

A Study on the Establishment System of Industrial Enterprises in the Tehran metropolitan area in Relation to the Position of Industrial Towns

¹Manijeh Lalehpour, Mohammad Soleimani Mehranjani², Hooshang Sarvar³

^{1,3}Assistant Professor, Department of Geography and Urban Planning, University of Maragheh

²Associate Professor, Department of Geography and Urban Planning, Kharazmi University

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ABSTRACT

The pattern of the business enterprises locations along with the organization of the industrial activities establishment are of almost importance in the studies conducted for regional and urban planning. Therefore, the present study aims to investigate the patterns of the industrial enterprises establishment in the metropolitan area of Tehran in order to get a better understanding of the industrial parks position in attracting industrial factories in the region. This descriptive analytical study uses a wide range of figures, documents, studies and reports on the topic under study. Findings on this metropolis region reveal that there is a lack of concordance in policies, viewpoints and spatial-physical plans in region's anatomic expansion and retarded facilitation of the Parks with infrastructures. This lack of accordance scatters industrial activities and disrupts the spatial-physical nature of the area. Accordingly, the results of the present study demonstrate that scattered and undocumented factories established in the region possess a much greater share compared to the organized factories in industrial parks. Yet, unsystematic establishment of industrial complexes in agricultural fields and main transportation roads have devastated the fields, gardens and other green spaces and imposed heavy traffic on the roads.

KEY WORDS: Economics enterprises; Industries; Industrial Towns; Metropolis area; Tehran.

1- INTRODUCTION

Enterprises establishment in various locations has long been the focus of economists and geographers [1]. From the urban planning point of view, organizing the industrial factories establishment and founding industrial parks are of extreme importance for they favorably optimize and separate industrial and residential spaces. This importance is even greater in a metropolis region. Metropolis regions are the areas on geographical maps covering a central city and other surrounding population, tourism, production and service centers. These centers are generally in environmental, social, spatial and economical interaction with each other [1]. Therefore, the major managerial challenge in these regions is finding a way to systematize the connections and relations between these centers. Considering the high demand for industrial investments, economic changes occur with higher intensities compared to other regions. This issue has become evident in the past few decades as well¹. All these necessitate a closer attention of authorities and managers to the organization and systematization of establishing economic activities along with economic ones in the metropolis region of Tehran. One of the most important indices of metropolis development is lower rate of population growth in the central region and its increase in the suburban areas. This phenomenon emerged in Tehran and its suburbs in the 1970s. A simple comparison of the population growth rate in Tehran and its suburbs between the years 1966 to 2011 reveals a significant change representing the trend of Tehran and its suburbs becoming a metropolis. Statistics show that the share of the city of Tehran and its metropolis region (Tehran province) in the population and industrial factories has increased over the past decades (Table 1).

Table 1 .Value and Average of annual growth of industrial workshops in the Tehran metropolitan area between 1976-2002 [9]

	1976	1986	Annual average growth (1976-1986)	1994	Annual average growth (1986-1994)	2002	Annual average growth (1994-2002)
Tehran County	41919	67640	4.9	373680	23.8	456763	2
Tehran Province	45871	82189	6.1	504939	25.5	675101	2.95

*Corresponding Author: Manijeh Lalehpour, Assistant Professor, Department of Geography and Urban Planning, University of Maragheh, Email: M.lalehpour@gmail.com,



Fig. 1 Tehran metropolitan area and its counties [10]

Yet, in the same period, the share of Tehran has decreased compared to the province. Tehran held an 85% share of the population in 1976 and it has come down to 55% in the year 2001. This demonstrates the geographical dimension of the activity and population changes and the spatial reality of the metropolis region of Tehran. Map 1 shows the limits of the metropolis region of Tehran¹.

