da bere*" (literally "Milan to drink") refers to Milan's artistic and festive atmosphere. The slogan meant to illustrate Milan as a city of fashion, media, luxury goods, new entrepreneurs, extravagance and glamour.
- 22 The Parco Valle del Ticino was designated as Biosphere Reserve by the UNESCO's Programme on Man and the Biosphere (MAB).

Chapter 2

Enhancing the competitiveness of Milan

Introduction: developing a vision for Milan's economic future

Milan has a long and illustrious industrial history. However, current trends suggest that Milan's position as one of the world's most productive regions, and among the most competitive non-capital regions, may be at risk. Despite its continuing high profile – as the economic engine of Italy, a European capital of advanced services and a fashion and design global capital – the data presented in Chapter 1 suggest that Milan's international competitiveness is not as robust as it once was. Cities such as Frankfurt, Munich, Stuttgart, Zurich, Madrid, Lyon, Barcelona, Vienna/Bratislava and Budapest, are increasingly investing in their traditional assets or building new competitive advantages and therefore contesting Milan's ambitions. Concern over the performance of Milan should, however, extend beyond a purely local debate and onto the national agenda. The performance of Milan and that of the nation are intertwined. A slowdown in the vitality of the Milan region will affect national outcomes. As an economic region that accounts for around 20% of national output, Milan's capacity to meet current challenges is likely to have a significant impact on national performance. Moreover, the ability of the nation's largest urban centre to adapt and grow will provide important indications for other Italian cities on policy responses to some specifically urban problems.

The key to understanding how Milan can best react to current pressures is to examine more closely how the city has evolved, both spatially and structurally. Milan's population sprawl has increased significantly over the past 30 years, and it has expanded outwards to encompass previously distinct manufacturing centres. As a result, it now stands at the core of a much broader productive system in which input-output relationships between firms of different kinds stretch over a larger territory and cover a wider variety of sectors. In other words, Milan has grown into a diverse metropolitan region.

As with many large cities, manufacturing in the city itself has largely relocated to other sites, mainly on the urban periphery. The core of Milan is

progressively becoming a technology and service hub. Milan's reach extends across a large part of Northern Italy, with strong linkages across the whole country and to parts of Southern Europe. A key issue for Milan is how to ensure that it meets proactively the evolving needs of the industries (often SMEs) that lie within its "sphere". In many cases, the SME network model is facing severe pressures from international competition. The strategy of the Milan region should therefore valorise the technologies, skills and services that will help these firms to adapt to new economic circumstances.

Several macro-regional capitals in the OECD area play comparable roles in respect of the surrounding areas, but the specific *performances* and *characteristics* of the Italian economy assign a peculiar emphasis to Milan's role as "economic coach" for a large advanced economic region.

- With respect to overall economic *performances*, Italy underperforms in key areas. In particular, the dynamic of industrial production is lower in Italy than in main competitors and trade partners (Germany and France). Moreover, Italy's share of exports in total international trade has declined. Finally, both growth and trade trends seem to be related to modest productivity growth. These poor outcomes are at least partly explained by risk-averse investment behaviour from the private sector over a long period. Instead of using higher profits to enhance technologies and internationalise, industrial and service firms have improved their *leverage* so to consolidate control. A key challenge for Milan is thus to act as a catalyst for a more dynamic approach to enterprise management.
- As for the *characteristics* of the economy, Italy – in particular Northern Italy – relies on an array of small manufacturing firms that are capable to produce competitively and even contribute to technological change through a specific type of co-operation between final producers, subcontractors and skilled workers. However, in recent years, firms seem to be reluctant to renew the sedimented skills and knowledge present in many industrial districts via stronger links with the research and scientific community, preferring short term solutions such as direct public support and calling for protection from low-wage competitors¹.

In short, the current situation calls for action to foster innovation and adaptation in firms' processes, products, and organisations (including, marketing, communication, management, financial and administrative functions). At the same time, the spatial geography of the region suggests that Milan plays a central role in organising both private and public provision of services that can help to renew the historical endowment of

skills and technological knowledge that are present in the wider region. This is particularly challenging given that it involves supporting an economic system that is based largely on the collaboration of hundreds of firms and thousands of workers. Fostering innovations in services and technologies and spreading skills in such a large and complex industrial fabric cannot be achieved through a specific programme or through the efforts of a few facilitators. Rather it suggests the need for a more organic system that links public and private actors, service, technology, and communication functions.

Such a systemic process does not emerge without a strategic vision to orient public policy. This vision needs to have two clear dimensions. First, it should place the city and its surrounding region – the aggregation of assets and capacities – in the context of a national economic strategy. Second, it should tie the different parts of region together in a more coherent manner. This is essentially a governance issue, but the heart of the strategy should be derived from economic rationales, not only from administrative reorganisation. This chapter explores some of the main elements that can underpin such a vision, emphasising the two main “groups” of factors that support competitiveness, *i.e.*, those relating to firms directly and those relating to the environment in which firms operate².

This chapter is divided in two sections: (i) the first section assesses how the productivity of enterprises in the region can be improved and proposes some possible solutions to key bottlenecks. It looks at the specific challenges of small firms in the region (and how the dense fabric of entrepreneurs both within the city and in surrounding areas can be supported and made more dynamic), at the specific issue of research-intensive innovation (specifically how the city’s strong “knowledge economy” assets can be made more productive in terms of “breakthrough innovation”), and finally at the role of Milan’s “global” advantage in fashion, design and trade fairs (how they can be strengthened and integrated into a broader vision for the city and the region); (ii) bearing in mind that creative and forward-looking enterprises are also looking at the quality of Milan as a place to invest and to live, the second section of this chapter focuses on liveability and attractiveness, in particular on the state of transportation facilities and the local housing market, and presents some international best practices in flagship restoration projects that have revitalised a number of OECD metropolitan regions and that could be helpful also in Milan.

2.1. An integrated regional approach to enterprise support

Milan’s future competitiveness depends on its ability to use its enterprise-related assets. This would have important positive consequences for a large component of Italian production. It would also provide a lead for

other Italian regions where the enterprise fabric shows similar characteristics. OECD work on regional competitiveness underlines that there are two basic groups of factors that can be influenced by policy to improve the competitiveness of a region: (i) those directly related to economic activities (principally related to economies of agglomeration) and (ii) those that have an indirect influence on economic activities (principally related to what have been termed economies of urbanisation). The “direct” factors assume that individual firms derive comparative advantage from their internal organisation, management style, internal processes of innovation, product development, marketing, etc. In some regions, the performance of the local economy is driven by a few dynamic firms. In many other regions, and this seems particularly the case in Milan, collective characteristics pertaining to groups of firms or sectors provide a source of productivity gain. These collective advantages – often found in clusters or productive systems – stem from the historical development of local sectors and links with the region, firm size and structure, level of specialisation (agglomeration effects related to specialisation of industrial production, and any spillovers such as high innovation capacity and concentration of specialised workers), use of advanced technologies, and the use of networking as a business practice. Where such attributes exist, public policy should try to build on them.

2.1.1. Strengthening and supporting the enterprise base – entrepreneurship, networks and services

First of all, the Milan metropolitan region includes a dense and relatively entrepreneurial SME base. This is a clear asset, particularly as the range of industries in which SMEs are organised is very diverse and the systems of organisation of the SMEs emphasise stronger levels of inter-firm co-operation than are found in most other OECD countries. These concrete assets should be promoted, even if in many cases the small business networks are facing much stronger competition than in the past. As with other countries and regions, the needs of local SMEs are often difficult to assess and are sometimes poorly matched by the supply of services through the private sector. Nonetheless, it would seem in the case of Milan that more effort to meet the demand of SMEs for advanced business services would help to support a key source of the region’s “systemic” competitiveness, *i.e.*, its SMEs and their entrepreneurs. Second, Milan has a very strong knowledge infrastructure. This important asset has a direct bearing on the innovation capacity of firms. As noted above, the predominance of small firms in the economy makes public involvement in R&D and innovation and their transmission across the region particularly crucial. In this respect, efforts should focus on reducing fragmentation of innovation and research

centres and universities to increase the effectiveness of these institutions and collaborating firms to produce breakthrough innovations.

Meeting the implicit demand for advanced services of manufacturing SMEs could be a way to improve their international competitiveness and, in turn, that of Milan. Milan acts as a supplier of advanced business services (*i.e.*, finance, management, advertising, and communication) for a macro-region comprising Northern Italy and a part of Southern Europe. Milan has become a service hub thanks to a long process of tertiarisation. The growth of Milan's service economy has taken place alongside the development of manufacturing SME clusters, which boomed between the late 1970s and the early 1990s. Accordingly, the industrial character of Milan has been at least partially transformed from an economy that included significant heavy industry (along with Turin and Genoa) to a more diverse economy that includes strong SMEs in both new and more mature sectors. The presence of such a diffused and heterogeneous demand has supported the further expansion of Milan's service sector.

Today, Italy's production framework (mostly based on SME networks) is facing new challenges resulting from globalisation and the spatial reorganisation of production. Globalisation and the spread of new ICT technologies seem to make possible a shift from local to global or international systems of production that can in theory preserve knowledge flows without the need for region-level interaction. It is clear, however, that even small firms have the option of substituting their local collaborators with external networks, thereby (arguably) undermining the local socio-economic fabric. Some commentators argue that regional "assets" – such as those derived from clustering or research-industry collaboration – are only advantageous to those regions when they can link into "global value chains" and complement or serve the *strategic needs* of trans-local actors. This is probably an exaggeration of the situation, but it is clear that SMEs are increasingly confronted with a situation where they are forced to adapt their production to meet standards set outside the region and try to enter ever more distant markets. What this means in practice is that supporting the enterprise fabric of the region involves providing them with new or enhanced services – services that many SMEs have not needed in the past and that they might not even be aware they need now. These are the implicit or latent demands of SMEs to develop external networks, to internationalise, and so on.

SME demand for advanced services is uneven. Some dynamic firms have strong expansion strategies, while others are much less knowledgeable about their real needs. The role for public policy is to ensure that information gaps and market failures in this respect are minimised. For example, Milan has developed a strong specialisation in some high value-

added business services that can have a powerful influence on firms' strategy, orientation and productivity. On the one hand, the potential of these services is not exploited by small firms that usually have a limited amount of information about them (and fewer resources to invest in such services). On the other hand, the possibility for SMEs to access these advanced services is often limited since service suppliers do not consider them as profitable customers. Accordingly, a public policy to facilitate the match between the local supply (from Milan's core) and the wider regional demand for services could be an important way to enhance the competitiveness of a very large number of SMEs that are stable but are currently under-investing, have too limited horizons and have ambitions that are too low. The more dynamic small firms will generally find the support that they need. However, there are many that appear to be focused on short-term targets and therefore invest too little despite having accumulated experience, skills, product lines, etc.

Milan acts as a regional capital of finance, management and consulting, and services linked to mass-communication such as media and advertising. These have different profiles, as discussed briefly below, however they all add to the "clustering" of investors and decision-makers within the city. This intellectual and financial asset is shared by only a small number of other European cities such as London and Paris, and is probably unique for a non-capital city. Interestingly, many of these services are increasingly tradable and are to some extent globalising, which opens new opportunities for Milan to increase the specialisation of the city centre in high-value, high-wage services.

- Finance. A quarter of the Italian financial sector is concentrated into the Milan Province³. Almost all the most important Italian banks have their headquarters in the city of Milan. Moreover, because of numerous mergers, some Milanese banks have become important international players. An outstanding example is the "*Gruppo Unicredit*" bank that has bought the second German bank (HypoVereinsbank AG) in 2005 and holds a strong competitive position in Eastern Europe.
- Management and consulting. Thanks to the specialisation of the academic system in business and management and to the city's historical concentration on manufacturing activities, Milan is the centre of Italian business management and strategy. Furthermore, being a leading metropolitan area, all of the leading global consulting firms have their Italian headquarters in Milan (McKinsey, KPMG, Accenture, etc.).

- Communication, advertising and media. Milan is a European hub in services related to communications. First, the three largest Italian private television stations and the national leader in satellite broadcaster are based in Milan (which has created a strong specialisation in the local labour market – almost 25% of Italian employees in this sector in 2001 were Milan-based). Second, more than 20% of Italian publishers are located in Milan, which also hosts the bulk of the national press industry⁴. Third, the largest Internet providers are in Milan and the city has a very large fiberoptic facility that has allowed the development of a significant “new economy” industry. All these media are used by Italian firms for advertising campaigns that are produced and implemented mostly in Milan by small-micro specialised firms (Table 2.1).

Table 2.1. **Firms’ demand for workers with a university degree in Province of Milan, 2004**

Size of firms (number of employees)	Number of high-skilled employees	Number of collaborations with high-skilled workers	Total demand for high-skilled workers
1 – 9	866	4 674	5 540
10 – 49	1 249	5 420	6 669
50 – 249	2 075	1 183	3 258
≥ 250	5 448	1 331	6 779
Total	9 638	12 608	22 246

Source: Chamber of Commerce of Milan.

2.1.2. *Promoting innovation: building a regional innovation “system”*

Another way in which Milan could help Italian competitiveness is by providing the national production framework with breakthrough innovation. Milan’s innovation capacity was affected by the fact that Italy lacks a national industrial policy. Measures to build a market for breakthrough innovation could pave the way for future sources of growth. The micro-innovations produced by firms need to be accompanied by breakthrough innovation, which is mostly generated in public and private research centres as well as in universities. Breakthrough innovation then needs to be diffused with public support in order to fuel the regional economy and to address a market failure. Although the Milan metropolitan region is the technological hub of the country, its innovation capacity in high-tech sectors has been reducing over the last years (Chapter 1). Milan’s negative trade balance in science-based goods proves that the metropolitan region is not competitive in producing revolutionary breakthrough innovations and has a limited capacity to generate new products or new sectors. Considering the lack of large companies that could have afforded

large-scale R&D expenditures and cascaded spillovers into the economy, future prospects do not appear brighter. Accordingly, Milan has to find out a way to enhance its system of (Schumpeterian) innovation and to link such a system to the local production framework.

A new policy for innovation could co-ordinate and empower some interesting policies that local authorities are implementing in Milan, such as the “metadistrict” policy (Box 2.1). Launched in 2003, the metadistrict policy is attempting to support linkages between firms and research institutions within selected supply chains of selected knowledge-intensive sectors and conception-intensive activities (biotechnology, nanotechnology, new materials, fashion, and industrial design) rather than simply enhancing the spatial agglomerations of firms. Particularly, this approach aims at promoting backward linkages of firms with local research organisations. A “research pole”, for instance, could negotiate a given research programme with local business community and then it could propose partnership programmes to SME networks and other key actors (as banks) in order to operate together.

Box 2.1. Lombardy’s “metadistrict” policy

In 2001, the Region of Lombardy has defined the concept of “metadistrict” as a territory where the concentration of firms belonging to knowledge-intensive supply chains is higher than the regional average. In contrast with the “industrial district” policy, territorial contiguity of firms is not the key indicator to identify networks. Metadistrict focuses more on the density of networks between firms to exchange input/output goods and information within the same supply chain. In order to be eligible for public funding, firms, universities and research centres active in a given metadistrict must set up a network and present a joint research project. After evaluating the quality of networks and projects, the Region of Lombardy allocates support funds (total of EUR 25 million for 5 years, *i.e.*, EUR 5 million per industry). The policy targets 5 major industries: biotechnology, nanotechnologies, new materials, ICT, fashion, and design.

The metadistrict policy holds promising advantages. First, the metadistrict policy complements and goes beyond the industrial district policy, which was strongly conditioned to the territorial contiguity of firms. Whilst the industrial district policy aimed at strengthening spatial agglomerations of firms, the metadistrict policy embraces entire supply chains and overcomes the limits of previous policies that constrained their action to statistically defined territories and left aside potential synergies with firms that were part of a cluster but were simply located outside the statistical boundaries. Second, the idea to finance networks linking firms, universities and/or research centres rather than individual firms offers an efficient tool to upgrade the competitiveness of local SMEs via knowledge spillovers and improved innovative capacity and, in the long run, could promote the creation of meso-institutions co-ordinating innovation along the entire supply chain.

Universities are still the missing player. Fragmentation of universities and research institutions poses a widely shared challenge throughout Milan's economy. International evidence shows that in some high-tech sectors, the presence of powerful academic poles is an important asset for regional development. The absence of Milanese global players able to invest in R&D activities and to innovate could be counterbalanced by the presence of other R&D organisations like, for instance, universities. Although Milan holds the largest academic system after Rome and some of the most specialised universities in Italy (*e.g.*, Politecnico di Milano for engineering, Bocconi for management, San Raffaele for medicine and biotechnology, etc.), the impact on the regional economy has remained disappointing⁵. This is mainly because universities perceive very few incentives to collaborate, they generate a handful of spin-off firms and they barely interact with SMEs (even though the latter constitute the bulk of Milan's production framework). Better integration of local knowledge holders could contribute to enhancing high-tech activities in Milan, for example by creating a strong specialised university pole endorsed to co-ordinate the existent research structures.

The creation of a Regional Innovation System (RIS) that integrates local universities and research centres could support the endogenous innovation process in knowledge-intensive activities. The experience of other OECD metropolitan regions shows that the regional competitiveness often depends on the presence of specialised knowledge easily available for local SME networks (Box 2.2). Especially in Milan, where large firms in high tech are quite rare in the region but universities with a relevant scientific specialisation (*e.g.*, San Raffaele University, University of Milan-Bicocca) are relatively numerous as well as R&D centres, a higher co-ordination of such organisations could produce the level of innovation that the region needs.

Box 2.2. Regional Innovation Systems (RIS)

Knowledge infrastructures, notably research institutes, and higher education institutions are the main pillars of Regional Innovation Systems (RIS). In addition to the institutions, knowledge bases, communication channels and mechanisms for learning and sharing of knowledge are crucial to articulate innovation systems. As several case studies show, it is a relatively common idea to put universities at the heart of the regional strategies (*e.g.*, North East England, Overijssel/Netherlands, Busan/Korea or Jyväskylä/Finland). In several countries, however, the number of universities equipped with liaison offices or centres of entrepreneurship is still limited (*e.g.*, only ¼ of universities house a commercial service department in France). These departments are often understaffed, endowed with modest budget (*e.g.*, Denmark, Norway, Spain or Italy) and too much emphasis is put on obtaining patents and too little in exploiting them through licenses. A number of good practices have nevertheless emerged in Europe and the US. Most higher education institutions (HEI) with some type of research activities have created or reorganised industrial relationship offices. The MIT Industrial Liaison Office, for instance, is one of the best known models of linkages between universities and companies.

Box 2.2. Regional Innovation Systems (RIS) (Cont).

Providing that they pay a membership fee, companies have unlimited access to specialised information services and seminar series, a monthly newsletter that includes details of ongoing research and outlines new inventions, the directory of MIT research activity organised by area of expertise to make it easier to track down with specific interest, faculty visits and expert meetings for companies that often result in consultancy or research sponsorship. The programme is particularly attractive to companies because it is managed by a panel of Industrial Liaison Officers (ILO), each one being responsible for a focused portfolio of companies with the responsibility to serve their unique interests and needs.

While these offices usually do not differentiate between regional firms and others, some HEI are starting to clearly identify their activities with state or regional firms. Innovative models are emerging. For example in the US, Purdue University (Indiana) has established “innovation commons” within its campus: Discovery Park. This structure is aiming at identifying technologies with special promise for commercialisation in the state. The university has also completed its regional strategy by creating an Office of Engagement and the Centre for Regional Development to manage the resources assigned to regional involvement.

In line with the growing commercial awareness on campuses, universities are increasingly hiring executives and entrepreneurs from the commercial world to lead their institutes. This is mainly the case in the US but such practice starts to emerge also in Europe. In Finland, Research Service units have been created to assisting researchers with planning IPR and providing other commercial services. Many universities also employ development managers (*e.g.*, Jyväskylä). They are also in need of highly professional personnel to identify client firms and deliver transfer of technology, licensing or consulting services

Finally, with regard to incubation and production of university spin-offs, while some universities have been highly successful (for example, Twente University, Cambridge/UK or Grenoble/France) and notably in the US (see above), these spin-offs are in very little numbers in a majority of HEI and the chairs of entrepreneurship very dispersed, not exceeding 100 in Europe compared to 400 in the US.

The creation of a co-ordinated knowledge institution could also attract exogenous sources of growth such as FDI. Currently, Milan’s high-tech clusters lack an international image able to attract venture capital and human capital. The deficit of capital constitutes a serious obstacle because knowledge-intensive industries are capital-consuming sectors in which return on investment may be considerably delayed in time (if any). Some knowledge-intensive sectors, as for instance biotechnology, do not attract “classical” investors such as banks or the stock exchange, but typically venture capitalists and business angels⁶. Milan attracts very few of such investors presently. A unified structure could stand up for the local SMEs in

the international investors' community and promote possible opportunities for investment.

A decisive test for Milan's innovation system will take place in high-tech activities such as biotechnology, which is supported by a well-developed local healthcare sector but must contend with powerful European competitors. The Milanese biotechnology is a good example of a promising local high-tech sector whose development is limited, among other things, by the lack of co-ordination between universities. The local biotechnology industry is based on fragmented local networks of firms and organisations (Figure 2.1). Considering that biotech technology has numerous commercial applications across a wide variety of industrial sectors (*e.g.*, pharmaceuticals, health care, food processing, waste water management, etc.), the constraints on the sector have an adverse impact on the economy as a whole.

International competition is fierce in this sector: many OECD regions are attempting to have their biotech cluster (*e.g.*, Montreal, Stockholm). But can they all succeed? In most cases, the success of leading biotechnology clusters, as San Francisco or Cambridge, is the result of a coincidence of different factors (Box 2.3) rather than any deliberate design or public policy interventions. Furthermore, successful locations have generated positive externalities that influence directly the competitiveness of local firms. Thus, a biotech firm located in Cambridge or in San Francisco will be, other things being equal, more competitive than a similar firm located in a region where positive externalities are weak. The only advantage late-comers can have is to focus their efforts on the latest technology (which could generate a new agglomeration dynamic) and to learn from the policies that have been successful in other regions. In order to do this, however, locally available resources must be well co-ordinated and focused.

Box 2.3. **Local and national factors that underpin biotechnology clusters**

There are a number of factors to support regional growth in biotechnology. A selection of nine factors are listed and discussed below.

