

Chapter XVI

Spatial Transformations in Istanbul CBD: The Role of ICT?

Feral Geçer

Izmir Institute of Technology, Turkey

Adile Arslan Avar

Izmir Institute of Technology, Turkey

Koray Velibeyoğlu

Izmir Institute of Technology, Turkey

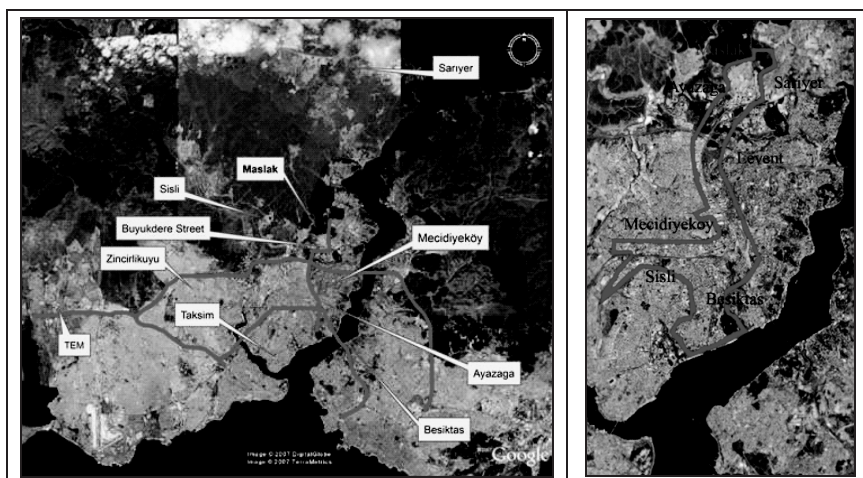
Ömür Saygın

Izmir Institute of Technology, Turkey

ABSTRACT

Now with the intensive use of information and communication technologies, many cities around the world are competing to become a global city. Istanbul is enumerated within the first 50 cities in the globalization process, other than the triad of New York, London, and Tokyo. This chapter explores urban space transformation of Maslak, the contemporary central business district of Istanbul, with respect to information and communication technologies, by using deconcentration and economic restructuring approaches of urban theory. Compared to other global cities, Istanbul has distinctive characteristics, since it has been passing through a unique transformation process. More specifically, its economic, political, and social characteristics distinguish Istanbul from other cities within the same category (Gamma) of world cities. This study has revealed that transformations in Istanbul were not primarily driven by information and communication technologies. In contrast information and communication technology's role in the transformation of the Istanbul central business district is only a contributing factor.

Figure 2. Settlements and main roads connecting Beşiktaş–Maslak axis and borders of Beşiktaş–Maslak axis (Google Earth map)



secondary data sources and survey data collected by face-to-face interviews with stakeholders.³

As to the boundaries of the study, while focusing on Maslak, we also included the surrounding areas and important axes (i.e., Beşiktaş–Maslak–Ayazağa axis, Büyükdere Avenue; sub-centers of Taksim, Beşiktaş, Şişli, Mecidiyeköy, Zincirlikuyu, Levent, and Maslak—see Figure 2).

In the following sections we elaborate on: (1) Istanbul in the globalization process; (2) the basic arguments related to the deconcentration and restructuring approaches to ICT and urban spatial transformations, and how different dimensions of the spatial transformations in Maslak, Istanbul might be considered in the light of them; (3) the political and economic conditions of Turkey making these urban changes possible; and (4) the spatial transformations in Maslak, Istanbul.

BACKGROUND: ISSUES AND THEORETICAL CONSIDERATIONS

Istanbul in Globalization

To begin with, it should be noted that the term globalization is used in this study as economic

globalization; neither cultural nor political globalization is referred to. As Sassen (1991) argues, ‘economic globalization’ ascended during the 1960s while, in its more conventional terms, it dates back to the 1970s (see Marcuse & Kempen, 2000).

There are different approaches in explaining the spatial patterns of globalized cities. To cite some conceptions they offer, the most prevalently used and discussed ones are ‘global cities’ (Sassen, 1991; Castells, 1996; Graham & Marvin, 2001), ‘world cities’ (GaWC Study Group & Network⁴, 1999), ‘megacities’ (Marcuse & Kempen, 2000; Friedmann, 1998), and ‘edge cities’ (Garreau, 1991; Castells, 1996; Graham & Marvin, 2001). Sassen (1991) emphasizes that, although Friedmann defines global cities as the nodal points for coordination of process, they are also the sites of production (see Sassen, 1991, p. 5). The content of the production and its components shifted from the industrial or mass production to advanced services. This shift is also accompanied by the flows of capital and the operations of international corporations seeking to create new sites of industrial production, financial inventions, and a new market, thus running remote management facilities. On the other hand, services and

financial goods merchandized through a network series of flows within and over borders are counted as the assets of the global cities. Regarding all these practices, ICT making flows of information limitless is crucial (Kellerman 2002; Sassen, 1991). Hence, the transformations in the spatial patterns of world cities should be examined in connection to ICT.

The spatial patterns of cities are the reflections of socio-economic structure and historical changes. Drawing on this definition, it must be emphasized that the new spatial reflections of different cities vary due to their inner-dynamics, although globalization imposes itself upon the cities by creating significant and somehow similar transformations in the spatial patterns of today's globalized cities (Marcuse & Kempen, 2000). As a recently globalized city, Istanbul is also a mean to these spatial transformations.

The GaWC Study Group places Istanbul within the category of gamma world cities, and counts it as 24th among the first 50 global centers.⁵ It makes a hierarchical classification regarding the number and nature of the multinational corporations' chains throughout the advanced cities. This classification is based on 100 firms, which have chain offices at least in 15 different ones among 316 cities. Being a gamma world city, Istanbul nests global service centers in two sectors and at least one major service, and is placed within the top 123 connected cities. This study group, on the other hand, also attempts to explain the European structure regarding the globalized or globalizing cities, and considers European cities amongst the world city hierarchy. The importance of the GaWC inventory for this particular study is that most of the globalization studies refer to American experiences, and therefore lack of adequate survey for European cities—including Istanbul—having different local patterns and traditions (Taylor et al., 2002).

One of the most common spatial features of the globalized cities is the transformation of the city center from single to polycentric form. In Istanbul, the beginning of such changes dates back to

the 1970s. Three factors are visible regarding the formation of new CBD areas that appeared especially along the transportation routes: (1) the newly constructed firms which were located at the first ring⁶ because of its relative accessibility in land ownership and rental opportunities, construction regulations, and building permits; (2) the firms' tendency to locate close to the main transportation arterials for accessibility advantages; and (3) new financial issues having forced the firms to search for bigger plots for their production and/or administrative facilities. The further acceleration of the formation of the new CBD coincides with the liberalization of markets after the 1980s. Following the military coup in 1980, especially after the 1984 elections, the new economic deregulation of neo-liberalization process also accelerated the transition of Istanbul into global markets (Dökmeçi & Berköz, 2000; Kocabaş, 2005; Osmay, 1998; Taşan-Kok 2004; Yenen, Dinçer, Şengezer, Yakar, & Dikçinar, 1996).

