# Knowledge-Creating Activities in Contemporary Metropolitan Areas, Spatial Rationales and Urban Policies: Evidence from the Case Study of Milan

# Chiara Mazzoleni

#### Abstract

This chapter deals with the structural shift in the economic base of the city of Milan and its metropolitan area, characterized by a great tradition of manufacturing and industrial districts, towards knowledge-based services directed mainly at the financial sector. This case study shows that, though the post-industrial transition of the city had not a significant impact on the employment structure, from the point of view of professionalization, it has exacerbated inequalities in income distribution and has caused the formation of new social and territorial polarization as a consequence of the fierce competition for space between the population and economic activities. Analysis of the locational behaviour of the knowledge-creating services provides evidence of the disruptive results-such as the under-capitalization of the urban area, the worsening of housing problems, the strengthening of the monocentric urban structure and the intensification of territorial imbalances-of neo-liberal policies and a service economy substantially left to market forces, in a territorial context with dense functional interrelations and faced with intense urban sprawl, the growth of traffic flows, as well as increasing housing costs, especially in the urban core.

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#### 1 Introduction

One of the principal characteristics of contemporary capitalism is the growing importance, in terms of economic development, incomes and employment, of activities connected with the knowledge economy, and above all those sectors whose outputs have a significant cognitive, symbolic and cultural content (Rullani, 2004; Scott, 2001, 2008).

This transformation of the economic basis of the city, reflecting the autonomy and importance acquired by the service sector within the economic fabric, has also changed the value of the core of the metropolitan area. This core has become the place where cognitive resources are concentrated, an environment within the metropolis devoted to experimentation with ecosystems of innovation, consisting mainly of micro-enterprises and clusters of new economic activities (Hutton, 2006, 2009). Many of these activities have developed with a logic of their own, not only functional to the industry, and represent the latest phase in the development of the urban service economy.

These clusters and ecosystems are characterized by activities of high mobility, choice of location being guided by a combination of professional criteria and cultural, social and personal factors, and draw on combinations of attributes that are a potent source of localized competitive advantage. The factors determining this situation are the economies of agglomeration and urbanization, a high concentration of activities, professional skills and expertise, material goods and services, the presence of main institutions, cultural amenities, shopping facilities and well-appointed residential enclaves, and a dense social milieu, which favours the development of a complex network of interactions and knowledge, producing mutually reinforcing synergies (Meusburger et al., 2009).

This milieu, similar to what Allen J. Scott (2006) has defined as a "creative field", operates on different scales, but with greater intensity in the metropolitan core, and facilitates processes of grass-roots generative development and the "socialized" production of human capital, knowledge and skills.

On account of these special attributes, the core has also become the strategic space needed by the headquarters of enterprises operating in international markets, especially multinationals, which by conquering this space are able to accumulate the special type of intangible capital defined by Saksia Sassen (2010) as "urban knowledge capital", which is a key aspect of the economic function of a city integrated into the global networks.<sup>1</sup>

The value of the core has been enhanced above all by the presence of specific traditions and cultural conventions, the existence of many disused industrial buildings which have acquired a new symbolic-representative significance, and

<sup>&</sup>lt;sup>1</sup> The term "economic heritage", proposed by Giulio Sapelli (2011) in a hermeneutic sense, has many affinities with the expression of urban knowledge capital. As well as stocks of fixed capital and the organic composition of capital in its various forms, this heritage consists of intangible assets, principally cognitive ones, and a complex of intangible values represented by the capital of institutional and social relations, the accumulation of which is fostered by the spatial collocation.

the particular conformation of the built environment. This environment is characterized for the most part by a compact urban fabric which offers advantages of proximity, facilitating the development of relational dynamics and informal relationships, and the exchange of tacit knowledge. Such knowledge is "viscous", more easily accessible in places of interaction<sup>2</sup> where there is no separation or demarcation between the various functional fields. The core is also the area in which employment tends to be characterized by the presence of high-end segments of the new economy and relational capital is at a premium.

This particular environment, which often coincides with gentrified inner city neighbourhoods, is however far from being a fully self-organized entity. It is in fact susceptible to various types of distortion and crisis, caused not only by great uncertainty and the effects of global competition, but also by the production of negative externalities and serious economic, social and territorial inequalities, which put both the political sphere and forms of social co-existence under pressure. And it is in their capacity to tackle these phenomena, which have a strong local impact and produce serious social tensions, reshaping a locality both physically and socially, that the effectiveness of public policy and the competence of governmental institutions must be measured.

The specific features of these clusters and the different spatial configurations these complex mixes of productive activities and services have assumed in the contemporary city depend on various factors. These have to do with the particular vocation and economic specialization of the city, the articulation and diversification of the productive fabric of the urban region, the degree of synergy between investment projects, research centres, advanced training facilities and enterprises, the availability of appropriate venues, and the incisiveness of measures taken by public and social institutions.

This latter factor has increasingly become a precondition of the quality of the developing urban economy and society, given the widening sphere of action of local government.<sup>3</sup> The most distinctive aspect of the new service economy is an extreme fragmentation of activities, under the strong pressure of entrepreneurial and professional individualism.

While, on the one hand, the multiform world of professions and activities that has been generated structures the space of urban relationality, creates social capital and facilitates the formation of "generative milieu", on the other it competes not only in taking advantage of the economic opportunities available, but also in the use of public assets, the exploitation of the economies of urbanization and the physical appropriation of space and its positional values.

<sup>&</sup>lt;sup>2</sup> I. Helbrech, *The Creative Metropolis. Services Symbols and Spaces*, Paper presented to mark the anniversary of the *Gesellschaft für Kanada-Studien*, Grainau (Germany), February 1998.

<sup>&</sup>lt;sup>3</sup>The local authorities are responsible for promoting mechanisms of strategic governance to mobilize the many local actors and their resources in the economic development and redevelopment of the urban space, and also for defining appropriate measures to mitigate the (economically and socially) destructuring effects of the development of the knowledge economy and the integration of the city into the global economic networks (Le Galés, 2003; Scott, 2010).

Considering that the spread of the new economy tends increasingly to impact the intra-urban area and opens the way to major changes in its organization, in the present circumstances of considerable reductions in public spending on different forms of redistributive policy, applying effective corrective measures to regulate the complex relations between the public sphere and market dynamics is an even more crucial political challenge.

Within this framework, the specific characteristics of the post-industrial transition of the city and its spatial dynamics, the influence of space and the environment on the formation of new activities of high cognitive and creative content within the urban fabric, and the adequacy of public policy and regulatory mechanisms in promoting and governing this transition and its social impacts are here investigated in the case of Milan. Taking into account both the urban and metropolitan areas,<sup>4</sup> we first analyse the general aspects of the change in their economic base. We then examine the localized strategies of the knowledge crating services within the metropolitan and urban areas, relating them to transformations in the social structure, as well as to city-planning policy and the different forms of regulation adopted by local government. Our examination shows that, in the case of Milan, to a greater extent than other European cities, there is acute tension between the political and economic spheres. This relates to the fact that the form, content and trajectory of both the post-industrial transition and the urban diffusion pattern are the uneven effects of a political-economic change within which neo-liberal impulses have been intensified rather than mitigated.

Here, in fact, social inequalities have been accompanied by territorial ones, caused by processes of urban sprawl, by the relationships developed between the centre and peripheral areas and by flows of population crossing the urban territory, each following its own logic, as well as by urban property market trends (Ranci, 2010). Here, in addition, the dynamism of economic activities and the innovative character of spontaneous processes of urban regeneration connected with the emerging cognitive and creative economy have not been matched by the willingness of the public institutions to perform a regulatory role, much less a role in guiding the process of transformation, and to derive from these dynamics forms of renewed political action and the resources required for implementing local redevelopment and social cohesion programmes.

## 2 Characteristics of the Post-Industrial Transition of Milan

In the Italian national context, Milan, a city with a great manufacturing tradition, has played and continues to play a vital economic role. After the enormous change that affected the city and its hinterland in the 20 years from 1951 to 1971, a trend

<sup>&</sup>lt;sup>4</sup> The metropolitan area is generally accepted as coinciding with the Province of Milan, as it was configured prior to the institution of the Province of Monza-Brianza. It is here regarded as the two provinces taken together.

away from big-company capitalism to a form of "district" capitalism based on small and medium-sized enterprises (SMEs) and specialized service activities began to gather pace. This form of capitalism drove national economic development from 1970 to 2000 and delegated to the city of Milan a large proportion of the specialized service functions it needed, exceeding the skills generated at local level by the industrial development of the districts.<sup>5</sup> The city in fact provides managerial and professional skills involving a high intensity of knowledge and creativity, i.e. highadded-value activities, for many enterprises supplying material products, some of them located in the urban and metropolitan area, and a large number in other districts of central northern Italy, which look to the service sector of Milan for intellectual and relational input (Rullani, 2012). Since the 1970s, we have therefore seen the consolidation of a functionally complementary relationship between Milan's conversion to service activities and the development of manufacturing industry in the various districts of its urban region<sup>6</sup> and the Centre North. It is on the strength of this relationship that the city has become an indispensable nexus of the national production system and had established its role as a laboratory of change and of Italy's interconnection with the global economy.