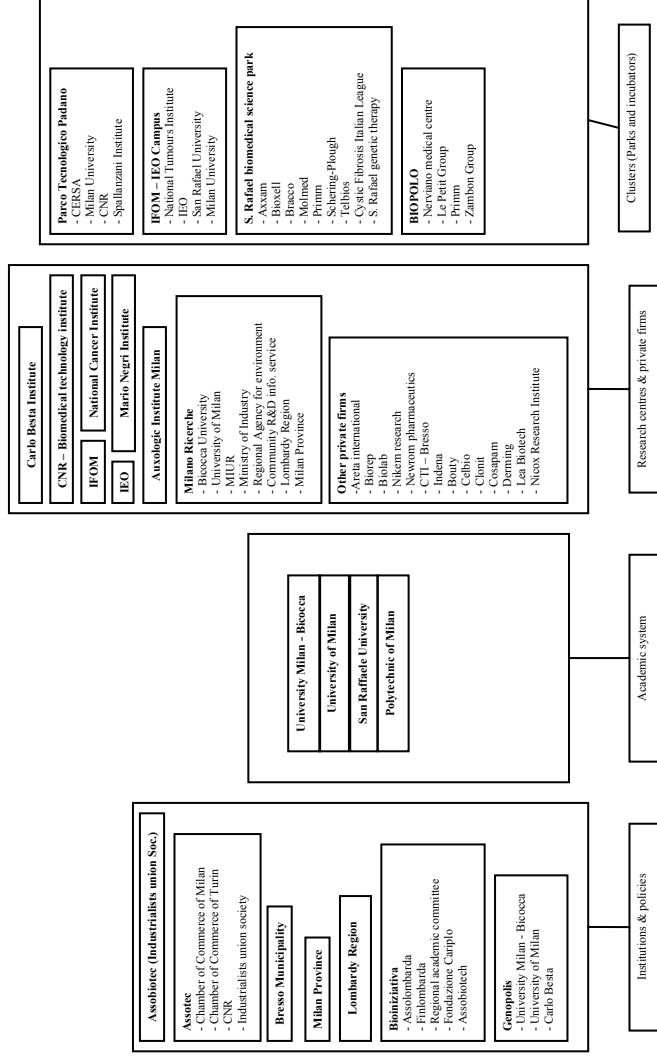
- **Availability of venture capital, business angels, or other advanced finance instruments**, since they are the only source of funding for biotechnology firms. In California, for example, almost one quarter of biotechnology firms have received venture capital in their first year, compared to 6% of fast-growing firms in the general US economy.
- **Strong government leadership** can help to create the necessary **conditions** for biotechnology to grow in particular regions. The US is a good example of where state and local government leadership and support are helping biotechnology companies to flourish. A US survey in 1999 listed 18 types of state and federal support, including schemes supporting venture investment, carry forward of tax losses, R&D tax concessions, capital gains tax exemptions, centres of excellence funding, pilot plant funding, incubators, enterprise zones, business support and drug reimbursement policies. These state-level initiatives are also supported at a political level. Governments of smaller countries with fewer natural advantages are taking a direct approach and are actively co-ordinating biotechnology strategies and funding programmes designed to overcome natural disadvantages.
- **A strong bioscience research base** since many biotechnology firms rely on **research** institutions because they form a source of intellectual property that can be commercialised. The majority of new biotechnology-based therapeutics, for example, has arisen from basic research which has then been developed and applied to a product. Ongoing basic and applied research is then required in order to provide incremental improvements and identify new applications for existing technologies. It is no accident that strong biotechnology firms have scientific advisory boards made up of leading research scientists and continue to forge strong links with research institutions around the world. A number of regions around the world are taking a strategic approach to development of biotechnology strengths within the region, by building on areas of strength and bringing existing players together.
- **The presence of centres of excellence** to generate a clustering dynamic. Many biotechnology regions are clustered around key research institutions, primarily because the majority of firms have arisen as spin-offs from these institutions. Once the core of firms has formed, this attracts other firms which may be suppliers to the core group or may wish to create alliances with them. In Maryland, for example, local biotechnology industry is clustered around the National Institutes of Health and in Seattle, the fourth largest biotechnology cluster in the US, firms are located close to and interact regularly with the Hanson Cancer Institute. Germany has set about creating biotechnology clusters through its competitive BioRegio programme.

Box 2.3. Local and national factors that underpin biotechnology clusters (*Cont.*)

- **A feeder layer of growing companies** in which companies at different stages of growth can find services they need. Furthermore, having firms in different stages of their evolution provides a range of employment experiences for employees, and provides further incentives for the development of specialised support services. Such a factor either generates firms by spin-off dynamics or attracts firms from other regions by implementing business attraction programmes which provide incentives for new regional entrants. Many European and US regions, in fact, are keen to attract large pharmaceutical and other types of biotechnology firms, which provide employment and also bring skills in management, commercialisation and distribution.
- **A strong entrepreneurial environment** in which individuals can undertake risky businesses thanks to the availability of specialised financial instruments, a good economic climate, and a supportive public policy reducing burdens for business activities.
- **The availability of key staff** as high-skilled managers plays a key role in developing biotechnology firms. Management skills are important because it takes a long time to market research activities and firms have to deal with a complex regulatory framework. Thus, growing firms must be able to attract the staff they need to help them move through the various phases of commercial development and ultimately product launch and distribution. Staff can be attracted by a range of factors, including quality of life, ancillary services (*e.g.*, for children's education) and natural surroundings, as well as specific factors relating to their employment with a particular firm. Similarly research organisations can be enhanced by the introduction of key senior personnel through professorial appointments of world class researchers to endowed chairs.
- **Well-funded and accessible infrastructure** are an important component of the biotechnology environment as firms rely on highly complex and expensive equipment. Incubators and other shared facilities can help firms, in association with research laboratories, to obtain equipment on a shared basis through co-locating in purpose-built facilities where laboratory space is leased out and equipment is provided as a central resource.
- **Good formal and informal networks.** By the end of the 1980s, over 80% of every major corporation investing in biotechnology had alliances with other firms or universities for contract R&D, for licensing of technology or distribution of products. Such alliances can be at local, national or global levels. At the local level, they provide support for entrepreneurs and links to research and funding. Such local networks and alliances have played an important role in the growth of California as the leading biotechnology district in the US. Informal networks can be supported by industry associations, or technology transfer or technology demonstration centres. At a national or international level, alliances can help firms gain access to skills and facilities not available locally and can help them enter new markets. Such alliances can be forged by individual firms, by associations or by governments.

Source: Western Australian Technology & Industry Advisory Council
(<http://www.wa.gov.au/tiac/biotechnology/biotech-13.htm>)

Figure 2.1. Life-science framework in Milan Province



Source: arranged by the OECD with background information

A public policy to connect all the local players related to the biotech industry is therefore an important means by which to try to close the gap with leading biotech regions. Milanese biotech firms have built strong linkages with the well-developed health care system, which has provided a stable market for new products. Several R&D centres and incubators exist in the metropolitan region (Table 2.2) but they tend to be isolated and often compete against each other. Despite its promising debut, Milan's biotechnology cluster is still much smaller than its powerful competitors in other European regions (*e.g.*, Biovalley in the cross-border region between France, Germany and Switzerland; Medicon Valley in the Öresund Copenhagen-Malmö region). Milan could draw inspiration from the Danish-Swedish model of the Öresund University, in which 12 science-oriented universities were unified in 1997 and contributed to the creation of an internationally competitive cross-border biotechnology cluster called the "Medicon Valley" (Box 2.4).

Table 2.2. **Biotechnology-related R&D centres and incubators in Milan**

Organisation	Description
Molecular Oncology Institute (IFOM)	Advanced research in molecular oncology
Centre of excellence for innovation and technology transfer hosted by University of Milan-Bicocca	Technology transfer for chemical and industrial biotechnologies. Patent activities, particularly in genomic and pharmaceutical sectors
Centre of excellence hosted by University of Milan-Bicocca, specialised in plasma applications	Research on plasma and possible technological transfer to other sectors such as textile, packaging, biomedical and cultural studies
Technological Park of Lodi Foundation	University research centre focused on vegetable and animal genomics. Business park on agro-biotechnology

Source: Province of Milan.

Box 2.4. Example of a strong university pole supporting a competitive biotechnology cluster: the Öresund University and the Öresund Medicon Valley Academy

The **Öresund University**, established in 1997, is a consortium of 14 science-oriented universities (Lund University, University of Copenhagen, Copenhagen Business School, Roskilde University, Malmö University, Kristianstad University, Royal School of Library and Information Science Denmark, the Royal Danish School of Pharmacy, the Danish University of Education, Technical University of Denmark, the Royal Veterinary and Agricultural University Denmark, Swedish University of Agricultural Sciences, the Royal Academy of Fine Arts School of Architecture, IT University of Copenhagen), in the cross-border region of Copenhagen-Malmö (Denmark-Sweden), with a total of around 130 000 students. This consortium pole has been able to provide a wide array of specialised services and to generate spin-off firms. It has been a leading actor not only in formal scientific research and education, but also in the identification of promising clusters in collaboration with researchers, business leaders and policymakers throughout the region, and in the creation of co-operative institutions and platforms to promote networking activities and information sharing.

Box 2.4. Example of a strong university pole supporting a competitive biotechnology cluster: the Öresund University and the Öresund Medicon Valley Academy (Cont).

One of the co-operative institutions is the **Öresund Medicon Valley Academy**. It started out in 1997 as a publicly funded regional and bi-national network organisation. In 2000, it became a membership-based organisation, funded primarily by membership fees (which accounted for 67% of total funding that year). The Academy offers a regional bio-tech forum for debate and networking by sponsoring conferences, workshops and seminars around specific challenges that have been jointly identified by its members. The Academy has also organised a series of sub-groups around related topics such as human resources in bio-tech, bio-molecular structures and dynamics, cancer research and health economics. It operates a Ph.D. programme involving aimed at strengthening co-operation between public institutions and private companies about product development. Öresund Medicon Valley stands out as one of the most competitive biotechnology clusters of Europe today. While catalysed by the Öresund University and significant public sector funding, the organisation has now developed a dynamic of its own and plays an active role in promoting information sharing and knowledge development in the region.

Due to the successful experience of the Medicon Valley Academy, the Öresund region has undertaken new collaboration measures and created similar institutions to support other clusters, such as IT (Öresund IT Academy), food (Öresund Food Network), and environmental issues (Öresund Environment). Cross-sectoral collaboration between these institutions has also been launched. In 2002 for example, the Öresund Medicon Valley Academy has developed a post-doctoral programme linking IT and biotechnology. The presence of such co-ordinated structures has facilitated relationships with foreign investors (including venture capitalists and business angels).

2.1.3. Integrating global activities (fashion, design, and trade fairs) into a regional strategy

The third key pillar on which a firm-oriented strategy can be constructed is that of Milan's leading "global" sectors – fashion, design, and trade fairs. Any long-term vision for the region, and more widely at national level, needs to build on tangible strengths. Fashion, design, and trade fairs are undoubtedly regional specialisations that set Milan apart from most other large cities. While they have a global reach, and contribute in large part to Milan's international image and reputation, fashion, design, and trade fairs are also the downstream end of several traditional/labour-intensive sectors in which the Milan region and Italy more generally specialise. In other words, they are cross-sectoral activities that influence positively the competitiveness of a large number of sectors, such as the clothing or the furniture industries. There is a very close link between the

conception-oriented activities and the issues discussed in the first part of this chapter with respect to small firms.

Fashion: strengthening linkages between creativity and (regional) production

To enhance its leadership in high-quality “ready-to-wear” industry – and other related sectors such as shoes and accessories industries – Milan needs a strategy that tackles every part involved into the fashion supply chain. Textile and clothing firms based in Lombardy are supported by the recently launched “metadistrict” policy (see previous Box 2.1). The textile industrial districts located in the ring belt of the Milan metropolitan region excel in the production of raw materials and of specialised machinery. Not only do they supply Italian firms but also a wide variety of French, English and American firms. The Region of Lombardy has freshly launched the “metadistrict” policy to upgrade the technological capacities of these manufacturing firms and to shift their value-added upwards as a response to aggressive international competition in the textile and clothing industry⁷. Nevertheless, the policy seems too focused on the manufacturing activities and not enough on the creativity side.

As many other metropolitan regions in the OECD area, Milan was hit hard by the upsurge of low-cost textile and clothing manufacturers such as China and India. An ever growing share of the textile and clothing market was taken by offshore business in low-cost countries over the last years. The strong comparative advantage of these countries in traditional sectors like textile and clothing has attracted high FDI and relocation of plants, including from Milan. Such a dynamic clearly poses a challenge to Milan’s comprehensive supply chain, which is the distinctive asset of the metropolitan region¹. Although policymakers are aware of the need to support the whole productive system, policies and resources have remained disconnected from each other and rarely integrated. Milan could aim to enhance linkages between “creative workers” – usually agglomerated in the City of Milan – and manufacturing firms, scattered in the ring belt and in the country, in order to increase the level of fashion embedded in the firms’ output and their competitiveness on the global market. The key issue is how to generate a pole that can attract students, nurture entrepreneurs, and help create a fluid labour market for skilled people that helps the region’s firm to retain graduates and skilled designers.

Design: linking the “Made in Italy” label to local production systems

Milan has always been synonymous with innovations in design. In particular, Milan hosts the “Fiera del Mobile” (MACEF), one of the most important design fairs in the world². Design firms are localised all over the area of the Milan municipality. Although the metropolitan region hosts numerous schools specialised in industrial design and produces large numbers of young designers every year, the fragmentation of the demand for design, coming from

SMEs mostly specialised in niche markets, leads to a fragmented pattern of supply that is not readily translated into large-scale commercial success. Accordingly, Milanese micro or individual design firms usually deal with a sort of “artistic” and “creative” design and have few chances to gain experience in mass production goods. Furthermore, these small design firms cannot afford to have (or are not interested in having) an R&D branch. Local know-how is not very institutionalised but is rather dependent on individuals – an entrepreneurial culture that is both an advantage and a source of potential weakness for the sector as a whole. One way to counterbalance the drawbacks of the modest size of design firms could be the creation of networks and alliances in order to achieve, when needed, the critical mass to be competitive on the global market. This policy could promote a proper clustering dynamic that, despite the territorial contiguity of firms, is relatively uncommon in Milan in this sector.

One way to better exploit Milan’s specialisation in design could be to enhance the link between local creative firms and the Italian industrial districts. Milanese designers could seize the opportunity to design traditional “Made in Italy” goods, *i.e.*, goods related to individuals (clothes, jewellery, shoes, etc.), households (furniture, electrical facilities, tiles, etc.) and machinery tools, whose value-added is largely determined by the quality of their design. Taking over the design of “Made in Italy” items could act as a good substitute for mass production and entail significant economies of scale. Strengthening or creating strong linkages between Milanese designers and Italian industrial districts could be an efficient way to maintain Milan’s role as one of the international capitals of design, especially as industrial districts convey a strong brand image of Italy³. This is a specific example of the more general point made at the beginning of this chapter, *i.e.* how a vision for the region can be built on an approach that uses traditional assets related to the organisation of production while helping such activities to adapt to new economic circumstances.

The creation of associations and consortia could help the high-skilled but currently fragmented designers to exploit this new market opportunity. In some OECD metropolitan regions, the design cluster seems to have benefited from the existence of collaborative platforms in order to meet the local demand, for example via the demand of large companies and their design centres as in Barcelona or via a national strategic body to support industrial design as in the UK (Box 2.5). Milan lacks large companies that could drive local demand, and lacks durable platforms for the exchange of knowledge and ideas. Although the Province of Milan has very recently launched a promising initiative called the “Milano Made In Design” (Box 2.7), more stable forms of partnerships such as associations and consortia could yield several advantages. For example, associations could:

- garner enough critical mass and credibility to raise funds for R&D activities, whereas a designer alone would certainly have fewer chances to earn banks’ confidence for speculative activities such as research;

- help firms to build stable collaboration networks with large and high-skilled universities such as the Politecnico di Milano and the various design schools;
- sponsor the participation of local designers to international design fairs and events, and finance the promotion of their art in specialised international media (e.g., advertising campaign in design magazines);
- organise various events in the industrial districts to demonstrate how Milanese industrial design could enhance the international competitiveness of the “Made in Italy” label by adding new contents, functions and meanings to classical products.

Box 2.5. Initiatives to support design clusters in OECD countries: Spain and the UK

Barcelona (Spain) hosts virtually every facet of design: graphic design, environmental design, product design, interior design, digital design, and textile and fashion design. Strong corporate demand has driven the development of the design cluster. Barcelona is home to the design centres of world-class automobile brands (e.g., Audi, Renault, Seat, Nissan and Volvo). Catalonia hosts the design and development centres of other major large international and national companies (including Hewlett-Packard, Sony and Venture Electronics Spain). Catalonia also accommodates important research centres specialised in high-tech industrial design (e.g., the Computer Integrated Manufacturing Centre, the International Centre for Numerical Methods in Engineering, the New Products Innovation & Conceptual Development Centre, and the Virtual Reality Centre). Local authorities have acted as facilitators for the specialisation process, for example by creating some of the most prestigious design contests and awards in Spain. Today, about 8 000 designers work in more than 1 000 companies (including multidisciplinary design firms, engineering companies and technological centres).

The Design Council is a national strategic body for design in the **UK**. It is funded by grant-in-aid from the Department of Trade & Industry. It aims to strengthen and support national industrial design by enhancing its linkages with the economy and society by demonstrating and promoting the vital role of design in making businesses more competitive and public services more effective. The Design Council’s work includes: (i) a national programme of design support for managers; (ii) a ten-year public design promotion in UK regions; (iii) campaigns to accelerate innovation and transformation in industry and the public sector through practical interventions promoting the strategic use of design; (iv) projects generating new thinking on how design can be used to tackle key economic and social challenges. Finally, the Design Council runs one award scheme, the Prince Philip Designers Prize. This prize is awarded annually to an individual designer or leader of a design team, selected from nominations by a number of design organisations.

Source: www.cidem.com/catalonia/en/catbcn/design/index.jsp and <http://www.design-council.org.uk>

Box 2.6. The “Milano Made In Design” initiative

The Province of Milan has recently launched the “Milano Made In Design” initiative, an itinerant exhibition that will tour around the world to promote the most innovative Milanese designers. More than 120 items (among which the cloud bookshelf by Cappellini, the Iuta armchair by B&B Italia, Artemide’s pipe lamp, the Alfa Romeo Brera automobile, etc.) will be shown to the international public. The “Milano Made In Design” exhibition started its world tour in New York in May 2006 and will go through a number of locations in Asia.

The entire exhibit area has been conceived as an authentic exploration of the Milan area, a large workshop where objects, ideas, men and businesses come together. Throughout the exhibit, one may observe the complex machine which drives “Made in Italy”, including areas such as Italian fashion and the indoor lighting sector. A special part of the exhibition is dedicated to the famous Italian life style, both at home and at work, and to the furniture industry.

Source : <http://www.provincia.milano.it/provinciaincasa/marzo2006/art06.html>

Some metropolitan regions in low-cost countries that did not hold particular competitive advantages in design have already witnessed a swift surge of demand and have addressed it through significant investment in education and training, generating a growing specialisation of the labour market (Box 2.7). In order to overcome the potential reluctance of Milanese design firms to engage into co-operative arrangements, local authorities could launch a comprehensive information campaign and showcase the potential benefits. This has been attempted by other local authorities in Italy where traditional industrial districts have been assisted in the expansion and transformation of their productive systems to include external partners.

Box 2.7. When demand of industrial design can enhance supply: the example of Beijing

Beijing (China) offers a striking example of a region where the acute concentration of demand for design can drive the further specialisation of the region. Although few experts would name Beijing as one of the international design capitals yet, local authorities have invested massively in promoting the specialisation of the local labour market in order to meet the increasing demand of designers by domestic and foreign companies. Universities and colleges have received important subsidies over the last few years and the gap between Beijing and other design capitals in terms of supply has already started to close. For example, Beijing’s Tsinghua University is opening a new 60 000 m² building dedicated to design classes. At the national level, about 400 schools offer design classes and breed some 10 000 industrial designers every year, *i.e.*, more than a six-fold increase in five years. Beijing has also introduced a new course called “Technology and Design” into the national education curriculum, in which students learn about the history and excellence criteria of design. The aim is to develop Chinese people’s taste and awareness for design and to promote the renaissance of Chinese design.

Source: Business Week, November 21st 2005.

Trade fairs: a showroom for the region's and the nation's products

Finally, Milan-based trade fairs strongly support Italian firms (including SMEs) and connect many of them with the global market. Milan has a long commercial history thanks to its strategic position in Central and Southern Europe. The Milanese industrial revolution, which started in the 19th century, further enhanced the commercial attitude of the city and Milan developed its fair sector at the beginning of the 20th century. Today, the fair of Milan is managed by a powerful foundation called the “Fondazione Fiera Milano” (a local coalition between Milanese public and private actors), which handles one of the largest fair facilities of the world (Chapter 1). The construction of the new facility just outside the boundaries of the Milan municipality has provided local authorities and local actors (such as the “Fondazione Fiera Milano”) with the possibility to search for a higher integration of the ring belt with the city and to give new space to metropolitan functions such as trade fairs. Moreover, enhancing the Milan-based fair sector means improving the main “showroom” of “Made in Italy” goods and thus contributing to the national economy.

2.2. Upgrading liveability as a competitiveness strategy

The second major contributor to the competitiveness of the region, after the “direct factors”, is the “indirect” factors – specifically, the wider business environment. The wider business environment includes a range of factors that either encourage or inhibit business activity, including the efficiency of the transportation and communications infrastructure, the level of local taxes and the quality of public services that they fund, provision of affordable housing, the presence and quality of education institutions. This is strongly linked to the strategic management of the economy and the level of leadership that local authorities provide and, within that, the approach taken to support local business, attract new industries and to provide an environment that is attractive for investors and employees. In general, attention focuses on the framework conditions for business, the tangible factors that increase or decrease production costs – local tax regimes, transportation infrastructures, and so on. However, there is increasing recognition that environmental quality, social stability and other attributes, often derived from good local governance, can have an important influence on regional competitiveness.

Milan needs to restore its localisation advantages for firms (*i.e.*, higher value of the output produced in locus or produced in connection with Milan's metropolitan services and functions) and people (*i.e.*, higher liveability within the metropolitan region to allow people to express and exploit their talents). The current low performance is reducing the influx of

FDI and skilled people in the metropolis (Chapter 1), hence Milan's role within the international community. To enhance local liveability, the Province of Milan has recently launched a strategic plan called "*Città di città*" ("City of cities"). This initiative aims at creating a polycentric metropolitan region by enhancing the specialisation of the different neighbourhoods (Box 2.8)⁴. The quality of the urban environment in Milan is considered to be low, despite the role the city plays both in Europe (as capital of a macroregion) and in the world (as supplier of rare functions). Milan provides its numerous "stakeholders" (*i.e.*, people and firms who live/operate within the region, or consume metropolitan goods and services in the region) with an unfair level of services in some key fields as: (i) regional accessibility; (ii) availability of affordable and attractive housing; and (iii) availability of cultural and natural amenities.

Box 2.8. The "City of cities" strategic plan

The strategic plan "*Città di città*" ("City of cities"), recently launched by the Milan Province, aims at improving local liveability. "*Città di città*" is the first public policy that considers Milan as an extended and heterogeneous urban region composed by different urban systems (considered as cities) that changes dimension according to the kind of stakeholder taken into account (commuters, students, visitors, etc.). Specifically, the urban systems in which the strategy divides the Milan metropolitan region are: (i) the Monza-Brianza system (which is the territory of the recently established Monza Province); (ii) seven "cities" that will compose the new province of Milan; and (iii) a central core that is almost coincident with the Milan municipality.

