### Kadir Temurçin

# The development and structure of industry in the district of Bağcılar, Istanbul

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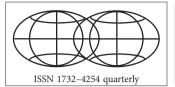
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## The development and structure of industry in the district of Bağcılar, Istanbul

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**Abstract.** As a part of Istanbul Metropolis, Bağcılar has been one of the leading centers of developments in parallel with the developments in outward-oriented economy and industrialization in the 1980's in Turkey. After these years of experiencing rapid urbanisation and industrialisation, the district has taken a look far from its earlier appearance. During this period of migration fact from suburbs to the cities, one of those who took the biggest share is Bağcılar. The purpose of this study is to determine the historical development of industrialization in Bağcılar and the causes of this development, its structure, and its sectors distribution. As an operation of a regional industry, this study handles the features of Bağcılar District Location, the factors that affect the industry in the District, the sectors distribution of industry and environmental issues.

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### Contents:

1.	Introduction	96
2.	Factors affecting industry in Bağcılar District	99
3.	Industrial development of Bağcılar District	101
	3.1. Industry before 1980	102
	3.2. Industry between 1980 and 2010	105
4.	Division of industry sectors in Bağcılar District	107
5.	Environmental impact of industry in Bağcılar District	109
6.	Conclusions	109
	Notes	110
	References	110

#### 1. Introduction

Istanbul Province is located in the Marmara Region in the northwest of Turkey, on the two sides of the Bosphorus, where Asia and Europe come the closest. The Province of Istanbul is composed of a total of 31 districts, 29 of which are in Europe, and 10 on the Asian Continent. Bağcılar district is one of them and it which constitutes the field of study. Bağcılar District is located in the Marmara Region; on the European side of Istanbul and within the boundaries of Istanbul Metropolitan Municipality. The district is surrounded by Küçükçekmece to the west, Bahçelievler to the south, Güngören to the southeast, Başakşehir to the northwest, and Esenler to the east and north (Fig. 1).

The purpose of this study is to determine the historical development of industrialization in Bağcılar and the causes of this development, its structure, and the distribution of its sectors. As it is an example of the operation of a regional industry, this study deals with the features of Bağcılar District Location, the factors that affect the industry in the District, the distribution of the sectors of industry and environmental issues.

The paper uses data collective from Bağcılar Municipality, Turkish Statistical Institute (TSI), Turkey Employment Agency (TEA), Istanbul Chamber of Industry (ICI).

The intensification and spread of economic activities in different fields is the result of the functional relationship of economic factors with each other. Thus, main locations are composed where the economic activities are condensed, and these main locations reach the status of centres that attract all kinds of economic activities. In Turkey the most important centre in which the economic activities are condensed is Istanbul (Mutluer, 1995: 1). Industrial plants firstly develop from the interior portions of the cities, then spread around the city, and so encourage the spread of cities territorially (Tümertekin, 1984: 109-128). In Turkey, in large cities such as Istanbul, new areas are opened for new industrial activities often located at the edges of cities and agricultural areas, old recreational areas, and suburbs (Özgüç, 1986-1987: 135). As a result of the rapid and unplanned urbanization and increase in land prices - which has been taking place since the second half of the 1980's, decentralization movements started, and the industrial facilities in Istanbul began to move out of the town (Karakuyu, 2008: 21–49).

The research area is located in the Catalca-Kocaeli part of the Marmara Region, on the European side of Istanbul, within the boundaries of Istanbul Metropolitan Municipality. Until the last 25-30 years, there was vegetable (crop) production in Bağcılar where 72% of the land was arable and people were sold their produce and bred animals in order to live. The industrialization movement, which initiated the establishment of factories in the district in the years of 1956, 1959 and 1962, developed rapidly in parallel with the development in industrialization and the open economy in Turkey after the 1980's. Bağcılar district which is part of Istanbul, being the most significant province with regard to development and sophistication, hask more than 5% of the industrial facilities within its boundaries. Bağcılar district is among the top five districts, where there is intensive industry. By the year 2010, there were 710 industrial facilities registered at the Istanbul Chamber of Industry in Bağcılar. The majority of these facilities are in Bağcılar, Evren, Mahmutbey and Güneşli neighbourhoods which make up the Western part of the district because of the E-5 highway.

As a part of Istanbul Metropolis, Bağcılar has been one of the leading centres of developments in parallel with the developments in outward-oriented economy and industrialization in the 1980's in Turkey. After these years of experiencing rapid urbanisation and industrialisation, the district has taken on a look far from its earlier appearance. During this period of migration from the suburbs to the cities, one of those who took the biggest share is Bağcılar.

Bağcılar, the date of whose settlement goes back to very old times, was formed as a result of the migration of 63 households, from Varna, Bulgaria in 1929, who bought 17,000 acres of farm land known as Çıfıtburgaz. During this period, due to the distribution of seedlings provided by the state to the public, this region with over forty varieties of grapes grown in vineyards and with some famous species, was named after Bağcılar. Also, currently, 24<sup>th</sup> Street in Central District and Devekaldırımı Street are located on the Silk Road route.