As Sassen (1997) argues, a global city cannot be counted as one at the top of the hierarchy but as a 'part of a network of cities'. Besides, the globalization process is accompanied by a new economy called 'knowledge economy' that is dominated by ICT. In the new economy, the traditional spatial organization of the urban core has lost its production, manufacturing, and wholesale, along with some other blue-collar functions. As the city center becomes fragmented and transformed into a polycentric structure, it also intensifies the decision-making powers, capital, finance, insurance, trade, transportation, communications, cultural and educational institutions, tourism, and various types of white-collar works (Godfrey, 1995).

As to the situation in Istanbul, the traditional city center sprawls from the Historical Peninsula towards the north⁷ (from Beşiktaş to Maslak) running along Barbaros and Büyükdere boulevards which is the CBD axis of Istanbul from the 1930s onwards. Although the recent developments take place in Maslak, the continuous line leading from the south to the north cannot be omitted and treated as a separate CBD formation. The sub-

centers were connected to each other in a way of embodying the new CBD (see Figure 2).

Having drawn the context of globalization within which Istanbul would be placed, and put the relationship between ICT and globalization, a chart can be formulated in order to show how ICT could be considered in relation to the spatial formation of Istanbul-Maslak (see Figure 3).

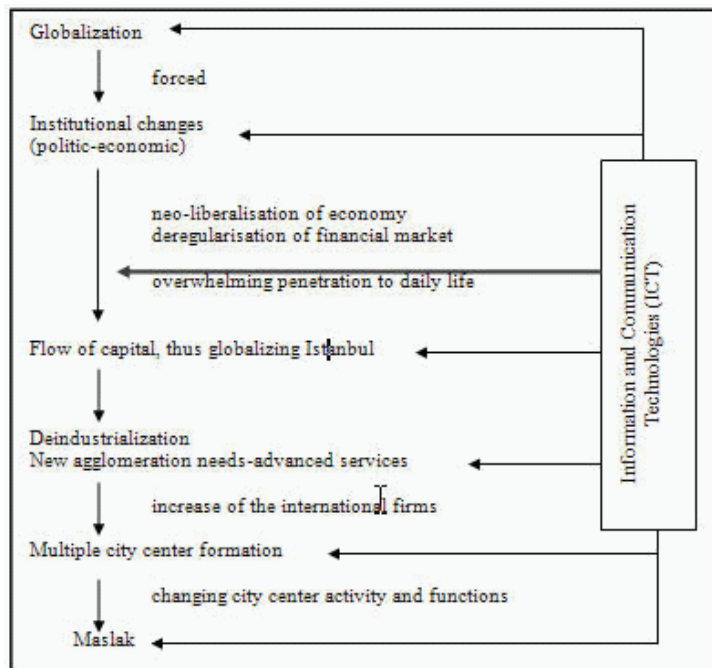
The flow chart above comprises main aspects of transformation of urban spatial practices in Istanbul. Before going well into the spatial changes in Maslak, Istanbul, we take a detour from the basic arguments of deconcentration and restructuring approaches as to the relationship between ICT and urban form.

Theoretical Considerations on ICT and Urban Form

Especially following the second half of the 1970s, multinational corporations sought to enter new markets, to find labor at a relevantly cheaper cost

and extensive sources for production, to expand consumer bases, and thus to increase the profit. The telecommunications system was a major factor supporting these corporations in such operations. Developments in ICT made further contributions in flows of information, goods, people, and capital by forming new linkages and networks within the globalization process. The new and advanced infrastructure of ICT can be met decently in metropolitan areas. Also, it is more lucrative to settle in metropolitan areas for the service provider and the firms, since the widely produced infrastructural facilities make the information and services faster. Also, the speed of data flowing from one place to the other through the channels of the information systems affects capital management. Another reason for ICT to settle in metropolitan areas is to meet the spatial needs of new economy and knowledge workers. In Turkey, such changes in urban space mostly take place in Istanbul, which is the largest metropolitan city and is at the same time considered to be a globalized one (see GaWC studies).

Figure 3. ICT and urban spatial transformation process in Istanbul



Basically two theoretical approaches attempt to explain the influences of ICT on urban form: deconcentration and (economic) restructuring. In this study, we assert that in practice these two theoretical approaches together enable one to explain different layers of the urban process in Maslak, Istanbul. Deconcentration theory focuses on sprawl and centrifugal effects of ICT. It takes ICT as the substitute for transportation, since it enables individuals to relocate elsewhere. On the other hand, (economic) restructuring theory deals with the major political and economic structural changes. It essentially assumes that cities have been continuously restructured by capitalism. Because of political and organizational issues, multinational corporations tend to centralize in city centers as a way of forming new agglomerations of advanced services.

Deconcentration theory emphasizes individual locational preferences. Since ICT makes simultaneous flow of information possible, it allows individuals to relocate their houses or change their workplaces (i.e., by teleworking, working stations, etc.). It also allows dispersion of production functions and facilities to suburbs, edge cities, or rural areas. At the same time this decentralization process is supported by ICT in the means of advanced transportation systems enabling reducing real-time travels and cost of commuting. The dispersal of production facilities to peripheries or other cities, even to other countries, generates the need for centralizing management activities. On the other hand, administrative functions prefer creative urban regions that provide faster connections and advanced infrastructure for the ICT-intensive firms attempting to cut down their information costs (Hepworth, 1992).

The use of ICT and especially telecommuting came onto the scene as a solution for trip-reduction both in time and transportation costs.⁸ However, other modes of information flows (via air, electronic data transferring, couriers, etc.) have to be conducted for remote business management and administration. Besides, the need for life enhance-

ment (meaning the freewill of an inhabitant for different choices of locations) and connectedness transform old spatial agglomerations. The latter were used to be dependent upon proximity to transportation routes, nodes, or raw material, replacing with new ones. New agglomerations are established through connectivity needs of firms which are confronted mainly in the cities. The peripheries of highly connected cities (usually the metropolitan areas) are also places for such localizations offering themselves as new nodes in the multi-centered organization.