Understanding this point, and since the 1980s, the plan for industrial parks around major and average cities was developed. Accordingly, the bill for the foundation of the Iranian Industrial parks Company was developed in the Ministry of Industry and Mining and after its passage, was given to the ministry to be administered. After taking the initial steps, the statute of the company was passed by the cabinet on June 13, 1984. Since the factories were predicted to expand in provinces, it was decided that the company assign decent spaces for the establishment of industries and provide enough facilities through proper planning and policies in order to decrease the investment costs and elevate the industry and environment. It was assigned to construct industrial parks in remote regions of the provinces and provide them with the necessary facilities for the investors and investment enthusiasts [2]. Thus, since the year 1985, and after the bill was passed by the cabinet, the Industrial parks Company has founded ten industrial parks around the city of Tehran and has given proprietorship and prepared the facilities for new factories to prevent the linear establishment and expansion of industrial enterprises along the roads and the gates of the cities [21]. Considering the measures taken in order to organize the establishment of industrial enterprises in the metropolis region of Tehran, the present paper aims to identify the distribution patterns of industrial factories in the region and look at the position of industrial parks. In this regard, following questions are asked. What are the spatial distribution and the establishment pattern of industries like in the metropolis region of Tehran? Are industrial parks successful in attracting new industrial enterprises and systematizing their body and space in the metropolis region of Tehran? The spatial distribution patterns of the industrial factories have accordingly been investigated in the metropolis region of Tehran. Furthermore, in order to have a better understanding of the position of industrial parks in attracting the factories, their status is also scrutinized to see how successful they were in reaching their goals.

2- MATERIALS AND METHODS

According to the subject and aim of this research, the present study has been conducted descriptive analytically. In addition to illustrating the existing situation of the problem, the researcher explains and interprets the reasons behind the existing situation and its different aspects. In order to evaluate and verify the reasons, the researcher is required to have a strong reasoning support for his discussion. This support is acquired by searching the literature and theoretical discussions about the research and the development of existing cases about it and is referred to in literature review and theoretical background sections of the research. The researcher relates the logical details of his/her own research with general cases in that field and concludes the results [4].

¹ According to the 1995 Cabinet bill on the plan for Tehran's urban complex, the territory of Tehran covers Tehran province and Alborz province except for Firooz-Kooh

In this regard, the library and field research data collection methods are used. Analyzing the existing situation is done according to the findings of this study and also referring to the theoretical basis, field observations and interviewing with the involved experts in the area of management and supervision of the industry distribution in Tehran metropolitan area. The steps and method of the research is as follows.

In its first phase, several theories and criteria on the location of industries and the position of industrial parks in systematizing the industry establishment system have been investigated through library work. The outcome from this research is the identification of the principles and criteria of locating industries in order to utilize them in the analysis of the existing establishment patterns of industries in the metropolis region of Tehran. In order to find decent responses for the research questions, statistics and documents published by the National Iranian Statistics Centre and other governmental organizations were studied to find the location pattern of the industrial factories establishment in the metropolis region of Tehran. The census from two recent years of 1994 and 2002 and annual statistical records from years 1966 to 2011 were used to extract the statistics of the industrial factories. Arc GIS computer software was also utilized to create a spatial distribution map for the factories in the region. The extracted maps clearly demonstrate the companies' distribution pattern in the metropolis region of Tehran.

Later on, a comparison and merger of theoretical principles and research findings along with interviews with experts and field studies helped induce some of the main features of the establishment system of industrial factories in the metropolis region of Tehran and the relating issues. Finally, in conclusion, managerial policies and solutions are proposed to improve the establishment system of industrial factories especially in the metropolis region of Tehran.

3- Theoretical Framework of the Study

3-1.Theories and factors affecting the location of industrial enterprises

Studying the location of establishing enterprises in various locations has always been the centre of attention for economists and geographers. How do enterprises decide on the location for their installation and production activities? Finding a proper answer for this question is of great importance for both investors in economic activities and policy-makers of a specific region. Investors on one hand, try to find a location to maximize their profit and on the other hand, policy-makers attempt to attract activities with the highest possible positive impact on their region. Finding a location for an industrial enterprise aims to maximize its benefit; therefore, the best location is the one which minimizes the costs and maximizes its incomes. One of the related concepts in this field is the concept of "collective saving through accumulation". Accumulation saves are the main reason for advancements in industrial areas. In this concept, the production costs in a specific industry decreases as the enterprise increases its production. In order to reach these savings, enterprises of the industry must be located near each other. If so, the production costs of an enterprise decreases with the increase in the overall production of the city [4].

Various savings include financial, business, banking, insurance and public services, urban transportation, express ways, schools, abundance of work forces, expert managers etc. Available in any city, all bring the accumulation savings into urban areas [13]. In general, knowing the influential factors forming an industrial region, it is necessary to say that how these enterprises are attracted to a specific region and what incentives help them to be selected. At this point, location and the related theories are developed.

The most important model for location, emphasizing the minimum introduced cost, is the Alfred Weber model from the early 20th century. The main focus of his model is on minimizing the cost of transporting material and input on one hand and transporting the produced goods to the markets on the other hand. In fact, manufacturing activities are highly sensitive to transportation costs.