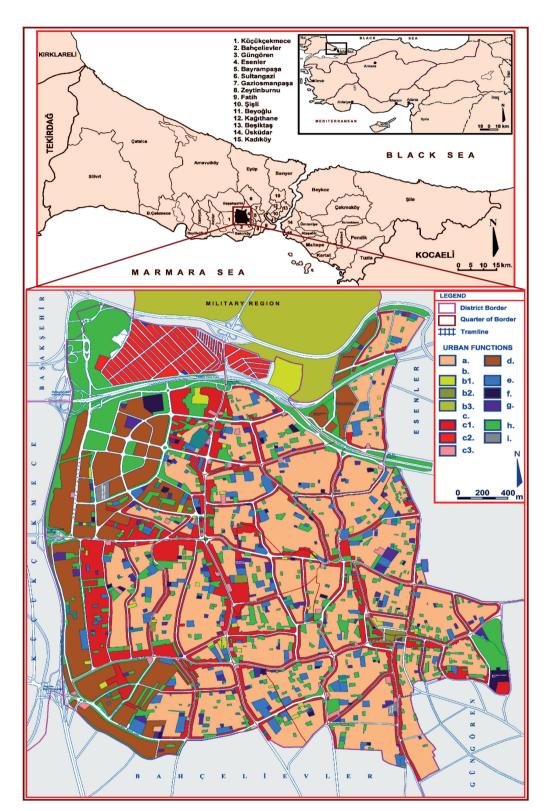


Fig. 1. Location map of Bağcılar District and urban functions

Explanation: a. – residental areas (housing), b. – official areas, b1. – administrative areas, b2. – municipalty areas, b3. – military areas, c. – trade areas, c1. – business, c2. – ISTOC business center, c3. – other trade areas, d. – industry areas, e. – education areas, f. – health areas, g. – social areas, h. – parks, gardens and forest, i. – cemetery

Source: Bağcılar Municipality 2011

Bağcılar is one of the villages of Mahmutbey County where the Greek population lived during the Ottoman period. During this period, there were 11 (1) villages connected to Mahmutbey County, which is one of the oldest settlements in İstanbul (2). Each of these villages, which are today urban centres, looked like small villages until the 1950s. At the same time, each of these villages, which were established on a separate ridge, has grown up and integrated by merging in the valley.

Bağcılar district was founded by combining the four regions (Mahmutbey, Güneşli, Kirazlı and Bağcılar) connected to Bakırköy in 1992. These are Kalfa Köy (Mahmutbey), Papazçiftliği (Güneşli), Aypa (Kirazlı) and Çıfıtburgaz (Bağcılar) settlements, which constituted the basis of the district. In these villages, which served as the first settlements in Bağcılar, the economy was totally agriculture–based in previous times. In the villages, families who were engaged in farming made their living from raising produce including especially grapes, wheat, barley, oats, corn, watermelons, cantaloupes, cherries, Figs, walnuts, plums and peaches. Farmers marketed this produce and bred cattle, goats and sheep.

One of the country's economic activities, the motor of development and globalization, is industry. Investigation of the Industrial activities geographically implies ordering the main geographical aspects of industrial activities under three titles: distribution scheme, their interactions with various elements in the area they settled, their relationships to

other districts. As well as its contribution to the urban economy, industrial production has important effects on urban structure in the context of industrial activities, site selection and their relationship with each other. Industrial activities accelerate due to the technological advances basically, new developing technological structures create important effects on processes of production, and the position and range of manufacturing units change.

In Turkey regional distribution of industrial establishments is not balanced, and 51.8% of industrial added value is concentrated in the Marmara Region. Industry in Istanbul has a very important place in the industrial sector of Turkey. Istanbul province, although it makes up only 7 per thousand in the area of Turkey, is a major metropolitan area which contains approximately 18% of the population. By 2010 22,595,000 people were employed in various sectors in Turkey. 17.5% (3,947,000) of Turkey's employed population is located in Istanbul. According to the distribution of employed population in Turkey on a sector basis, Istanbul province contains 26.6% of the industrial sector, 21.4% of the service sector and 0.3% of the agricultural sector (Table 1). 0.4% of the active population in agriculture, 39.9% of industry and 59.7% of the service sector are working in the province of Istanbul. The province of Istanbul carries out 50.6% of Turkey's total foreign trade, 46.7% of total exports and 53% of total imports. 43% of the 500 largest industrial establishments in Turkey are also in Istanbul (ICI, 2010; TSI, 2010).

Table 1. The population employed in Turkey and status of the İstanbul Province (x1000)

The population employed	Agriculture	Industry	Service	Total
İstanbul province	16	1,577	2,354	3,947
%	0.5	39.9	59.6	100
Turkey	5,683	5,927	10,985	22,595
%	25.1	26.2	48.7	100
The share of Istanbul in Turkey %	0.3	26.6	21.4	17.5

Source: Turkish Statistical Institute 2010

Industrial facilities in the province of Istanbul are mostly located in organized industrial zones and due to unplanned construction they are located within settlement areas. While 76% of industrial establishments are located on the European side

and 24% of them are located on the Asian side. On the European side İkitelli, Beylikdüzü, Hadımköy and Kıraç, on the Anatolian side Tuzla and Ümraniye zones are areas where industrial facilities are concentrated. According to the distribution of industrial facilties in urban areas in the province of Istanbul, Büyükçekmece and Küçükçekmece districts share first place with 9% and these districts are followed by Şişli and Güngören with 6%, Bağcılar, Zeytinburnu, Kağıthane and Bayrampaşa 5% and Gaziosmanpaşa with 4%. Bağcılar district is in the first 5 districts in which industry is concentrated.

According to industrial sectors in Istanbul and the employed population in these sectors, the garment and apparel industry is important at a rate of 29% and this sector is followed by metal products (11%), and machinery and equipment (8%) together with the plastic and rubber industry. Looking at the employment rates in these sectors, the apparel and garment industry still leads and this sector is followed by textiles (9%), food (7%), and land and sea vehicles (7%) (ICI, 2010).

### 2. Factors affecting industry in Bağcılar District

One of the most important features of modern industry is the need for a location which will provide raw materials economically. But today, raw materials can be provided easily due to the development of transportation systems, complex industrial establishments and technological developments. Manpower and the market are other important factors (Tümertekin and Özgüç, 2005: 433). A reason for the establishment of industrial facilities in Bağcılar is not to be close to sources of raw materials, but to be close to the market, sector specialization and transport possibilities. Especially as in the study area, the location factor is eliminated slowly due to obtained energy from an interconnected system.