On the other hand, the centers of global cities form a new kind of agglomeration economy. This fact proves one of the basic arguments of the restructuring theory. As Kolko emphasizes, telecommunications prefigures the polycentric developments both in city centers and in exurban developments (see Moss & Townsend, 2000, p. 34). Thus, the ICT-embeddedness in the urban space culminates in the decentralization of production activities, but the centralization of administrative facilities in a reverse process. Even so the polycentric system enhances the commercial and office activities within city centers and increases the traffic congestion which suburbanization imposes (Godfrey, 1995; Moss & Townsend, 2000).

According to the restructuring theory, the urban space is continually restructured under three conditions: (1) the location preferences of corporations for their manufacturing units, management, and research centers; (2) political decisions and controls imposed by governments regarding land use, investments, and industrial production; and (3) the real estate investments and land speculations by private investors. It focuses on decision making including political strategies for economic growth, profit making, and spatial dispersion processes. The restructuring of urban space and organization are simultaneous (Castells, 1996, 2000; Sassen, 1991, 1997; Audirac, 2002; Timberlake, 1995).

Economic restructuring operates at both national and regional levels. The capital accumula-

tion is intensified via liberalization of markets. The nation-state also relegates its production units beyond its boundaries. Hence, important policies of a neo-liberal economy are the delegation of authority and command from national to local power, and even from nation-state to multinational corporations through the privatization of production activities.

However, for economic growth, to keep the flowing capital as long as possible within the city is the main target. While mass production units move out of the city, the vacant spaces which these production units leave are filled by new institutions of the advanced service sector. The core city is densely populated with the advanced service sector, its new institutions and organizations, and knowledge workers. The cities hosting these economic and spatial phenomena are called global cities (Sassen, 1991; GaWC, 1997-2006). The emphasis is on new organizations of production and management, flows of people, and information and goods both in local and global terms. Hence, “centrality remains a key feature of the global information economy” (Sassen, 1997, p. 11).

Although ICT is not the main reason triggering the urban space transformations in Istanbul, it contributes to the restructuring of CBD. After all, ICT is an important factor which makes the splintering of the industrial activities possible, removing them from the urban space to other cities, even offshore. But the splintering process of industrial facilities in Istanbul was also conditioned by such factors as construction and establishment of two bridges and ring roads that connect east and west parts of the city, land ownership, spatial and infrastructural restrictions of the traditional city center, and the increase in service sector with regard to globalization process of Istanbul. In the following section, the underlying conditions of urban space and CBD transformation in Istanbul-Maslak are examined closely.

WHAT HAPPENED IN ISTANBUL-MASLAK?

In this section, in order to illustrate the role of ICT within the recent spatial changes culminating in the formation of the new CBD, we examine the urban space formation in Istanbul-Maslak with respect to historical periods. We define the landmarks of these periods with the major changes in political approaches whose spatial reflections are of importance for this study. As to be seen, during the first three periods, the conditions essentially defining the new CBD formation and the transformation of Istanbul from monocentric to polycentric city center were macro political and economic changes, spatial restrictions of the traditional city center, and the development of the new transportation links. On the other hand, there had been some planning efforts for the restructuring of the new CBD. However, the development plans neither determine spatial practices on the north axis, nor were able to guide the new developments. In other words, the development plans followed the restructuring process of urban space rather than controlling and steering the new spatial formations.⁹ In accordance with the changes in political approaches and the new economic transformations throughout the world and in Turkey, spatial transformations had already begun in Istanbul in general, and in Maslak in particular, even before the plans were to be implemented.

1920-1950 Period

Following the establishment of the Turkish Republic in 1923, and during the reorganization process of the economy between 1923 and 1950, Istanbul lost its attractiveness as an economic center. It was due to the Statist policies of the 1930s, the efforts to bypass the economic crisis known as the Great Depression in 1929, the debts of the Ottoman Empire, the resistance towards the imperialism, and announcement of Ankara as the new capital

city. For the first time in its history, Istanbul started losing population. But soon the population growth accelerated again, causing Istanbul to be the largest and the most densely populated city in Turkey with its population of 10,018,735 according to the general population census of the year 2000. Recently, 91% of the population in Istanbul lived in urban areas (TURKSTAT, 2000).

During the 1930s, regarding the spatial formation, the major factors worth citing are closed economy and the Henri Prost plan dated 1936. To construct new transit traffic routes connecting the center to the first ring outside the traditional center of Istanbul was among important public works and plans (Tekeli, 1993; Yücel, 1996).

1950-1970 Period

By the 1950s, the development plan (the 1936 Henri Prost plan) was dismissed due to the unexpected rise in population. On the other hand, a dual center development emerged in the form of a newly developing administrative and service center. The industrial compensations, highway investments, and modernization in agriculture following the U.S Marshall Aid had spatial reflections in Istanbul (Yenen et al., 1996). Economic changes triggered a rapid development process for Istanbul. By the replacement of closed-economy¹⁰ policies of the 1930s with economic liberalization emphasizing the precedence of the individual entrepreneurs and opening economy to national markets, Istanbul was put forward as an industrialization area which grew towards the north including the east part of the axis (i.e., along the Mecidiyeköy-Levent- Maslak axis).

With its new role as the economic center, during the 1950s and 1960s, important public works had taken place in Istanbul. The government of Adnan Menderes had a four-year public works plan considering such issues as establishing a modern transportation system, opening boulevards, fixing mosques, and making the city beautiful (Kuban, 1996). In Figure 4, the land use distribution of

1963 is shown. The industrial areas were distributed through the city, and among them the north of the axis and east of the historical city center stick out. Compared to the land distribution of 1994 (see Figure 5), it is observed that the industrial areas of the 1960s are mostly vanished throughout the city.

Another important urban issue during this decade was the rapid urbanization due to the massive immigration from the rural areas, one of the results of which was the establishment of the first squatter housing settlements around the industrial areas.¹¹ On the other hand, despite rapid industrialization supported by the Marshall Aid causing the need for land for the industrial facilities, the plan had no adequate industrial zone whatsoever. This problem was also linked to the increased rate of car ownership that caused traffic congestion within the city. In order to confront these issues, revision was started on the Prost Plan, but it was never really implemented. The actual planning of the industrial sites was realized by the 1954 Beyoğlu Development Plan for the first time. West and east of the north axis were assigned and planned as industrial sites. During this period different planning attempts took place both by the municipality and the Ministry of Housing and Development. According to a preliminary planning study for the east Marmara region published by the Ministry of Housing and Development in 1963, Istanbul was to be developed as the industrial zone of the region. With an emphasis on attracting the entrepreneurs and industries to the city, major importance was given to the land routes and highway transportation. Although the plan indicated the location of these industrial areas on the east and west corridors of Istanbul, the practice did not actually follow the plan. In spite of this, the west side of the axis through the north had already become an industrial area and brought along the squatters. It follows that the area was enunciated as an industrial area by the master plan—the Istanbul Industrial Areas Development Plan—in 1966 (CPD, 1995).