The drastic scaling down of the weight and functions of Milan's manufacturing base (according to census data, the number of persons employed in manufacturing in the province fell by nearly half between 1971 and 2001, from 805,529 to 477,841) has been largely compensated for by the expansion of the service sector (281,000 new jobs, largely in business services, where employment increased from 35,000 in 1971 to 126,000 in 2001) and by financial and insurance services (with an increase over the same period from 45,138 to 89,300 employees). The latter services, operating in conjunction with the multinationals based in Milan, constitute the country's largest and most internationalized system and have helped to establish the city as a leader in this field (Table 1).

This metamorphosis of the economic base of the metropolitan area is closely reflected by the significant change in employment in manufacturing and in the service sector as a proportion of overall employment in the province which

<sup>&</sup>lt;sup>5</sup> The external acquisition of factors of production (materials, energy, components, processing by third parties, services, consultancy and knowledge), measured in terms of the relationship between added value and turnover, on the part of small enterprises in various sectors of industry increased from 69.3 % in 1990 to 80.4 % in 2008, according to data supplied by Unioncamere and Mediobanca, based on the turnover of a sample of companies (see F. Coltorti, "Tra il piccolo e il grande. Ruolo delle imprese di dimensione intermedia in Italia e in Europa", report submitted to the Union Chambers of Commerce and the Industrial union of Turin, 24 October 2011, Mediobanca, Milan).

<sup>&</sup>lt;sup>6</sup> Among the various industrial districts of the Milan urban region, three have specially benefited from their territorial proximity to Milan: Brianza, East Milan and Lecchese. The first one is the oldest and more competitive Italian furniture district and has developed several synergies between furniture, mechanical and textile industries. The second is a relatively young district specialised in the production of electric, electronic and medical equipment and it developed mainly thanks to FDI and the location choice of two giants in ICT (IBM and ST Microelectronics). The third has long-standing expertise in the metal-engineering industry.

Economic sectors	Employees 1951	Employees 1971	Employees 2001	Changes in %	
				1951/ 1971	1971/ 2001
Mining and quarrying	1,683	2,829	3,302	168	117
Manufacturing	542,822	804,529	477,841	148	59
Construction, water supply, electricity, gas	57,121	90,612	103,461	159	114
Services as a whole	228,465	456.173	736.947	200	162
Wholesale	39,953	92,015	121,635	230	132
Retail trade	71,509	128,954	132,055	180	102
Accommodation and food service activities	26,298	33,662	63,588	128	189
Transportation and storage	34,788	65,439	88,482	188	135
Information and communication	8,539	19,919	32,175	233	162
Financial services	17,254	29,414	65,815	171	224
Insurance services	5,008	15,724	23,385	314	149
Property, consultancy, business services	9,918	35,178	126,272	355	359
Creative, arts and entertainment activities	4,047	4,888	9,837	121	201
Other personal services activities	11,160	30,980	73,703	278	238
Employees (total)	850,534	1,354,143	1,321,557	159	98
Enterprises (total)	107,012	171,801	276,083	161	161

**Table 1** Employment by economic sectors in the Province of Milan, 1951, 1971, 2001 (employees in absolute figures and changes 1951–1971, 1971–2001, in %)

Source: Rullani (2012, p. 46)

occurred in the second half of the twentieth century: while the percentage of workers employed in manufacturing decreased from 64 to 36 % between 1951 and 2001, those employed in services increased from 27 to 56 %.

This was in the context of an overall employment situation in which the number of jobs increased rapidly in the first 20 years, then remained virtually stable for the next 30. While, the phenomenon we are describing is, on the one hand, symptomatic of the model of territorialized capitalism, which has undergone a radical transition in its urban form, on the other it is a manifestation of an equally profound change in the social composition of the metropolitan area (Bonomi, 2008).

The city, which has maintained its strong local centre of gravity, has also begun to trade and do business over a vast national and international area, thanks to its location at the confluence of the principal mobility infrastructures, becoming the "network city" of an interconnected and pluri-localized production system, as well as a "gateway": an economic and commercial platform exercising a strong capacity of attraction on the macro-regional scale (Magatti, 2005).

Since 2000, Milan has extended its gateway role, presiding over trade and exchange with the wider world, which is much to the advantage of the industrial

interests of the whole of Italy's Centre North. This role is both physical, where its logistical function is concerned, and financial and symbolic-relational, on account of the city's abundance of venues (trade-fair centre) and its concentration of events and communication services (Rullani, 2012). In addition, Milan has become one of Europe's most competitive metropolises and, nationally, is the city that has most benefited from globalization, having consolidated its function as a focal point of the global network (Taylor, 2011).

Because of Milan's international vocation and entrepreneurial dynamism, incomes are much higher than those of people in other metropolitan areas and provinces.

The Milan area is the principal crossroads of financial and productive flows, concentrating more than 42 % of the enterprises active in the Lombardy region, and this has enabled it to maintain a high level of productivity, local GDP accounting for 9.5 % of Italy's GNP in 2009 (Milan Chamber of Commerce, 2012; Monza and Brianza Chamber of Commerce, 2010). The city retains its national primacy in advanced services and the biotechnology sector and, internationally, has established itself in electronics, photonics, the production of new materials and, above all, in the creative industries sector, in particular in fashion and design (Camagni et al., 2008). The labour market that takes shape around the agglomeration of producers of these latter systems, which generate outputs with high levels of aesthetic or semiotic content, has acquired "a patina of place-specific colour"—as Allen Scott (2006, p. 7) defined it—in that it has become a locus of peculiar traditions, sensibilities, and norms that hang like an atmosphere over the local community. This atmosphere continues to be of prime significance as source of unique competitive advantages.

Although the manufacturing sector has continued to lose jobs, the city retains a diversified productive structure and still has strong links with the production system of its urban region, organized in a polycentric network and characterized by a number of strategic sectors. This system remains competitive, being able to draw on an abundance of local resources and the presence of the most important national university institutes and research centres, mainly concentrated in the central urban area, as well as a variety of specialized services and the headquarters of many international companies. It forms a kind of "archipelago economy"—to quote Pierre Veltz (1996)—made possible by its enhanced integration of economic activities and consisting in the co-habitation of forms of inter-relationship and interdependence, with both short and long networks interconnecting the poles of the district-based territorialized production systems and the large centres that function as systems of proximity.

The Milan area's specialization in advanced services, within the network of interchange with the other cities of the urban region and the Centre North, gained strength after 2000, as shown by the pace at which industrial workers moved into business services (approximately 0.5 % per annum in the years 2000–2007). At the same time, the added value contributed by business services, compared with added value for Milan as a whole, increased from 30 % in 2000 to 35 % in 2007, an incidence many percentage points higher than that recorded in most of the territorial

systems more affected by the development of district-related capitalism, like those of the North East (Rullani, 2012).

The structural shift in the economy of the Milan metropolitan area has been even more intense in the central urban area, characterized by an economic base increasingly orientated towards advanced services for production, which have grown significantly since 1991 (in terms of both the number of enterprises and of employment). The sector providing high-intensity knowledge and creativity services accounts for a large part of this process of internationalization.

In the city of Milan, prior to the 2008 crisis, service activities as a whole, excluding commercial activities, accounted for more than 41 % of employment, residual manufacturing industry for only 14 %, while the metropolitan area and region still retained a significant manufacturing base, with respectively 22 % and 30 % of workers engaged in industry (Necchi & Mariani, 2009).<sup>7</sup> The volume of employment in advanced services-information and communication, finance and insurance, professional scientific and technical services, production supportincreased even more markedly in the following period (2001-2008), reaching 30 % of total employment in 2008.<sup>8</sup> The concentration of activities in this services sector (according to the localization index) confirms that the metropolitan area is specialized in information and communication services, and in insurance and finance. As a proportion of all private service activities, employment in financial intermediation accounted for 13.5 % at metropolitan level. Seventy-six percent of those engaged in this activity are concentrated in the urban core, a figure which provides further evidence of the role assumed by the financial sector, which more than any other identifies Milan as a focal point of the global economy. Milan in fact hosts the main Italian banking groups and several foreign banks, and is the home of the Italian Stock Exchange, with 225 financial companies and about 130 national and international intermediaries.

If we examine the territorial distribution of employment in the creative industries—industries which are distinguished by a high degree of coexistence of different activities, are especially active in the process of cross-fertilization (Lazzaretti, 2008) and give meaning and value to the new technologies—in 2008 the Milan Metropolitan area presented a high concentration of creative workers, with an incidence of employment in this category of more than 16.6 % and a location quotient of 2.08, an indicator that set the area apart, not only within Italy but also from other European metropolitan areas. In this case, too, the central urban area has absorbed a high percentage of employees working in creative enterprises, particularly those that form the design and fashion "ecosystem".

Another important aspect of the changes that have affected the production system of Milan is the replacement of medium and large-scale enterprises by a dense network of small and very small businesses (entities with fewer than ten members of staff), which in 2006 accounted for 94 % of the total. This type of

<sup>&</sup>lt;sup>7</sup> The data reported in this study have been combined with Asia data for 2008.