Despite intensive mechanization, in modern industry the availability of a qualified labour force and its costs are still an important factor (Tümertekin and Özgüç, 2005: 434). In general, industrial branches provide for a large number of people to be hired. A qualified workforce is important for efficiency and also it is the group who can use modern tools and equipment in industry. In addition, the industry's commitment with a large force of labour has led to the establishment of a linear relationship between industrial activities on earth and population density.

According to the year 2010 Address Based Population Census, Turkey's total population is 73,722,988.

The province of Istanbul constitutes 18% (13,255,685) of the population of Turkey. Bağcılar, Küçükçekmece, Ümraniye, Bahçelievler, Pendik are Istanbul's most populous districts in terms of the amount of the population. Bağcılar District contains 5.6% (738,809) of this population. 68% of the total population in the district of Bağcılar is the active population (TEA, 2010). In Bağcılar, according to the distribution of population by age groups in a wide range, 29.2% of population consists of children (0–14), 65.5% of population consists of adults (15–64), 3.3% of population consists of elderly people (65 and older) (TSI, 2010).

By 2000 in Bağcılar, the population density was 25,278 to sq km, by 2010 the population density increased to 33,582 to sq km. According to the population density of neighbourhoods in 2010, the highest population density areas are Yenigün, Çınar, Yıldıztepe and Fatih neighbourhoods. Minimum population density areas are Mahmutbey, Bağlar, Evren neighbourhoods, where intensive industrialization is located (Table 2).

Transportation is an indispensable element for development in a country, region, province or district. On the one hand, supply of raw materials, and on the other hand easy transport of finished products are main factors for development of industrialization. For this reason, one of the most important factors for both the establishment and development of industrial facilities is easy transport by sea, road, rail and even air transport (Atalay, 2005: 201). In addition, transport of the workers to facilities is possible in a fast organized and efficient way. In Bağcılar, the main factor of development of industry is transportation.

To be located in the Marmara Region which is the most developed area of Turkey in terms of transportation and to be in Istanbul province provides great benefits to Bağcılar. The district is located between Turkey's most important highway M–80 (TEM)'s O–2 route and south–west and north–east of express links of the E–100 (the old E–5) which is established between Edirne– Ankara. In addition, Mahmutbey highway, which is the most important second transport route of Istanbul, is in the northern border (Fig. 1). In the district, local transportation is also well developed and the roads are connected to specified streets. Although there is no coastline in Bağcılar, transportation is easy to Istanbul's major ports (3) and airports thanks to highways.

Table 2. In Bağcılar District population distribution and density of neighbourhoods

Name		Area	Density
of Neighbourhood	Population	(km²)	(person/km²)
Yenigün	25,949	0.3	86,496
Çınar	38,638	0.5	77,275
Yıldıztepe	42,929	0.6	71,548
Fatih	47,001	0.7	67,144
Kemalpaşa	38,512	0.6	64,186
İnönü	26,510	0.5	53,019
Sancaktepe	20,417	0.4	51,042
K.Karabekir	25,027	0.5	50,054
Demirkapı	53,074	1.1	48,249
Kirazlı	43,387	0.9	48,208
Yavuz Selim	28,274	0.6	47,123
Barbaros	18,181	0.4	45,452
Yeni	35,433	0.8	44,292
Hürriyet	25,590	0.6	42,650
Fevzi Çakmak	32,293	0.8	40,366
Yüzyıl	52,029	1.3	40,023
Güneşli	40,289	1.2	33,574
Merkez	25,710	0.9	28,566
Göztepe	34,924	1.3	26,865
Evren	46,210	1.9	24,321
Bağlar	13,454	1.4	9,610
Mahmutbey	24,979	4.7	5,315
Total	738,809	22	33,582

Source: Bağcılar Municipality and Turkish Statistical Institute 2010

Industrial plant construction requires a large amount of capital in terms of raw materials, machines and other needs, transportation and marketing execution services, workers' payment, etc. In other words, large industrial facilities are being set up and existing capacity is expanded at the centres of capital (Atalay, 2005: 203). In Bağcılar district, existing industrial facilities belong to private sectors and they have been established with entrepreneurs' own capital. With globalization, in today's modern industry, foreign funds invest and establish various partnerships in another country. In Bağcılar, USAŞ (Aircraft Service Inc.), which is operating in the food industry, is a part of the world's largest independent airline catering company with its 97 units in 28 countries (4). Various industry facilities which

are operating in the district have been evaluating their capital in different countries. One of these industrial institutions is Ayka Textile and it has activities in Ethiopia.

The aim of industry is to produce goods in order to sell them (Tümertekin and Özgüç 2005: 437). In other words, the sale of produced goods, namely marketing, is one of the important criteria that should be taken into consideration in the establishment of industry (Atalay, 2005: 200). In any country, region, province and district, the sale of manufactured goods in the production area or foreign selling at reasonable prices, exports need to be done for development of industry. There is an important relationship between the distribution of industrial establishments and the market. For these reasons,

the Marmara Region has become the most important area with the most intensive industrial activities (Atalay, 2005: 200).

Bağcılar is located in the middle of the market due to its location. The most important of these markets is Istanbul province and its hinterland. There are 710 large and small industrial facilities in the district. These facilities cater for national and international markets outside the local one. In particular, the companies producing textiles, apparel and leather, paper and paper products and the printing industry, metal products, machinery equipment, transport vehicles, etc. have an important place in the international market outside national markets. Some of these companies are İçdaş, Ziylan Shoes, Çak Textile, Ayka Textile, Taner Triko, Taha Clothing, Hey Textile, Kama Pres, Kanca Hand Tools and Dövme Steel. Branding is another element in the industrial sector. In this context, Ziylan Shoes has formed its own brands by buying the rights of Polaris, Kinetix, Flogart, Proshot Torex, Halley and Rootless. Also Çak Textile and Taha Clothing have formed their own brands buying the rights of LTB by Little bigs and LcWaikiki, a French brand in 1997, respectively.