Spatial Transformations in Istanbul CBD

The preliminary plan was to distribute the different functions to different parts of the city. For example, through the historical city center up to the first half of the north axis, different land uses exist such as CBD, residential areas for high income-groups, and industrial areas, and they were located through the same transportation route (Ministry of Housing and Development, 1963). By the construction of the Bosphorus Bridge, new ring roads were assigned. Unfortunately, the industrial areas, which were planned in the east-west direction, could not be realized due to the new transportation roads connecting Anatolia to the north axis beginning from the south through the bridge. Maslak is, therefore, literally a very good example of the conflicts between the plans and actual urban development.

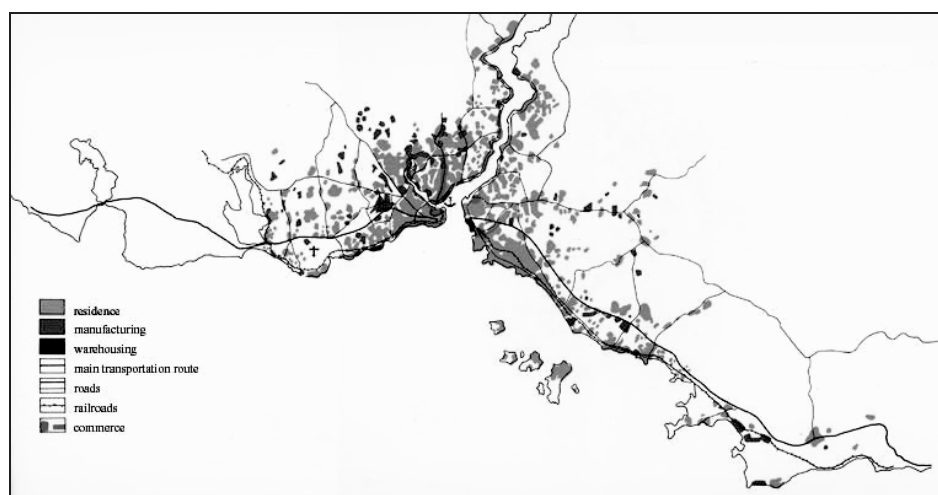
1970-1984 Period

Two military coups, in 1971 and 1980 respectively, took place during this period. The latter was of ultimate importance regarding the spatial transformation in Istanbul. The metropolitan area was enlarged to include the exurban settlements. Following the introduction of new legislation¹² by the government soon after the second military

coup, the administrative structures of 22 counties and 25 peripheral municipalities were dissolved and reorganized into other municipalities (Tekeli, 1994). As the population of Istanbul rose from almost three million to five (TURKSTAT, 2000), the exurban settlements of the north axis were joined one by one to the metropolitan city as new city center formations alongside the development of the north axis via ring roads (Büyükdere Avenue, Barbaros Boulevard, E5, and TEM ring roads) continuing through the Bosphorus Bridge (see Figure 2).

In the 1970s, Istanbul again faced serious transportation and housing problems. Between 1950 and 1990, while the population of Istanbul was multiplied by six, the motor vehicle ownership multiplied by 100. The rise in the car ownership resulted in congestion and decentralization of the housing units, which were once summer houses, by causing them to shift along with the tourism areas through east and west parts of Istanbul (CPD, 1995). On the other hand, the lack of public transportation and residential area production for low-wage workers resulted in a serious squatter housing issue, which remains an unsolved problem even today. In spite of the fact that there was almost no urban infrastructure and no government

Figure 4. Land use distribution in 1963 (Ministry of Development and Housing, 1963, p. 140)



action to solve this problem, unauthorized buildings were legalized by four amnesty acts between 1979 and 1984 (Tekeli, 1994). These squatter houses had been usually constructed around the industrial sites beginning from the 1950s (CPD, 1995; Çakılcıoğlu 2004).

The plans prepared during this period (1973, 1978, 1980) by the Istanbul Master Plan Bureau were subject to approval of Ministry of Housing and Development (CPD, 1995; Yüzer & Giritlioğlu, 2003). Following the approval of the 1980 plan, there was almost no planning action in Istanbul Municipality other than some implementations for the establishment of industrial sites and new production units, and betterment projects for transportation. These practices supported the decentralization (Cansever, 1993).

Between 1970 and 1980, Istanbul radially grew 10 kilometers beyond the existing radius of 50 kilometers (CPD, 1995). Beginning from this decade onwards, the traditional city center lost population in favor of the north axis. On the other hand, as most of the businesses were held in the city center in the 1960s, employment and commercial activities splintered from the first ring to the sub-centers in the 1970s due to limited area for the expanding firms, high rents of the central areas, traffic congestion, and the dense urban texture. Initially, the sub-centers mostly developed as retail trade centers. As small, scaled industrial areas and working estates were established, the production activities of the city center were distributed to these areas.

The Bosphorus Bridge, which opened in 1973, connected the east and west sides of Istanbul through the north axis. The second half of the north axis developed along the main roads and the connecting ring roads (i.e., TEM and E5; see Figure 2). Following the opening of the bridge, as the sites along these roads became prestigious areas, offices moved over these arterials. Since these sites were subject to land speculation, the land ownership changed rapidly. At the north of the axis, for example, the land ownership was

mostly held by the largest local corporations (Berköz 1996; Cengiz, 1992; Yenen et al., 1996). Consequently, the CBD axis developed and expanded through the fringes up to the north (Berköz, 1996).

Despite the tendency to split from the city center, the traditional core was still attractive for some functions. That the old functions were replaced by the new ones caused a shift to the commercial activities. In 1970, the employment rates in the CBD areas were 54% in the central site, 32.5% in the first ring, and 13.5% in the second ring. Coming to 1985, as the rate of employment decreased to 33.1% in the central site, it increased in the first and second rings; the values were 51.4% and 15.5%, respectively. On the other hand, in 1985, the industrial employment rates were 47.1% in the first ring, 39.8% in the second ring, and 13.1% in the central area (Dökmeçi & Berköz, 1996).

There are two main urban spatial formations on the Maslak axis, especially following the 1970s: decentralization of the industrial areas and industrial production functions to the surrounding edge cities, and the new CBD formations taking place in the brownfield sites. However, they may still keep their administrative centers in the CBD. This resulted in a new agglomeration within the city center, as the production facilities splintered to the nearest cities such as Gebze, İzmit, and Bursa, which are the main preferences of the corporations for the industrial activities that are removed from the Istanbul CBD.