<sup>&</sup>lt;sup>8</sup> Source: Statistical Register of Active Enterprises, Asia 2008.

entrepreneurship, consisting to a large extent of one-man businesses (which account for 40 % of the total) is distinctive of the productive fabric of the metropolitan area. Even so, there continues to be a far from negligible presence of large companies, which still account for a significant share of employment (Camagni et al., 2008), especially in the telecommunications and communication sectors, as well as in large-scale retailing. We are therefore seeing a polarization of business systems: on the one hand, big players, largely globalized, which have developed standard platforms; on the other, micro-firms which are developing innovative products and services and performing high-added-value activities and having recourse to external platforms for only some of the activities in the value chain. Compared with other European metropolitan centres, Milan does not, however, seem to have developed the same capacity to produce and use ICT technologies. It lacks its own ICT platform and its innovation-oriented services are poorly differentiated and lack the organizational structure that would enable them to develop, not only locally but also in the sphere of global flows (Verganti, 2012).

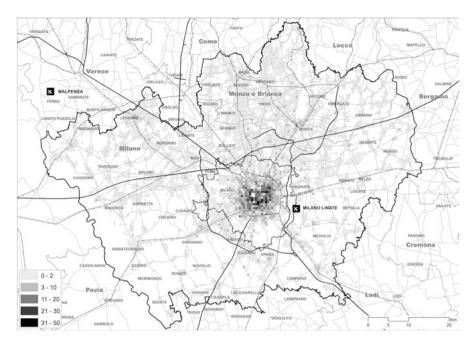
In the central urban area, the presence of micro-enterprises is much more marked, especially those that supply services geared to innovation and highintensity knowledge activities. This phenomenon, which has gathered pace over the last decade, highlights a further aspect of the shift to service activities in the economic base of the urban area: the driving role assumed by "knowledge workers" and by creative enterprises supplying services geared to innovation.

The high-knowledge-intensity micro-services which previously supplied innovative services to local enterprises and had little place or importance in the processes of innovation and in generating development have become an autonomous economic reality, quantitatively important and central to the growth of employment, developing both product and process innovation and performing high-added-value activities for manufacturing enterprises, as well as operating directly on the global market. For the actors involved in shaping these fragmented and highly atomized eco-systems of creativity and innovation, very much akin to craft enterprises, the main concern is not so much potential clients as the environment in which they can operate. Increasingly, this environment is the urban milieu, now confirmed as a factor that can exercise a profound influence over professional development and the formation of new businesses.

# 3 The Principal Characteristics of Activities Connected with the Knowledge Economy

Analysis of the distribution of economic activities in the metropolitan area,<sup>9</sup> particularly in the manufacturing sector, shows the presence of a monocentric urban structure which has grown in a radio-centric manner, with a strong settlement

<sup>&</sup>lt;sup>9</sup> The data used are those of InfoCamere relating to the Register of Active Enterprises owned by the Chambers of Commerce and Industry of Milan and Monza-Brianza. On the whole, in 2011, the manufacturing firms are about 40,000, while firms classified as KCS are more than 37,000.



**Fig. 1** Spatial distribution of manufacturing industries in Milan metropolitan area (2011). *Source*: Chambers of Commerce and Industry of Milan and Monza-Brianza: Register of Active Companies (our data processing)

thickening, especially along the radial axis in the northern part of the metropolitan area, where the main industrial district have been developed, and along the western ring-road (Fig. 1). The Brianza industrial district, particularly well-known for its furniture industries, has a multi-sectorial matrix and is characterized by the presence of both SMEs<sup>10</sup> and a number of large companies. The latter form the more dynamic group, with a managerial form of organization, specializing predominantly in either product or market niches and engaged in external cooperation with advanced services, universities and research centres, with a view to developing innovative products.<sup>11</sup>

The eastern part of the metropolitan area shows a more fragmented productive structure along the ring-road, with some important poles specialized in biotechnology industry, which are located quite close to the urban core. Although the biotechnology cluster is supported by a well-developed local healthcare infrastructure and is a promising local high-tech sector, its development is limited by the lack

<sup>&</sup>lt;sup>10</sup> These are mainly small-scale enterprises with a distinctive family-style management model and little relationship with structures supporting innovative processes.

<sup>&</sup>lt;sup>11</sup> Assindustria Monza e Brianza-Nomisma, *Brianza globale. I percorsi dello sviluppo*, Research report, Monza 2000.

of coordination between universities and by the fragmented local networks of firms and organization.

While the ring-belt around the city accommodates several industrial settlements, the core of the Milan metropolitan area concentrates a system of firms specialized in advanced functions and concept-oriented high-level services. These assets are not only geographically concentrated but have developed close functional interactions. Inside the urban core, there is also a concentration of high-tech industries<sup>12</sup> (Fig. 2), due in particular to the proximity to the codified knowledge provided by universities and related research centres. There is also a significant density of high-tech enterprises along the axis connecting Sesto San Giovanni, an area with a long history of major industrial activity, Monza, Desio and Seregno, along the western ring-road, and in the area of Vimercate, where a high-tech district<sup>13</sup> has been formed. This brings together a number of companies operating in the fields of industrial electronics, information technology, telecommunications, energy and engineering, including some multinationals.

Analysis of activities with a high cognitive and creative content reveals the factors that most influence their choice of location and shows the main strengths and weaknesses of the way in which the territorial structure is currently organized.

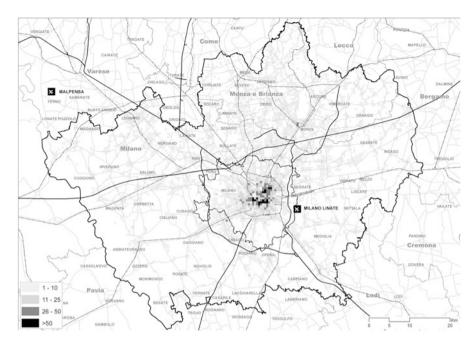
In our analysis—as Cusinato has specified in this volume—we used a classification based on identification of advanced service activities expressly dedicated to the formulation of cognitive codes,<sup>14</sup> referred to as Knowledge Creating Services (KCS). Taking the metropolitan area, we examined the distribution of KCS activities as a whole and as subdivided into the two categories of Core KCS and Core-Related KCS, and into specific activities, as well as the support services connected with them (Collateral KCS). We also considered in greater detail the location within the urban area of a number of advanced sectors belonging substantially to the creative economy field.

The representation, based on the territorial density of activities, confirms a high concentration of advanced services of high cognitive content in the metropolitan core (Fig. 3). Outside this core, the distribution of Core KCS + Core-Related KCS, and of particular specialized functions, tends to conform to the same pattern as for the location of manufacturing activities (Figs. 4, 5 and 6), with nuclei of greater density coinciding with the larger towns of the Brianza (Sesto San Giovanni, Monza, Lissone, Desio e Seregno), along the route to Como. A tendency towards polarization in the central urban area is also evident in the case of Collateral KCS (Fig. 7), of activities connected with public relations and communication,

<sup>&</sup>lt;sup>12</sup>Within the manufacturing sector, high-tech industries have been selected and considered separately, in accordance with the classification in common use.

<sup>&</sup>lt;sup>13</sup> The high-tech district includes the "Green & High-Tech" technological centre.

<sup>&</sup>lt;sup>14</sup> The classification adopted is that formulated by the SET Research Unit of IUAV University, Venice (cf. Compagnucci & Cusinato, 2011). For the database, we drew on various sources: the Milan Chamber of Commerce Companies Register (industries operating in 2011 classified by sector of activity on the basis of their main declared activity), the Yellow Pages, the Camera della Moda, Studiolabo, and universities' websites.



**Fig. 2** Spatial distribution of high and medium-high technology industries in Milan Metropolitan area (2011). *Source*: Chambers of Commerce and Industry of Milan and Monza-Brianza: Register of Active Companies (our data processing)

publishing, advertising, film and television production, and of holding companies engaged in managerial functions, R&D activities and activities in the fashion and design segments (Figs. 8, 9 and 10). Where the fashion segment is concerned, Milan has consolidated its position as the centre for the whole region: in 2006, it accounted for 38 % of enterprises operating in the sector (Donzelli, 2007), in particular those belonging to the fashion design and styling segment, as well as for the segment's principal public and private training centres. In 2009, 12,000 fashion industry businesses were operating in the city, with 800 showrooms and around 6000 sales outlets (Jasson & Power, 2010).

Examining the distribution of these activities, we find a greater polarization in the location of law firms, chartered accountants' and the headquarters of holding companies in the central area, delimited by the inner ring-road of the *Bastioni Spagnoli* and characterized by a compact built environment of large blocks and historic buildings, while architectural firms and design and engineering studios are distributed almost uniformly throughout the central and semi-central areas (Figs. 11, 12 and 13).