### 3. Industrial development of Bağcılar District

In the research area, 710 manufacturing industry establishments are still active. In these industrial facilities, while 48.5% of them (344) have under 25 employees people, 51.5% of employers (366) are medium-large scale industrial facilities over 25 employees. According to the establishment of these facilities, 655 of them (92.3%) were established after 1980, and 55 of them (7.7%) before 1980 (Table 3). In Bağcılar, 92.1% of medium-large industry establishments and also 92.5% of small scale (5) establishments were opened after 1980. Medium and large industrial establishments which employ 25 and over increased in the period 1990-2000, and small industrial establishments which employ 25 and under increased in the period 2000-2010 (Table 3). The economic crises in Turkey and the world between the years 2001 and 2008 had negative effects on both large and small industrial establishments, but these crises led to downsizing in very large establishments, and some of them even closed down. Insufficient land and shifting out of city centers are also causes of that downsizing.

Table 3. Distribution of industrial facilities in Bağcılar District

Establishmant Davis 1	25 Employe	ees and over	25 Employee	es and under	Total		
Establishment Period	A	%	A	%	A	%	
1950 - 1960	2	0.5	_	_	2	0.3	
1960 - 1970	8	2.2	5	1.4	13	1.8	
1970 - 1980	19	5.2	21	6.1	40	5.6	
1980 – 1990	82	22.4	24	7	106	15	
1990 - 2000	151	41.3	142	41.3	293	41.3	
2000 - 2010	104	28.4	152	44.2	256	36	
Total	366	100	344	100	710	100	

Explanation: A – Number of establishments Source: Istanbul Chamber of Industry 2010

In the district, according to the history of establishment of industrial establishments with 25 employees and over, there can be seen the opening of 1% in 1950–1960, 2% in 1960–1970, 5% in 1970–1980, 22% in 1980–1990, 41% in 1990–2000, and

29% in 2000–2010. These values show that industrialization of Bağcılar is in a rapid increase from the past to the present but the 12% reduction in facility numbers attracts attention in the period 2000–2010. Almost half of industrial facilities in Bağcılar

were opened in 1990–2000. In 1992, Bağcılar became a district and this is the biggest factor in the intensification of industry. The new status of the district of Bağcılar affected positively small industrial establishments and 85% of these establishments were opened after 1990 (Table 3).

### 3.1. Industry before 1980

In Turkey, the establishment stage of industry began in the first years of the Republic. After the 1950's, development of transportation opportunities, accompanied by an increase in population migration from rural areas to cities and the potential of the workforce in towns, as well as the government sector increasing the private sector and its investment in industry enabled the development and diversification of industry. This movement from the 1950s has continued to the present with various ups and downs.

The development of industrialization was much more felt in Istanbul. Especially the industrialization movement after the 1950s led to intensive migration from rural areas to Istanbul. The population coming from rural to urban areas began to settle in back parts of the city. Our study area, Bağcılar has been home for this population which came from rural to urban areas. Especially with the intensive migration in the 1970s, in parallel with developments in industry, in 1975 a municipality was established in Bağcılar, but this situation did not last long and the status of town was withdrawn in the 1980 military coup. Afterwards, in 1992 it gained both the municipal and district status. Population growth accelerated even more after this period, and it has grown along with industrialization.

According to the Istanbul Chamber of Industry, in Bağcılar between 1950–1960 there were 2 large business, in the period 1960–1970, 8 large and 5 small businesses, so a total of 13 and in the period 1970–1980, 19 large, 21 small for a total of 40 companies which were established. In total 55 plants were established before 1980 and 7.7% of the established facilities were opened before 1980. These facilities consist of 29 medium and large establishments and 26 small establishments. According to the sectoral distribution of these industrial establishments, the textile, apparel and leather indus-

try ranks first with 19 establishments (11 of them are large industries) and industries producing metal products, machinery equipment, transport, scientific and professional measuring instruments follow this sector with 14 establishments (6 of them are major industries). With 7 establishments (5 of them are major industries) is the paper and paper products and printing industry, with 6 establishments the base metal industry and 4 chemical establishments, while the petroleum, rubber and plastic products sector follows all. During this period, the food, drink and tobacco industry, wood products and furniture industry, stone and land-based industries, information technology are ranked in the lasts positions (Table 4 and 5).

In Bağcılar, Iron and Steel Industry Plant facilities operating during this period were the first, when it was established in 1956. Again during this period, for paper and paper products and the printing industry Altın Kitap Publishing House, which was established in 1959, for textile, apparel and leather industries Öğretmen Hosiery Factory which was established in 1962, for metal products, machinery equipment, transport, scientific and professional measurement devices the Motorsan Motor Industry which was established in 1969 and for the chemical, petroleum, coal, rubber and plastic products industry Yıldız Plastic which was established in 1969 are the first established industries. Bağlar, Mahmutbey, Evren and Güneşli neighborhoods are the centres where the industry developed before 1980 (Fig. 2).

In industrial establishments which were established before 1980, with 2,300 employees İçdaş Steel which was established in 1970 and produces iron and steel, with 1,057 employees, Edip Yarn which was established in 1971 and produces yarn manufacturing are facilities which have the most number of employees compared with other facilities in Bağcılar. In addition, Matraş Leather Industry with leather and fur production, Broderi Delicate Embroidered Fabric Industry with tulle, lace and embroidery, Hürriyet Journalism with printing and publishing activity and Orjin Leather Garment with fur apparel production are other important facilities which have over 300 employees. Furthermore, in the facilities which were established before 1980, there are 10 facilities which have over 100 employees.