Up to this point, mostly the internal dynamics of the city forced the development of the CBD. As was seen, the conditions underlying urban spatial transformation of the CBD into polycentric centers in Istanbul were threefold: (1) the traffic congestion after late 1970s caused by the increasing private car ownership and usage in the city center, where the main concern was directed towards the pedestrian-based access and mass transportation; (2) following the Marshall Aid, the construction of new highways and ring roads

which would unify the sub-centers along the axis into the new CBD; and (3) the spatial restrictions of the traditional city center to meet the needs of the firms because of its dense population and conservation policies.

The new sub-centers can afford the spatial needs with their vast land stocks for office complexes. Because of its transportation advantages, the first ring had been occupied by the new high-rise buildings of new firms, which tended to form international relationships rather than joining to the local markets. By the 1980s, the multinational corporations and the local firms, having partnerships with foreign entrepreneurs, preferred to locate in these new sub-centers which have the adequate land stocks around the developing highways and ring roads (Dökmeçi & Berköz, 2000; Osmay, 1998; Yenen et al., 1996).

1984–To Date

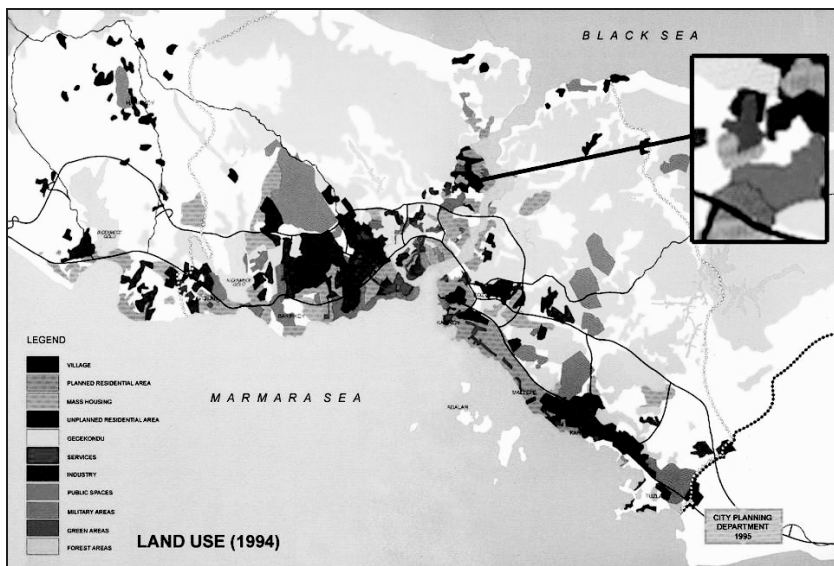
The neo-liberal economic policies having been adopted since the 1980s brought about various changes stamping the urban spaces. Their immediate results were the reinforcements of import and

export functions, and new construction of housing estates and infrastructure. The number and shares of the companies with internationally distributed production bases have increased in the economy by the grace of the privatizations mostly imposed by the IMF's structural adjustment programs. The need to pursue the financial and technological changes and to create a sufficient environment for the new technological infrastructure led the firms, which hold the administrative facilities as dispersed in the city, to construct new office buildings.

The headquarters of multinational companies and the largest local corporations are located at the site, starting especially from the middle of the axis, including its east part towards the north (Hacisalihoğlu, 2001). New buildings populating the area were the administrative centers of banking and finance, media, and corporations. Some of the public buildings such as Şişli Municipality, Bureau of Public Roads, Turkish Telecommunications (Turk Telekom), and the Istanbul Stock Exchange were relocated to the site.

Maslak as the ICT-intensive CBD had been planned piecemeal. Regarding the planning

Figure 5. 1994 land use distribution (Maslak inset) (CPD, 1995, p. 309)



policies of this period, it is worth noting that the City Planning Office was adhered to the Greater Municipality of Istanbul. As the structure plans remained untouched, master plans were overhauled regularly. The regulatory plan was introducing mainly four types of area composition for Maslak: military zone,¹³ small-scale industry, commercial areas, and residential areas with medium-high density (250 people/ha). The master plans, on the other hand, considered only three of them, namely, military zone, small-scale industry, and commercial areas.

According to both the structure plan and master plans approved in 1985 and 1987, respectively, neither the Maslak area nor the north axis were modified. Although the first implementation plan of Maslak was approved in 1985, it has never been applied. Instead, a 1995 plan is currently in implementation. Recently, either Şişli Municipality was studying for a new plan or the Istanbul Metropolitan Planning Authority (IMP) for a master plan for Istanbul Province.

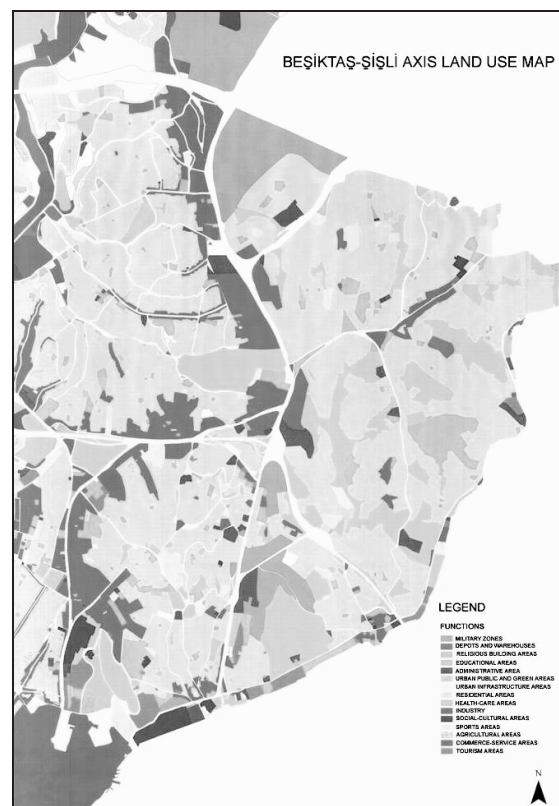
However, these plans do not bring any propositions to the axis. The major underlying reason is that, throughout the axis, different local authorities are responsible for planning: Şişli Municipality to which Maslak belongs, Sariyer at the other side of Büyükdere Avenue, and finally, Beşiktaş, at the end of the axis (see Figure 1). Only its west-northern part remains within the administrative boundaries of Şişli Municipality. Until 1994, because of this fragmented spatial and administrative arrangement, and the lack of a planning process along the axis, the developments of the site were organized according to piecemeal Tourism Area plans by the central government through the Ministry of Culture and Tourism. The current Municipalities Act renders the authority of decision making and planning of the special tourism areas to the Ministry of Culture and Tourism. This process caused the piecemeal development of building blocks throughout the site, leaving of the municipality off duty in control and planning functions (Cengiz, 1995; Taşan-Kok, 2004,

2006). The current land use distribution of the north axis is given in Figure 6. These land use analysis indicates the CBD uses and the tendencies throughout the north axis.