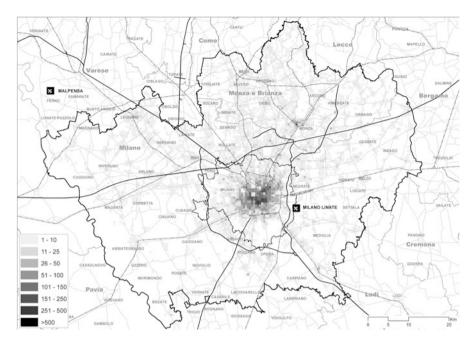
From the inner circle, defined by the ring of the *Navigli*, to the next circle of the *Bastioni Spagnoli*—now a potent factor in the spatial structuring and economic and symbolic hierarchisation of the city (Bolocan Goldstein, 2009)—and out into some areas of the second belt, we also find a spread of services connected with fashion



**Fig. 3** Spatial distribution of KCS (all services) in the city of Milan (2011). *Source*: Chamber of Commerce and Industry of Milan: Register of Active Companies (our data processing)

and design, activities associated with communication and the production of intangibles, and above all exhibition venues, which have been increasing due to a proliferation of temporary events, in particular fashion shows. As a result, significant groupings of showrooms and similar venues are to be found, not only in the central area, in particular the "fashion quadrilateral" (an area long abandoned by its inhabitants and now devoted to elite consumption), but also in the historic neighbourhood around *Brera*, in the *Isola* district and the areas adjacent to the *Navigli*, at *Porta Genova* (Via *Savona* and Via *Tortona*) and *Porta Vittoria*, and in the vicinity of the *Romana* railway station, an historic industrial and working-class suburb (Fig. 14).

These functional transformations of the built heritage are also affecting the city's major historic establishments, such as the *Frigoriferi Milanesi*, and most of the old industrial buildings located in the central and semi-central areas. This is the urban environment most affected by the molecular transformation of the built heritage (conversion of attics and "lofts", redevelopment of industrial premises for service/ managerial activities), a process which has been able to exploit the "porosity" of this environment, as well as the ineffectiveness of city-planning and other regulations. It has also suffered from colonization and contamination by stronger systems (especially those of finance and fashion), which have led to greater business dynamism and specialization in the area. Here, recent changes driven by the growing importance of intangible activities are to a large extent connected with



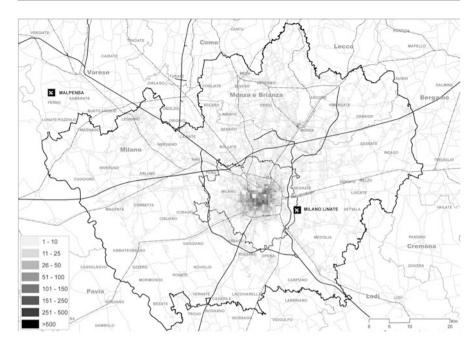
**Fig. 4** Spatial distribution of KCS (all services) in Milan Metropolitan area (2011). *Source*: Chambers of Commerce and Industry of Milan and Monza-Brianza: Register of Active Companies (our data processing)

alternatives to events held on the Trade Fair (*Fiera*) site (*Salone del Mobile*), Milan's main "showcase" for its wares, and we have seen an overlapping of the "*Fuori Salone*" phenomenon and the post-industrial redevelopment of the city.

As well as causing a steep rise in property values, with real estate now selling at monopoly prices, and periodically subjecting the city to excessive congestion due to the pull of its wide gravitational field, this intensification of fashion-and-design-related activities has attracted large numbers of workers from outside the city.

Also on account of the cumulative dynamic of activities in its central area, Milan continues to be a major pole of attraction for flows of workers. Whereas, in 2006, 46 % of those working in Milan were commuters, over the last decade commuting has increased, partly because younger workers are coming in from the towns of the city's hinterland.

As well as the extreme congestion of the city centre caused by the excessive concentration of flows of workers (making longer or shorter journeys), this analysis shows that the semi-central areas (traditionally inhabited by the middle classes, and also the working class) are now under pressure from the more specialized businesses of the new urban economic base. It is therefore easy to understand how the stresses and strains of the property market, caused by sky-high prices and rigidity of supply, are among the main factors that have induced broad strata of the population, most of them young, to abandon the city, and have led to the

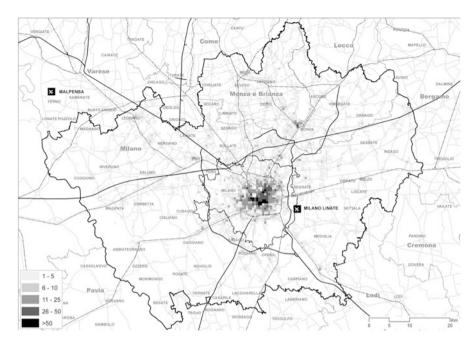


**Fig. 5** Spatial distribution of core KCS in Milan Metropolitan area (2011). *Source*: Chambers of Commerce and Industry of Milan and Monza-Brianza: Register of Active Companies (our data processing)

polarization of the present settlement pattern within the urban area, which manifests itself in the form of very segmented urban neighbourhoods (Ranci, 2005). This tensions have become even more acute in recent years, during which we have seen a concentration of real-estate investment in the central areas, especially those close to the city's higher quality urban renewal projects. Until the mid-2000s, the main thrusts of real-estate development tended to extend beyond the boundaries of the province, towards the hub of *Malpensa* and in the north-east of the metropolitan area, despite the inability of the transport network to adequately cope with the pressures. Since 2006, however, (according to *Osmi Borsa Immobiliare*) the market seems to be driven primarily by operations in the core of the urban region (especially within the circle of the *Bastioni Spagnoli* and in the *Montecity-Rogoredo* area, along the tram route to San Donato Milanese), in the prestige residential and executive housing sectors, sustained by the accessibility of the rail network, despite the vast amount of unleased housing stock (Gaeta, 2012).

While, on the one hand, the spatial organization and changes in the production system and settlement patterns of the metropolitan area have presented great opportunities, on the other they have caused seriously negative externalities and diseconomies of agglomeration, as well as profound territorial inequalities.

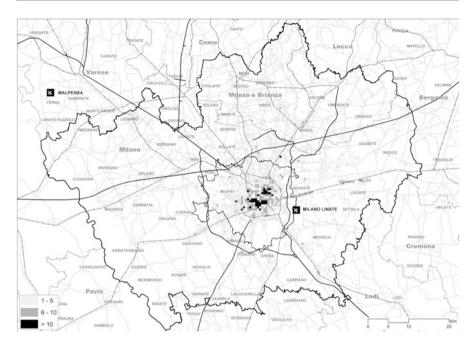
The spread of settlement, the relocation of industrial activities and the specialized production that historically has characterized the industrialization in



**Fig. 6** Spatial distribution of core-related KCS in Milan Metropolitan area (2011). *Source*: Chambers of Commerce and Industry of Milan and Monza-Brianza: Register of Active Companies (our data processing)

the Alto Milanese (area to the north of Milan, including Malpensa airport), where the principal productive industries have become established, has not resulted in a well-structured and autonomous polycentric system. The area to the north of Milan, subject to constant urbanization, has experienced a highly concentrated pattern of settlement, particularly dense along the principal (and increasingly clogged) transport arteries, which have attracted the large retail and entertainment structures. All this has brought about a considerable increase in population density, a very high level of land use (approaching 80 %) and high levels of congestion, which also extend to the secondary road network (Provincia di Milano-Centro Studi PIM, 2009). The demand for mobility in the metropolitan area has greatly increased,<sup>15</sup> but public transport has become less and less competitive, particularly on secondary railway lines serving commuters. The situation is aggravated by the fact that the national and international east-west and north-south routes which need to bypass

<sup>&</sup>lt;sup>15</sup> Over 40 % of total mobility in Milan consists in movements in and out of the city, with around half of these journeys to and from the 39 municipalities of the first and second belts. Every day, some 850,000 people travel into Milan to work, study, access primary services and go shopping. For similar reasons, every day almost 270,000 residents travel out of the city. All told, the territory of the municipality of Milan has to cope with almost 5.3 million daily journeys (Comune di Milano-Agenzia Mobilità Ambiente Territorio, 2013).

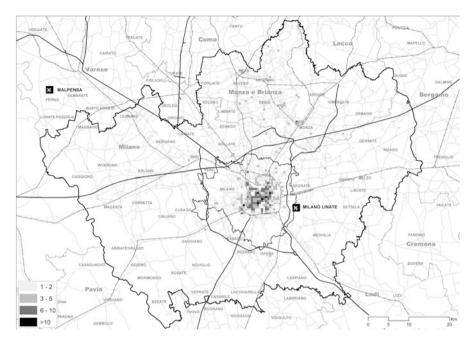


**Fig. 7** Spatial distribution of collateral services to KCS in Milan Metropolitan area (2011). *Source*: Chambers of Commerce and Industry of Milan and Monza-Brianza: Register of Active Companies (our data processing)

the centre of Milan have no alternative but to use the city's ring-roads and railway network, which are already performing the tasks of providing both local and regional mobility. This has resulted in the saturation of the main access routes. In 2009, public transport accounted for around 45 % of journeys into the city centre, but only between 10 and 20 % of circular journeys between one outlying area and another.