Table 4. In Bağcılar District distribution of industrial facilities (which employ 25 and over by sectors)

Janufacturing Sectors		Before 1980		1980-1990		)-2000	2000	-2010
Manufacturing Sectors	A	%	A	%	A	%	A	%
Manufacture of food, beverages and tobacco	_	_	4	4,9	9	6	3	2.9
Textile, wearing apparel and leather	11	38	48	58.5	98	65	80	77
Manufacture of wood and wood, products including fur-								
nitures	_	_	2	2.4	1	0.7	2	1.9
Manufacture of paper and paper products, printing and								
publishing	5	17.2	11	13.5	16	10.6	9	8.7
Manufacture of chemicals and chemicals of petroleum,								
coal, rubber and plastic products	1	3.4	4	4.9	4	2.6	4	3.8
Manufacture of non metalic mineral products except								
products of petroleum and coal	_	_	2	2.4	4	2.6	_	_
Basic metal industries	6	20.7	1	1.2	1	0.7	_	_
Manufacture of fabricated metal products, machinery								
and equipment, transport equipment, professional and								
scentific and measuring and controlling equipment	6	20.7	10	12.2	10	6.6	3	2.9
Information industry	_	_	_	_	4	2.6	1	0.9
Other manufacturing industry	_	_	_	_	4	2.6	2	1.9
Total	29	100	82	100	151	100	104	100

Explanation: A - Number of establishments

Source: Istanbul Chamber of Industry 2010

Table 5. In Bağcılar, Distribution of Industrial Facilities (which employ 25 and under by sectors).

Manufacturing Sectors —		Before 1980		1980-1990		1990-2000		2000-2010	
		%	A	%	A	%	A	%	
Manufacture of food, beverages and tobacco	2	7.7	0	0	6	4,2	5	3.3	
Textile, wearing apparel and leather	8	30.8	13	54.2	75	52.8	91	59.9	
Manufacture of wood and wood, products including furnitures	1	3.8	0	0	4	2.8	2	1.3	
Manufacture of paper and paper products, printing and publishing	2	7.7	2	8.3	14	9.8	12	7.9	
Manufacture of chemicals and chemicals of petroleum, coal, rubber and plastic products	3	11.6	6	25	20	14.1	14	9.2	
Manufacture of non metalic mineral products except products of petroleum and coal	1	3.8	0	0	0	0	2	1.3	
Basic metal industries	0	0	0	0	3	2.2	0	0	
Manufacture of fabricated metal products, machinery and equipment, transport equipment, professional and									
scentific and measuring and controlling equipment	8	30.8	3	12.5	18	12.7	15	9.9	
Information technology industry	1	3.8	0	0	1	0.7	3	2	
Other manufacturing industry	0	0	0	0	1	0.7	8	5.2	
Total	26	100	24	100	142	100	152	100	

Explanation: A - Number of establishments

Source: Istanbul Chamber of Industry 2010

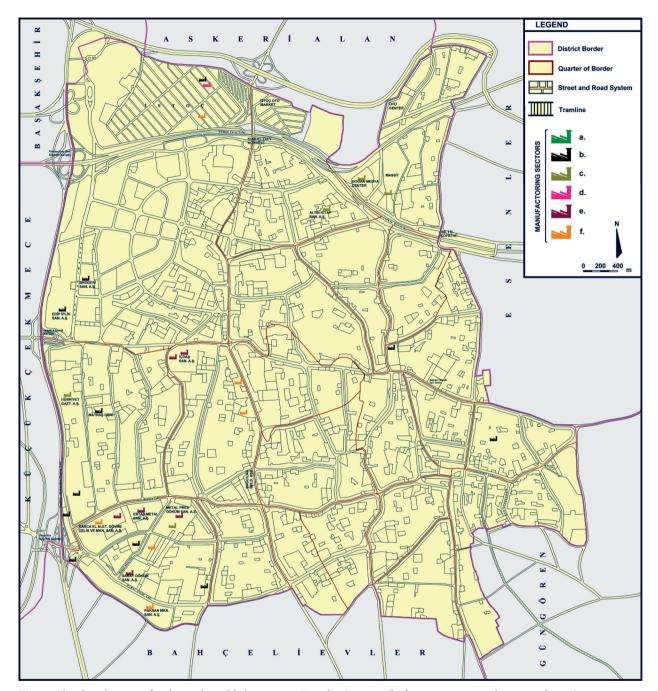


Fig. 2. The distribution of industrial establishments in Bağcılar District (before 1980, 25 employees and over)

Explanation: a. – manufacture of food, beverages and tobacco, b. – textile, wearing apparel and leather, c. – manufacture of paper and paper, printing and publishing, d. – manufacture of chemicals and chemicals of petroleum, coal, rubber and plastic products, e. – basic metal industries, f. – manufacture of fabricated metal products, machinery and equipment, transport equipment, professional and scentific and measuring and controlling equipment

Source: Elaborated by author based on Istanbul Chamber of Industry

### 3.2. Industry between 1980 and 2010

Industry has chosen Istanbul as the place of incorporation, following a tendency to create an external economy and take advantage of it for its important features like Turkey's largest and most important market, more easily accessible and cheaper raw materials and labour, technical infrastructure, accessibility and high level of social reinforcement. In the first half of the 1980s when Turkey's economy experienced conversion, 52.2% of the total medium and large scale industrial facilities and approximately 40% of the workforce which worked in the medium and large scale industrial establishments were in Istanbul.

Fifteen precent of industrial establishments which were established in the district were opened in the period 1980–1990. During this period, 82 medium and large establishments and addition 24 small businesses with a total of 106 facilities were established. When these industrial companies are examined by sector, with 61 establishments (48 large industrial) the textile, apparel and leather industry ranks first. Also with 13 major industries (11 major industries) paper and paper products and the printing industry, with 10 establishments chemical, petroleum, coal, rubber and plastic products industry is another big industry (Table 4 and 5).