Preserving the oneness of the metropolitan region, the strategy defines a number of hubs that are planned to be transformed into focal points of the metropolitan area. Such hubs will have different specialisation according to the urban system in which they are placed. They will be in turn: infrastructural nodes to enhance and facilitate mobility; open spaces to provide public services (for instance, large urban parks); spaces dedicated to leisure and commerce activities; working spaces; etc.

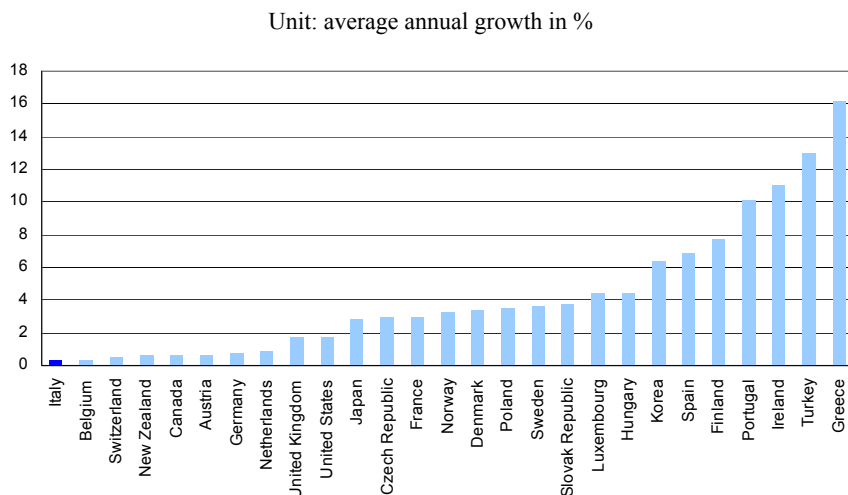
The strategic plan has recently opened a "call for projects" inviting local actors to present their ideas for improving Milan's liveability. The best ten ideas will be collected in an atlas that will be presented during the next "Triennale di Milano" (2006-2007). The exhibition will be the occasion to involve other public institutions in the strategy as well as to raise the needed funds to implement the selected projects.

2.2.1. *Improving accessibility and easing the flow of goods and people*

Good accessibility and good logistics capacities could constitute key competitive advantages for Milan's global role, but Milan has not yet fully grasped its position as a node on the European and Mediterranean axes. Milan is the most congested node of a thick transportation framework in Northern Italy (Chapter 1). Such congestion is generated partly by the commuting flows related to the metropolis, and partly by the cross-over traffic flow between Turin and Venice that runs along the core of the metropolitan region. Decreasing traffic congestion is crucial for the local development strategy⁵ as the Milanese production framework is largely based on SME networks that use intensively the territory and consider the city as their supplier of advanced services.

Traffic congestion in Milan generates important diseconomies of agglomeration (Chapter 1). Not only has Milan's impressive traffic congestion caused very high levels of air pollution⁶, but it is also badly affecting consumers' leisure time and firms' capacity to connect with their suppliers or customers. In other words, traffic congestion is reducing their opportunities for consumption and for exchanges of knowledge and innovation. The economic loss entailed by congestion has not been quantitatively assessed in Milan, but similar evaluations in other OECD metropolitan regions have pointed out the existence of dramatic penalties (for example, the cost of traffic removed around 4.4% of potential output in Seoul in 2002). Finally, traffic congestion is eroding Milan's image *vis-à-vis* international investors.

Congestion problems have led to the discussion of several large-scale transportation infrastructure projects. In 2001, the national government introduced a new process to enable faster realisation of large-scale infrastructure (Law n. 443/2001 called "Legge Obbiettivo"). Lombardy concentrates sixteen of the infrastructure projects listed in the law. One of them is the Pedemontana highway, which is supposed to provide a long-awaited direct connection between the provinces of Varese and Bergamo (in the ring belt of the metropolitan region) in order to reduce the crossover traffic flow. However, several obstacles such as insufficient financing, complex bureaucratic procedures (every each phase of the project must be approved by an Inter-ministerial Committee), and political conflicts⁷ are still preventing the project from moving forward. Many other projects have remained suspended or slowed down due to the lack of consensus about appropriate action and to the lack of implementation capacity. As a consequence, road connections in the metropolitan region are still saturated⁸. The lack of investment seems to follow a national trend as Italy has registered the lowest growth of its motorway network among OECD countries during the 1991-2004 period (Figure 2.2).

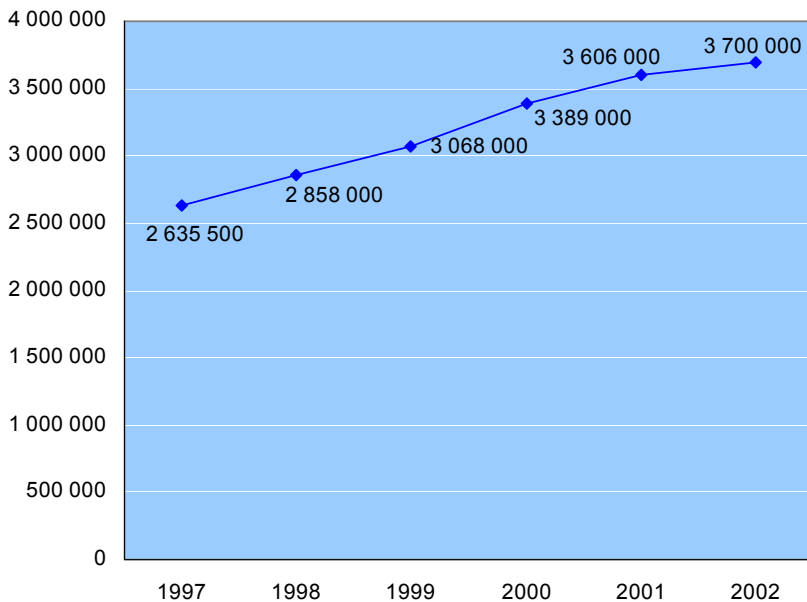
Figure 2.2. **Growth of motorway network, 1991-2004**

Source: OECD Factbook 2006.

Milan has tried to bridge over its lack of an integrated metropolitan transportation system with alternative measures, such as the “*Passante ferroviario*” (assessed below), with mixed results. As in many other OECD metropolitan regions, public transportation services are unevenly distributed across the metropolitan region, with a relatively high concentration of services in the core area and low endowment in the ring belt. As a consequence, workers who moved out in the ring belt and work in the core often find no other solution than to commute by car, which contributes to increasing congestion and pollution. In order to solve this problem, local authorities have experimented two main policies. First, they have attempted to encourage intermodality facilities by offering park-ride facilities to car commuters, *i.e.*, giving them the possibility to leave their cars in *exchange parking areas* and to switch to public transportation in order to reach downtown. Although exchange parking areas are absorbing a growing share of cars (Figure 2.3), the deficit of co-ordination among local authorities is reducing their efficiency. As exchange parking areas are located on the borders of the City of Milan, they are unable to absorb the congestion that is mostly emanating from the ring belt. Second, the City of Milan has established *restricted parking areas* in the city centre in order to deter commuters from using their cars (Figure 2.4). This policy is similar to the measures taken by many large OECD metropolitan regions (*e.g.*, Paris). However, it seems to entail regrettable side-effects for workers living in the areas of the ring belt that are most poorly connected via public transportation to the city centre⁹.

Figure 2.3. Average annual use of exchange parking in City of Milan, 1997-2002

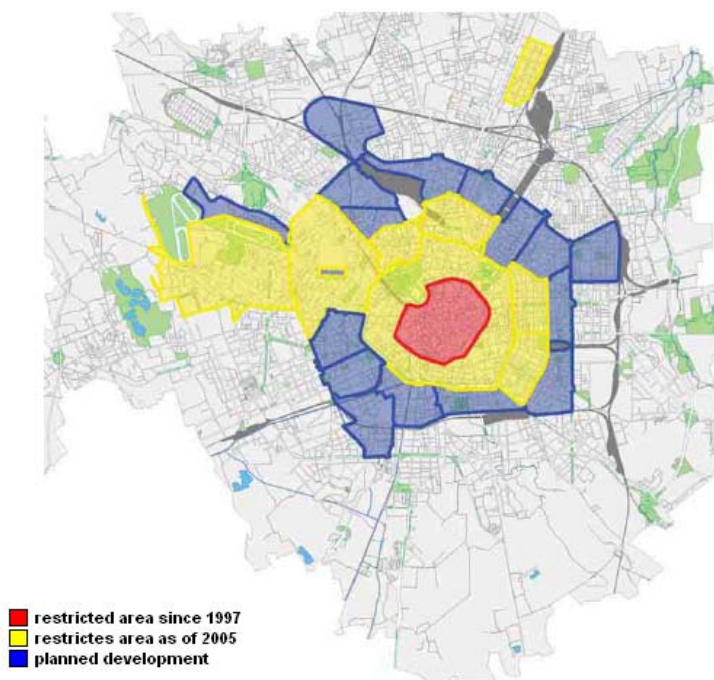
Unit: number of cars per year



Source: ATM, Milan

Milan needs to better connect the core of the metropolitan region and the ring belt. An option could be the creation of a regional subway system by the integration of the railroad network with the subway network. One of the best examples is the RER (Réseau Express Régional, “regional express network”) system in Paris, which does not offer enough suburb-to-suburb connections yet but provides relatively well-distributed and efficient connections from the periphery to the core of the metropolitan region (Box 2.9). Many other OECD metropolitan regions have chosen this option and supported it with adequate collaboration mechanisms. In Stockholm for example, the public transportation companies in the five counties of the Stockholm Mälars region and the national railroad administration (SJ) have decided to launch, starting from January 2006, a commuter pass that will be valid on all InterCity and regional trains as well as express trains from Stockholm to distant cities in the region. This initiative expands efforts started with “Traffic in the Stockholm Mälars region” by allowing the new commuter pass to be adapted to a personal travel profile in order to make planning and payment for journeys more convenient for the commuter (OECD, 2006c).

Figure 2.4. Restricted parking areas in the City of Milan, 1997-2005



Source: Milan Agency for Mobility and Environment

Box 2.9. The RER system in Paris

The RER (*Réseau Express Régional*) is one of the best examples of public transportation system in a metropolitan region. The RER is a hybrid transportation system, resulting from the integration of modern city-centre subway and pre-existing suburban rail. The implementation of the project started in 1962 and the first east-west line (A) was inaugurated in 1977. Meanwhile, 4 other lines were built and the last one (line E) was opened in 1999. The RER covers 571 km today (nearly 60 km are underground) and has 246 stop points (33 in the city of Paris).

The need of having a transportation facility connecting the Île-de-France external ring (*banlieue*) with the city of Paris dates back to the beginning of the 20th century. The main aims were (i) to integrate the ring belt with the core of the metropolitan region, and (ii) to simplify commuting flows providing commuters with direct linkages. The RATP (*Régie Autonome des Transports Parisiens*) revived the scheme of a metropolitan transportation facility in the 1950s, and in 1960 an interministerial committee decided to go ahead with the project. The RATP was granted authority to run the new link and the SNCF (*Société Nationale des Chemins de fer Français*) ceded the operation of the Saint-Germain-en-Laye line (to the west of Paris) and the Vincennes line (to the east). Today, the RER maintains its hybrid nature: part of it is operated by RATP and others by the national rail company (SNCF).

Above all, Milan will have to address the problem of weak implementation capacity in transportation policy. The idea of creating a metropolitan public transportation system is not new in Milan. The debate dates back to the early 1960s, with the “Passante Ferroviario” project inspired by the RER system of Paris. However, the past 40 years have seen a remarkably slow implementation of the project. The project has become partially obsolete before even being realised due to the increasing size of the metropolitan region. Another drawback of the delayed implementation of projects has been that investment has continued to focus on the core area of the Milan metropolitan region (for instance, by planning new lines of underground), leaving aside areas suffering from poor mobility services and perpetuating the ongoing dynamics of regional fragmentation. Little can be done to accelerate mutual consultation and policy action without co-operative governance mechanisms (see Chapter 3).

Box 2.10. More than 30 years to realise the “Passante Ferroviario”

The debate about creating an integrated transportation system in the metropolitan region of Milan started in the 1960s with the creation of the PIM (*Piano Intercomunale Milanese*). The PIM was entitled to design and to develop new infrastructure for the region. One of the first suggestions of the PIM was the creation of a system able to integrate the railroad network with urban transportation facilities: the so-called “Passante Ferroviario”. The idea was largely inspired from the RER system in Paris and it presented an efficient way to exploit the existing railroad endowment of the region. However, the original plan of the Passante Ferroviario was considerably downsized over time due to the lack of consensus among local governments and the absence of a strong leadership able to pull the project forward. Only one part of the original project survived: the connection between the Province of Varese (in the Northwest of the metropolitan region) with the Provinces of Pavia and Piacenza. After years of negotiation, the plan was finally implemented in the early 1980s. A first segment of the “Passante Ferroviario” opened in 1997 but the project will be finalised only in 2006.

2.2.2. Managing the local housing market

Upgrading the quality and the quantity of affordable houses is an important part of the regional development strategy. The under-governed expansion of Milan over the last few decades has resulted in the juxtaposition of deprived areas in the core concentrating immigrants and low-income people and of under-served residential areas in the ring belt¹⁰. Although many brownfield sites remain, involving private investment in restoration projects might prove thorny (at least in the short run) due to the low expected investment pay-off¹¹. On the one hand, public investment could increase the stock of available houses through a social housing policy. On the other hand, local authorities could sustain the local demand via property tax and rental control.

Regarding social housing needs, local authorities could enhance the supply and, at the same time, promote the presence of social houses in different areas of the city, thus avoiding the creation of deprived neighbourhoods. It is estimated that more than 80%

of Italian families own their residence, and Milan most likely follows the national trend. This figure suggests that social housing is virtually absent or very limited in the Milan metropolitan region. The Province of Milan and some municipalities of the metropolitan region (79 local authorities in total, representing around 2.8 million inhabitants) are part of a consortium called the CIMEP (*Consorzio Intecomunale Milanese per l'Edilizia Popolare*), whose main aim is to centralise and to co-ordinate the management of social housing. The consortium has allowed for the planning of many interventions (e.g., the construction of new social housing for around 150 000 citizens), but their implementation is often held back, mainly due to the lack of resources. The pay-off from the renewal policy in wealthy areas and part of the additional revenues coming from the areas with higher property tax rates could be used to finance the projects in impoverished areas. The experience of other OECD metropolitan regions showed that involving higher levels of government (regional or national) in financing social housing projects could be helpful (Box 2.11).

Box 2.11. Involving higher levels of government in social housing projects: the experience of Stockholm and Montreal

Social housing poses an urgent and widely shared problem in many large OECD metropolitan regions. The general rise of housing prices in large wealthy cities often stops significant shares of the population from purchasing or from renting decent housing in pleasant neighbourhoods. The affordability of housing is defined in various ways across OECD countries. For instance, in Canada, the key indicator is the share of households spending 30% or more of their pre-tax income on housing. In Australia, households that rank in the lowest 40% of the income range and that spend more than 30% of their income in housing are considered to be in “housing stress”.

In **Stockholm** (Sweden), the low level of housing investment, exacerbated by housing market distortions, has contributed to aggravating housing shortages. Housing investment in Sweden stands at a very low level in comparison with other OECD countries. Municipalities, which are responsible for the planning and overall implementation of housing construction, have been unable to promote the housing investments required to meet Stockholm’s in-migration. Most municipalities own non-profit housing companies that allocate apartments to renters regardless of income, origin or family structure. Housing allowances also redistribute income to families with children and to low-income families. The City Council of Stockholm approved strategies to reduce the cost of new housing construction in 2004. The City’s housing companies have implemented contractor competitions and developed new housing concepts to solve this problem. The central government has introduced a temporary investment grant for the construction of rented housing in areas suffering from a housing shortage (OECD, 2006c). In **Montreal** (Canada), intergovernmental contracts have allowed for increased commitment from the various actors and for greater integration of the projects. The “City Contract” signed by the Government of Quebec and the City of Montreal at the beginning of 2003 was a promising first step. The City Contract was considered as financial support for Montreal in areas such as social housing, culture and public transportation. It had a single envelope of CAD 1.4 billion for a 5-year period. Once the overall objectives had been jointly defined, the city was supposed to be autonomous in operational and financial execution. The Metropolitan Community of Montreal (MCM) also established a social housing fund to which all municipalities contribute. With this fund, the MCM has financed new social housing projects in member municipalities (OECD, 2004a).

In order to avoid ghettoisation and gentrification, social housing could be built in central areas and partly financed by private investors. In general, affluent neighbourhoods tend to reject the construction of social housing in their own territory so as to keep out low-income people who might jeopardise local safety for instance. Some OECD metropolitan regions have designed various mechanisms to overcome their reluctance. For example, some regions have established a sanction mechanism (a financial penalty) for the areas that refuse to host social housing, using the collected revenues to encourage other neighbourhoods to accept social housing. Other regions have also encouraged the creation of a mixed urban environment (Box 2.12).

Box 2.12. Incentives and sanctions to increase social housing: the example of France and the US

In **France**, the law obliges cities in which social housing accounts for less than 20% of the total housing stock to either increase social housing or to pay 1% of the rental value of private buildings to the Treasury. In the **US**, the State of New Jersey is experimenting with systems of transferable rights through which a municipality can transfer its obligation to provide housing for low-income households, via a financial contribution to another municipality. To avoid gentrification in the areas experiencing booming housing prices, “inclusionary zoning” has been pointed out as effective. In California for example, a study by the California Coalition for Rural Housing Project showed that 64 jurisdictions that had adopted inclusionary zoning had produced over 25 000 affordable housing units. Two-thirds of the programmes were mandatory, and two-thirds required 10% to 15% of proposed units to be affordable. Almost all programmes provided density bonuses and some offered fee waivers and fast track permitting as well.

Source: OECD “Report on Socially Sustainable Housing: Scope for and Barriers to Improvement” (GOV/TDPC/URB(2004)6), paper presented at the Working Party on Territorial Policy in Urban Areas, 2 June 2004.

Concerning property tax, a flexible taxation system could help encourage a fairer distribution of economic activities and population. Several OECD metropolitan regions have reduced property tax or granted fiscal exemptions for a certain period of time as an efficient way to draw investment and residents in lower-income areas. Considering that the property tax is set by municipalities in Italy, Milan could use it to better influence urban sprawl. Current property tax rates in the City of Milan are calculated to reach 5% of the value of the property (which is reported in the local land registry office). However, the latter is often obsolete as it has mainly remained based on previous evaluations, which date back to the period preceding the boom of housing prices. The under-evaluation of the value leads to significant losses in property tax revenues, which could have

been invested in upgrading public services in impoverished areas. Updating and digitalising land registers could thus offer a solution to differentiate property tax rates without introducing a complex system of neighbourhood-based tax rates.

Finally, a rent control mechanism in certain areas could help deprived families or young university students to find housing. The local rent market has experienced a boom over the last few decades and control mechanisms could monitor further movements. However, rent control mechanisms might be accompanied by negative side-effects¹². In order to overcome such problems, special rent setting schemes could be introduced. Such schemes include adjustment systems that allow an increase of rent according to upgrades in the housing quality, and adjustment systems that allow rents to be adjusted downwards if a tenant takes charge of the housing maintenance (at least partially). Empirical evidence in several OECD countries (e.g., former West Germany, the Netherlands, Canada, Sweden) shows that it is important to simplify related procedures and to reduce adjustment costs. Another example in Australia suggested that rent control could also become an effective tool to improve housing conditions when applied only to sub-standard housing, because it provided strong incentives for landlords to maintain their property in an appropriate condition¹³.

2.2.3. Restoring Milan's role as cultural capital

Milan's role as a cultural city has declined. Cultural amenities abound in the core and are almost absent in the ring belt of the metropolitan region. Although Milan is the place of the Italian media and publishing industries, and despite the presence of theatres (among which the famous "*Teatro alla Scala*"), museums (as the "*Pinacoteca di Brera*"), and other entertainment facilities (such as restaurants and nightclubs), a large part of the local population that lives in the ring belt (especially the low-middle class and young workers) is virtually excluded from the consumption of cultural amenities. Such a dynamic can be detrimental as cultural amenities are often enhanced by mass consumption.

Supporting entertainment and leisure activities could be a way to attract creative workers and FDI. Although the lack of precise figures on the Milanese cultural and entertainment economy makes it difficult to grasp clearly their dimension¹⁴, empirical evidence suggests that these activities support other key local industries (such as fashion and design), providing spaces and moments in which creative people "consume" culture and exchange ideas. In other words, they contribute to shaping the "buzz" environment, which facilitates the innovation process.

2.2.4. Using flagship projects to build a Milan brand

Finally, flagship projects may also play an important role for Milan's capacity to attract and retain creative workers. Flagship projects present the merit of involving "emotionally" the entire metropolitan region and of promoting internationally the brand of a region, thus attracting investment and visitors. Milan needs flagship projects because the metropolitan region of Milan often appears as an anonymous urban continuum which fails in conveying a distinctive sense of a place. Investment could focus on areas that have already experimented endogenous growth or play a particular role within the metropolitan region as infrastructural or service hubs (such as those involved in the "Città di città" strategic planning). Such a policy could generate both "hard" and "soft" outcomes. "Hard" outcomes include physical results such as new infrastructure and attractive new spaces. "Soft" outcomes include local capacity building through a learning-by-doing process and a new image for Milan within the international community: a new city brand (Box 2.13).

Box 2.13. Branding policies in the OECD metropolitan regions

An increasing number of cities and regions pursue a strategy of territorial branding to associate their area with specific high-quality products or approaches. In the case of many traditional products, particularly food, wine, and some types of clothing, a place name is often formally included in the name of the product (Champagne is probably the most famous example). Similar, though probably less deeply rooted, associations can be promoted for more modern products and for larger areas like metro-regions (Silicon Valley is an example, where rather than the product taking its name from the place, the dominant material of the production process has become the unofficial name of the area). Territorial branding associates a place with a successful range of products, advancing the reputation of the place; and it also becomes a marketing tool of firms in the sector concerned that they can boast of their place of origin. Firms, local trade associations and local authorities can combine to produce territorial branding strategies. These need to involve, not simply the production of logos, but specialised local facilities for the sector - for example, technical college courses, or museums relating it to the region. Again, these developments are most likely to take place in smaller, strongly specialised locations than metro-regions. Strategic vision at the metro-regional level needs to be aware of existing and potential territorial brands *within* the wider area, which implies a general willingness of other places within the region to accept the special character of these locations and not to seek to lose them within the wider whole. Tourism is often at the heart of territorial branding, especially when this concept can be expanded to include such elements as hosting conventions and displaying local culture

Source : OECD (forthcoming), *Competitive Cities in the Global Economy*

The industrial history of Milan has left behind numerous brownfield sites in the central area of Milan. Today, this diversified and complex urban landscape represents a local resource that could be the basis for flagship regeneration initiatives. The experience of other OECD metropolitan regions, which have launched their own urban renewal policy, opens optimistic prospects for Milan. For example, global cities such as London, but also medium-sized cities such as Bilbao have achieved remarkable results by implementing an integrated a shared renewal policy in deprived areas of their territories (Box 2.14). In London, the public sector had to lay down a sizeable kick-off investment, yet the output of the policy has been the creation of a prestigious residential and financial centre, which has created new opportunities for the city to grow. In Bilbao, local actors faced the local economic downturn by investing in culture and giving a new face to the entire urban area.