In this period, telecommunication technologies started to gain weight in structuring the urban space whose main tendency was suburbanization and splintering. As the advanced ICTs were introduced into new urban areas, and the CBDs are multiplied, the centralization and decentralization tendencies of corporations have restructured the urban spaces (Osman, 1998).

The liberal economic policies and the acceleration in extroverted commerce allowed direct foreign investment to locate especially in Istanbul. One of the immediate results of this was the separation of the units of production from those of

Figure 6. 2006 Beşiktaş-Şişli axis land use map (Istanbul Greater Municipality Metropolitan Planning and Urban Design Center, 2006)



management and administration. Istanbul’s leading position within the national economy makes it an attractive place for multinational corporations. Since there is a fine pool of knowledge workers in Istanbul, it can also meet the need for a qualified labor force. All these coincide with the growing demand of ICT during this period (Dökmeci, Dülgeroğlu, & Akkal, 1993).

In Istanbul, being similar to many global cities, the urban space transformed while the industrial sector splintered and left the city as the service vendor. Starting from the 1970s, the corporations at the upper part of the north axis were mostly service oriented. By the 1980s, 59% of the service-oriented firms were relocated, and 27% of the ‘new corporations’ were established in the Maslak area along the axis. Considering their previous locations, it is observed that 29% of the head offices of the firms used to be in the traditional city center, and 64% in the first and second rings. The service sector in Istanbul is distributed to both sides of the province. The western parts of Istanbul, in which the northern axis is included, are more advanced regarding services sector. This share may be attributed to the intensive service sector¹⁴ along the north axis.

In 1960, almost 10% of total employees were working in industrial activities. However, by 1990, 17% of the labor force was working in the

industrial sector and 18% in the service sector (Yenen et al., 1996). The labor force distribution of the municipal counties proves this tendency. In this distribution Şişli Municipality sticks out with its share of 13% in the service labor force (IMP, 2006). This number also includes Maslak, as it is within the borders of Şişli Municipality. Beşiktaş is the third service labor provider, solidifying the axis as the main service provider of Istanbul. The service workers in Şişli increased drastically from 1992 to 2002. This tendency was also followed by Beşiktaş (see Figure 7).

The increase in polycentric city center formation in Istanbul especially clustered around the north axis and Kadıköy at the east side of the Bosphorus. However, the north axis sticks out with 68% of the total service firms. Considering the total employment rates, the north axis including a part of the traditional core is the main job-providing area. These rates also include the industrial workers (IMP, 2006). Büyükdere Avenue, which gathered large-scale enterprises during the 1970s, started composing as the western part of the northern axis’ CBDs’ prolongation after the 1980s. Aside from the headquarters of the enterprises, large back offices, parking lots, entertainment centers, and shopping malls were constructed here.

Figure 7. Services workers during 1992-2002 (IMP, 2006)

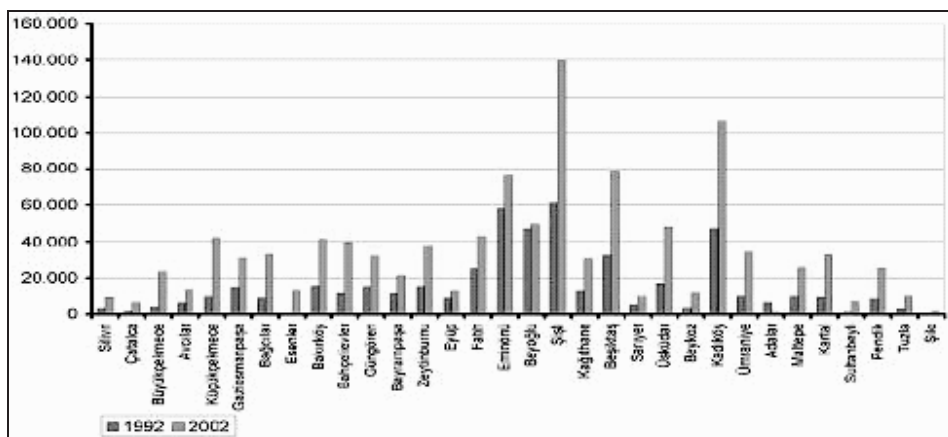


Figure 8. The switches at the north axis

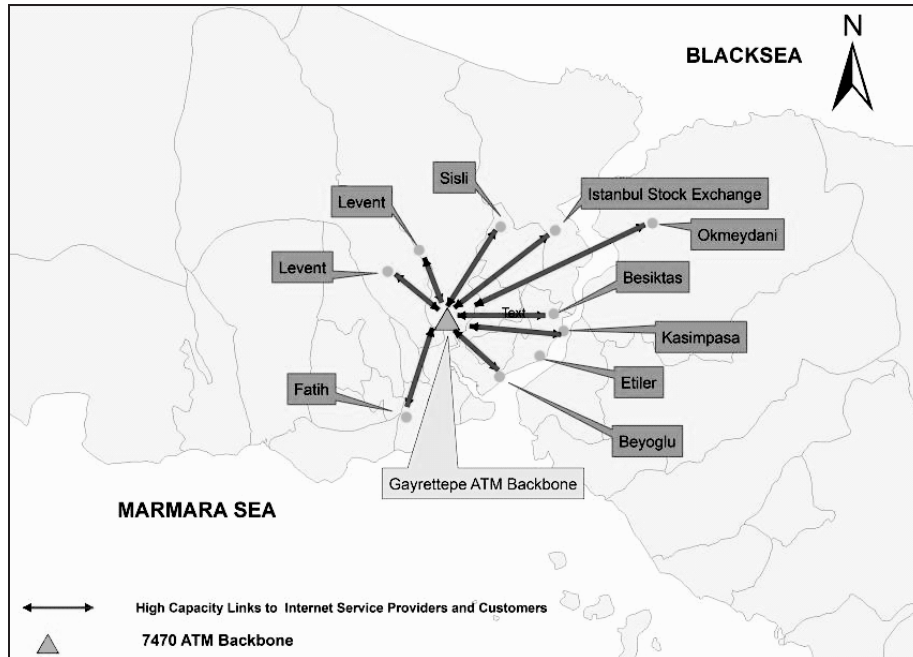
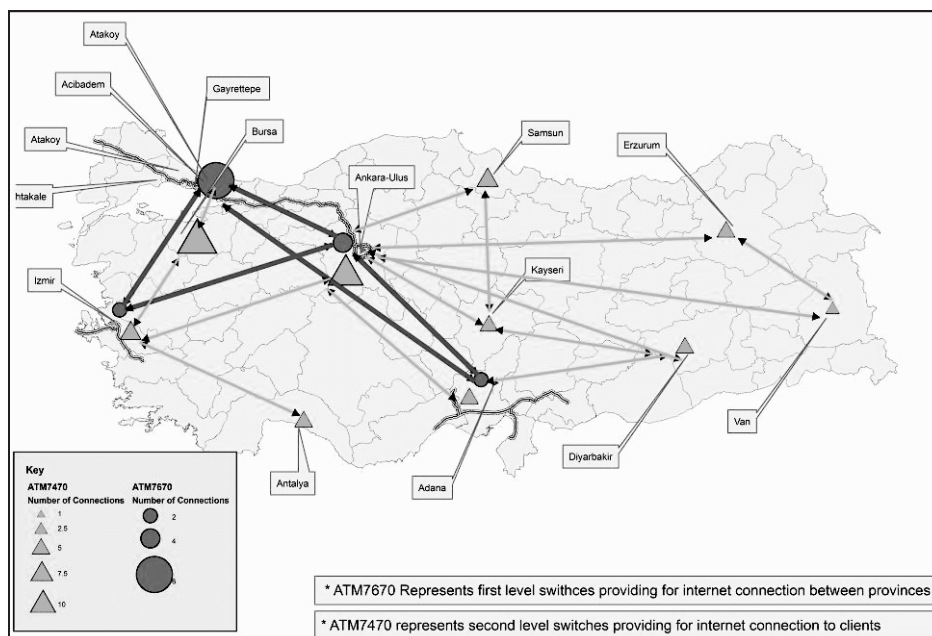