Of the facilities established during 1980-1990, the first established industrial facilities were the following established in 1984, Anıl Bread and Baked Goods for the food, drink and tobacco industry, established in 1985 Murtaş Electronics Industry wood products and the furniture industry, and Alacalı Construction Industry which was established in 1987 for the stone and land-based industries. During this period, as in the period before 1980, Bağlar, Evren, Mahmutbey, Güneşli neighbourhoods are centres of concentrated industry thanks to the transport factor. Unlike the previous period of 1980--1990, 100th neighbourhood stand out as - a different neighbourhoods which are experienced in industry (especially as a regards paper and paper products and the printing industry) (Fig. 3).

In Bağcılar, the maximum number of industrial companies were in operation in the period 1990–2000. in comparsion to the previous period, during this term there was an increase of 84% in the number of opened facilities. Undoubtedly, the new-

ly acquired status of municipality and district of Bağcılar plays a leading role. 41.3% of the establishments (293) which registered in Istanbul Chamber of Industry opened during this period. These establishments are 151 medium and large establishments and 142 small businesses. If these industrial companies are examined on a sectorial basis, textiles, wearing apparel and leather industries lead with 173 establishments (98 large industries). With 30 establishments (16 large industries) paper and paper products and the printing industry, with 28 establishments (10 large industries) the industry producing metal products, machinery equipment, transport devices, scientific and professional measuring instruments follows other sectors (Table 4 and 5). Again in this period, 4 establishments of information technology which did not exist in the previous period and 4 more establishments in other industrial companies were established for service. In information technology industries, Akenez Tourism-Transportation, established in 1991 and other manufacturing industries, like Favori Jewellery, established in 1992 were the first facilities in these sectors (Fig. 3).

In the research area, in the period 2000–2010, 256 facilities were established and 36% of these facilities started to operate in this period. 104 of these facilities are medium and large establishments and 152 of these facilities are small establishments. When industrial facilities are analyzed by sectors; it could be seen that, with 171 establishments (80 large industries), textiles, clothing and leather industries lead and this sector is followed by, with 21 establishments (9 large industries), paper and paper products and the printing industry, with 18 establishments metal goods, machinery equipment, transport devices, scientific and professional measuring instruments and the chemical industry, petroleum, coal, rubber and plastic industries (Table 4 and 5). The period 2000-2010 is remarkable as the period of the most industrial establishments after 1990-2000. In this period, economic crises (2001 and 2008 economic crises), industrial facilities and urban planning reasons such as the decentralization of facilities represented major reasons for the decline in the number of facilities opened during the previous period. Before 1980, in the period 2000-2010 as well as 1980-1990, 1990-2000 Bağlar, Evren, Mahmutbey,

Güneşli and 100<sup>th</sup> Year neighbourhoods were the centres of the industry (Fig. 3).

In Bağcılar, after 1980, a total of 77 establishments which have 100 employees and over in the food, drink and tobacco sectors were operating (in the textile, apparel and leather industry; 4, in wood

products and the furniture industry; 50, in paper and paper products and the printing industry; 5, in the stone and land-based industrial sector; 3, in the basic metal industry sector; 3, in metal products, machinery equipment, transport vehicles, etc. sector; 10, in other manufacturing industry; 1 plant).

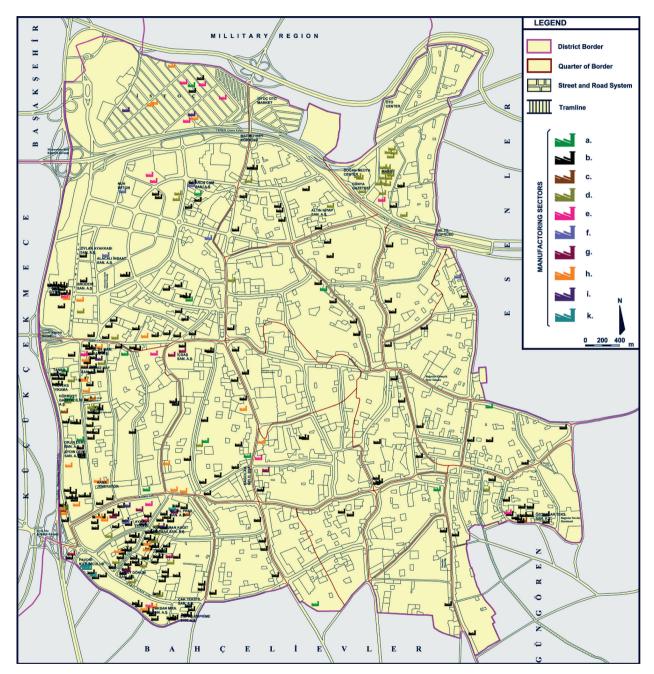


Fig. 3. The distribution of Industrial Establishments in Bağcılar (1980-2010, 25 employees and over)

Explanation: a. – manufacture of food, beverages and tobacco, b. – textile, wearing apparel and leather, c. – manufacture of wood and wood, products including furnish, d. – manufacture of paper and paper, printing and publishing, e. – manufacture of chemicals and chemicals of petroleum, coal, rubber and plastic products, f. – manufacture of non metalic mineral products except products of petroleum and coal, g. – basic metal industries, h. – manufacture of fabricated metal products, machinery and equipment, transport equipment, professional and scentific and measuring and controlling equipment, i. – information technology industry, k. – other manufacturing industry

Source: Elaborated by author based on Istanbul Chamber of Industry

Of industrial establishments established after 1980, Hey Textile opened in 1992 and engaged in the production of underwear with 1,039 employees, and Özcanlar Textile opened in 1982, which manufactures textile dyeing and discipline textiles with 950 employees are operating as two large facilities. In addition, Uçak Service in the production of ready meal service for air vehicles, Çak Textile, Gülom Textile and Taner Triko for apparel production, Ayka Textile for weaving and garment production, Ziylan Shoe for shoe production and Ser Durable Goods Industry for household and electrical appliances are other important establishments which have more than 300 employees.

### 4. Division of industry sectors in Bağcılar District

While 38,355 people are employed in the 710 facilities which are located in Bağcılar district, 4,960 people (13%) are employed in 344 industrial facilities which have 25 employees and under 33,395 (87%) people are employed in the facilities which have 25 employees and over (Table 6 and 7).