Box 2.14. Brownfield regeneration policies in London and Bilbao

London stands out as one of the pioneering examples of urban renewal policy. Originally one of the largest ports in Europe, the last of London's Docks had closed by 1982, victims of changing shipping technology. The Docks consisted of man-made land, much of former wetlands and marshlands, and contained a mixture of obsolete housing and industrial buildings. During the 1980s, most of the industrial structures were demolished and cleared, while new housing and offices were built in the western part of the area. A little over GBP 9 billion (USD 15 billion) was invested between July 1981 and early 1998. Just under GBP 1.9 billion of the total came from the public purse, about half of which was spent on transportation infrastructure. Public investment in roads and railways helped to unlock private investment. Further encouraged by tax breaks, development in the Docklands is now driven by the private sector. Specifically, Canary Wharf Group (the company that administrates the area since 1993) signed an agreement for a GBP 2 billion scheme to develop, a neighbouring area owned by British Waterways, a corporation that reports to the Ministry of Environment. The whole Docklands region is now growing, and it is expected to receive a further boost from the 2012 Olympic Games.

In **Bilbao** (north of Spain), the traditional industries of shipbuilding and steelmaking collapsed in the early 1990s, leaving numerous brownfield sites in the city centre. The municipality decided to play on the cultural lever to redevelop the city and it spent about EUR 84 million to attract the Guggenheim Foundation. Bilbao Guggenheim Museum, a spectacular building made in metal and stone, opened in late 1997 and has grown into one of the most important museums in Europe. Such permanent cultural landmarks have a lasting impact on once-deprived areas. First, the museum has triggered a remarkable increase in the number of tourists and visitors. Second, it has had a less quantifiable but major effect on "local creativity".

Many of these flagship regeneration interventions share common characteristics:

- they usually have high profiles and are designed by internationally famous architects;
- minimum public investment in infrastructure improvements thanks to high participation of private capital;
- flexibility of planning practice in order to encourage private investment;
- they have been implemented in important cities at the top of the urban hierarchy;
- they are made to attract and agglomerate the highly qualified professionals and creative workers who are their primary targets.

However, flagship projects are likely to be implemented in limited areas and they should be integrated with the rest of the metropolitan region. Concentrating resources on a limited area might increase inequality within the city. It is sometimes the case that links between these projects and existing local economies are weak and that they are sometimes reduced to closed economic enclaves detached from the local economic fabric¹⁵. Moreover, specific problems are associated with brownfield regeneration. Although private investment in brownfield restorations has been high during the last decades (generating new housing units, urban parks and commercial services) several impediments remain. First of all, there is no comprehensive framework that could regulate and co-ordinate the various interventions (for example, there is no national law regulating redevelopment procedures). Second, responsibilities for the management of brownfield restoration policies remain unclear within local authorities (for instance, various parts of one brownfield site may be owned by several local governments, which entails conflicts of interest and strains decisions for restoration policies). Third, private developers still receive few incentives to invest in brownfield restoration whereas they tend to prefer greenfield sites (which require lower investment in general).

Milan could implement a mix of flagship restoration and city branding policies. The example of Barcelona may represent a useful benchmark. The two regions share a series of characteristics. First, they both act as motors of economic development in their respective country by producing a large part of national wealth without being the state capital. Second, both are economic capitals¹⁶. Third, both serve as a service hub for a large region concentrating activities with high added-value (among which some conception-intense service such as design) but still maintain an important

manufacturing sector with a specialisation in high-tech or conception-intensive industries such as pharmaceuticals and electronics¹⁷. Fourth, both host first-class metropolitan functions such as a powerful academic system¹⁸ and an expanding fair sector¹⁹.

The experience of Barcelona suggests that a previously set up vision reinforces the benefits to be drawn from a flagship event. In the early 1980s, Barcelona was affected by demographic decline, pollution, scarcity or misallocation of valuable land (with an old, dismissed, harbour facility just in the centre of the city and numerous large brownfield sites all around the municipality) and by social problems in the historical downtown. All the attempts to restore the urban area had been long delayed or even cancelled²⁰. The occasion to implement them and to promote an integrated restoration strategy came with the Olympics (hosted by Barcelona in 1992). Although the Barcelona Games have shown all the potential of “big events” in promoting urban redevelopment, the Olympics have been only a way to implement a pre-existing shared vision for the urban development²¹. Without such a vision, even the Olympics would have been ineffective in promoting local growth²². Flagship restoration projects, which have been implemented mostly on the waterfront (for instance, the old port and the Olympic port have been transformed in the most attractive open-spaces of the city centre), are perfectly integrated in the urban framework and acted as a flywheel for the urban restoration of other parts of the city (mostly financed by private investment). The city had improved local services as well as local liveability, accepting to challenge a risky large investment and achieving a result that is globally considered as one of the most successful examples of city redevelopment (Box 2.15). The reallocation of manufacturing SMEs in the ring belt and the availability of valuable land has enhanced a local process of cumulative causation. Today, Barcelona is one of the most important congress cities of the world and it is extremely specialised in supplying high-quality tourism services.

Box 2.15. Some key issues in the Barcelona regeneration model

Of course international events are used to enhance prestige, to attract private investment and to focus and motivate the city’s workforce. But the city has to use the new facilities not only for short-term use during the event, but also to regenerate decaying areas and to improve urban performances (in terms of delivering public and collective goods) in the long term. This being said, many elements participated to the success of the Barcelona Games, including:

- Promoting a more efficient allocation of people and functions throughout the metropolitan region to emphasise the sense of belonging to a community. The city is seen as the sum of its neighbourhoods, rather than comprising distinct parts.

Box 2.15. Some key issues in the Barcelona regeneration model
(*Cont.*)

- Restoring value heritage of buildings that are used for public purposes such as schools, libraries, offices, cultural centres, etc.
- Promoting innovative architecture and thinking.
- Enhancing transportation infrastructure to improve regional and international accessibility.
- Introducing a new social mix into deprived neighbourhoods to promote the creation of new communal open spaces in strategic areas to encourage social mixing.
- Purchasing buildings in very poor condition in order to renovate them.
- Providing tax incentives and grants to refurbish properties.
- Producing a vision for city development (supported by a strong political and local leadership).
- Investing in education, job training, health, and leisure initiatives to help tackle the social problems of illiteracy, poor health, and high unemployment.

Source : Barcelona Field Study Centre (www.geographyfieldwork.com)

What can Milan learn from the experience of OECD metropolitan regions? First of all, **Milan needs a vision** for its future development, and then it might look for a way to implement it. The numerous initiatives implemented in the city are not coordinated and this dramatically reduces their effectiveness. Local leaders, taking into account local resources, have to provide the local community with a clear idea about future development. Second, **Milan needs a branding policy** to enhance its image on the international market. Being considered a polluted and congested place reduces the possibilities to develop the knowledge economy. Third, **Milan needs a neighbourhood-based structure** to enhance the local sense of belonging to a community. Finally, **Milan has to define a proper territorial dimension** as a scale to implement local policies. Delimiting borders and a proper institutional level endorsed to lead the area could be the necessary (but not sufficient) condition for enhancing local development. This last point is largely discussed in the next chapter.

Notes

- 1 The Italian industrial structure is often criticised for being specialised in light industries with low technological content or low intensity of skilled labour. According to critics, these industries are less capable of exploiting science-based innovations and are more affected by international competition. In reality, it seems that even in so-called light or traditional industries, there are opportunities to innovate and thereby respond to competition from countries with low wages but also increasing technological capacities (China, India, Brazil, etc.). The threat in these industries seems more related to entrepreneurial behaviour than to technological determinism as such. Entrepreneurs in these industries are not obliged to innovate and can choose rent-seeking strategies rather than long-term investment strategies. The present stagnation in Italian industrial production seems therefore more related to the modest level of innovation in all sectors than to the specific sectoral mix of the country.
- 2 Local research has underlined that Milan's innovation strategy should include the following actions: upgrading the existing production framework (*e.g.*, by introducing new technologies in mature – yet still significant – sectors); using design services as a tool to improve the competitiveness of local products; enhancing business services; better exploiting the supply of cultural goods; creating a local pole of innovation, using existing structures (*e.g.*, Palazzo dell'Innovazione); investing in e-business and e-commerce; spreading innovation through diversified channels (exploiting brokers, improving industry-university linkages, supporting entrepreneurship). The chapter examines most of the above-mentioned actions more in detail.
- 3 Data from 2001 Census, Istat.
- 4 A clue of the national role of Milan in the publishing industry comes from the comics sector. Milan hosts two comics schools, including the “Disney Academy”, the only one in the world.
- 5 Universities represent 1.3% of provincial GDP and 2.2% of the labour market in the Province of Milan, versus 2.7% of municipal GDP and 5% of the labour market in the City of Milan. However, according to research carried out by Roberto Camagni (2006), the multiplier effect of investment in local universities is estimated to be about 2 (an investment of EUR 1 would generate EUR 2 in regional production). The demand of families for academic education generates three categories of demand: (i) the demand for education *services*, which generates an impact of EUR 1 689 million within the region; (ii) the demand of *investment*, which generates an impact of EUR 387 million; and (iii) the demand of *housing* from students coming from other regions and commuters, which generates an impact of EUR 418 million.

- 6 Only successful firms that already put a strong product on the market are considered reliable by common investors. Consequently, only large biotech firms are able to raise funds on the stock exchange while SMEs suffer from a critical shortage of capital.
- 7 Considering that the policy started only in 2003, it is still too early to evaluate its impact. However, 2003 data (the only available at the moment) suggest that the number of projects financed through metadistrict grant has remained relatively low. Several reasons could explain this meagre preliminary result. First, it appears that firms and other organisations have not been properly informed about the possibility to receive financial support for research activities. Second, the budget remains way below the needs for research activities. For example, the five projects received in fashion and design so far have already drained out the total package available in the sector and in the year.
- 1 For instance, Milan concentrates both world-class stylists (Armani and Prada are the most legendary, but Milan abounds with talented stylists) and strong manufacturing textile firms. The first usually occupy the core city while the latter have traditionally developed in (or moved out to) the periphery of the metropolitan region.
- 2 Launched in 1964, with more than 850 000 visitors during the last five years, the development of the MACEF has gone hand in hand with the international success of Italian design. When the international demand for high quality furniture and house accessories (such as mirrors, lamps, coat hooks, vases, etc.) soared during the 1980s, the fair became a point of reference for wholesalers, buyers, mass distributors, retailers as well as for architects, interior designers, furnishers and journalists. It provided design actors with a forum where to meet, exchange ideas, and elaborate next trends. In January 2006, the fair was relocated to the new larger facility of Rho Pero. The relocation could prompt a major expansion for MACEF if it is coupled with a significant enhancement of transportation means and an improvement of Milan's international accessibility.
- 3 Another promising policy to better exploit the Italian brand image is the Province's possible initiative to connect design and Italian food and wine. On the basis of the worldwide prestige enjoyed by Italian food and wine, some designers are experimenting with ingenious devices to allow people to walk (*e.g.*, while admiring exhibitions) and to eat Italian food comfortably at the same time.
- 4 The “*Città di città*” initiative seems to be influenced by the latest trends in urban planning such as, for instance, new urbanism. The latter revives the concept of neighbourhood to solve the problems stemming from urban sprawl. Neighbourhoods are understood as human-scale living spaces that concentrate the main functions of a city (shops, offices, green spaces, etc.) in a “ten minutes walk” distance. They would display the following characteristics: increased diversity and

density of land use, connectivity and integrated transportation system (promoting the use of public transportation, bicycles and pedestrian streets), aesthetic architecture and environmental sustainability. This implies a new conception of metropolitan areas as a system of neighbourhoods that are linked to each other by light rail and trains, and avoid the negative externalities of suburbanisation (such as air pollution and social segregation). The expected output of new urbanism policies is a citizen-friendly, diversified, safe and attractive environment that offers high quality of life.

5 OECD work across a range of different region-types demonstrates that the presence of efficient physical infrastructure and related services remains a key to economic development. The expectation that improvements in physical infrastructure will generate productivity gains for local businesses and increase the attractiveness of an area for investment has been a recurring theme in OECD reviews of specific regions. High quality infrastructure and services are accepted as being vital to a strong economy – locally, regionally and nationally. Taking the example of transportation, upgrading infrastructure changes access (travel times) which, in turn affects property prices and economic rents, influences decisions of households (residential location, patterns of consumption) and firms (production location, access to markets and investment decisions) and these, in turn, should have a net positive impact on the economy, increase tax revenues, create employment and generate resources for further investment. For business, the logistical benefits generally include: access to a wider labour market pool, with more diverse competencies; faster access to suppliers and customers, which reduces transaction costs; expanded market reach (including choice of suppliers, as well as expanded customer base; reduction of land use constraints.

6 See Chapter 1.

7 Several municipalities have manifested a NIMBY (“not in my back yard”) behaviour because they were primarily concerned about preserving the use-value of their land and they had not been involved enough in the decision-making process for the design of the project.

8 As assessed in Chapter 1, roads connecting different parts of the Milan metropolitan region have reached a saturation level. For example, the traffic/capacity ratio of the Milan-Bergamo highway is higher than 150%, and that of the eastern ring road ranges between 100% and 150%.

9 From the viewpoint of the workers living in the least serviced areas of the ring belt, restricted parking areas might act as a sort of “unfair taxation”. The workers who cannot afford to pay this “tax” are likely to find themselves excluded from the labour market and will have to seek employment opportunities outside of Milan. Over a certain limit, the use of restricted parking areas might thus increase

the fragmentation of the regional labour market and cause the creation of “pockets” hosting higher levels of unemployment than the regional average.

- 10 Milan has traditionally enjoyed diversified social infrastructure and a solid local welfare system, which have helped counterbalance social polarisation trends so far. However, Milan has become more vulnerable to social insecurity and the role of the public sector in the local welfare system is shrinking (except for some municipalities in the Province of Milan) in favour of private charities and other community organisations. A comprehensive strategy to enhance Milan's competitiveness and attractiveness needs to include social cohesion issues.
- 11 Brownfields in those areas are large highly polluted sites as a result of their previous occupation by oil refineries or chemical plants. Thus, their restoration is usually a costly policy.
- 12 Rental control mechanisms might reduce the size and the flexibility of the private rental housing market, further reducing the availability of affordable housing for impoverished people. They could also create a mismatch between rent prices and housing quality. Finally, they could exert a dissuasive effect on housing maintenance decisions and consequently on the quality of the built environment.
- 13 For further information, see OECD paper GOV/TDPC/URB(2005)2.
- 14 In these sectors there is a significant weight of informal economy.
- 15 For example, in spite of the remarkable success of the waterfront development in Baltimore, which was attracting 22 million visitors annually by the late 1980s, economic and social problems persist in areas that are at a distance of just a few blocks (Ward, 2002).
- 16 Barcelona is the economic, cultural and administrative capital of Catalonia, a highly industrialised region that contributes more than 22% to the country's exports, a percentage that has been growing in recent years.
- 17 Local knowledge economy is increasing thanks to its attractiveness for the establishment of European head offices of multinationals dedicated to development of specialised activities. Since the mid-1990s, a number of multinationals have established their shared services worldwide. In this context, Catalonia, and particularly Barcelona, has emerged as one of the most attractive locations for Shared Services Centres (SSCs) and Call Centres in Europe. Companies like Citibank, General Motors, and Bayer have already set up their European SSCs in Barcelona and outlying areas.
- 18 Barcelona hosts the Pompeo Fabra University, the Universidad Autónoma de Barcelona, etc.

- ¹⁹ Bread & Butter is an international tradeshow for selected fashion brands and represents a strong global marketing and communication platform for international oriented enterprises specialised in young, progressive, and contemporary fashion. Bread & Butter is held in Spain (Barcelona) and in Germany (Berlin and Cologne).
- ²⁰ A programme of public open-space creation had been proposed (yet not implemented) in 1980 to correct the shortage of land and leisure facilities following an era of minimal urban planning during the Franco period (B. Chalkley, S. Essex, 1999).
- ²¹ Strategic planning started in 1988 in Barcelona, one of the first cities with San Francisco to use such an instrument.
- ²² Although the Olympics is considered as a way to promote the redevelopment of urban areas, there are cases in which they have produced long-term indebtedness (for instance, Montreal 1976 caused a debt of CAD 1.5 billion), or any relevant effect for city development because of the scarcity of investment (for instance, Atlanta 1996).

Chapter 3

What governance to revive Milan?

Introduction

While Milan's span and economy have changed, its governance has remained fragmented. Italy's economic capital is no longer a confined city storing an industrial engine within its boundaries. It has grown into a much larger metropolitan region, with dense interdependencies between a nucleus agglomerating advanced services and a periphery dotted with manufacturing functions. The new Milan still tops Italian economic standards and registers fair performances compared with other OECD metropolitan regions. It holds promises of developing into a regional hub that fuels Northern Italy with public goods, which in turn could generate positive national spillovers and capture global market demand. Yet Milan's current trials in terms of innovation dynamics and liveability might cast a shadow on its future prospects. Policies to trigger Milan's public goods require a better grip of the larger region of Milan and connecting voices from a wider variety of actors. Milan's current governance framework may be missing out on territorial synergies and practicable inspiration to galvanise Milan. Compared with the recent dynamism of other OECD cities that are smaller or economically less advanced (such as Barcelona and Bilbao), Milan's prolonged deficit of internationally appreciable flagship projects reveals that metropolitan governance reforms have become urgent. Governance reforms alone offer no guarantee to clear up all of Milan's socioeconomic problems. However, better-tailored governance mechanisms could equip Milan with tools to build a more competitive metropolitan region. The potentially decisive impact of Milan's spillovers on national competitiveness advocates in favour of a national policy for large metropolitan areas such as Milan.

This chapter looks at potential governance mechanisms to revive Milan, based on examples from diverse OECD countries. It proposes an incremental process based on three arguments: (i) *learning from past failures*: although Milan is the largest urban actor in the Italian institutional framework, its direct attempt to institutionalise metropolitan governance stalled, while the unfinished implementation of the national decentralisation

agenda somewhat eclipsed the region's overriding challenges until recently; (ii) *starting with technical collaboration*: Milan could harness its own organisational capacities and improve metropolitan collaboration in key issues, especially transportation; (iii) *building sustainable governance*: in a longer term, creating an integrative metropolitan governance framework could not only facilitate the emergence of *ad hoc* “flagship projects” but also develop the sense of belonging to a “Milan community” based on trust, creative ideas and collective political leadership.

3.1. Milan: the largest urban actor in the Italian institutional framework

Milan could be a key asset for Italy's economy if adequate governance mechanisms were designed to support its role as a high-level service centre. Within the Italian institutional framework (Box 3.1 and Figure 3.1), Milan is the main urban actor both in size and economic impact. In terms of *size*, it is in every tier of government the biggest. Milan is the largest municipality in Italy after Rome with 1.4 million inhabitants¹. Milan is also the largest province with almost 4 million inhabitants. Finally, Lombardy is the largest region with 9.1 million inhabitants. In terms of *economic impact*, Milan is the richest and the most productive area in the country. Its strong fabric of large industrial companies and innovative SMEs has steered the growth of Northern Italy for decades and it has contributed to making Italy one of the most industrialised countries in Europe. Milan could help reverse the current national economic slowdown and it has the potential to make Italy more competitive in the global economy over the next years. In order to achieve this objective, Milan needs to comprehend its catchment area and to design adequate governance mechanisms.

Box 3.1. The Italian institutional framework

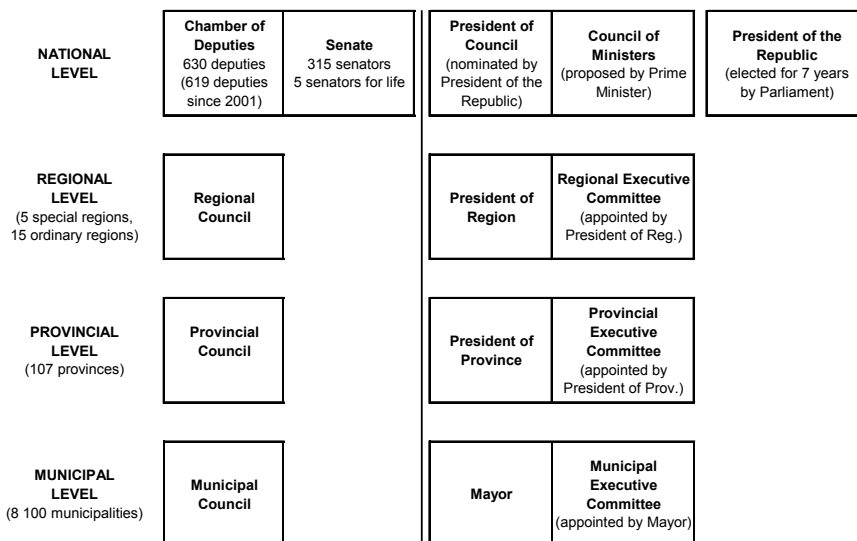
Historically, Italy has had a centralised institutional framework. At the time of the country's unification in 1861, strong concerns remained about the maintenance of national unity beyond local identities. Most public policies were administered through locally detached departments of central government ministries, while local governments (municipalities and provinces at that time) were left with very little autonomy. After World War II, the new 1948 Constitution allowed for the creation of regional governments but the implementation took over 20 years. Five “special regions” were eventually established in the early 1970s, mostly to reduce the threat of separatist movements and ethnic tension (Friuli Venezia Giulia, Sardegna, Sicily, Trentino-Alto Adige, Valle d'Aosta). These special regions have wider legislative responsibilities and larger resources than the remaining 15 “ordinary regions”, which were created later in 1975-1977 (Abruzzo, Basilicata, Calabria, Campania, Emilia Romagna, Lazio, Liguria, Lombardy, Marche, Molise, Piemonte, Puglia, Tuscany, Umbria, Veneto).

Box 3.1. The Italian institutional framework

Italy has gone through a significant decentralisation process since the 1990s (*devoluzione*). It now has a three-tier system of subnational governments with 20 regions, 107 provinces and 8 100 municipalities (Figure 3.1). All of them have statutory autonomy. The executive branch of each subnational level was reformed in order to be made directly elected (mayors and provincial presidents since 1993, regional presidents since 2000). Following the “Bassanini Laws” (1997) and successive implementation decrees, subnational governments have progressively received new responsibilities:

- *regions* play the most important role and they are mainly in charge of health services, urban planning, vocational training, culture and tourism, regional public transportation, environment, housing;
- *provinces* are the weakest level and they are mainly responsible for education and environmental preservation;
- *municipalities* mostly provide local public services (e.g., social housing and social services, local public transportation, municipal roads, building and maintenance of primary schools, kindergarten services).