While the pressure exerted on the central urban area by economic activities and flows of commuters has not diminished, neither has there been a reduction in the difference in income levels between this central core and the wider metropolitan area. The reversal of the trend of income levels begun in 1991 was also confirmed more recently (2005–2009): during this period the average income of city-dwellers grew significantly more than that of their counterparts living in the province of Milan, and even more so in the region (Percoco, 2009).

Despite these aspects of the labour market and productive structure that characterize Milan's transition to a service economy, the change has not been accompanied by a corresponding increase in levels of education. Although the city is home to the principal centres of excellence where university education is concerned, in 2008 a relatively small proportion of the population of working age held a university degree (just over one quarter), which put Milan very low down in

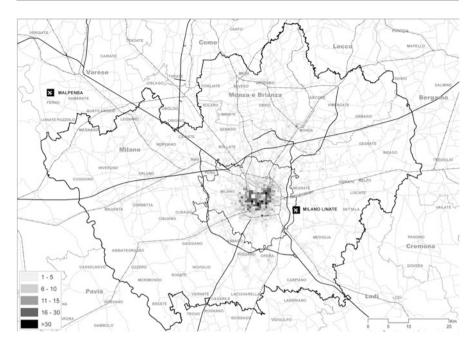


**Fig. 8** Spatial distribution of fashion and design activities in Milan Metropolitan area (2011). *Source*: Chambers of Commerce and Industry of Milan and Monza-Brianza: Register of Active Companies (our data processing)

this respect in the ranking of European cities (Necchi & Mariani, 2009; OECD, 2006).

Furthermore, the driving financial and advanced services sectors do not seem to have had such a significant widespread impact on the urban employment market, from the point of view of professionalization. The urban employment structure—as Roberta Cucca has pointed  $out^{16}$ —is only weakly oriented towards professionalism: the very low percentage of highly-qualified people in management roles registered in the 2001 census (professionals and managers 8 %, medium skilled workers 46 %, clerks and service sector employees 12 %, low skilled workers 34 %) is not comparable with the situation existing in other European cities, even if it seems to be moderately increasing, according to the Excelsior system. The strong development trend of these sectors seems to have been to the advantage of a tiny group of high income earners, while other people involved appear stuck in medium qualified jobs, and this seems to have led to more inequalities in term of income distribution (D'Ovidio, 2009).

<sup>&</sup>lt;sup>16</sup> R. Cucca, "Unequal development. Economic specialization and social inequalities in six European Cities", Paper presented at the 23rd *ENHR-European Network for Housing Research Conference*, 5–8 July, Toulouse 2011.

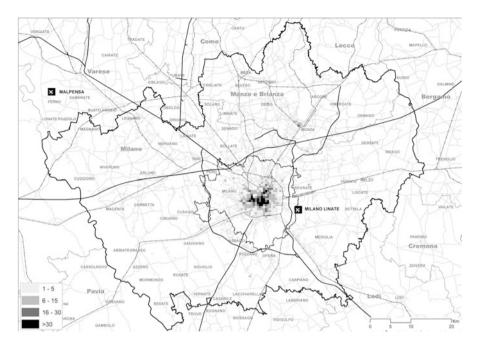


**Fig. 9** Spatial distribution of advertising industries in Milan Metropolitan area (2011). *Source*: Chambers of Commerce and Industry of Milan and Monza-Brianza: Register of Active Companies (our data processing)

Taken together, the dynamics at work over the last 20 years have led to the dispersal of businesses and people within the metropolitan area and region, but at the same time to a concentration of service functions in the central urban area, replacing the resident population and gradually reducing the urban middle class (Ranci, 2005).

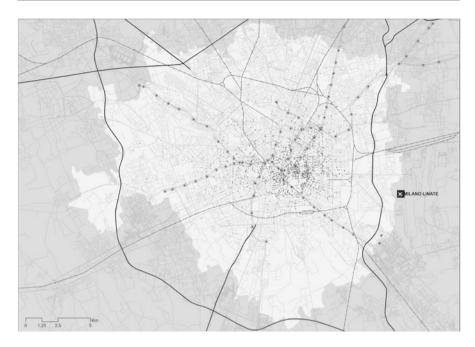
The decades-old social composition of the city, with a substantial working-class population, the white-collar and technical classes produced by large-scale industry and public services, and a vast traditional middle class consisting of small businessmen, artisans and shopkeepers, has undergone a gradual contraction, particularly in its middle strata, and has been affected by social mobility, both upwards and downwards, a phenomenon that has been less and less regulated buy public policy (Bonomi, 2008).

Since 1973, when the number of people living in Milan reached a peak of more than 1,730,000, the city has continued to haemorrhage population, the number of inhabitants dropping to 1,256,000 by 2001. The demographic growth recorded between 2001 and 2010 (fewer than 100,000) can be ascribed mainly to foreign immigration. This is a fairly recent phenomenon, considering that the incidence of foreigners as a proportion of the total population increased from 9 % in 2000 to 16.4 % in 2010, according to data provided by the municipal authorities.



**Fig. 10** Spatial distribution of business and management consultancy service sin Milan Metropolitan area (2011). *Source*: Chambers of Commerce and Industry of Milan and Monza-Brianza: Register of Active Companies (our data processing)

The processes that have taken place have been determined primarily by a marked structural change in the central area, as well as the selective mechanisms of the housing market. On the one hand, these processes have led to the formation of an urban region in many ways integrated in terms of its labour market and consumption patterns, and having a critical mass that has enabled it to attract private investment, services, the headquarters of multinationals and investment in fixed social capital, and to position itself among the principal European urban areas. On the other hand, these same processes have caused a large migration into the metropolitan area, growing levels of commuting into the central urban area, and thus very large flows of people who "invade" the city every day, with socially disruptive effects. All this is demonstrated by a copious literature which emphasizes how the dispersal and fragmentation of settlement patters, high levels of commuting and the inadequacy of the public transport infrastructure, have had negative effects for the stability of relationships and for the formation of social capital. The combination of these conditions in fact reduces the possibility of establishing stable connections, results in weak ties (Granovetter, 1973, 1983) and tends to widen the gap between work and private life.



**Fig. 11** Spatial distribution of law firms in the city of Milan (2011). *Source*: Yellow Pages (our data processing)

# 4 Distribution of Population and the New Geography of Social Inequality

Examination of the spatial distribution of the population, considered in relation to that of businesses in advanced sectors of the economy, reveals the principal mechanisms that have combined to determine the economic and social patterns of the central urban area. This, as we have said, is an environment in which opportunities are very selectively distributed and the tensions produced by the reorganization of the economy clearly evident, as a result of the fierce competition caused by the integration of the city into the circuits of the international market.

As well as serious imbalances between city centre and outlying areas in the economic and occupational structure, further imbalances have arisen in the central nucleus, in particular in neighbourhoods where the foreign immigrant population is most concentrated, and these are reflected in the distribution of population. The inequalities that originate where new-economy sectors have flourished, in regard to incomes and access to the amenities and the collective equipment of urban space at large, assume particularly intense manifestations—as Allen Scott (2006) says—in places where employment tends to be dominated by high-end segments of the new economy, the sources of localized competitive advantages are unequally distributed within the urban area, and there is a lack of public policy. This latter aspect is



**Fig. 12** Spatial distribution of architectural firms in the city of Milan (2011). *Source*: Yellow Pages (our data processing)

particularly important in a context where, faced with a reduction in the quantity and quality of public goods, public action has been very weak in activating and regulating the processes of urban transformation capable of generating these goods, and there has been an inequitable interpersonal distribution of spatial capital.

Since 1991, social inequalities have become more pronounced in Milan's metropolitan area, where the core has assumed a functionally more specialized configuration, socially more segmented and with greater differentiation of incomes.

Compared with other metropolitan areas in Italy, in 2001 a high proportion of Milan's population (around 15 %) was concentrated in marginalized areas with a higher risk of deprivation, where the various forms of hardship and social exclusion reinforced one another. By examining the representation of the distribution of socio-economic disadvantage in Milan's urban area, elaborated by Randini (2008) for the years 1991 and 2001, it is evident that the highest concentrations of disadvantaged population<sup>17</sup> are mainly located at the edge of the urban area, above all in areas with high percentage of public housing. Analysis shows clearly also a tendency, confirmed by other analysis reported below, to an accentuation of social and spatial polarization, that has arisen between the central area, encompassing the band of the first twentieth-century urban expansion, and the

<sup>&</sup>lt;sup>17</sup> The identification of the most disadvantaged social aggregates was performed considering three main forms of disadvantage, i.e. low education, unemployment and housing for rent.



**Fig. 13** Spatial distribution of accounting firms in the city of Milan (2011). *Source*: Yellow Pages (our data processing)

periphery, along the main north and south lines, characterized by greater social disadvantage (Fig. 15).