In the facilities located in Bağcılar, the textile, apparel and leather industry represent more than 50% of district establishments with 425 industry establishments and this sector is followed by metal products, machinery equipment, transport vehicles, scientific and professional measuring instruments establishments with 72 (10%) and paper and paper products and the printing industry with 71 (10%). At the same time these three sectors compose 80% of the facilities operating in the district. In the district, when the number of employees in industrial establishments is analyzed, it could be seen that textile, apparel and leather industry occupy first place with 23,675 employees (62%). This sector is followed by the industry producing metal goods, machinery equipment, transport vehicles, scientific and professional measuring instrument with 3,714 employees (10%), paper and paper products and the printing industry with 3,076 employees (8%) and the basic metal industry with 2,919 (7%) (Table 6 and 7). According to this information, the textile, apparel and leather industry which is the leading sector of Istanbul and our country, appears to be the most important sector in Bağcılar.

By 2010, there were 344 small industry establishments which were registered by Istanbul Chamber of Bağcılar. In these establishments, the textile, apparel and leather industry is still first with 188 (55%) establishments, and this sector is followed by the chemical, petroleum, coal, rubber and plastic industry and producing metal products, machinery equipment, transport vehicles, scientific and professional measuring instruments with 43 establishments (12%) and with 30 (9%) establishments paper and paper products and the printing industry. Within sectors, the base metal industry and stone and land-based industries with 3 establishments are in the last place. A total of 4,960 people work in small industrial establishments in the district. According to the number of employees by sector, we have the following numbers of employees in the textile, apparel and leather industry 2,780 (56%) people, in the chemical, petroleum, coal, rubber and plastic products industries 620 people (13%), and in metal goods, machinery equipment, means of transport, scientific and professional measuring instruments 555 people (11%). Of sectors, the base metal industry is the last one with 40 (1%) employees (Table 6 and 7).

According to the horizontal distribution of the Industry in Bağcılar, industry is dense in Bağlar Neigbourhood at Osman Paşa Street, Mimar Sinan Street, Talçın Koreş Street, Koçman Street; in Evren Neighbourhood at Gülbahar Street, Bahar Street, Halkalı Street; in Mahmutbey Neighbourhood at Taş Ocağı Yolu Street, Halkalı Street, Devekaldırımı Street, Peyami Safa Street, Atlas Street, İstoç Business Center; in the 100<sup>th</sup> Year Neighbourhood at Hüseyin Karaarslan Street, Veysel Karani Street, Kışla Street; in Merkez Neighbourhood at Güngören Street and around. As stated on the Map of Urban Functions in Bağcılar District as well as formal areas, administrative facilities, the central commercial and business areas are concentrated on these streets.

Table 6. Sectors Division of Industrial Facilities in Bağcılar District

Manufacturing Sectors		25 employees and over		25 employees and under		Total	
		%	A	%	A	%	
Manufacture of food, beverages and tobacco	16	4	13	4	29	4	
Textile, wearing apparel and leather	237	65	188	55	425	60	
Manufacture of wood and wood, products including furniture	5	1	7	2	12	2	
Manufacture of paper and paper products, printing and publishing	41	11	30	9	71	10	
Manufacture of chemicals and chemicals of petroleum, coal, rubber and plastic products	13	4	43	12	56	8	
Manufacture of non metalic mineral products except products of petroleum and coal	6	2	3	1	9	1	
Basic metal industries	8	2	3	1	11	2	
Manufacture of fabricated metal products, machinery and equipment, transport equipment, professional and scentific and measuring and controlling equipment	29	8	43	12	72	10	
Information industry	5	1	5	1	10	1	
Other manufacturing industry	6	2	9	3	15	2	
Total	366	100	344	100	710	100	

Explanation: A - Number of establishments

Source: Istanbul Chamber of Industry 2010

Table 7. Bağcılar Sectors Division of Employees within Industrial Facilities

Manufacturing Sectors		25 employees and over		25 employees and under		tal
	A	%	A	%	A	%
Manufacture of food, beverages and tobacco	1,710	5	205	4	1,915	5
Textile, wearing apparel and leather	20,895	63	2,780	56	23,675	62
Manufacture of wood and wood, products including furniture	283	1	70	1	353	1
Manufacture of paper and paper products, printing and publishing	2,607	8	469	9	3,076	8
Manufacture of chemicals and chemicals of petroleum, coal, rubber and plastic products	536	2	620	13	1,156	3
Manufacture of non metalic mineral products except products of petroleum and coal	655	2	43	1	698	2
Basic metal industries	2,879	8	40	1	2,919	7
Manufacture of fabricated metal products, machinery and equipment, transport equipment, professional and scentific and measuring and controlling equipment	3,159	10	555	11	3,714	10
Information industry	170	0	55	1	225	0
Other manufacturing industry	501	1	123	3	624	2
Total	4,205	100	4,960	100	38,355	100

Explanation: A - Number of employes

Source: Istanbul Chamber of Industry 2010

### 5. Environmental impact of industry in Bağcılar District

The average altitude of Bağcılar is nearly 50–70 metres and Bağcılar district was established on a straight and slightly undulating plateau which is affected substantially by abrasion. The lengths of rivers are small and its regimes are irregular. They have changed into streams which carry biological and chemical waste because of rapid urbanization and industrialization.