Figure 3.1. Governments levels in Italy



Source: arranged by the OECD with background information

Milan's governance has not kept pace with the region's socioeconomic changes. Despite its glorious industrial history and its potential to rise as a high-level service hub for Italy and Europe, Milan remains a fragmented region with scattered and overlapping initiatives that failed to be seized and harmonised into a competitive strategy. The challenge of institutional fragmentation is shared by many other OECD metropolitan regions (e.g., Montreal, Stockholm). They have encountered mixed success but their experience proves that reforms are possible. Milan has not managed yet to mobilise its actors into an inclusive framework. Two factors could shed light on the current situation: (i) Milan is still striving to make the transition from its past experience of efficient municipal governance to the challenge of adjusting to a larger and more heterogeneous region, with lessons to learn from its aborted attempt to institutionalise metropolitan governance; (ii) the national background has left Milan in the midst of an unfinished decentralisation agenda.

3.1.1. Milan's own attempt to institutionalise metropolitan governance

Much of Milan's current governance knots derive from its inability to move beyond its past experience. Empirical analysis suggests that Milan's governance landscape changed drastically since the 1950s (Dente and Fareri, 1997). The governance framework has rarely been able to adjust to the city's fast expansion (Box 3.2). Milan encountered serious obstacles in designing coherent strategic planning for a larger territory than its own surface, despite the creation of an intermunicipal planning body called the Piano Intercomunale Milanese (PIM) (Box 3.3).

Box 3.2. The history of governance in Milan since the 1950s

After World War II, the devastated city of Milan rebuilt itself and its economy thanks to the zeal of a hard-working population, influential politicians and a dedicated team of local civil servants. The Milanese bred specialists (e.g., architects, designers) who drafted creative and visionary ideas for the rebirth of the city. These ideas found a receptive audience among local politicians, who were supported by civil servants endowed with the technical expertise to translate them into workable projects. In the 1950s, politicians enjoyed enough political leeway and stability to implement medium- and long-term projects². This clear distribution of roles ensured close collaboration and trust between all actors and minimised social conflicts, while it allowed the city to carry out some of its most innovative initiatives with record efficiency³.

Box 3.2. The history of governance in Milan since the 1950s (Cont).

In the 1960s, strong political parties emerged. Mostly based in Rome and spreading their guidelines from there, the advent of political parties contributed to the collapse of the equilibrium that had once been achieved in Milan between the creative specialists, local civil servants and politicians. The previously active civil society lost interest in the management of the city, high-quality local civil servants faded out and a schism occurred between the citizens and the political leaders. The governance climate deteriorated even further after 1993, when the political scandal of the Tangentopoli⁴ blew the credibility of policymakers and diluted the decision-making power. The evolution of Milan's governance could thus be summarised in three phases: a stable and cohesive municipal governance phase (1950-1965), a gradual split between actors (1965-1993) and persisting governance confusion (after 1993) (Bruno Dente).

Box 3.3. Strategic planning in a larger Milan: the experience of the Piano Intercomunale Milanese (PIM)

Measures were proposed to better manage Milan's urban sprawl as early as 1948, with the city's suggestion to draw up a spatial plan applying to an area larger than its own administrative surface. Milan ran into glaring resistance from neighbouring municipalities, which dreaded the supremacy of the central city over their own prerogatives and rejected the plan. The conflict was further fuelled by political discrepancies as Milan was governed by the Christian Democrat Party and the Socialist Party, while many neighbouring municipalities were ruled by the Communist Party.

A pragmatic solution was devised in 1961 when Milan and 34 other municipalities created the Piano Intercomunale Milanese (PIM), a voluntary consortium in charge of strategic planning. The city of Milan was brought back to the status of *primus inter pares* in the decision-making structure. The PIM requested economists, architects, sociologists and various urban technicians to design spatial development plans for the larger area of Milan, using the expertise of a research institute (ILSES-Istituto Lombardo per gli Studi Economici e Sociali) which had been established in 1960 by the City, the Province, the Chamber of Commerce of Milan and a local bank called Cariplo.

The PIM experienced a promising debut. It attracted new members very rapidly (94 municipalities and the Province of Milan adhered by 1967) and put forward many innovative and high-quality ideas. However, two problems eroded its mandate. First, the projects were often strikingly ambitious and stepped closer to a cultural ideal than to a pragmatic scheme. Second, technicians entertained close relationships with the two antagonist political parties (Christian Democrat Party and Communist Party), which led to frequent deadlocks when their projects were put to vote. A glaring example of standstill came to light when two alternative urban development projects were presented in 1963: the so-called "Turbine model", prepared by technicians close to the Communist Party, and the "Linear model", set up by Democrat technicians. Both projects were rejected by the assembly as each party voted for its own plan and the attempt for a shared vision waned. The rule of unanimous vote further paralysed the decision-making process. The PIM progressively shifted towards a technical support body and a research centre rather than a proper intermunicipal consortium, the city of Milan quit during the 1990s and the PIM's institutional capacity has remained weak.

Even in the midst of uncertainty, Milan had taken a promising start to a potential metropolitan reform. One of the most controversial issues during the 1990s in Italy was how to design efficient governance for the country's largest cities. At first, Italy seemed to move expressly towards an institutionalised form of metropolitan governance with the creation of "metropolitan cities" (Box 3.4). In Milan, an exceptionally active debate started even earlier during the 1980s among socioeconomic actors, mainly spurred by private initiatives⁵.

Box 3.4. The "virtual" creation of metropolitan cities in Italy

In 1990, the Law no.142 on Local Self-Governing Entities introduced the possibility to set up metropolitan structures. According to this law, some of the largest municipalities of Italy (Rome, Milan, Naples, Turin, Florence, Venice, Bologna, Genoa and Bari) and the municipalities closely tied to them through economic, social and cultural linkages could be considered as metropolitan areas (*area metropolitana*). The newly created metropolitan areas would then have a two-tier administrative structure: one metropolitan city (*città metropolitana*) at the higher tier, and regular municipalities at the lower tier.

Regions were empowered with the competency to determine the perimeter of metropolitan areas and metropolitan cities. For this purpose, they had the obligation to consult with the municipalities and the provinces concerned, but they were also entitled to modify municipal boundaries via mergers or dismantlement.

The metropolitan city would then accumulate provincial responsibilities with a range of responsibilities considered as supramunicipal such as: spatial planning; transportation; preservation and enhancement of cultural and environmental heritage; water and energy resources; waste management; economic development; healthcare, education and training services. The metropolitan city would be endowed with a council (directly elected), an executive committee (elected by the council) and a mayor (elected by both the council and the committee). The metropolitan city would draw its financial resources from own taxes, transfers from national and regional government taxes and user fees.

Although no specific procedures for intergovernmental co-ordination between metropolitan cities and other subnational governments were sketched out yet, metropolitan cities were supposed to be considered officially as part of Italian subnational governments. The new Article 114 of the Constitution states that "the Republic is composed of Municipalities, Provinces, Metropolitan Cities, Regions and the State".

However, this first move towards metropolitan governance did not last. A political and institutional conflict arose as the Province of Milan volunteered to be converted into a metropolitan city while the City of Milan strongly opposed the proposal. Both the Province and the City of Milan engaged into intense

discussions with the Region of Lombardy but the latter avoided taking sides. Socioeconomic actors debated actively about the perimeter of the metropolitan area of Milan and what governance solution should be implemented. Many seemed to converge with the Province of Milan on the need to create a metropolitan-wide structure that would cure Milan's weaknesses and exploit its strengths⁶. Yet political interests continued to diverge and later drifted away from metropolitan issues as Italy was shaken by intense political turmoil in the early 1990s⁷.

A combination of general factors could explain the prolonged metropolitan inertia. The 1990 law had established a foundation for the concept, administrative organisation and finance of metropolitan cities. Its implementation would have entailed both the potential dismantlement of existing boundaries and the creation of a new metropolitan structure (the metropolitan city). While this would have been a "hard" result in institutional terms, the procedures to achieve this outcome remained relatively "soft": (i) the possibility to set up metropolitan cities was offered on a *voluntary* basis; (ii) the initiative was left up to the *highest level* of subnational governments (regions), which were likely to feel reluctant to reinforce an already large and apparently threatening urban area within their own jurisdiction; and (iii) *without any incentives* coming from the national government. This might explain at least partially why neither Milan nor other large Italian cities have implemented the law. In 1999, a second law attempted to alleviate the top-down approach by giving larger decision-making power to municipalities in the process of forming metropolitan cities. However, the momentum was lost and none of the large Italian cities has managed to establish metropolitan cities so far, with the notable exception of Bologna during a limited period of time (Box 3.5).

Box 3.5. Starting with practical co operation across the metropolitan area: the case of Bologna

Out of the nine large cities aimed in the 1990 Act, Bologna was the only one that implemented it. In 1994, the Province of Bologna and 51 out of the 60 municipalities composing the province (including the municipality of Bologna) signed an agreement called the *Accordo per la Città Metropolitana* (ACM). This agreement created a new structure called the "metropolitan conference" and three technical bodies.

- The **metropolitan conference** is a political body composed of the mayors of the member municipalities and chaired by the President of the Province. It is backed up by a light administrative Secretariat. The objective of the conference was to coordinate the metropolitan area's policy priorities such as transport, environment, social services, health, sport and culture. The metropolitan conference is not a decision-making body as it is not a substitute for the municipal councils and the provincial council. It serves as a forum for discussion, where non-member municipalities are also invited as observers.

Box 3.5. Starting with practical co operation across the metropolitan area: the case of Bologna (*Cont.*)

- The **technical bodies** act as thematic working groups in charge of: (i) administrative and financial issues; (ii) economic and territorial issues (transport, environment and planning); and (iii) social and health issues. The working groups are composed of civil servants from the member municipalities involved in the same collective projects. Their priorities are voted unanimously by the metropolitan conference. Their work focuses on specific projects (*e.g.*, the enlargement of a bridge between two municipalities) and is carried out by technical experts.

The unique success of Bologna in establishing a metropolitan conference could be explained by several factors:

- **Open and attractive membership.** While the partnership between the institutional actors was made on a voluntary and flexible basis (municipalities may join and withdraw whenever they wish, and they may participate in all or just part of the actions), the metropolitan conference attracted most of the municipalities because it focused both on broad collective strategies and micro-projects involving a smaller number of parties.
- **Tangible outputs.** The metropolitan conference led to some concrete results, such as administrative simplification via the creation of a “metropolitan card” that any citizen in the metropolitan area could use to have access to administrative public services; the harmonisation of municipal staff recruitment, and the creation of a training programme for municipal staff.
- **From practical co-operation towards institutionalisation.** The political and technical elite believed that practical public policies successfully implemented across a metropolitan area could in turn generate a sense of belonging and solidarity, which could later give political legitimacy to the potential creation a metropolitan government.

The Bologna metropolitan conference came to a halt after the political shift following the 1999 municipal elections, but it inspired similar experiences in other large Italian cities like Rome and Turin. Between 1994 and 1998, the municipality of **Rome**, the Province of Rome and the Region of Latium established common offices to discuss and address the metropolitan problems of the Rome area. Again the experiment closed with the political swing after the 1999 provincial elections and the 2000 regional elections. In **Turin**, a metropolitan conference was set up in 2000 with the voluntary adhesion of 38 municipalities including the municipality of Turin and the Province of Turin (co-chairing the conference together).

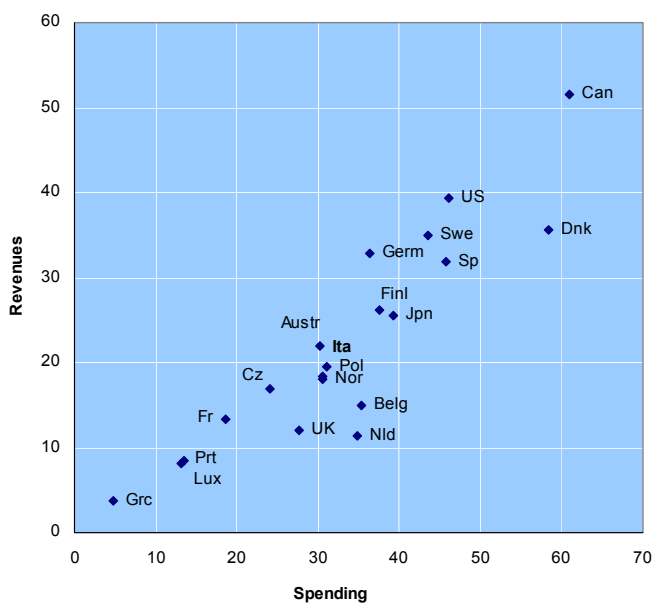
3.1.2. ... in the midst of an unfinished decentralisation process

While Milan's direct attempt failed to build a broader governance framework to meet its metropolitan-governance challenges, the recent decentralisation process has left it with halfway tools. Italy has moved progressively from a centralised towards a decentralised institutional system. After a long search for national unity, there are currently three hierarchical levels of subnational governments (regional, provincial and municipal) and all of them were made directly elected quite recently. In terms of subnational expenditures and resources, Italy now appears fairly decentralised among OECD Member countries (Figure 3.2). However, it is not clear yet to what extent the decentralisation process has endowed Milan with tools to build appropriate governance. The uncertainty stems from three main reasons: (i) the decentralisation process has answered the needs of the Milan area in an uneven manner; (ii) overlapping responsibilities persist across levels of government; (iii) Lombardy may encounter fiscal hazards.

(i) The decentralisation process has answered the needs of the Milan area in an uneven manner. Individually, the City of Milan, the Province of Milan and the Region of Lombardy gained new responsibilities and resources. The functional area of Milan, larger than the City of Milan and smaller than the Region of Lombardy, matches closer the Province of Milan. However, the province is the weakest subnational level in terms of responsibilities and resources. Following the various decentralisation measures, *municipalities* have obtained a number of additional yields (including the institution of a municipal property tax called ICI in 1993, the reorganisation of minor municipal taxes in 1993, and a surcharge on the personal income tax called IRPEF in 1998), while *provinces* have been assigned relatively minor resources (taxes related to car ownership in 1999). The decentralisation process has mainly strengthened the *regional* level. At the beginning of the 1990s, the regions had virtually no fiscal autonomy. Up to 95% of total expenditure was financed by transfers from the central government and all of these transfers were conditional grants. During the 1990s, the regions received significant new fiscal resources⁸. As a consequence, the regions have now an appreciably higher budget than provinces and municipalities in absolute terms (Figure 3.3) and they receive more national transfers in both absolute and relative terms (Figure 3.4 to Figure 3.6). Compared with other regions, Lombardy counts a higher share of own tax revenues due to its higher fiscal capacity (around 48% of total budget against 37% for other ordinary regions in 2001). The regional level may be further strengthened if Italy were to turn into a federal country¹.

Figure 3.2. **Indicators of fiscal decentralisation**

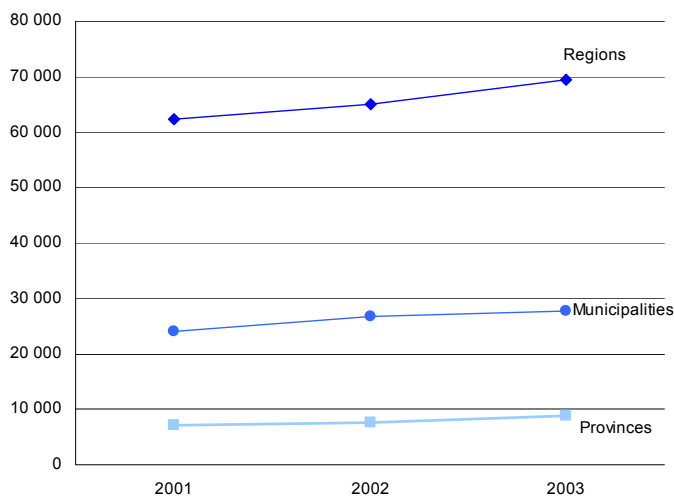
Unit: share of subnational governments in total public revenues and spending, 2003



Source: OECD National Accounts.

Figure 3.3. **Subnational government revenues in Italy, 2001-2003**

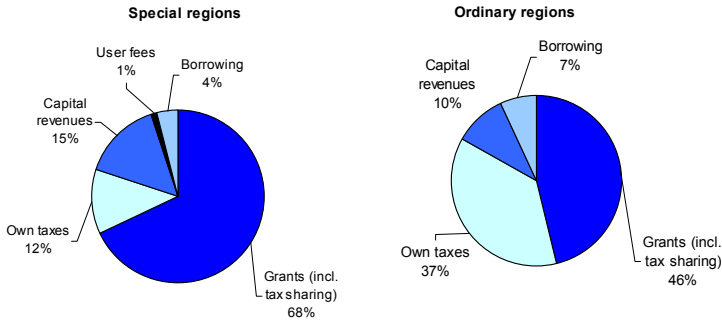
Transfers and own taxes, in millions of EUR



Source: Bank of Italy, Annual Report 1999-2004.

Figure 3.4. Revenue sources of Italian regions, 2001

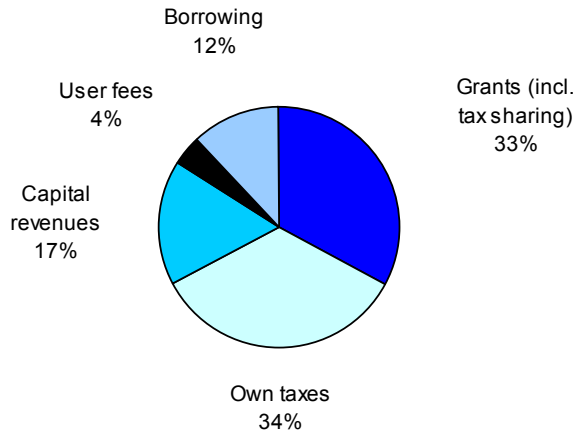
% of total budget



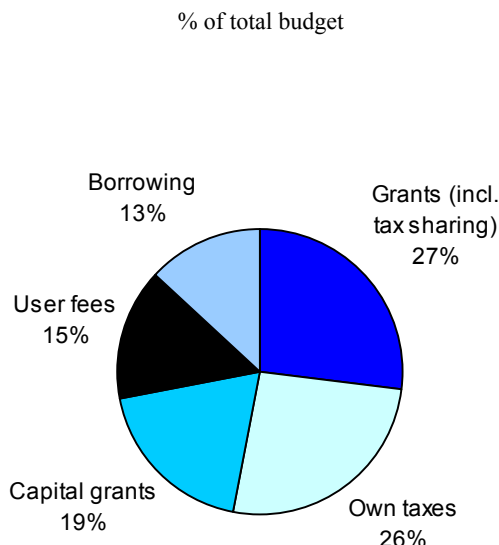
Source: Permanent Delegation of Italy to the OECD, 2004, “The structure of local governments and the role of own taxes in Italy”, background note for OECD Network on Fiscal Relations Across Levels of Government.

Figure 3.5. Revenue sources of Italian provinces, 2001

% of total budget



Source: Permanent Delegation of Italy to the OECD, 2004, “The structure of local governments and the role of own taxes in Italy”, background note for OECD Network on Fiscal Relations across Levels of Government.

Figure 3.6. **Revenue sources of Italian municipalities, 2001**

Source: Permanent Delegation of Italy to the OECD, 2004, “The structure of local governments and the role of own taxes in Italy”, background note for OECD Network on Fiscal Relations Across Levels of Government.

(ii) Persistent overlapping responsibilities hamper the empowerment of local governments in practice. For example, although *health* stands out as a major regional responsibility, a large part of it remains controlled centrally (*e.g.*, wages of the health sector workers, rules for recruitment and layoff). This creates moral hazard effects². In the *education* sector (which used to be an exclusive competency of the central government and was converted into a “shared responsibility” between the central and regional governments by the 2001 constitutional reform), the central government still finances teachers’ wages and equipment, while the financing of non-teaching staff is scattered between municipalities (kindergartens and scientific high schools), provinces (technical high schools) and the central government (classical and professional high schools). Blurred responsibilities have generated what has been dubbed an “administrative nightmare” (Bordignon, 2000). Such overlaps have been frequently solved via lawsuits in the Constitutional Court rather than intergovernmental collaboration.

(iii) While Lombardy is currently the largest contributor to the fiscal equalisation scheme, it may encounter fiscal hazards soon. Italy's fiscal equalisation scheme consists in a tax sharing system through which part of the national VAT revenues are allocated to the regions³. Driven by its powerful fiscal capacity, Lombardy is by far the largest contributor, estimated to account for around half of the positive contributions. From model simulations of the new fiscal equalisation system, it appears that Lombardy would have contributed EUR 3.5 billion in 2001 (if the whole system had been completely put in place in 2001), far more than the second largest contributor, Lazio, which contributed about EUR 0.9 billion (Arachi and Zanardi, 2004). The contribution of Lombardy is probably even bigger as the largest part of grant allocation is still determined by historical expenditures that are profitable for several Southern regions. Its contribution would prove even more important if its indirect contributions to special regions were taken into account⁴. Yet Lombardy's fiscal prospects may grow dim and jeopardise the sustainability of the national equalisation scheme⁹ (Box 3.6).

Box 3.6. Threats to Lombardy's fiscal prospects

First, Lombardy bears considerably higher health care needs than younger regions due to its demographic structure. At the national scale, health spending needs are estimated to grow faster than VAT revenues⁵ (Arachi and Zanardi, 2004). In a fortunate scenario Lombardy could walk away unharmed, but in an adverse scenario it could end up with more health spending needs than revenues to cover them. Possible solutions would be to increase the tax sharing rate periodically or to lower the health standards granted by the national health system, but both imply additional problems that apply to Lombardy⁶.

Second, Lombardy is likely to pay for any fiscal discipline problems of subnational governments in Italy. Since the domestic stability pact in 1998 (introduced to abide by the EU Stability and Growth Pact), the central government has become stricter on subnational borrowing and overspending. It also introduced an expenditure ceiling for regions in 2004 (current expenditure cannot grow faster than the planned annual inflation) and a deficit ceiling for municipalities and provinces in 2005 (the deficit cannot exceed the deficit registered two years earlier). Lombardy is less likely to free-ride since a large part of the burden in case of a bail-out would have to be carried by its own citizens, but it is more likely to bear the cost of a bail-out in any other subnational government in Italy.

Box 3.6. Threats to Lombardy's fiscal prospects (*Cont.*)

Third, Lombardy could generate considerable additional revenues but it has few incentives to do so and the central government is preventing it from doing so. As other ordinary regions, Lombardy relies primarily on the regional business tax (IRAP, 74% of total regional tax revenues in Italy). The IRAP presents two limits: it is a pro-cyclical tax that hinders fiscal stability, and by nature it is quite difficult for the region to collect and control it⁷. The second most important regional tax revenue source (surcharge on the IRPEF, 13% of total regional tax revenues in Italy) stems from the same tax base as the national personal income tax and varies according to the central government's changes. It was however calculated that regions (as a whole) could obtain about 10% of additional revenues if they raised both the IRAP and the surcharge on the IRPEF to the maximum rate. Lombardy would acquire as much as 14% extra revenues (versus less than 5% of Calabria for example). This option remains ruled out since the central government suspended temporarily any increase in subnational tax rates in 2003, with the objective to pursue fiscal consolidation and preserve the impact of its redistributive fiscal policy. The central government still controls a major part of subnational taxing power. It is entitled to modify or suppress subnational taxes, and many of the latter are regulated by national rules. Regions also have a relatively weak incentive to expand tax bases. The fiscal equalisation system as envisaged by Law Decree 56/2000 corrects for 90% of the fiscal capacity, which implies that regions only retain 10% of the extra revenues that are generated by the tax base increase.