Figure 9. TTNet national Internet infrastructure of 2003



In the same period, retail stores also started to relocate to these sub-centers. With the rising shopping mall concept, the retail facilities slithered towards these sub-centers along the more accessible main roads (see Taşan- Kok, 2004). These sub-centers along Büyükdere Avenue—consisting of high-rise office buildings, plazas, shopping malls, and residential areas—show a linear development. The plazas constructed here were ‘smart buildings’, offering ICT as well (Dökmeci & Berköz, 2000).

The infrastructure of this newly developing site was far more salubrious than the inner-city CBD. At the same time, the connectivity to ICT was more important than the internal network within the building, as ICT infrastructure was being established by Turk Telekom which belonged to the public sector before its privatization in 2005. Up until 2003, Turk Telekom was the sole ICT service provider. The establishment of ICT infrastructure was, and still is, totally provided by Turk Telekom.

Five main ports are located on the north axis as indicated in the Ttnet National Internet Infrastructure Network Management Topology Chart of 2003 (see Figure 8). The main switch is at the east part of the northern axis (in Gayrettepe). The arterial switches along the axis are in Beşiktaş, Şişli, Levent, and Ayazağa (see Figure 8). Another important switch is located near Istanbul Stock Exchange Headquarters. These switches are also the main backbones for the international outflows.

The main switch was established in Gayrettepe, which is also on the north axis, and the other switches are distributed along it as shown in Figure 8. It is also determined that the size of the entrepreneurships had parallel tendency in the usage of ICT, and its usage in the establishments is mostly oriented in banking and finance services. Both the large-scale enterprises and banking and finance services are located on the north axis. The relationships between the service sector and ICT infrastructure are important since they indicate the

ICT-intensive CBD restructuring along it. Also, it provides an advanced and high-level service sector, including about 80% of Istanbul’s total service employees (TURKSTAT, 2006).

On the other hand, by 2000, Internet users in Turkey totaled approximately two million (Çağiltay, 2000). Thirteen years after the establishment of the Internet in Turkey, it is assumed that Internet users total almost 15 million, and two million of them are members of broadband TTNET ADSL services (TÜBİDER, 2006). The main switches and their linkage values in Turkey are shown in Figure 9. It is obvious that Istanbul performs more connections than the other provinces.

Within its region Istanbul is a major command and control center both in ICT and finance. Following the 1980s, the neo-liberalization policies of markets and the acceleration of globalization find their urban spatial reflections on the north axis. The deconcentration of the industrial facilities and the sprawl of the CBD along the axis started during the 1960s with new transportation routes and the construction of the Bosphorus Bridge. However, the urban space transformations connected to ICT were solely observed following the 1990s.

CONCLUSION

Having examined the spatial changes culminating in the new CBD formation in Istanbul, the most important finding of this study is that the urban space transformations in Istanbul CBD were not essentially triggered by ICT. We took a departure from the assumption that the current transformations of CBD in connection to ICT cannot be explained without considering the globalization process, by drawing on the deconcentration and restructuring theories. They attempt to explain the transformations and the reshaping process of the ‘global cities’. As we have already asserted, both of these theories are valid in explaining different levels of the urban transformation processes.

The north axis was already in progress within a restructuring urban context. By the 1980s, its characteristics had been started to be defined by the neo-liberalization of the economy, increasing will to integrate into the globalization process, connections to global markets, and the keen interest of the foreign entrepreneurs and investments. The developments in ICT after the 1980s accelerated the restructuring process of Istanbul in Turkey, as well as the cities throughout the globalizing world. Thus, in Istanbul, the Maslak area also proves the main arguments of the restructuring theory.

On the other hand, with the intensive use of ICT, the production facilities of the firms were distributed to suburbs such as the new industrial parks at the edge of Istanbul along İzmit, Bursa, and Kocaeli axes; to other cities such as Bursa, Kocaeli, İzmit, and Gebze; to smaller cities; to Anatolia; or even to offshore. This coincided with the alliances with foreign entrepreneurs seeking a cheap labor force and the sources of raw materials in developing countries. Also, the suburbanization of residential areas, shopping malls, and recreational facilities, which are observed within the relocation process of urban activities, can be explained with deconcentration theory.

However, the current CBD formation of Istanbul is a culmination of the agglomeration tendencies of administrative functions of the firms. The traditional and historical city center of Istanbul cannot meet the new spatial necessities of multinational corporations because it lacks new spatial facilities, and because of its physical infrastructure of ICT, transportation, parking lots, expensive and limited land, restricted building spaces and construction regulations, the social infrastructure of recreational and cultural facilities, its relatively difficult accessibility, and so forth.

It is also a common process that in a global city, the single center is converted into a multi-centered structure. This process realized in Maslak, Istanbul, as well. The north axis is a means to this new CBD formation. The historical city center was

splintered along the north axis. The new CBDs were structured along this axis piecemeal. Starting from Taksim, the districts such as Beşiktaş, Gayrettepe, Zincirlikuyu, Şişli, Mecidiyeköy, Levent, and Maslak became city centers along the axis. The latter is also dominated by the relocation of the governmental organizations.