Analysis of the distribution of incomes within the central urban area (Necchi & Pavanati, 2008) for the period 2000–2004 shows that the chief beneficiaries of economic growth were above all people on medium-high and high incomes (the first two quintiles, corresponding to 7.9 % of all taxpayers in 2004), who increased by 35.5 %, while the number of persons on low incomes (the last quintile, the largest slice of taxpayers, approx. 62 %) remained more of less stationary. The income class that registered the most substantial contraction was the middle-to-low segment (penultimate quintile), whose numbers fell by 12.1 %. A further indicator of major economic inequalities is the difference in annual average income between taxpayers in the first and last quintiles, which in 2005 reached a ratio of more than 1:22 (D'Ovidio, 2009).

The transition to a service economy and the internationalization of the urban market, together with the tendency of advanced services and creative industries to become concentrated in the highly specialized metropolitan core with its greater social homogeneity, side-lining areas not involved in the development of the new economy, has had serious repercussions for the socio-economic system. The joint effect of these processes has been to bring about trajectories of social inequality, reflected in a more pronounced functional and social differentiation of space and in a worsening of the living conditions of traditionally well protected social classes, in



**Fig. 14** Spatial distribution of showrooms and side-events (*Fuorisalone*) in the city of Milan (2011). *Source*: Studiolabo and Chamber of Fashion database (our data processing)

particular a large proportion of the urban middle class. Although these trajectories are common to all large metropolitan areas in Europe, they can be aggravated or, on the contrary, attenuated by the local dynamics of advanced economic activities, the structure of the labour market, the different forms of public policy adopted, the role of urban renewal in local development policy, and the dynamism and cohesion of the institutional environment.

In the case of Milan, social inequalities have become more, not less, acute as a result of these factors. They have impacted the distribution of incomes, favouring an increasingly well-off urban upper class concentrated in the sectors of finance, fashion and advanced services, as well as the labour market and the spatial distribution of the population. They are the combined effect of a sharp rise in the cost of living, the selective action of very high property prices and rents, and a tendency if many neighbourhoods to a greater downward segregation and polarization, in particular neighbourhoods with a greater concentration of disadvantaged groups (Torri & Vitale, 2009).

We are seeing the exacerbation of a phenomena that the city had begun to experience in the 1980s, when the shift to a service economy was already in progress and there was intense investment activity, especially in real-estate development, encouraged by a substantial slackening of planning controls in the urban area, which soon proved to be a potent vector of corruption, leading to a major upset in the local political and administrative system.

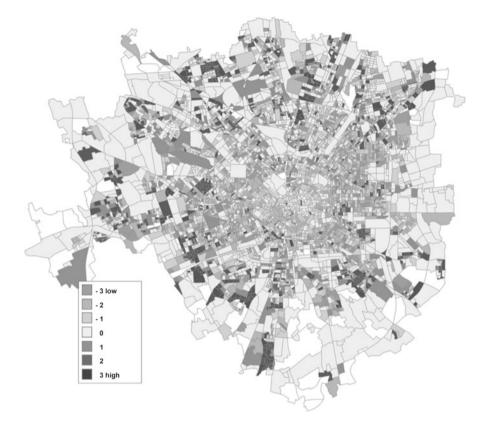


Fig. 15 City of Milan 2001: Exclusion-attraction of disadvantaged settlements by census sections. *Source*: M. Randini (2008, p. 348)

This inevitably raised questions as to the effectiveness of the instruments intended to manage these changes, and flagged up a substantial and prolonged deficit in planning controls and the inadequacy of regulatory policy (Mazza, 2004b).

The widening of the social and economic gap, which is evident in the income structure and the labour and housing markets, has been more pronounced than in other European cities (OECD, 2006; van den Berg et al., 2005). It has strongly impacted the demographic structure and has been further reinforced not only by the radial conformation of the city, but also by a low level of connectivity between different areas, an insufficient and unequal transport infrastructure, and a striking concentration of opportunities, services, facilities and highly qualified employees in the historic centre of the urban area lying within the circle of the *Bastioni*, where intense competition for space is a longstanding phenomenon.

The representation of the outcomes of this process confirmed the presence of a double axis of inequality (Necchi & Contini, 2006). The more striking of these two forms of inequality was that between centre and periphery, while the other was

between North and South, resulting from the different development trajectories that have distinguished the northern areas, more affected by the establishment of major manufacturing industries, from the southern part of the city. The central area, historically home to the major universities, the stock exchange, the headquarters of the major banking groups, the "fashion quadrilateral", the main public institutions and a concentration of cultural facilities, was characterized by a higher social and economic level, with a large percentage of graduates (43.8 % of residents) and highly qualified employees (50.7 %), a higher incidence of one-person households, a lower incidence of elderly residents and a small proportion of unemployed people. Similar characteristics were also found in the semicentral zones of the first belt and in two zones not contiguous with the centre, though here there were also areas of social and housing deprivation, especially in neighbourhoods of less recently built public housing, and areas with a higher proportion of elderly residents and larger numbers of immigrants. The gap between the central and semi-central areas, on the one hand, and the peripheral areas, on the other, was further accentuated in the distribution of productive activities and employment: the centre in fact accounted for 47 % of local business units and 38 % of employment, had a larger incidence of self-employed people (29.5 % of all employees in the area) and persons employed in forms of work intermediate between self-employment and dependency on an employer.

The peripheral zones, more markedly residential, mostly disadvantaged in terms of their transport connections with the central area, with a greater incidence of elderly residents and a low percentage of graduates and highly qualified workers, were more diverse and heterogeneous in character. In these areas, consolidated settlements of less recently built housing and areas of working-class accommodation, often more dilapidated and with a greater incidence of social deprivation, coexist with more recently built settlements, with a greater housing density, a younger population, fewer single-person households and better provision of collective facilities. This was particularly true of areas of the northern outskirts served by the underground. The presence of a socially diversified population (including a proportion of foreign immigrants) in each neighbourhood is characteristic especially of the second urban belt, but should not be ascribed to policies explicitly geared to reducing inequalities and encouraging a social mix. This social morphology is rather the result of a combination of factors: the low incidence of large concentrations of public housing, widespread home ownership, the fragmentation of operations to replace/redevelop the residential fabric and the consequent juxtaposition of urban areas that look like enclaves, through a process that has gained strength in the last few years, following the proliferation of major real-estate operations (Bolocan Goldstein & Bonfantini, 2007). We can therefore see that, although the social polarization occurring in Milan does not have very obvious spatial connotations, it is very evident in the distribution of incomes and well-being, and lies behind the high rate of replacement of the resident population.

# 5 The Challenges Facing the New Urban Economy, Given the Weakness of Public Policy

It is widely recognized that the concentration of more highly skilled and specialized new-economy businesses in inner city areas and the rise of development trajectories disconnected from the living space of the population and the space of flows of goods, persons, and information, as governed by the dynamics of the global economy, have introduced growing tensions into their physical and social fabric.

Connected with the concentration of knowledge-based businesses, which are playing a driving role in global economic competition but are more difficult to recognize and monitor, there is also an emergent problem that requires special attention on the part of local government authorities, if they are to devise adequate policies. It concerns the ability not only to attract but also to retain cognitive resources and encourage their consolidation, because—as Richard Knight (1995) has pointed out—the impact of the restructuring of sectors connected with the new knowledge economy has a greater incidence on the economy and on the environment, since this impact is indirect, cumulative by nature and manifests itself over longer times periods, compared with the decline of industrial activities, the impact of which is direct and immediate.

The major European cities which have developed an advanced knowledge economy and a global vocation have faced up to the tensions caused by the dynamics of these sectors, tackling the changes that have occurred in the urban economy and the effects of growth, as well as the associated problems of fairness and quality of urban life, with clear regulatory intentions and complex projects to upgrade the public sphere. They have experimented with different processes of strategic governance allocating economic and financial resources with a view to rebalancing territorial inequalities and thus affirming the role of the public administration as principal agent of development and social regulation (Le Galés, 2003; Mazzoleni, 2011; Ranci, 2010). This is evident from some of the cases referred to in this work, particularly that of Munich.

Milan, however, though able to rely—for more than two decades—on a solid centre-right majority and substantial cultural conformity, has generally responded to these tensions reactively, revealing uncertainty and structural weakness. It has responded with partial and fragmentary interventions lacking an overall framework of reference, i.e. without being able to formulate a shared strategy and recognizable public plan.

The urban condition of Milan and its metropolitan area has been the subject of many studies. It has been interpreted as the outcome of an incomplete modernization evident in the relationships that have become established between the economy, society and politics, and in particular in the blatant inadequacy of the city's governing classes (Magatti, 2010; Sapelli, 2010). The latter seemed uninterested in formulating innovative urban and metropolitan development strategies and in building an image to match the status of the city, and incapable of achieving coordination between institutions and the main local players, as it happens in stable forms of urban governance (Lascoumes & Le Galès, 2010).