The input and the material used in any enterprise are divided into two domestic and non-domestic groups. Domestic inputs include climate, work force, medical services, construction material etc. whose transportation is not economical and has to be used in the site where they are produced. The best site for an enterprise using these factors is the one that minimizes the transportation expenses.

Furthermore, several other factors affect the location of an enterprise. Inertia and forces acting to keep and enterprise in a specific site, work force expenses, environment and the quality of life, various forms of taxes, along with some other reasons play crucial roles in finding a decent location for an enterprise. On the other hand, the governments' incentives like subsidies, low interest rates, loan securities, regulation and tax exemptions and providing low cost land and facilities along with reducing expenses in the site potentially affect the business owners' decision for the location of their enterprise [18]. Reducing expenses can be done through decreasing rents and energy expenses for attracting business enterprises. Studying the issue in Iran reveals that the development and establishment of industrial parks in cities depends on the overall developments in constructing and living in cities. The regulations and functions of various institutions influencing the location

and organization of industries and services are other factors influencing the development and establishment of industrial parks.

3-2. Organizing the establishment of industrial activities in the form of industrial towns

Compiling regulations and plans especial for the establishment of industries defined in local and national logistics, is one of the main priorities of the policy making in the governments. Having the factors and criteria for the location of industrial enterprises for these decisions could be of great long term economic, environmental and technical influences in the related regions.

Industrial parks are planned spaces for establishing enterprises designed and built by the governments. They are aimed to create coordination and optimal utilization of infrastructures and offering proper and necessary services for the investors in industrial manufacturing. Thus, they are an important sector of the economy in the society [4].

The bill of Transferring the Proprietorship and Management of Industrial parks recently presented to the parliament entails that the industrial Park is a site with definite area and borders with an organized set of industrial, research and technology facilities offering logistic services. The logistic services include designing, engineering, training, informing, counseling and trading. These industrial parks provide a bunch of infrastructures and necessary services regarding the area of the park and the composition of the activities conducted in it by the enterprises [14].

A noteworthy point about industrial parks is the access of these parks to infrastructures like water, electricity, gas, sewage disposal systems, banking and financing services, transportation networks etc. In addition to efficient use of infrastructure services, the authors assume that clustering of industries in industrial institutions is an opportunity for harmonization of environmental policies [16].

Regarding these points, the criteria for the location of industrial parks could be categorized as follows:

Social factors: including ecology and the education and employment structure

Economic factors: including expenses, access to the markets and adjacency to other industries

Environmental factors: including the management of environment, pollution, climate, topography and distance from protected areas

Infrastructural factors: including the adjacency to transportation networks, availability of energy, water, recycling and access to garbage disposal services

Planning factors: including local development plans, industrial plans, and land classification plan [18]. Having these criteria in mind and observing them while planning for the establishment of industrial parks has to be priorities of policy makers and planners if they crave for success in their development plans and organization of industrial enterprises [5].

Investigation of the issue in Iran reveals that since the beginning of the urban and economic planning, several measures have been taken to guide and supervise the industrial and urban development relating to various areas of municipal regulations, urbanization laws, environmental codes, industrial development management etc. From industrial development planning point of view, location and organization of industries are closely related to spatial and logistic measures taken in the country. Since there is a lack of local and national logistic development plans, the process of location and establishment of industries have generally been conducted regardless of planning and development considerations. This justifies the imbalanced and disorganized distribution of industrial activities in population centers and emergence of environmental and physical problems in the cities of this country.

4. Spatial organization plans for industrial enterprises in the metropolis area of Tehran

Studying physical plans in Tehran demonstrates that the first comprehensive plan for Tehran (1966) had two major recommendations for the establishment of industries in Tehran. The plan firstly recommended the Tehran- Karaj road as the center for the establishment of industries and then new industries were founded there. Secondly, it prohibited establishment of industries in a 120 km radius of Tehran. However, this prohibition was not strong enough with all the attractions Tehran region had for industrial investments. Yet, the plan did have nothing for the establishment of industries inside the metropolis region and outside it. Thus, the industrial parks plan was necessarily proposed for organizing industrial enterprises in the metropolis region of Tehran and was passed. Establishment of industrial parks in recent decades is a solution used to solve the problems of the scattered industries. Therefore, the present study selected the plan for establishing industrial parks in order to evaluate the role of these parks in organizing and establishing industries in the metropolis region of Tehran. The plan for establishing industrial parks was put into practice by the establishment of Tehran Industrial parks Company in 1987. Following the passage of the establishment of industrial parks law in the parliament and its foundation in 1984, the Tehran Industrial parks Company was established. The company was founded to organize the establishment of industrial activities around Tehran and coordinate and optimally utilize the