3.1.3. Pursuing the status quo or moving forward?

Milan now stands at a crossroads. After two decades of stagnation, the metropolitan debate is rising up again with the renewed proposal put forward by the Province of Milan in 2005 to give up its provincial status and to be converted into a "metropolitan city". The economic and institutional background has changed since the debate started in the early 1990s. On the economic side, previous chapters of this Review have suggested that Milan has maintained suitable performances but it may miss significant opportunities to become a high-level service hub if it fails in organising its own metropolitan area. On the institutional side, Milan was unable to seize the single opportunity offered by the decentralisation process but local actors have at least gained more leeway to design their own future. Most of all, the acute debate throughout the 1980s-1990s has taught Milan that it has an exceptionally active and innovative pool of socioeconomic actors (business community, labour unions, academics and researchers, NGOs...). Similar to the creative specialists and citizens that had shaped Milan in the 1950s, these actors are capable to exchange and to debate ideas about the future of their territory. They however lack a public space where they can voice their opinions and interact with policymakers.

Milan could initiate its own metropolitan progress by starting with practical collaboration. Intermunicipal collaboration for technical reasons is widespread in OECD countries including Italy. Municipalities usually identify one or more sectors where a joint supply of local public services and specific projects would generate economies of scale (*e.g.*, waste management, water treatment, redevelopment of distressed areas, etc.). Intermunicipal collaboration bodies have been set up when sharing the costs and learning by doing together were considered more efficient than simply allowing intermunicipal competition to go on or attempting to get closer to a theoretical optimal size for providing public services through municipal amalgamation⁸. This trend was particularly visible in countries with a highly fragmented municipal structure, such as France where around 85% of the population has now been integrated under some kind of intermunicipal structure as of 2005 (OECD, 2006b). Italy has introduced typical forms of intermunicipal co-operation and Milan is using them fairly well, although the city of Milan is often missing in them (Box 3.7).

Box 3.7. Intermunicipal cooperation for practical issues in Milan

Three forms of intermunicipal co-operation are provided by the Italian law and can be found in Milan:

- the **convention** (*Convenzione*): municipalities voluntarily agree to carry out joint tasks and services by signing a convention on common objectives, financing mechanisms and collaboration methods. For example, 17 municipalities of the Vimercate area (Agrate Brianza, Aicurzio, Bellusco, Bernareggio, Brugherio, Busnago, Bussero, Caponago, Carugate, Cavenago Brianza, Cornate d'Adda, Mezzago, Pessano con Bornago, Ronco Briantino, Subiate, Villasanta e Vimercate) have signed a convention to promote collective measures for local sustainable development. In collaboration with the Province of Milan, they have also signed a Local Agenda 21 plan⁹ to address mobility, biodiversity, waste and water management issues.
- the **consortium** (*Consorzio*): municipalities and other public or private actors can set up a consortium to share the management of specific activities according to a jointly drafted statute. For example, the Consortium for the Reindustrialisation of the Arese Area (C.R.A.A.), in the North of Milan, was set up in 1996 with the participation of five municipalities (Bollate, Garbagnate Milanese, Rho, Arese, and Lainate), the Province of Milan, the Chamber of Commerce, regional financial institutions (Finlombarda SpA, SVI Lombardia SpA) and the Fiat Auto SpA. The Consortium promotes and co-ordinates the redeployment of the former Alfa Romeo industrial area. It aims at reducing the unemployment crisis by developing new activities using the existing traditional high-skilled workers.
- the **municipal union** (*Unione di Comuni*): municipalities can also constitute a union and appoint its President among the mayors of member municipalities.

Today more than ever, Milan needs to better embrace its larger territory in order to remain a high-level service hub in the wake of increasing international competition. Previous conflicts in Milan have shown that the direct institutionalisation of a metropolitan government was maybe an over-ambitious target at that time. This is all the more understandable that the new metropolitan reform came when the pre-existing subnational levels of government were still adjusting to their new powers and no financial incentives were offered to accompany the metropolitan reform. Recently, the landscape has changed and may experience further change. New scenarios could emerge in Milan now that a bottom-up proposal for reforms was put forward, dynamic socioeconomic actors exist in the region, and the national government announced a possible imminent legislative reform about large metropolitan areas. Considering the potential of metropolitan areas to steer national growth, several OECD countries have taken renewed interest in urban policy and some of them have developed national policies for metropolitan areas (*e.g.*, France, Canada). According to the various experiences carried out in the OECD area, metropolitan governance imposes no single model and proposes diversified arrangements with their own advantages and disadvantages (Table 3.1). Pending the forthcoming choice of the national government, Milan could start with a both pragmatic and strategic reform: rationalising the governance framework of metropolitan-wide public services such as transportation.

Table 3.1.1. Selected examples of metropolitan co-operative arrangements in OECD countries

	Tax-base sharing and redistributive grants	Informal co-operation networks (association/platforms/metropolitan conferences)	Metropolitan authority/agency		Metropolitan government	Amalgamation
			Single-purpose	Multi-purpose		
Examples	Minneapolis Saint-Paul (US); Stockholm County (Sweden); some municipalities within Paris-Ile-de-France (France); Busan, Seoul (Korea)	Regio Randstad (Netherlands); Lyon Urban Region (France); Council of Stockholm Mälar Region (Sweden); Bilbao 30 (Spain); Torino Internazionale (Italy); regional conference in Rhine-Rhur (Germany)	Many US cities; Mexico City (large number of sectoral agencies) (Mexico); Athens (transportation agency) (Greece)	Montreal Metropolitan Community (Canada); Greater Vancouver District (Canada); Communauté d'agglomération and communauté urbaine (France)	Greater London Authority (UK); Stuttgart Verband Association (Germany); Portland (US); Comunidad de Madrid (Spain); Region Paris-Ile-de-France (France)	Montreal, Toronto (Canada); Busan, Seoul in the 1950s (Korea); Madrid in the 1960s (Spain); Melbourne in the 1990s (Australia)
Administrative boundaries	No change	No change	Possible creation of a new tier		Building on existing regional tier or creating a new tier with elected body	Disappearance of municipalities Possible creation of sub-municipal units
Economies of scale (cost saving)	No	No	For one public service only	For certain public services only	Expected for certain public services only	Expected
Sharing of public services	In a limited way	No	For one public service only	For certain public services only	For certain public services only	Common
Specific advantages	Reduces fiscal disparities Still allows for variety	Flexibility Might provide impetus to further co-operation	Cost saving for a particular service Better management of a metropolitan function	Same as single-purpose + integration and co-ordination of sectoral policies	Integration and co-ordination of certain sectoral policies Better equalisation of costs Stronger political power	No fiscal disparities Unified decision-making centre

Table 3.1. Selected examples of metropolitan co-operative arrangements in OECD countries (*Cont.*)

Specific disadvantages	Separates the costs and benefits of local public services	Does not address territorial spillovers/negative externalities/equity issues	Emergence of sectoral constituencies	Emergence of issues related to funding and legitimacy	Democratic cost?	Lack of creative diversity Democratic cost?
Long-term strategic vision	No	Weak implementation capacity Yes, in many cases	Yes, in many cases (for economic development agency) Risk of ignoring multi-sectoral facets of urban/metropolitan development	Yes, in some cases only	Yes, will depend on the administrative boundaries of the new structure	Yes, will depend on the administrative boundaries of the new structure

Note: This typology is not exhaustive. The different options are not mutually exclusive, as some metropolitan regions combine several options (e.g., Montreal experienced both an amalgamation of 27 municipalities and the creation of a multi-sectoral agency at the wider metropolitan level). For further analysis, see OECD (*forthcoming*), *Competitive Cities in the Global Economy*.

3.2. Starting with practical collaboration on a key issue: the example of transportation

Transportation could be a key choice for at least three reasons. First, it is urgent to liberate transactions and exchanges in the metropolitan area of Milan to ensure its future competitiveness and attractiveness¹⁸. Second, most local policymakers share the concern of improving transportation, which could constitute an effective incentive for collaboration. Third, a first successful experience of collaboration on a practical matter like transportation could foster a culture of co-operation and encourage broader forms of partnership that are required to support Milan's competitiveness strategy. Metropolitan co-operation on transportation issues also entails a few drawbacks. In particular, it remains a sectoral solution that is likely to call for inter-sectoral co-ordination in the future and to pose issues of democratic accountability. Yet it presents the advantage of being a flexible solution that could be combined or adjusted following national decisions. Currently, Milan has a complex transportation governance framework that is unable to solve co-ordination needs in the metropolitan area. The experience of other large OECD metropolitan regions could inspire more efficient solutions in Milan.

3.2.1. A complex transportation governance framework

Close intergovernmental collaboration is indispensable to solve the transportation challenges currently faced in Milan. As in many other OECD countries, the responsibility for transportation is distributed across different levels of government (Table 3.2). However, each of the challenges that Milan is enduring raises the acute need for better collaboration between these levels of government:

Table 3.2. **Transportation planning across levels of government in Italy**

Level of government	Plan
National government	National transportation and logistics master plan (<i>Piano Generale dei Trasporti e della Logistica</i> , PGTL)
Regions	Regional transportation plan (<i>Piano Regionale dei Trasporti</i> , PRT)
Provinces	Triennial public transportation programme (<i>Programma Triennale dei Servizi di TPL</i>)
Municipalities	Local public transportation plan (<i>Piano Urbano della Mobilità</i> , PUM)

Source: arranged by the OECD with background information

- To increase the supply of road and railway equipment. The radial roads converging towards Milan register a high level of congestion, especially the east and the north ring roads which are nearest to the high-density areas (Figure 3.7). Some railway lines are persistently saturated. Highways and railways belong to national interest infrastructure and are consequently decided at the national level via the national transportation and logistics master plan (Piano Generale dei Trasporti e della Logistica, PGTL). Yet efficient investment will require close coordination between the national master plan and the regional transportation plan (Piano Regionale dei Trasporti, PRT), which is aimed at enhancing efficient interactions between the different transportation modes and to state the regional transportation strategy.

Figure 3.7. **Traffic congestion on major road networks in Milan**



Source: Province of Milan, *Mobilità e territorio. Dinamiche attuali e obiettivi di integrazione del PTC*, 2003

- To strengthen transversal connections. The demand for mobility has changed, with a reduction in radial trips and an increase in transversal trips.

The structure of transportation infrastructure, however, has not kept pace with the shift in mobility demand. Many radial roads have been widened but transversal roads remain few and undersized. The biggest achievement so far has been the construction of ring roads (also called tangential roads or *Tangenziali*), and the east and west ring roads (currently under construction) are the only high speed roads cutting across the radial roads. Fostering more dense transversal connections would require public authorities to solve the problem of the resistance from local population (*not-in-my-backyard* or NIMBY phenomenon) and to co-ordinate with local jurisdictions.

- To upgrade the public transportation system. Both radial and transversal routes are saturated in the Milan region. In principle, the province is in charge of preparing a triennial public transportation programme (*Programma Triennale dei Servizi di TPL*). This programme calls for close co-operation with the region (which is co-financing the investment) and the municipalities (which have to prepare the local public transportation plan, called the *Piano Urbano della Mobilità*, PUM). But in practice, the role of the province in public transportation planning remains unclear as the bus and subway system is managed by the City and the suburban and regional railway system falls under the responsibility of the Region (Table 3.3).

Table 3.3. **Public transportation system in Milan**

Transportation mode		Subnational government in charge of planning
Bus	187 lines, total of 4 500 km	City of Milan
Subway	Line M1 – 24.9 km, 37 stations Line M2 – 34 km, 33 stations Line M3 – 13.7 km, 17 stations Light rail (Metro San Raffaele) – 0.7 km, 2 stations	
Suburban railway (called “S” Lines, <i>Servizio Ferroviario Suburbano</i>)	8 lines, total of 338 km Links Milan with the other largest cities in Lombardy (Novara, Varese, Como...)	Region of Lombardy
Regional railway (called “R” Lines, <i>Servizio Ferroviario Regionale</i>)	Links main cities in Lombardy and national railway system	
Underground railway (<i>Passante Ferroviario</i>)		

Source: arranged by the OECD with background information

Ongoing infrastructure projects confirm the need for a clarification of responsibilities and better intergovernmental collaboration. Several projects to expand and upgrade road, railway and public transportation systems are underway or scheduled. Yet many of them are held off or slowed down due to recurrent deadlocks in the decision-making process, financial limits and political discrepancies. During the decision-making process, some projects get jammed in the Interministerial Committee for Economic Planning (CIPE)¹⁹ (e.g., the Pedemontana road network and the east-external ring road). Other projects are being designed but their funding remains uncertain (e.g., the Milan-Verona high-speed railway). Some other projects encounter fierce local resistance and no actor is actually able to arbitrate between conflicting interests (e.g., the BreBeMi motorway linking Brescia, Bergamo and Milan).

3.2.2. Improving public transportation planning and co-ordination

Much of congestion problems could be solved through improvements in the public transportation system. Not all transportation problems depend on subnational governments. In particular, the planning and management of highways and railways often fall out of subnational governments' reach, even of the highest levels (region and province). When transportation modes of national interest are put aside, Milan is still left with a substantial margin of manoeuvre in public transportation. Public transportation is actually a field most large OECD metropolitan regions have massively invested or are investing in, with the aim of decongesting the private transportation system. Well-known examples are found in Paris, Madrid and New York, where urban and suburban subway systems were appreciably expanded and improved.

Milan could draw inspiration from several options to improve the planning and co-ordination of its public transportation system. Currently in Milan, responsibilities for public transportation remain blurred and there is a mismatch between the scope of mobility (provincial and extra-provincial) and the authority in charge (mostly municipal and slightly regional). More exceptionally, the bulk of public transportation-based traffic is managed by a municipal company (Box 3.8). This is quite an unusual organisation style. Milan is an atypical example of a large city without a metropolitan transportation authority. Many of the OECD's largest cities have transferred the responsibility for metropolitan-wide public transportation to the level closest to their functional area, usually via the creation of a transportation authority. Their experience suggests to Milan that several governance options exist: (i) one option could be to embed a metropolitan transportation authority in the existing regional government level, but this only worked under certain conditions; (ii) a second option would be to include public transportation in the functions of a metropolitan government, which does not exist yet in Milan; (iii) finally, a third

option could be to set up an autonomous authority exclusively in charge of public transportation planning and co-ordination, with possible consequences in terms of policy co-ordination.

Box 3.8. Milan Transportation Authority: a municipal company

The Milan Transportation Authority (*Azienda Trasporti Milanesi*, ATM) was created in 1999 following a resolution of the Town Executive Board and Council. It has been a joint-stock municipal company since 2001. Under the service contract signed with the City of Milan, the ATM manages and develops all types of public transportation (bus, trolleybus, tramway and subway). It offers various kinds of tickets and passes to meet the specific needs of passenger groups (students, workers, tourists, the elderly, occasional users).

The ATM is fairly well adapted for transportation within the core city of Milan and its immediate surroundings. But it has two limits:

- It offers only restricted access to the functional area of Milan as the ATM network only encompasses the City of Milan and 85 out of 189 cities in the Province of Milan.
- Co-ordination with other transportation authorities still needs to be improved. ATM has established an integrated fare system called “SITAM” (Milan Area Integrated Fare System), which enables users to travel with a single ticket or pass on all ATM lines. But the integrated system only includes a limited number of routes run by other transportation authorities.

(i) A first option could be to entrust the regional government level with the responsibility to plan and co-ordinate overall public transportation. Paris and Madrid offer the most typical examples of a regional transportation authority (Box 3.9). The outstanding advantage of a regional transportation authority is that no additional structure needs to be created. But this arrangement was most operational when at least two conditions were fulfilled. First, the region matched the functional area fairly well. It is widely acknowledged that the region Ile-de-France covers most of the functional area of Paris. In Milan, the situation is more ambiguous. The boundaries of Lombardy do not reflect appropriately the functional area of Milan. Second, there was close collaboration between the region and the other subnational governments involved. In Paris, the region, the *départements* and the municipalities are all represented in the public transportation authority and they have pursued common interests with few known conflicts until recently. In Madrid, although the Region and the City have regularly wrangled with each other on a range of policy issues (e.g., economic development), they have managed to establish operational co-ordination relationships in the field

of public transportation, with relatively positive results. In Milan, not only do the Region and the City oppose the Province in political terms, but also the City of Milan seems to have adopted an inward-looking approach and it is very often missing in intermunicipal or intergovernmental collaboration agreements. Accordingly, establishing a regional transportation authority with the collaboration of subnational levels in Milan looks difficult to put in practice.

Box 3.9. Examples of metropolitan transportation authorities managed by the regional level: Paris and Madrid

Paris

Public transportation is placed under the authority of the *Syndicat des Transports d'Ile-de-France* (STIF), a public institution created in 1959 to co-ordinate the provision of public transportation services and to determine the fare policy in the French capital. Along with massive urban sprawl, an east-west economic and spatial divide emerged around Paris since the 1960s. From the 1970s to the 1990s, the national government invested heavily in highways and ring roads, built suburban railway networks (*réseau express régional*, RER) and extended the subway and the RER.

At the same time, France experienced a significant decentralisation process. In 1982 and 1983, the first decentralisation laws transferred some State powers, notably in the field of public transportation, urban planning and social affairs, to existing local governments (municipalities and *départements*). In addition, regions were created as a new upper-level of local government and endowed with democratically elected regional governments in 1986. However, Paris was long maintained under the tight control of the central government for political and economic reasons. Regional planning and especially transportation were closely monitored by the central government. The national government chaired the STIF and held 17 out of 34 seats in the Board of Directors, which for the rest was composed of 5 representatives of the Ile-de-France regional council, 5 representatives of the City of Paris and 7 representatives of *départements* (Essonne, Hauts-de-Seine, Seine-et-Marne, Seine-Saint-Denis, Val-de-Marne, Val d'Oise and Yvelines).

In July 2005, the national government has totally withdrawn from the STIF. The region now holds the majority of the Board of Directors and the president of the elected regional council chairs it. The two major public transportation operators have remained owned by the State: the *Régie Autonome des Transports Parisiens* (RATP, 42 000 employees) which operates the subway, bus and tramway lines and 2 RER lines (75% of total passengers, 50% of passengers-km); and the *Société Nationale des Chemins de fer Français* (SNCF, 20 000 employees), the French National Railways, which operates all suburban railways and the rest of the RER network (17% of total passengers, 40% of passengers-km). The remaining equipment is operated by the *Organisation professionnelle des transports d'Ile-de-France* (OPTILE, 5 000 employees), an association bringing together 93 private bus companies (8% of total passengers, 10% of passengers-km).

Box 3.9. Examples of metropolitan transportation authorities managed by the regional level: Paris and Madrid (*Cont.*)

Current missions of the STIF include:

- Organising all public transportation services of the Ile-de-France region and co-ordinating the activities of the 95 transportation operating companies;
- Defining the fare policy and setting fare levels, funding public transportation systems through contracts with the operating companies;
- Approving and monitoring new investment projects;
- Improving overall quality of service, measuring user satisfaction and planning the future needs of travellers by analysing mobility trends.

The total budget of the STIF amounted to EUR 3.92 billion in 2005. Resources mainly stemmed from user fees (EUR 2.69 billion) and public subsidies (EUR 1.09 billion from national, regional and *département* governments). The remaining resources come from fines (EUR 85 million) and other contributions from the Ministry of Education and the Ile-de-France regional council specifically devoted to financing students' passes (EUR 47.6 million). The STIF spends almost its entire budget on subsidies to its two main operators (RATP EUR 2 billion, SNCF EUR 1.33 billion).

Madrid

The *Consortio Regional de Transportes de Madrid* (CRTM) was created in 1985 as a public regional consortium under the authority of the Regional Government of Madrid (*Comunidad de Madrid*). It offers a relatively important role to the City of Madrid. The president of the consortium comes from the Region and the vice-president from the City. The City also has the same number of representatives as the Region in the CRTM Executive Board (5 representatives each). Other public and private actors participate in the Executive Board (3 representatives of other municipalities of the Region, 2 representatives of the central government, 2 representatives of private operators associations, 2 representatives of trade unions and 1 representative of user associations).

The CRTM functions are the following:

- Planning and co-ordinating public transportation infrastructure (*e.g.*, defining routes, deciding subway and bus line extensions, interchanges, etc.);
- Defining the fare policy and setting fare levels (*e.g.*, managing monthly and annual travel cards (Abono Transportes), multimodal tickets and integrated tourist tickets);
- Controlling the quality of service, carrying out user surveys and analysing mobility trends.

The budget of the CRTM amounted to EUR 1.29 billion in 2003, coming mainly from user fees (EUR 623 million) and contributions from the national, regional and municipal governments (respectively EUR 143 million, EUR 414 million and EUR 110 million). These funds are mostly used to subsidise transportation operators: MetroMadrid (subway in the City of Madrid), MetroSur (subway in the south metropolitan ring) and TFM (suburban subway under public concession), EMT (urban buses), 33 private operators grouped in 2 associations called Fenebus and Asintra (suburban buses).

(ii) A second option would be to include public transportation in the functions of a metropolitan government. For example, London and Stuttgart have elected a new layer of government to run their functional area and they have entrusted this new political structure with the task of planning and co-ordinating public transportation, among other functions (Box 3.10). This solution has the obvious merit to shape policy responses at the closest scale to the needs and to ensure an ideal rescaling of territory. In Milan, there is no such metropolitan government yet. But there is renewed interest in exploring the possibility to create a “metropolitan city”, which was first introduced by the 1990 law, and public transportation could be one of the competencies assigned to this new structure. A comprehensive metropolitan reform could be useful to tackle not only transportation problems but also other sectoral policy needs (e.g., housing) or strategic objectives to revive Milan (e.g., competitiveness strategy). It might take some time to mobilise all relevant actors, to collect the necessary funding and to put in place such a reform. Meanwhile, transportation problems persist in Milan. Although some improvements have been made recently, such as the creation of the underground railway (*Passante Ferroviario*), congestion may get worse as other infrastructure projects are being slowed down or blocked due to the absence of a decision-making body. It may be wise to consider at least the creation of a sectoral autonomous authority in charge of transportation co-ordination and planning.

Box 3.10. Examples of metropolitan transportation authorities managed by newly created metropolitan governments: London and Stuttgart

London

Transportation for London (TfL) was created in 2000 to manage public transportation services in Greater London and to implement the Mayor of London’s Transportation Strategy. The members of its Management Board are appointed for their outstanding knowledge of transportation issues by the Mayor of London, who chairs the Board.

TfL manages London’s underground, buses, tramways, river services:

- EUR London *Underground* was merged with TfL in 2003 and now employs most of TfL staff (13 000 employees out of 18 000);
- *London Buses* plans bus routes, manages bus stations and controls quality of service. It manages contractual agreements with 31 private operators;
- *London Trams* oversees light transit schemes. It manages Docklands Light Railway (DLR) and Tramtrack Croydon Limited (TCL).
- *London River Services* manages private operators and carried 2 million passengers in 2002.