River beds are treated to try to reintroduce breeding with improvement of streams and a compulsory waste water treatment system. In the last 30 years, in Bağcılar district which has 72% arable land, today plant and animal production is not possible anymore because of the construction industry. In this context, today it is not possible to talk about agricultural pollution in the district. In Bağcılar, the main causes of pollution are municipal and industrial wastes (6). Bağcılar district has 170,000 residential inhabitants and workplaces. That is why the amount of garbage is 260,000 tons per year. There is no heavy industry (except 1 iron and steel factory), but the pollutants of establishments are solid fuels (which concerns 20% of the existing establishments, while others completed the transition to natural gas) and they are released into the air as waste (stack filters). Also they use poor quality and lowsulphur coals impacting negatively human health. In addition, textile dyeing and discipline facilities use heavy water and create residual a water as a result, but only 30% of these facilities which operate in this sector have water treatment plant. Day by day, the numbers of facilities which establish water treatment establishments are increasing by Istanbul Metropolitan Municipality Water and Sewage Works Management activities in the area.

The biggest negative effect of industrialization is direct pollution. In the countries which are continuing the process of industrialization such as Turkey, cheap fuel is used for cheap production, as the waste required by the production is given to buyer sources. As a result air, water and soil are polluted. As well as environmental pollution by domestic waste, industrial pollution is much more significant. Industrial establishments show a large distribution regarding the pollution they create in themselves. In

terms of water pollution, while in electronic assembly plants, any industrial waste does not mix with the sanitary sewage system, in textile dyes, discipline and washing facilities pollution is much larger in size.

#### 6. Conclusions

The researched area which is located within the bounds of Istanbul Metropolitan Municipality, have had intensive urbanization in parallel with industrialization in the last 30 years. With 18% of the population of Turkey, in Istanbul, Bağcilar, with its 738,809 inhabitants is Istanbul's most populous and most densely populated district. In Bağcılar, 32% of the population constitutes the active population. More than 50% of the active population is employed in the manufacturing industry.

In Bağcılar district, raw materials sources of agriculture, and animal husbandry are extremely limited, even if there is no production in these fields. Industrial facilities which are operating in the district receive the necessary energy from the interconnected system. In addition, approximately 80% of industrial facilities in the district use natural gas as fuel. The district which is within Istanbul, and the most developed region of Turkey (Marmara Region) in terms of transportation is located between Turkey's most important highway M-80 (TEM)'s O-2 route and south-west and north-east of express links of the E-100 (the old E-5). In addition, it is also located on Mahmutbey highway, which is Istanbul's most important second main north-south transportation route. Almost all industrial facilities in Bağcılar show spatial distribution around the transport routes and especially road transport routes have had a significant effect on the place of incorporation of industry. In addition, in Bağcılar industrial facilities are privately owned and established by entrepreneurs' own capital. However, the main reason for the establishment of industrial facilities in Bağcılar is not represented by the proximity to sources of raw materials and energy but to be close to the market, sectoral specialization and transport possibilities.

In Bağcılar, industrialization began in the 1950s and continued to grow exponentially in the later

periods. Especially in the period 1990-2000, district industry was at its peak with the number of opened facilities. 34,452 people are employed in medium and large-scale industrial facilities (366 facilities) and in small industrial facilities (344 facilities) 4,960 people are employed. Despite the diverse range of industry sectors, in the district of Bağcılar, the leader sector is textiles, apparel and leather industries with 425 (60%) firms and 23,675 (62%) employees. Many companies which are operating in the district have been active both nationally and internationally. Bağcılar industry is concentrated around the main streets and business centres such as İçtoç, Bağlar, Mahmutbey, Evren, 100th year and Merkez neighbourhoods. Of these centres, especially Bağlar, Evren and Mahmutbey neighbourhoods are to be noted. According to data from the year 2010, Mahmutbey Neighbourhood with 5,315 people to sq km, Bağcılar Neighbourhood with 9,610 people to sq km, and Mahmutbey Neighbourhood with 24,321 people to sq km have the lowest population density. It is clear that the population has not moved to centres of intensive industry, but they have moved to neighbouring areas of industries.

A part of industry facilities of Bağcılar which were established in the past have remained in the middle of intensive settlement. These plants should be placed in better locations in the district. In the district there are very intensive crooked construction and irregular industrial facilities, which is why irregular and unplanned construction cannot be prevented. Some industrial facilities hold their production process in old and unhealthy buildings. It should be encouraged to transfer these plants to more modern and planned buildings construct business and industrial areas.

#### **Notes**

(1) According to the book "Istanbul City Statistics Annual 1930–1931" published by Istanbul Metropolitan Municipality Statistics Office, the names of these villages are Avas, Ayapa, Ayayorgi, Çıfıtburgaz, Vidos, İkitelli, Litros, Mahmutbey, Nifos, Şamlar and Yenibosna. Source: http://www.Istanbul.net.tr/Istanbul-Rehberi/Dosyalar/bolumler/bagcilar/7/62.

- (2) Istanbul was the capital of three empires, that is, Roma, Byzantium and Ottoman. It is one of few cities which has been an economic center in all eras. Istanbul's share of Turkey's Gross National Product is approximately 23%. While Istanbul's economic contribution to government budget is 40%, it takes only 7–8% from government budget. Istanbul has an important place in both import and export. Also, it is Turkey's most important export and import gate.
- (3) Zeytinburnu (11 km), Ambarlı (28 km), Haydarpaşa (30 km), Silivri (66 km), Tuzla (55 km).
- (4) www.usas.com.tr/tr/giris.asp, DoA: 10 February 2011.
- (5) In Turkey, the phrase "small industry" means not only small industry facilities but also small crafts and handcrafts. The report called "The Development and Manufacturing Industry in Egypt, Israel and Turkey," published by the United Nations in 1958, defines medium and large scale businesses as those employing more than 10 employees. So industrial enterprises employing fewer than 10 have been received as small businesses. The definition of small industry adopted in Turkey is as follows: Businesses employing 25 employees the most, having machinery park worth up to 20 million liras and using production methods partly based on experiment (Buldam, 1981, p. 3–4).
- (6) When residues are given to nature without any process, they are named as wastes. Wastes originated from houses and/or work-places which don't contain harmful and dangerous materials are named as domestic wastes. Wastes of industry and production facilities that occur in or after a process are called industrial wastes.

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