The most recent major project to transform the city based on a strategic vision, making a connection between land usage and the transport system of the urban region, was to create new railway infrastructure crossing the city from north-west to south-east (Passante Plan). First proposed in the 1960s as part of the Intercommunal Plan, and the subject of a City-planning Document (Documento Direttore) in 1982, this development would have enabled the external railway system to come right into the urban area, thus becoming the key link in the urban public transport system. Associated with this development was the attribution of new functions to vast areas of industrial buildings undergoing to disuse, all part of a plan to define new urban polarities, including the relocation of important functions and public services, which would have helped to break up the traditional monocentric urban layout. If this plan had been put into effect in this phase of decline in manufacturing, it would have been possible to implement policies to rebalance and redistribute economic activities on an urban and metropolitan scale, including the siting of positional assets and prestige functions in important urban settings, some of which are even now still under discussion. And it would have been possible to promote forms of coordination on the part of the various business and institutional players in funding urban renewal policies and constructing territorial capital (Camagni, 2008).

The most significant transformations of industrial areas, however, have occurred in complete contrast with this plan, through operations that were exempted from its obligations, in agreement with the major institutional and functional actors, as illustrated by the case of Technocity. Proposed by the new property/finance company founded by the Pirelli group as an advanced multi-functional technological centre, on the lines of science parks elsewhere, the operation degenerated into a more traditional, primarily residential investment, with some university functions and only 15 % of the usable area devoted to productive and research activities.

The 1980s also saw the dissolution of the district agency, which was "not even able to maintain its once-important role as an informal arena for negotiations between the parties on development options" (Balducci, 2005, p. 239). No large-scale infrastructure projects got off the ground (the *Passante* Plan was completed some 30 years later, but without the proposed closure of the ring). This has led to a large disparity, in terms of living conditions, concentration of forms of social deprivation and distribution of the benefits of urban change, between the inner circle of the city and the outer one, including the municipalities of the first belt, which are most affected by the negative repercussions of the dynamics of the urban property market.

Subsequently, during the long cycle of real-estate development, particularly in the decade 1995–2005, the transformation of the urban area of Milan was characterized by the "mono-centred" policies of the municipal government, deregulation where development operations were concerned, and a lack of coordination between mobility and planning policy. In terms of the spatial and social quality of the changes, the results of this period were highly controversial (Riganti, 2007). Planning policy consisted mainly in contractual instruments and discretionary procedures to facilitate urban redevelopment in ways diverging from the official plan, involving incremental adjustments, so that the profits of property development

were shared between landowner, developer and local authority in proportions depending on the circumstances of the decision-making policy and market constraints.

It has been emphasized that Milan's booming property cycle was exceptional, in both its financial and its territorial dimensions (Memo, 2007), in the fact that it was intimately connected with a period of radical change in city-planning instrumentation, and the type of players involved in the urban property market (Pasqui, 2007).

The end of the 1990s and the first decade of the twenty-first century were a time of global-scale financial investment in real estate, characterized the relative solidity of the property market, and recourse to the Integrated operational plans (*Piani integrati di intervento*), which are shaped by the new regional urban planning instruments. During this period, the pressure of the interests mobilized by financial capital and the new housing market had its full impact on the core of the metropolitan area. It particularly affected the areas within the circle of the *Bastioni* and around the infra-urban stations of the *Passante* Plan, exploiting the advantages of their location and the concentration of positional assets in these areas. Cityplanning policy and regulatory activity throughout this period was reduced essentially to rubber-stamping the contractual transformation of the city on a piecemeal basis, with the administration playing a mostly marginal role and exercising a great deal of discretion in valuing new projects.

The reason behind this more recent tendency on the part of a new type of "city builders" (finance and insurance companies, banks, big developers and multinational groups) to focus their development plans on more central areas is the large disproportion that has been created between established economic activities and functions of high value, on the one hand, and the scarcity of available land, on the other. This tendency, fostered by the administration's policies of attracting businesses and encouraging inter-urban competition, has reconfirmed the monocentric character of the Milanese property market, which the large-scale redevelopment of disused industrial areas, from *Bicocca* to Santa Giulia, was supposed to reverse. The outcome of these new developments have been somewhat negative, as demonstrated by the experience of the new district of Santa Giulia (in the south-east of the city, on the edge of the municipal area), which bears witness to the failure of a decentralized settlement.

The monocentric tendency is exemplified by the redesign of large portions of the consolidated urban fabric, including the historic *Fiera* (Trade Fair) district, an area of more than 350,000 square metres, in a strategic central position with good services, the promotion of which has had a big impact on the dynamics of the urban property market.<sup>18</sup> This is an impressive urban redevelopment project, the outcomes of which are as yet uncertain, but it highlights a tendency towards a

<sup>&</sup>lt;sup>18</sup> Begun on the basis of a Programme Agreement in the mid-1990s with a view to redevelopment, the transformation of the historic area of the Trade Fair has since been managed by the owners of the area (Ente Fiera) through a newly set up engineering and contracting company, created to manage the process of transforming Milan's trade-fair system and operating on behalf of the big investors who had founded Citylife S.p.A.

"media approach" to city-planning policy typical of city marketing strategies. It is intended to change the identity and urban balance of Milan by introducing new "skyscraper city" stylistic elements, reshaping the city's image with iconic buildings (Sklair, 2006) that display complete indifference to the existing context.

Partly for this reason, the operation has been bedevilled by conflict between key actors with different interests, first of all the inhabitants of the district. Instead of playing a driving role in the thinking behind and management of this project, the municipal administration has favoured opportunistic manoeuvres on the part of the technicians and operators involved, and has played no more than a remedial role in the face of the critical situations and social conflicts that have arisen.

Against this background of poor regulation, the investors' real-estate development strategies, instead of meeting the needs of the economic players operating in advanced and innovative sectors, have been geared to residential function provided for the affluent new urban classes. The initial plan for a mix of functions, with spaces for service/managerial activities, shops and prestigious urban amenities (exhibition venues and museums), has been changed, partly because of an oversupply of office space. So there has been more emphasis on residential accommodation (an increase from 55 to 70 %) and properties which are symbols of luxury living. The fate of the planned cultural facilities (initially a museum devoted to confirm that the private developer intended to exploit these attractive elements mainly for marketing purposes, as well as confirming the inability of the public institutions to provide adequate cultural infrastructure.

This centripetal tendency, together with the "regressive introversion" of cityplanning policy (Mazza, 2004a), has weakened, if not thwarted, the strategy based on a system of urban centralities advocated in the official planning documents. This provides further confirmation not only of the spinelessness of the local authorities in managing urban change, but also of their incapacity to cope with the dynamics driving things at metropolitan level, in particular the territorial strategies of the principal autonomous bodies fulfilling key functions (*Fiera*, universities, major hospitals, research centres), for which a multi-centre settlement pattern would be more advantageous.

Without a recognizable city plan and a transparent framework of conditions regulating bargaining between public and private interests, without guarantees of the synchronization of housing developments and the building of public works, most of the changes in the urban area have depended on a series of contractual documents, which in the event have produced only very limited public benefits.<sup>19</sup> The result is that the bargaining compensations deriving from the new executive instruments have proved totally inadequate to meet the demand for public services, far less the demand for housing at controlled/affordable prices, and more generally

<sup>&</sup>lt;sup>19</sup> According to a study conducted on the Integrated Intervention Programmes, the public benefit achieved through the main urban transformation stood on 8 % of the value generated by these (Camagni, 2008).

to find appropriate solutions to the big changes in the demand for housing<sup>20</sup> and reduce the inequalities in the territorial provision of public transport infrastructure, and public facilities and services.

We can therefore rightly claim that local government policy has been geared above all to the redevelopment of urban areas which has offered great investment opportunities to local entrepreneurs and global players and encouraged their opportunistic strategies,<sup>21</sup> and has delegated social policy to other institutions and a mixed bag of players. The various forms of vulnerability and social deprivation, now transferred to the area of housing, have on the whole aggravated the problems of a system characterized by the pervasive role of family economies, the backwardness of the private sector and the chronic inadequacy of public intervention.

Although the Urban Policy Document - Documento di Inquadramento 2000 had forcefully raised the issue of Milan's relationship with its urban region, the city has continued to grow within its confines, through ad hoc contracts that have spawned vast quantities of housing, in line with a recurrent but limited formula (residential settlement-offices-green spaces-large shopping centres). The result has been the formation of agglomerations of poor quality, lumping together separate functions and spaces, with most of the residential accommodation designed to meet top-end-of-the-market demand. The city has also been encircled, to the point where the areas of the first belt are saturated, by mobility infrastructure required by the ever-increasing flows of traffic and by logistics/distribution facilities, which have occupied disused industrial areas or as yet unbuilt-on interstitial sites and have become the focus of the latest property-market strategies (Dallari & Curi, 2010). As a result, even the more peripheral disused sites, if adjacent to major mobility infrastructure and therefore accessible, have seen a steep increase in property prices. This has occurred, for instance, in the old industrial areas redeveloped to house the various service activities connected with the fashion and design sectors in the new creative districts, which have developed spontaneously. Here market prices have risen in response to their positional advantages, combined with monopoly returns.