Box 3.10. Examples of metropolitan transportation authorities managed by newly created metropolitan governments: London and Stuttgart (Cont.)

TfL also co-ordinates with National Rail services, which are operated by 10 companies under franchise with the Strategic Rail Authority. TfL runs all London's 4,600 traffic lights, the Victoria Coach Station and London's Transportation Museum. It regulates taxis and promotes door-to-door transportation through Taxicard (co-financed with London's Boroughs) and the Dial-a-Ride service.

In fiscal year 2003-2004, TfL's main revenues stemmed from the UK government, the Greater London Authority and third parties (GBP 2.8 billion) and from user fees and other services (GBP 2.3 billion). It spent about GBP 4.8 billion in subsidies to transportation services and infrastructure investment.

Stuttgart

The Verband Region Stuttgart (VRS) was founded as an association in 1994 to represent the metropolitan area of Stuttgart (around 2.6 million people distributed in 179 municipalities within the German *Land* of Baden-Württemberg). Its decision-making body is a directly elected Regional Assembly. With neither taxing power nor user fees, the VRS is entirely funded by contributions from member municipalities and the Land of Baden-Württemberg.

The VRS is in charge of co-ordinating economic development, spatial planning and public transportation. Public transportation accounts for the most important task by far (EUR 221 million out of EUR 238 million in the VRS's 2004 budget). Public transportation is funded by earmarked grants and fareBox revenues.

The VRS is responsible for co-ordinating all of the region's services within an integrated transportation network (VVS): suburban railways (S-Bahn, operated by state-owned Deutsche Bahn), tramways and buses (operated by Stuttgarter Straßenbahnen AG and around 40 regional bus companies). Rail transportation services beyond the metropolitan area fall under the responsibility of the Land of Baden-Württemberg.

(iii) A third option could be to set up a sectoral autonomous authority, which would be exclusively in charge of public transportation planning and co-ordination. Such authorities exist in a number of cities that have no metropolitan government and they seem to work quite efficiently, even in the case of the largest transportation networks in the OECD such as New York (Box 3.11). In the short term, a sectoral autonomous authority in Milan would present the advantage of pursuing efficient public transportation and

co-ordinating scattered initiatives without necessarily imposing a politically controversial and large-scale governmental reform. In the medium and long term, the transportation authority might need to be coupled with one or more authorities. It is likely that sectoral issues other than public transportation will need metropolitan-wide co-ordination and planning. In the OECD area, some cities started by establishing a metropolitan transportation authority and ended up juxtaposing a multi-purpose metropolitan co-ordinating body. This is the case in Montreal, which is left with the difficult task of handling the two co-existing structures and is now thinking about how to best adjust their respective functions (Box 3.12). In other cities like Copenhagen, the pre-existing transportation authority was merged into the metropolitan co-ordinating body, which was created later to take charge of public transportation, traffic planning, cross-border co-ordination and development in the Öresund area (Copenhagen-Malmö), industrial policy, tourism and culture (Box 3.13). Learning from these experiences, Milan needs to search for planning and co-ordination mechanisms that are compatible with a long-term strategy.

Box 3.11. Example of a metropolitan transportation authority without a metropolitan government: New York

The Metropolitan Transportation Authority (MTA) of New York is a public-benefit corporation chartered by New York State in 1965. It is governed by a 17-member Board. Members are nominated by the Governor of New York State, with some recommended by New York City's mayor and the county executives of Nassau, Suffolk, Westchester, Dutchess, Orange, Rockland, and Putnam counties (the latter four cast one collective vote). The Board also has six rotating non-voting seats held by representatives of labour unions and the Permanent Citizens Advisory Committee (PCAC), which serves as a voice for users of MTA transit and commuter facilities. All Board members are confirmed by the New York State Senate.

With a USD 8 billion operating budget in 2004, the MTA manages North America's largest transportation network and serves a population of around 14.6 million people fanning out from New York City through Long Island, southeastern New York State, and Connecticut. Its subways, buses, and railroads move about one in every three users of mass transit in the US and two-thirds of the nation's rail riders. The MTA has implemented an integrated fare and toll payment system on subways, buses, bridges and tunnels through MetroCard and E-ZPass (MetroCard automated fare collection has brought free transfers between subways and buses, multiride bonuses, and weekly, monthly, and daily transit passes, reducing the cost of public transportation; E-ZPass electronic toll collection has sped up the trips while reducing traffic congestion and pollution). The MTA has also carried out the largest public works project in the US, generating an average of 31 760 private-sector jobs and USD 3.52 billion in economic activity annually.

Box 3.12. Cohabitation between a metropolitan transportation authority and a metropolitan co ordinating body: the example of Montreal

Montreal experienced the creation of a new metropolitan co-ordinating body coupled with a municipal consolidation. In 2001, the Montreal Metropolitan Community (MMC) was established as a multi-purpose co-ordinating, planning and financing body. The MMC represents about 3.4 million people, *i.e.*, 48% of Quebec population. In 2002, 28 member municipalities were merged into a new city of Montreal. The MMC presently includes 63 member municipalities, which are represented in a Council (28 representatives) and an Executive Committee (8 representatives). The MMC is in charge of nine strategic competencies: public transportation and metropolitan road network, economic development, land use, artistic and cultural development, social housing, metropolitan equipments and services, waste management, air management, and water management.

Concerning public transportation, the MMC has to co-operate with a pre-existing metropolitan transportation authority called the *Agence métropolitaine de transportation* (AMT). The AMT was created in 1996 under the authority of the Quebec Ministry of Transportation to plan and to co-ordinate public transportation in the greater area of Montreal. This umbrella organisation integrates 21 transit corporations and authorities. It is also in charge of commuter trains and metropolitan express buses. Currently, the MMC appoints 3 out of 7 members of the AMT Board of Directors, approves the AMT Strategic Plan for Metropolitan Transport, and may oppose the metropolitan fares set by the AMT.

In spring 2005, the MMC submitted a project for the decentralisation of public transportation to the Quebec government. The project aimed at making the AMT directed entirely by elected municipal officials, who would be appointed by the MMC.

Box 3.13. Merging a transportation authority into a metropolitan co ordinating body: the example of the Greater Copenhagen Authority (HUR)

The Greater Copenhagen Region is a metropolitan area of 1.8 million inhabitants distributed across three major counties (Copenhagen, Frederiksborg and Roskilde) and around 43 other municipalities. In 1974, several municipal bus companies had been merged into Copenhagen Transportation (HT), an intermunicipal transportation company that had allowed for the creation of an integrated bus and train system. HT also served as the bus operator in the region until 1990.

During the mid- to late 1990s, there was considerable debate about whether there should be a directly elected Greater Copenhagen Council to replace the mix of counties and cities. Counties and cities were however reluctant to lose any power, while the central government was anxious not to create a “super-authority” that might threaten its own powers.

Box 3.13. Merging a transportation authority into a metropolitan co ordinating body: the example of the Greater Copenhagen Authority (HUR) (Cont.)

A compromise was found in the creation of the Greater Copenhagen Authority (Hovedstadens Udviklingsråd or HUR, www.hur.dk). HUR was launched in July 2000 as a public organisation covering the metropolitan area of Greater Copenhagen. It is governed by a Council of 11 members, who are chosen among the politicians of three counties (Copenhagen, Frederiksborg and Roskilde that nominate respectively three, two and two representatives) and two cities (Copenhagen and Frederiksborg, respectively three and one representatives). It is supported by a staff of about 320 employees, who are organised in three divisions (Transport, Planning and Service) and the Management Secretariat. HUR liaises with a number of sectoral organisations, such as Wonderful Copenhagen (official tourism organisation for the Greater Copenhagen Region), Copenhagen Capacity (in charge of attracting international investors and companies) and the Öresund Committee (*Öresundskomiteen*, a forum where politicians from both sides of the Öresund Strait meet four times a year to discuss cross-border development issues).

HUR's main tasks are to co-ordinate and develop transportation (including public transportation), traffic planning, cross-border co-ordination and development in the Öresund area, industrial policy, tourism and culture. The previously independent public transportation authority (HU) was integrated in the Transportation Division of the HUR. The HUR Transportation Division currently manages all bus and local railway services (run by private operators). The central railway system and the suburban S-trains remain owned by the national railway companies, and the Metro lines are run by a company co-owned by the Danish State and the cities of Copenhagen and Frederiksborg. In contrast with most other cases, HUR has not only control over public transportation but also some influence over road planning.

Copenhagen is often referenced as a best practice in the delivery of transportation policy. Several factors are quoted: strong integration of the public transportation network, especially at interchanges (with timed connections between buses and trains, for example); high quality bus transportation (thanks to competitive tendering and incentives on operators to reward them for high quality service); integration of land use and transportation planning; successful measures to reduce car use (e.g., pedestrianisation, parking policy and cycling policy). Such performances were achieved by effective consensus and voluntary co-operation between the five main local governments in the region, coupled with a strong steer from the central government. Intergovernmental co-operation was essential not only in institutional terms but also in financial terms. For example, a large investment project (the construction of a new subway line to Orestad, a 50 000 people community built on reclaimed land on the southeast of Copenhagen City) was financed by loans from the central government, on the understanding that the loan would be mostly paid off later by the operating company co-owned by the central and local governments.

3.3. Building strategic collaboration: towards a “Milan community”?

The objective of Milan’s governance should not be simply to solve problems with an emergency management approach. Physical mobility is the basic tool that will allow Milan “to breathe” better and to take ownership of its own space. As shown in other OECD cities, physical mobility is often accompanied by other sectoral requirements such as land use planning and economic development, which need to be better integrated mutually. Meeting these requirements is important to Milan’s well-being and this calls for adequate action. But considering its long-standing economic strength, Milan could go much further. It needs to fully exploit its potential to move upward among globally competitive and attractive cities. It could become a modern and vibrant city, which is able to capture global customers and talents and could drive the growth of a much larger area than it considers now. Two lines of action could help Milan to pool actors together into strategic collaboration: (i) to build a “think tank” in order to facilitate the emergence of “flagship projects” and other innovative seed ideas that would be capable to reveal Milan on the global stage; (ii) to develop a sense of collective ownership around a “Milan community”.

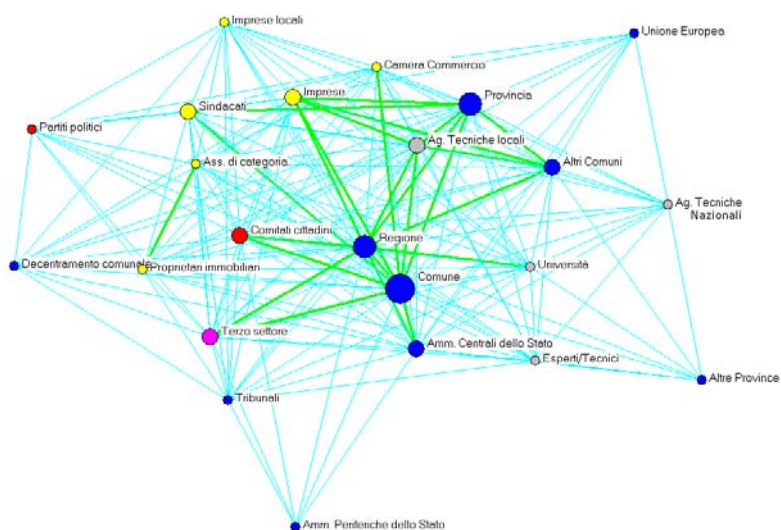
3.3.1. *Activating a think tank to facilitate the emergence of “flagship projects” and beyond*

Milan has to look for “flagship projects”. Examples of bold and appealing projects can be found in several OECD cities, including Italian cities close to Milan. Turin – around 2.18 million people, smaller than Milan – successfully bid for the Winter Olympic Games in February 2006. The excellent collaboration of the entire local community that supported the bid committee has been widely recognised as a key factor of success. “Flagship projects” would not only act as catalysts for internal change in Milan, but they would also offer an ideal opportunity to renew and to spread its global brand image. Milan has not staged such projects in a long time. The area has often been criticised for its fragmentation and its lack of cohesiveness that hamper creative ideas from emerging. This can be explained by several factors, including a disjointed landscape of potential project leaders and recent tensions within the area and individualistic behaviour:

- Milan has a fragmented landscape of potential project leaders. Milan currently suffers from a relatively loose fabric of actors, where possible leaders of “flagship projects” remain isolated from each other and innovative ideas fail to dawn (Figure 3.8). Networks are much tighter in Turin for example, which may explain how the city has built a buoyant agenda recently (Figure 3.9).

Figure 3.8. **The density of the governance network is lower in Milan...**

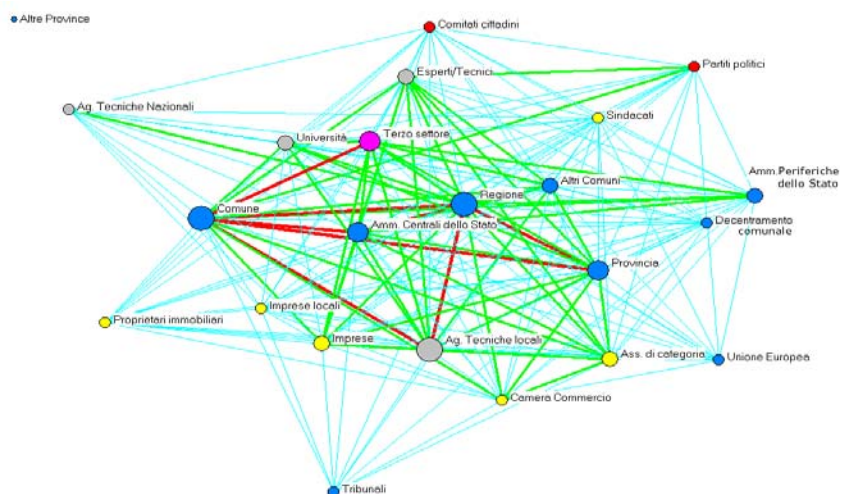
Density index: 0.069 on a 0-to-1 scale (number of projects/programmes involving interactions)



Source: Bruno Dente.

Figure 3.9. **... than in Turin for example**

Density index: 0.116 on a 0-to-1 scale (number of projects/programmes involving interactions)



Source: Bruno Dente.

- Milan has experienced recent tensions within the area and individualistic behaviour. The loosening of networks may have contributed to stirring new antagonisms. The central city of Milan has regularly manifested individualistic behaviour and seems on the verge of self-isolation. Some other municipalities are also looking for their distinctive identity. Recently, the municipality of Monza and some of its surrounding municipalities claimed their own territorial individuality. In May 2004, they obtained their secession from the Province of Milan and the creation of a new Province called “Monza and Brianza” (around 730 000 inhabitants), which is planned to be effective in 2009.

A think tank could be established to instil new ideas to policymakers for Milan’s revival. Drawing on the multitude of research centres existing in Milan, a team of eminent experts and high-skilled technicians could be gathered into a “Milan think tank”. This structure could devote itself to the following tasks: to observe and to identify the main trends in urban and metropolitan development issues, to analyse Milan’s strengths and weaknesses, to benchmark Milan internationally and to capture inspiring initiatives from outstanding cities, to devise the basic scheme for flagship projects and to share them with policymakers. The think tank could act as a metropolitan laboratory where ideas are converted into projects and tested (through feasibility studies, impact studies...) before they are implemented. Several cities have endowed themselves with such a support structure (*e.g.*, City of Helsinki Urban Facts was created in 1990 through the merger of the City Statistical Office and the City Archives; currently, it offers archives, statistics, research and forecasts in a single-stop institution). The support structures have sometimes helped cities to set up spectacular renewal projects to enhance the city’s liveability.

Milan could build on its forthcoming “Strategic Project”. The principle of a “call for ideas” was introduced to some extent by the Province of Milan in 2005 when it decided to launch the Strategic Project exercise (Box 3.14). The Strategic Project is an encouraging initiative as it proposes a brainstorming opportunity to various stakeholders and it plans to draw on their insights to design the future strategy of the region. Similar experiences in other OECD cities have shown that citizens are usually keen on speaking out their own voice when they are solicited to remodel their living environment and to give a “new face” to their city (*e.g.*, high popular mobilisation in Paris during public consultations about the renovation project of central shopping mall and subway station Les Halles). Milan could exploit existing talents and reawaken the passion of the Milanese for their city by pioneering attractive channels for citizen participation and dialogue.

Box 3.14. The Strategic Project of the Province of Milan (2006-2007)

The Strategic Project aims at promoting “development, competitiveness, governance capacities, social and urban planning cohesion in the Milanese metropolitan area and the individual and collective well-being of its inhabitants”, which are “all very closely connected with the dimension of *liveability* in a large and complex urban region” (Diap-Politecnico di Milano, 2006). Liveability is understood as the objective of concrete actions, such as “to dwell, to move and breathe, to share spaces, to create and enjoy culture, to develop new local welfare, to innovate and run businesses”.

In order to explore the concept of liveability and to put it in practice in Milan, the Strategic Project will follow several steps:

- The Province of Milan will organise a competition for design/planning ideas and best practices on liveability: a wide range of actors are invited to participate in the competition (public institutions, labour and business organisations, firms, research and education bodies, chambers of commerce, etc.), with the prospect of a financial reward;
- A jury will evaluate the projects starting from autumn 2006 and select the most promising ones; the winners will be published in an “atlas of policies and projects”;
- The atlas will be presented during an exhibition at the Milan Triennial in the winter of 2006-2007;
- New design/planning workshops will be organised and feasibility studies will be conducted in order to identify possible actions;
- A Strategic Plan will be prepared by the Province of Milan and the newly established Province of Monza and Brianza by spring 2007.

Milan could also better involve its university talents in strategic thinking. The twelve universities in Milan (seven in the city and five in the province) hold over 430 000 students, representing almost one quarter of the university student body in Italy. Many of these students are engaged in disciplines that are directly related to urban development, city management and the larger metropolitan infrastructure²⁰. A few universities enjoy close privileged relationships with local governments. For example, the Politecnico di Milano is a prime partner in the Strategic Project launched by the Province of Milan. Yet overall connections between policymakers and universities remain relatively weak. While some academics do conduct urban related research, their commitments are often tenuous and individualised. One way to stabilise a long-term set of relationships

between universities and policymakers could be to develop urban institutes. Urban institutes would be aimed at harnessing researchers, teachers and students to the future development of the metropolitan area. They could work under contract with local authorities to conduct research, engage in consulting and assign students to internships in various public, non-profit and private agencies.

Numerous benefits could be derived from this arrangement. First, there is the obvious advantage of a mutual exchange of talent and insights. Universities would gain by furnishing academics and students with empirical experience. Local authorities would not only gain an infusion of fresh local talent but they would also share the universities' linkages and networks with universities in other Italian regions and abroad. Urban institutes could serve as clusters of human talent, capable of launching new ideas and ventures. Second, these relationships would strengthen the ability of the city to retain a younger, productive generation. For young graduates, an applied exercise in local government or other public organisations would enhance a university experience and serve as a career channel. Third, the studies completed by urban institutes would provide bountiful information to the media and the public, thereby enhancing accountability and democratic participation. While some of these studies might be critical, others would be quite positive and their long term impact would be salutary.

Finally, the think tank could test its ideas on the economic milieu. The work of academics and experts could benefit from a process of proof-reading and debate by the economic milieu. Representatives of business and labour could infuse practical comments to make the ideas and the projects more operational. Milan has a strong economic community, which is fairly well represented. One of the main actors is the Chamber of Commerce of Milan. As in Spain and Ireland, the Chamber of Commerce has the advantage of being organised at the provincial level and closest to the functional level, instead of being organised at the municipal (or intermunicipal) level as in many OECD countries (e.g., France, Germany). Active support to the think tank from the Chamber of Commerce and other economic stakeholders could help spur political commitment, which is indispensable to the kick-off of a sustainable "Milan community".

3.3.2. Developing a sense of collective ownership

Implementing a strong strategy for the metropolitan region requires political endorsement. While ideas and projects can stem from a think tank and the economic community, translating them into reality takes political commitment and leadership. Particularities of the local governance system also need to be taken into account. Italian mayors have been directly elected since 1993 only. Considering this relatively recent empowerment, they are likely to search for opportunities to assert their clout and confirm their popular legitimacy. The

functional area of Milan totals an impressive number of municipalities. It would be virtually impracticable to push through key reforms without seeking the political support of mayors. Associating them through innovative governance mechanisms could be a way to move forwards with resolute and workable actions.

Existing intergovernmental collaboration initiatives such as “Milano Metropoli” could underpin further collective action and political leadership. Ten years ago, the most industrialised municipalities in the North of the Province of Milan – which share a particular industrial past and specific common challenges (such as the rehabilitation of brownfields) – kicked off a bottom-up experience of intermunicipal and municipal-provincial co-operation to bolster local economic development. Based on their combined concerns, the municipalities and the Province of Milan set up a local development agency in 1996 on a voluntary basis (*Agenzia di Sviluppo Nord Milano* or ASNM). Due to its success, the agency has since enlarged its membership to other municipalities, important financial institutions and companies. It has rebaptised itself “Milano Metropoli” and currently aspires to foster sustainable economic growth (Box 3.15).

Box 3.15. “Milano Metropoli”: Milan’s local development agency

Initially, the local development agency (*Agenzia di Sviluppo Nord Milano*, ASNM) was founded in 1996 by the Province of Milan and the municipality of Sesto San Giovanni. ASNM aimed at tackling the problem of deindustrialisation due to the relocation of large firms and the bankruptcy of many traditional manufacturing firms. For this purpose, ASNM has promoted the restoration of large brownfields by converting industrial areas into business incubators and locations for small firms. It has also enhanced linkages between universities and business by financing (through the European Social Fund) innovative business ideas coming from university researchers and professors.

In 2005, ASNM was restructured into a public-private agency called “Milano Metropoli”. Partners include: the Province of Milan; the Chamber of Commerce of Milan; 4 municipalities in the northern border of the City of Milan that share deindustrialisation problems (Sesto San Giovanni, Bresso, Cinisello Balsamo, Cologno Monzese); 2 financial institutions (Finlombarda and Banca di credito cooperativo di Sesto San Giovanni); some large companies (Falk, ABB, Brollo-Marcegaglia, Edil-Marelli). Milano Metropoli still specialises in brownfield restoration (by offering consultancy to local governments) and innovative entrepreneurship (by supporting new businesses in the “creative economy”), but it has also taken charge of territorial marketing. It will aim at attracting FDI and skilled workers, as well as creating an integrated tourism offer.