To conclude, regarding the new spatial transformations in Istanbul, ICT does not appear among the primary determining factors in urban space, but appears as a persecutor one. In Istanbul, the intensification of ICT in the new CBD follows the dynamics shaping the city at various levels after the transition from closed economic policies to neo-liberal ones during the 1980s. The restructuring process of Istanbul has been traversed by its integration to globalization, of which the main economic activities traversed to the service sector from the production/industrial sector. It has been accelerated by the foreign-direct investments and the embeddedness of new technologies in urban space. Thus, the northern axis sticks out as the ICT-intensive new CBD of Istanbul.

FUTURE RESEARCH DIRECTIONS

It is possible to assume that the changes in the land ownership in Istanbul CBD were also performed in an ad hoc manner. Hence the rest of the axis showed the same tendency of piecemeal development. The actual situation can be explained by drawing on a work that comprehensively examines the changes in land ownership, and indicates the actual dates and transformations of these alterations.

Another possible research area can be a detailed study of the northern axis by using data transfer rates, densities, and frequencies of firms through ICT systems. Such a study may represent more meaningful insights if they are to be based on the selected service corporations by the GaWC Study Group and other foreign direct investment corporations, including the local ones. A comparative study with other metropolitan cities around the

world as well as Turkey may help to understand the ICT usage, urban space transformations, and globalization process in Istanbul.

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ENDNOTES

¹ Various academicians and theoreticians study the effects of ICT in the urban spatial context in relation to globalization process. To cite a few: Sassen (1991, 1997, 1998, 2002); Castells (1991, 1997, 2000); Moss and Townsend (2000); Wheeler et al. (2000); Short, Breitbach, Buckmann, and Essex (2000); Godfrey (1995); Graham and Marvin (1997, 2000, 2001); Beaverstock et al. (1999); GaWC Study Group (1997-2007); GURU (2001-2007); Öncü and Weyland (1997); Taylor (1997, 2003); Mitchell (1996); Audirac (2002); Kitchin (1998); Hall and Pfeiffer (2000); and Moss (1996, 1997, 2001).

² İstanbul is currently the largest city in Turkey. Its population is 10,018,735 (TURK-STAT, 2000). At western and eastern sides of Bosphorus (European and Anatolian sides, respectively), there are 32 counties that have their own municipal administrative autonomy within the boundaries of the İstanbul Greater Municipality. In Figure 1, the municipal borders of the counties at the surrounding environment of the current ICT-intensive CBD is given. The traditional city center of İstanbul (namely Beyoğlu and Eminönü) is on the historical peninsula at the south of the European side. The current CBD axis follows a line from the south up to the north, beginning at Beşiktaş, continuing along Barbaros Avenue and Büyükdere Boulevard to Maslak and Ayazağa (see Figure 2). Beşiktaş is separated from the historical city center by Goldenhorn Bay towards the north which is at the same time the first splintering point of the central functions in the first ring (see footnote 6 for the explanation of rings).

- ³ The works on the transformation process of CBD such as Dökmeci et al. (1993), Özdemir (2000), Cengiz (1995), Dökmeci and Berköz (2000), Aysu (1990), and Yücel (1996) were of ultimate importance for this study. On the other hand, interviews with Murat Diren, Turk Telekom's General Manager Mehmet Beytur, and the authorized people from the Şişli Municipality Planning Department provided invaluable data for us.
- ⁴ The GaWC Study Group and Networks' Honorary founders are Peter Hall, Saskia Sassen, and Nigel Thrift. Its contributors are from various countries. The group's works focus on globalization and world city formations. For more information, see <http://www.lboro.ac.uk/gawc>
- ⁵ The world cities inventory prepared by the GaWC Study Group has four main groups: Alpha, Beta, Gamma World Cities, and Evidence of World City Formation. In this inventory, whereby Istanbul had been counted as a Gamma World City, the hierarchical tendencies of world cities were classified. The studies were done regarding the several service sectors and their corporations. These sectors are accountancy, advertising, banking/finance, insurance, law, management, and consultancy.
- ⁶ The first ring consists of Beşiktaş, Eyüp, Fatih, Kadıköy, Şişli, Üsküdar, and Zeytinburnu districts; and the second ring of Adalar, Bakirköy, Beykoz, Gaziosmanpaşa, Sarıyer, and Kartal districts (Dökmeci & Berköz, 2000).
- ⁷ Hereafter, Beşiktaş-Maslak axis will be referred as "the north axis."
- ⁸ The term "telecommuting" was used by Jack Niles during the 1970s. Telecommuting proposes a home-office system for the first time, working from home via ICT (Graham & Marvin, 2000). Furthermore, telecommuting is a job description valid for the employed and salaried staff by an established firm who works at home via telecommunications, but not the self-employed.
- ⁹ It should be noted that one of the problems of Beşiktaş-Maslak axis development was, and still is, that there are several different municipalities (namely Beşiktaş, Şişli, and Sarıyer municipalities) in charge of planning different sites along Büyükdere Avenue. Furthermore, along the axis, one side of the highway stays within the borders of one municipality, the other side within those of another one. This peculiar situation made planning more difficult to be united, thus it had been developed piecemeal. In the following pages, we will examine the evolution process leading to the present CBD formation along the Beşiktaş-Maslak axis.
- ¹⁰ Closed economy is an economic term describing the condition that one nation does not trade with foreign countries. Until 1980, Turkey led a closed-economy policy. After the economical policy changed from closed economy to liberal market policies, foreign trade was supported by government promotions, production was utilized to export oriented industries, and the fiscal policies had been revised for improving and restructuring the financial markets (Erçel, 1999).
- ¹¹ The squatter housings were also indicating the lack of the residential areas. The suburban areas, which were out of the municipality border, had begun and sold rapidly, thus was created the land speculation.
- ¹² Following 1980, four new pieces of legislation and applications for the local governments were introduced. These are (Tekeli, 1994, p. 169):
1. Changes in the organization of local administrations,
 2. Changes in development regulations,
 3. Changes in housing policy and duties of local administration and governments

4. Conservation legislation and special laws for preservation of the Bosphorus area.
- ¹³ The military zone will not be referred from this point onward, since the borders and usage of the area cannot be changed.
- ¹⁴ The services sector mainly has 11 sub-categories (IMP, 2006):
1. Investment and Administration
 2. Banking and Finance
 3. Insurance
 4. Real Estate Counselor
 5. Advertising and Advertising Agency Supporting Services
 6. Customs Agency
 7. Hardware and Software Firms
 8. Accounting , Financial Advisor, and Business Councilor
 9. Architecture and Engineering Firms
 10. Law Offices and Firms
 11. Distribution Company, General Post Delivery, and Courier Services