Urban change has therefore been characterized by the use of inadequate systems to regulate and reduce the entropy of the widespread initiatives to transform the built environment, brought about by intense changes in practice in the use of urban space, and by public inertia with regard to decision-making. This inertia has long

<sup>&</sup>lt;sup>20</sup> As regards the extension of housing risk, the public institutions have played a marginal role. However, traditional social institutions and private-sector social agencies (above all social solidarity organizations—Onlus—and various Foundations) have to some extent compensated for their inadequacy.

 $<sup>^{21}</sup>$  To demonstrate the role played by the real-estate sector, overall investment in works of urban transformation and housing from the late 1990s to 2005 is estimated to have been worth more than 10 billion euros, 87 % of it in the construction sector and the remaining 13 % in business services. In 2006, according to municipal data, more than 8 % of urban territory (more than 13 million square metres) was undergoing redevelopment, with 80 % of this area allocated to complex programmes, mainly on extensive sites (Memo, 2007).

delayed the major projects for the strategic areas of the city, as their content has been adapted and readapted, and has left many initiatives uncompleted. The issues on the public policy agenda have therefore borne little relation to the spontaneous dynamics of operators in the emerging sectors of the economy. This has led to inefficiency in the production of public assets and territorial capital, as well as a serious reduction in the quality and quantity of personal and business services.

A significant case is the redevelopment of the *Garibaldi-Repubblica* district, one of the few extensive disused areas in the city historic centre.<sup>22</sup> For decades, this district has been discussed and coveted, with a consequent accumulation of interests, expectations and disputes, and since 2001 has been the subject of an integrated intervention programme. Of the three planned development operations, the institutional pole was to have accommodated the new municipal and regional government buildings, the "campus" was intended to become a park, while the Fashion City (*Città della Moda*) was supposed to enhance the city's principal productive assets (fashion and industrial design), with high-level training facilities included.

The decision to create a "fashion citadel", when the dynamics of the fashion industry had already produced a widespread "fashion city", showing a preference for the quality of the consolidated urban fabric, the transition areas (Savona and Tortona) and the industrial archaeological heritage, at the same time expressing a propensity to maintain a well-structured system of relationships with the urban space, confirms the inability of the political leadership within the city government to interpret the meaning of the current changes.<sup>23</sup> The outcome is the concentration in a single district of massive amount of expensive real estate, which has caused an exponential increase in property prices in surrounding areas (up 80 % in just 5 years), as well as an overproduction of office and residential accommodation which fails to meet the emerging demand, not least the demand for new spaces expressed by the fashion sector.<sup>24</sup>

<sup>&</sup>lt;sup>22</sup> Seventy-eight percent of the area of *Garibaldi-Repubblica* is in public ownership (Municipality of Milan and Italian State Railways), with the remainder divided among several owners.

 $<sup>^{23}</sup>$  The operation as it was carried out (the new "business district" occupying an area of 290,000 square metres, with more than 3,120,000 square metres of useable floor space), extended to connect three projects, has suffered many changes. The effect has been to reduce the institutional pole, increase the residential accommodation (luxury apartments), seriously marginalize the quota of subsidized housing (a mere 5 % of the total residential space) and raise the profile of a number of global players. The development, consisting of a series of oversized buildings (very similar to those proposed by the Citylife project), which will house the headquarters of large financial institutions and insurance companies, has thus done no more than repeat the by now outdated "business centre", with the addition of shops, hotels and residential accommodation.

<sup>&</sup>lt;sup>24</sup> Writing of the semantic and symbolic expansion of districts or clusters of creative industries, and the large investments made by a growing number of cities in promoting them, Graeme Evans (2009)— in an internationally broad comparative analysis of urban-planning policies intended to create "spaces of invention"—refers to the case of Milan and its "Fashion City" to point out that some of these developments "are highly speculative and dependent upon major property investment" and may never materialise.

Entrepreneurship geared to incremental growth where the governing principles adopted by the previous centre-right administration in dealing with problems that required above all a private-led mobilisation of the market. This would seem to be confirmed by the dynamics of the urban property market and in particular the major changes to the urban fabric. Moreover, the long gestation of the major urban renewal projects and the prevalence of contingent actions substantially in line with the interests of the big developers have led to a gradual shelving of the commitments to create strategic urban facilities, particularly of a cultural nature. The consequences of this approach for the built environment and for urban life are especially evident in the fragmentation of the city, the decay of public assets, the deterioration of housing conditions and an increase in social and economic inequalities.

A further and no less alarming consequence, manifested in a territorial segmented development dynamic which also affects the urban region, is the growing gap between the functional city and the physical city. While in the former the positive connectivity and interdependence of the strategic functions constituting Milan's status as a global nexus prevail, the latter is largely undercapitalized (not only in quantitative terms but in terms of its many imbalances, the high social costs of mobility and low energy efficiency), with poor spatial connections internally and increasing difficulty in integrating its various parts (Bonomi, 2008; Camagni, 2011).

This being the case, there was a danger that the final decision taken by the administration shortly before the recent change in city government, consisting in the adoption of a new master plan, would only make the problem worse. The plan confirmed the longstanding limitations of Milan's city-planning, due to the absence of a strategy for the metropolitan area in the medium-to-long term, and outlined a scenario of unrestricted growth.

The unjustified planned increase of around 500,000 people over 20 years, obtained by indiscriminately increasing the building index in urban areas suitable for building and unused standard areas, to which had been added the virtual building rights deriving from the application of equalizing measures (generating an additional area in excess of 100 million square metres), revealed a huge gap between demographic trends, the sustainability of the new building potential and the conjectures of the city-planning policy document (Palermo, 2011).

The first decision taken by the newly installed centre-left city government was to revise the plan. They reopened a dialogue with the various area councils (*Consigli di Zona*), interrupted for more than two decades, and drastically reduced the building indices. They downsized plans to redevelop various areas and build new districts, introduced rules limiting the flexibility of functional uses, excluded the green belt to the south of the city (agricultural park) from the equalization system that permitted the totally unregulated transfer of huge volumes of the consolidate fabric (ensuring that substantial unbuilt areas can remain free), and fixed the increase in population at 155,000 additional inhabitants, including those to be settled in the districts then under construction.

In addition, to cope with the serious housing problem, they laid down the principle that all significant redevelopment operations must contribute to the building of a "solidarity city", by providing for the construction of quotas of social housing covering more than one hectare in areas being converted to other uses, and changing the rules of the plan to allow an increase in volumes to operations that included either quotas of subsidized housing or the creation of various public facilities. They also completed the agreement between municipal administration, regional government and Italian state railways that contains plans for settlement on former railway yards and guarantees significant public participation, with the priority aim of improving rail transport in the metropolitan area. The disused railway areas, more than a million square metres in total distributed along the railway lines in different parts of the city, are currently the most important strategic resource in which to invest to equip the belt outside the circle of the Bastioni with public spaces of quality and housing solutions accessible to people on middle-tolow incomes, in particular those in danger of losing their homes. These are the first important signals of a change in direction in the urban development policy of the new municipal administration.

#### 6 Conclusions

Milan has been experiencing a time of transition to a service economy, during which we have seen radical changes in its economic and social structure, its status and image. This period has been characterized by approaches to the management of the urban area disconnected from the processes of social innovation, the on-going weakness of territorial and functional connections between the city and its urban region (despite a proliferation of spatially important changes and molecular initiatives), and a model of economic development that is competitive but poorly integrated, because of an absence of effective policies to mitigate its disruptive effects.

This latter aspect, in particular, has led to a number of socially alarming factors: a marked dislocation of the social fabric and an emergent polarization in the distribution of incomes (making Milan the most unequal city in Italy), and in its settlement processes (OECD, 2006), a lack of flexibility in the urban property market resulting in chronic housing problems, the poor quality of public space, widespread gentrification of population groups and economic activities and, last but not least, a profound demographic crisis.

We should therefore not be surprised that Milan has gradually lost its ability to attract new businesses and that, for several years, it has been ranked very low down among European cities for its level of pollution, quality of life and the ease with which one can move about the city, as evidenced by the most recent European Cities Monitor report (2011).

Against the background of a crisis that is systematic rather than cyclical, the situation facing the city's ruling elite is not without its good points, including a clear service-economy vocation still based on relations with the manufacturing system,

especially in the most competitive creative industry sectors. But there is also the difficult legacy of urban change and the transition to a service economy left to market forces, with inadequate public policy-making, a lack of institutional coordination of the different scales involved, and obstinately introverted city-planning choices. Recently, with the institution of the "metropolitan city" and the forthcoming determination of the new planning authority, a rethinking of some of the policy and regulatory instruments for managing economic and social processes has become a matter of crucial importance.

As a city, Milan is integrated into the global networks, where the advantages acquired by involvement in the more competitive new economic activities of the advances services sector (KCS), on which its attractiveness to outsiders largely depends, have until now enabled it to coexist with growing internal disruption and disparities, a low quality of urban living, the increasing selectivity of the market (in both the property ownership and rental sections), and serious deficiencies in its transport infrastructure. But how much more inequality, especially with regard to the new housing situation, and how much more inefficiency will the city be able to cope with? This is the most difficult challenge that Milan, a city on shaky foundations that has not yet completed its transition to the new form of cognitive capitalism, will have to face.

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