Establishing a “metropolitan community” could be a stepping stone to bolster a stronger and more cohesive Milan. One interesting solution could be to retain existing levels and use them as building blocks to create a “Milan metropolitan community”. A similar approach was developed in France, a country also endowed with a three-tiered subnational government system and confronted with the challenge of designing efficient governance mechanisms for its largest urban areas. France is the first European country in terms of municipal proliferation (over 36 000 municipalities) and it had to overcome institutional fragmentation without offending local kinships. As early as the 1960s, the French government developed intermunicipal collaboration mechanisms based on bottom-up voluntary adhesion wisely coupled with strong financial incentives from the central government²¹. Concerning the largest urban areas, the model of “urban communities” (*communautés urbaines*) was sketched out in 1966. Today, most large urban areas in France have set up an “urban community” and some of them are constantly evolving towards a more integrated territory able to work out a common vision. An instructive example is Lyon, the second largest city in France (Box 3.16). Other mechanisms building on local politicians but involving a smaller number of municipalities have also generated positive outcomes, with the additional participation of the higher level of government (Box 3.17). Such intermunicipal partnership models offer inspiring examples, but ultimately Milan has to find a solution to its own characteristics and needs.

Box 3.16. Setting up a “communauté urbaine”: the experience of Greater Lyon (France)

The *communauté urbaine* of Lyon (also called *Grand Lyon* for Greater Lyon) was created in 1969. It encompasses 55 municipalities with a striking variety of population size (the smallest has about 850 inhabitants and the largest more than 444 370 inhabitants). Total population amounts to 1.3 million people, *i.e.*, 75% of the higher level of government (Rhône *département*) and more than one-fifth of the highest level (Rhône-Alpes region, second largest region of France).

Within the French legal framework providing for the *communautés urbaines*, Greater Lyon has three main types of responsibilities: (i) basic public services (*e.g.*, local road, water management, waste management...); (ii) land use and planning (*e.g.*, spatial planning schemes, social housing, public spaces, large infrastructure...); (iii) economic development and real estate. It also outsources certain services to external organisations (for car parks, public transportation...). In 2006, Greater Lyon had a budget of EUR 1.48 billion. Resources mainly came from the single business tax it levies directly (34% of total resources), grants from the central government (23%), other taxes such as the waste management tax and road tolls (22%), borrowing (15%).

Box 3.16. Setting up a “communauté urbaine”: the experience of Greater Lyon (France) (Cont.)

Greater Lyon is governed by a “community council” (*conseil de communauté*), a chairman and an executive bureau (*bureau*):

- The “community council” is composed of 155 members, who are appointed by member municipalities for a 6-year tenure among the local elected officials of the 55 municipal councils. The number of seats for each municipality is fixed on a population basis (each municipality has at least one seat). The community council meets about 10 times per year and its meetings are open to the public. Each decision is made by deliberations and majority votes.
- The chairman of the community is the mayor of Lyon, the largest city.
- The executive bureau is composed of the chairman and 36 vice-chairmen, who are elected among the members of the “community council” and are each responsible for a specific sector (finance, mobility, environment...). They are also either members or moderators of cross-sectoral working groups. The executive bureau has a decision-making power.

In addition, 9 “local mayors conferences” (*conférences locales des maires*) were established in 2002. These conferences aim at associating more closely the mayors of the member municipalities to the decision of Greater Lyon and to create an open forum for information exchange and mutual consultation.

Despite the traditionally strong attachment of French citizens to their municipalities, a “culture of co-operation” emerged progressively with the evolution of “urban communities” and other intermunicipal collaboration bodies. Spontaneous trade-offs have been observed. For example, the central city has sometimes accepted to have a lower number of seats in the community council than it should have according to its population size. The ruling parties and the opposition parties have also decided to share the seats of vice-chairmen in the executive bureau.

Civil society and the private sector have also been increasingly involved in urban communities. The 1999 law on regional planning (LOADDT) created compulsory consultative structures called “development councils” (*conseils de développement*). As the law did not mention specific rules for their composition, development councils vary across urban communities. They are generally composed of representatives from chambers of commerce, business associations, education and cultural organisations, NGOs, etc. In Greater Lyon, the development council was streamlined in early 2006 to recruit 240 new representatives from more diversified backgrounds.

Box 3.16. Setting up a “communauté urbaine”: the experience of Greater Lyon (France) (Cont.)

Although urban communities were introduced for technical reasons (*e.g.*, raising the efficiency of water management system) rather than for the objective of designing and implementing a strategic vision for the entire area, Greater Lyon offers one example of successful venture that is moving all partners towards the common goal of promoting the image of a European gateway. The creation of Greater Lyon also allowed for the emergence of even larger co-operation projects in the area, such as the Lyon Urban Region (LUR). Created in 1989, LUR is an association composed of all three subnational levels of government: the Region of Rhône-Alpes, 4 *départements* (Ain, Isère, Loire and Rhône), 700 municipalities, the Greater Lyon urban community and other intermunicipal collaboration bodies. It represents a total of 2.6 million people and commands a budget of EUR 540 000 (financed by contributions from its members). LUR focuses on elaborating strategic plans for the whole metropolitan territory on issues such as mobility, sustainable development and attractiveness. Co-operation has led to positive achievements, notably in mobility (tariffs for public transportation were harmonised) and sustainable development (a common strategy was adopted in 1998).

Box 3.17. Examples of metropolitan governance mechanisms based on local politicians

Greater Vancouver Regional District (GVRD, Canada)

The city of Vancouver is located within a large metropolitan region confronted with significant economic challenges (*e.g.*, rapid growth, underinvestment in infrastructure) and governance bottlenecks (*e.g.*, multiple jurisdictions with conflicting policy priorities). Until 1965, inter-municipal services in the metropolitan area of Vancouver were mainly handled by special-purpose bodies that were set up on a voluntary basis, such as the Joint Sewerage and Drainage Board, a Greater Vancouver Water District, various health and hospital boards, a Lower Mainland Regional Planning Board, and an Industrial Development Commission of Greater Vancouver.

The Greater Vancouver Regional District (GVRD) was created in 1967 as part of a system of regional governments being created by the provincial government of British Columbia at that time. The newly created GVRD took over the functions of the special-purpose bodies. It was originally responsible for hospitals and planning, but has grown to include other functions. It is now in charge of delivering most essential public services (*e.g.*, drinking water, sewage treatment, recycling and garbage disposal, etc.) and enhancing the quality of life (by protecting air quality and green spaces, managing and planning growth). GVRD funds come from member municipalities who pay for the services rendered. The cost of most services is apportioned among member municipalities on the basis of their property assessment base. The bulk of GVRD expenditures (90%) are for capital costs of hospitals, water, sewerage, and solid waste disposal.

Box 3.17. Examples of metropolitan governance mechanisms based on local politicians (*Cont.*)

The GVRD model presents a number of advantages:

- *Accountability and transparency.* The GVRD's Board of Directors is composed of mayors and municipal councillors, who are elected and appointed by member municipalities to serve on the Board. The number of seats for each member municipality is allocated on a population basis. Meetings are usually open to the public.
- *Formal decision-making power.* The GVRD serves as a collective decision-making body, which has formal responsibility for a number of activities. In addition, it can choose to take on other roles on a voluntary basis. It has a real impact without constituting an additional layer of government or invalidating existing local governments.
- *Pursuit of a common vision.* The GVRD has created a good interface between local and regional issues and it has encouraged partners to develop a sense of collective venture. It was able to put forward a liveable region strategy that was endorsed by all members.
- *Flexibility.* Member municipalities can opt out of many district functions.

San Diego Association of Governments (SANDAG, US)

SANDAG was founded as a Comprehensive Planning Organisation within San Diego County in 1966. It comprises 18 cities and the county government of San Diego, with a total of 2.8 million people. SANDAG's activities have come to include much of the important policymaking in the region, including economic growth, transportation, environmental concerns, housing, energy, and public safety. The Board of Directors is composed of local mayors, council members, and a county supervisor. They are assisted by a professional staff of planners, engineers and research specialists. In addition, the association draws on advisors from the regional and local transit boards, the port authority, the water authority, and other institutions. SANDAG also seeks residential input through monthly public meetings of the association itself and meetings of its various working groups on housing, transportation, and other important issues. The association publicises decisions and ongoing deliberations through mail distribution, a website, e-mail list serves, a monthly electronic newsletter and various press releases and reports through the local and regional media. SANDAG holds public workshops to solicit citizen input and maintains a speakers' bureau of elected officials and staff who conduct hundreds of presentations annually to local and regional groups and organisations.

A second best solution could be to set up lighter forms of governance. Platforms for dialogue and consultation exist in a few OECD metropolitan regions, such as Stockholm and the Randstad (Box 3.18). They present the advantage of offering an

informal and easily accessible roundtable for local policymakers to exchange freely ideas and experiences. Political commitment is sometimes very high as mayors, governors, or senior officials appointed by them can participate to such platforms. Yet light consultative bodies have displayed non negligible drawbacks. The lack of a proper field of competency, the usually weak implementation capacity (both institutional and financial) and the absence of democratic legitimisation often end up cancelling out some of the benefits to be drawn from open dialogue. It is therefore not surprising that some local authorities have decided to reform their light governance bodies. For instance, Stockholm local authorities are presently thinking about whether to create a regional structure (OECD, 2006c). Milan's experiment with the Piano Intercomunale Milanese (PIM) confirmed the limits of an informal platform. If Milan decided to push further with an informal platform, it would be wise to endow it with a precise mandate and to define a minimum roadmap to achieve this mandate.

Box 3.18. Light consultative bodies: Stockholm and Randstad

Stockholm: from a discussion group to a non-profit organisation (*Mälardalsradet*)

In 1988, a discussion group (*Mälardalsgrupp*) was created and acted as an informal forum for information exchange between county councils and municipalities around Stockholm. Much of the discussion focused on the preservation of water quality of Lake Mälär and infrastructure investment around the lake. The group initially consisted of civil servants from the four county councils located around the lake (Stockholm, Uppsala, Sörmland and Västmanland) and the four major municipalities in the region (the City of Stockholm, Uppsala, Eskilstuna and Västerås).

In 1992, the discussion group became the Council for the Stockholm Mälär Region (*Mälardalsradet*), a non-profit organisation with political representatives from 5 county councils and 46 municipalities. Building on the earlier work of the *Mälardalsgrupp*, the new council aimed to promote integration and co-ordination on regional development issues. In 2003, the Council proposed a vision of creating an attractive region for individuals and businesses through a sustainable living environment in the context of growing global competitiveness. The vision is relatively clear but it lacks practical mechanisms to implement it. With a secretariat of five and a small budget of SEK 10.7 million coming from membership fees, it is currently a mere NGO with no formal role for regional planning or economic development. It does little more than establish a network between the various public authorities in the region and strives to operate as a platform for raising awareness about the main strategic regional development issues on the Stockholm Mälär region. While creating an avenue for communication, it does not provide any formal mechanism for decision making, conflict resolution or issue management.

The region of Randstad (Amsterdam, Rotterdam, Utrecht and The Hague) has been searching for better modes of collaboration, particularly since the late 1990s. A public-private foundation called DeltaMetropolis was created in 1998 by a university professor and the four *aldermen* in charge of urban planning in the 4 cities. It grew into a larger structure with the participation of chambers of commerce, waterboards, housing corporations, public transportation companies, farmers associations and some business associations.

Box 3.18. Light consultative bodies: Stockholm and Randstad (Cont.)**Randstad: a deliberative platform**

An official platform for the region was set up in 2002 with the objective to strengthen regional international competitiveness. Regio Randstad is a joint venture of the four provinces that make up the Randstad (North Holland, South Holland, Utrecht and Flevoland), the four city-regions (Amsterdam, Rotterdam, The Hague and Utrecht) and the four municipalities (*idem*). Its general board is composed of 24 members who are appointed by the 12 partner authorities. Mayors can participate anytime but they tend to nominate a substitute. The general board elects five of its own members to serve on the executive board that meets on a monthly basis. The joint venture has an office with a director and a small staff of 12 people.

Regio Randstad acts as an interface for co-ordination within Randstad Holland on key issues (*e.g.*, transportation, economic development, environmental issues). Regio Randstad also aims at promoting harmonisation with the central government. For example, the general board and some ministries of the central government (according to the issue concerned) meet about 3 times a year in the Steering Committee Randstad (BCR), a platform for consultation about important investment and projects. However, Regio Randstad has no enforcement authority over local and provincial governments. It is also difficult to expect conflict mediation as the largest and strongest partners tend to prevail in this kind of platforms. In the absence of clear leadership and democratic legitimacy, the influence on decision-making remains quite low. Most of regional planning takes place at the city-region level (WGR plus) and other structures seem to have a far stronger say in national policies (*e.g.*, association of municipalities called VNG, association of provinces called IPO, grouping of the 4 cities called G4). The central government's regional policy focuses on a wing level (north wing Amsterdam-Utrecht, south wing The Hague-Rotterdam) rather than on the Randstad level.

Conclusion: the pressing call for metropolitan governance reforms

Milan cannot afford to linger with governance reforms. In the current globalisation context, Milan is increasingly challenged to exploit its critical mass, to build on its regional synergy dynamics and to infuse positive spillovers as a strategic powerhouse for a large part of Italy. Continued inertia to adjust governance mechanisms to Milan's changing functions could turn out to be costly, while other cities are accomplishing ever more innovative and creative projects. Cities across the OECD area have practiced a wide array of metropolitan governance mechanisms, ranging from voluntary associations of existing jurisdictions to the election of a new metropolitan government. While their experience suggests that there is no unique formula for metropolitan governance, it confirms that many OECD cities have decided to fine-tune their governance in order to respond to the needs of their metropolitan region. It is time for Milan to catch up with its economic development and to face its own governance agenda. Failure to adapt rapidly Milan's governance mechanisms may clear the way for the decline of Italy's largest urban agglomeration and economic engine. If the national government intends to grasp Milan's spillovers for national growth, it will have a decisive role to play in enforcing metropolitan governance reforms.

NOTES

- 1 This may even give a misleading impression about the average size of local governments in Italy (73% of municipalities have less than 5 000 inhabitants), which is considerably smaller than the average size in OECD countries.
- 2 In the 1950s, the municipal assembly used to devolve a lot of decision-making power (*deleghe*) to the municipal executive (mayor and its deputy mayors, called “*giunta comunale*”). Projects could be decided and implemented without being debated by the municipal assembly. The trust between all actors ensured a sort of political continuum of projects.
- 3 Many future “symbols” of Milan were put in place during the 1945-1960 period, including for example the reconstruction of the Scala theatre (1945-1955) and the construction of the subway (1957-1964). Other major investments focused on improving transportation (e.g., Milano-Serravalle highway, which was built very rapidly in 1956-1960) and social housing (e.g., the Bassetti Plan built more than 48 300 dwellings in 1962-1965 and launched the construction of another 56 200 dwellings).
- 4 The “Tangentopoli” corruption scandal started in Milan in the early 1990s and spread to other parts of Italy, unveiling large-scale bribery affairs where most political parties were involved. A series of overall judiciary investigations and clean-up operations called “Mani Pulite” was launched throughout the 1990s.
- 5 In 1987, the IReR (Regional Research Institute of Lombardy) launched a series of conferences and seminars under the name of “Progetto Milano”, with the participation of the government (Region, Provinces and Municipalities), the Chamber of Commerce of Milan, universities, research institutes, large companies and trade unions. Their debates resulted in a publication entitled “Towards a Metropolitan Government”. Several business associations were also set up at a larger scale than the city. For example, the Association of Metropolitan Interests (*Associazione Interessi Metropolitan*i, AIM) brought together many large companies settled in the area (Pirelli, Telecom Italia, Falk) and banks (Banca Intesa, Credito Valtinese) in 1987. The “Meglio Milano” Association also gathered the Chamber of Commerce, the Commercial Union, the Automobile Club and a few universities in 1988.
- 6 The Association of Metropolitan Interests (AIM) launched several conferences and debates on sectoral policy issues such as mobility, environment and international competition. In June 1998, the municipality of Milan even hosted a metropolitan roundtable during the “Milan Estates General” where many Italian mayors, the Province of Milan and the AIM were invited. The city also tried to

enhance its international openness by hosting a roundtable where the mayors of several European cities attended (Madrid, Barcelona, Frankfurt, Lyons, Glasgow and Birmingham).

7 See earlier note on the Tangentopoli.

8 In 1993, the regions received the yield from the health payroll tax, levied on salaries and the income of the self-employed workers. As a consequence, the share of total expenditure financed by transfers dropped to 48%. In 1998, the health payroll tax and some minor regional taxes were abolished and replaced by a new tax, the IRAP (regional business tax) and by a regional surcharge of 0.5% on the personal income tax (IRPEF). Although the 2001 constitutional reform replaced many grants by a share of national VAT and by increases in the rates of some surcharges, the total amount of resources flowing to the regional budgets as a whole remained unchanged as the share of the VAT going to the regions was fixed at 38.55%.

9 As voted by the Parliament in November 2005, the latest constitutional reform has significantly reinforced the regional level. The Senate is planned to be transformed into a Chamber of Regions (akin to the German *Bundesrat*), and its legislative competencies would apply to “concurrent powers” (neither exclusive to the national government nor the regions). Regional governments would gain exclusive legislative powers in health care and management, education, and administrative police (*vigili urbani*). This reform is waiting to be validated via a national referendum, initially scheduled for the summer 2006.

10 As the distribution of responsibilities remains fuzzy, regions may require higher transfers from the central government to cover the cost of the devolved services. Once they are provided with extra resources, regions are likely to prefer to spend them in sectors other than health because they know that the central government is liable to settle the deficit in the health sector. The budget constraint is thus softer in the health sector than in others, and spending extra resources in other sectors is politically more rewarding for regions.

11 The equalisation scheme, as introduced from 2001 by Law Decree 56/2000, is based on several criteria: fiscal capacity, healthcare needs, differences in the cost of providing public services (economies of scale). The Law Decree introduced a transition period from 2001 to 2013, in which the share of the Fund for Regions to be assigned according to these criteria would gradually increase to 100% by 2013. In the meantime, part of the allocation would remain based on historical expenditures; this part would decrease to 0% by 2013. From 2001 to 2005, some southern regions appealed to the Constitutional Court against the Law Decree. As a consequence of such appeals, the central government suspended part of the mechanism. The Financial Law 2006 finally settled the situation by providing a

more gradual application of the new criteria. The application of the new criteria has thus been relatively modest so far.

- 12 Special regions do not fall under the equalisation scheme but they receive special transfers from the central government. For example, Sicily receives special grants to finance health and various development expenditures. Such grants come from tax revenues mostly generated in richer areas such as Lombardy and could be considered as a form of interregional revenue transfer.
- 13 For example, total health expenditure rose from 5.9% to 8.4% of GDP during the 1978-1998 period.
- 14 Increasing the tax sharing rate may soften the budget constraint and foster the opportunistic behaviour of regional governments (some regional policymakers would be tempted to increase health expenditures and claim that the rise was due to the increase of health spending needs). Lowering health standards will lead richer regions that want to maintain high health standards to compensate through higher regional tax revenues. Large interregional differences in health standards might stimulate mobility of patients from poor to rich regions, which in turn might lead the rich regions to restrict the non-residents' access to health services.
- 15 The IRAP is generated by permanent productive activities and not necessarily by residents and voters. If the taxpayer resides outside the region where the value-added is produced, tax collection and auditing requires information that a region is likely to have trouble gathering by itself (the region must assess the total tax base of the taxpayer and apportion it according to labour costs).
- 16 Municipal mergers are also likely to encounter serious limits in terms of political feasibility. Although municipal mergers were implemented in many OECD countries in the past (Denmark, Norway, Sweden, Korea, Japan...), local resistance stopped merger attempts in other countries with a tradition of strong municipal autonomy (Finland). Municipal mergers were sometimes coined under a new status (in the Netherlands, the municipalities of Amsterdam and Rotterdam were supposed to merge with the surrounding municipalities and to become "city-provinces", endowed with the same functions and the same financing), but this approach did not succeed either (a referendum was held in Amsterdam in 1995 and citizens rejected the proposal). Even when mergers did materialise, they were sometimes followed by referenda in favour of disamalgamation (Montreal and Quebec, Canada, in June 2004).
- 17 Local Agenda 21 plans were introduced after the UN Earth Summit which took place in Rio de Janeiro in 1992. Following international and national strategies for sustainable development, local governments are encouraged to launch a local action plan with the close participation of local socioeconomic actors and citizens.

- 18 As shown in Chapters 1 and 2, Milan is experiencing critical bottlenecks in transportation. High demand for mobility and severe congestion constitute recurrent problems in large OECD metropolitan regions such as Milan. Faced with similar challenges, Milan seems to lag behind in designing solutions. Both private and public transportation systems register poor performances compared with other regions. Concerning private transportation, the average speed in the Milan Province during the rush hour is only 28 km per hour, while Greater London registers 24.14 km per hour with twice as large a population. As a consequence of traffic jams, Milan is now regularly referenced as one of the most polluted cities in Europe. Regarding public transportation, the Region of Lombardy ranks 71st out of 135 EU regions in terms of railway equipment and 91st for road equipment (Assolombarda, 2003).
- 19 The Interministerial Economic Planning Committee or CIPE (*Comitato Interministeriale per la Programmazione Economica*) was set up in 1967 with the task of directing national economic planning. It is formally chaired by the President of the Council, but it is headed *de facto* by the vice-chairman, the Minister for Budget and Economic Planning.
- 20 Over 26 000 of these students study economics and statistics, over 15 000 are engaged in architecture and planning, approximately 10 000 devote their time to management sciences and another 24 000 pursue engineering.
- 21 France initially sought to overcome institutional fragmentation by creating associations to fulfil technical functions (single-purpose associations or SIVU in 1890, multi-purpose associations or SIVOM in 1959; both still exist today). “City communities” (*communautés de villes*) were created in 1992 as the first intermunicipal structure with their own taxing power (an additional levy on top of the taxes imposed by the various partner municipalities). There are now three types of intermunicipal structures with the possibility to have their own fiscal power: “communities of communes” (*communautés de communes*, groupings of small rural communes with no strict allocation of responsibilities); “agglomeration communities” (*communautés d’agglomération*, which replace the “city communities” and must cover at least 50 000 people centred on a municipality of at least 15 000; they must levy a single business tax called TPU and perform four blocks of responsibilities transferred from member municipalities: economic development, transportation planning, local housing and urban policy); and the “urban communities” (*communautés urbaines*, which must cover at least 500 000 people centred on a municipality of at least 50 000; they must also levy a single business tax called TPU and perform six blocks of responsibilities transferred from member municipalities: economic, social and cultural development, social housing, collective interest services such as water and cemeteries, urban policy, urban transport, and environmental protection). The strong financial incentives offered by the central government played an important role in the quantitative success of intermunicipal collaboration in France.

ANNEX. DECOMPOSITION OF DIFFERENCES IN GDP PER CAPITA

GDP per capita (in logarithms) can be written as:

$$\frac{GDP}{Population} = \frac{GDP}{Employment} + \frac{Employment}{Labour\ force} + \frac{Labour\ force}{Population}$$

$$\text{GDP per capita} = \text{Productivity} + \text{Employment rate} + \text{Activity rate}$$

Therefore, the difference in GDP per capita between a give metropolitan region and the average of all metropolitan regions is equal to:

$$\begin{array}{ccccccc} \text{Difference in GDP} & = & \text{Difference in} & + & \text{Difference in} & + & \text{Difference in} \\ \text{per capita} & & \text{Productivity} & & \text{Unemployment} & & \text{Activity rates} \\ & & & & \text{rates} & & \end{array}$$

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