facilities in industrial parks along with providing and offering necessary services for the investors in new industrial enterprises [17]. Table 6 represents a list of active industrial parks established in the metropolis region of Tehran. It is worth mentioning that there are other industrial parks in which the design, construction and selling has began but the five parks of Eshtehard, Charmshir, Shams-Abad, Abbas-Abad and Ali-Abad which were active in the 1980s and 90s and between the 1992 and 2002 censuses (the latest results of industrial factories census) were investigated in this study. Two Nasir-Abad and Kharazmi Parks were authorized in 1990. Statistics show that the major part of construction and operation in the factories of these parks was after the 2002 census. Therefore, they are not considered in the present study. Fig. 2 displays the position of the industrial parks in the metropolis region of Tehran.

Table 2. The characteristic of industrial towns in Tehran metropolitan area [20]

The name of industrial town	Position	Start of the Project	Area (Hectare)	The ultimate employment capacity
Eshtehard	Karaj-Eshtehard road	1993	1400	48000
Charmshahr & Salarieh	85Km of Varamin-tehran road	1990	704	4750
Shams Abad	40Km of Qom-tehran Highway	1993	1650	37000
Abbas Abad	47Km of Garmsar road	1993	1029	45000
Ali Abad	Garmsar-tehran road	1991	370	37000

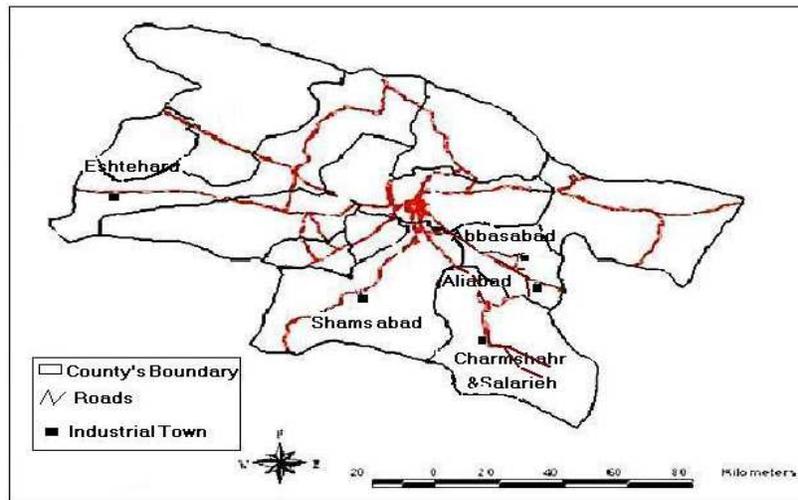


Fig. 2 The positions of Industrial towns establishment in the Tehran metropolitan area

5- RESULTS AND DISCUSSION

The patterns of the establishment of industrial enterprises in the metropolis region of Tehran and the position of industrial parks in it

In order to identify the establishment trend of industrial factories in the metropolis region of Tehran, the statistics from the two censuses of 1994 and 2002 (latest available census) was used. Table 10 shows the statistics for the establishment of industrial parks in Tehran province distinguishing the cities and regions. Table 11 demonstrates the statistics of the industrial factories established in the industrial parks in Tehran province.

Table 3. Spatial distribution of industrial workshops in Tehran metropolitan area and changes between 1994-2002 (Divided sections for each county)

County Section	Shahriyar				Robotkarim		
	The whole county	Markazy	Mallard	Ghods	The whole county	Golestan	Markazy
1994	23654	7690	3717	12247	7331	1675	5656

2002	35640	13354	4381	17905	10156	4235	5921
The average annual growth	5.2	7.1	2.07	4.9	4.1	12.3	0.6
County Section Years	Karaj				Eslamshahr		
	The whole county	Eshtehard	Asara	Markazy	The whole county	Markazy	Chahardangeh
1994	33464	1325	123	32016	10463	5710	4753
2002	53682	7347	58	46277	22269	6122	16147
The average annual growth	6.1	23.87	-8.9	4.7	9.9	0.87	16.5
County Section Years	Savojbolagh						
	The whole county	Chaharbagh		Chendar	Nazarabad	Markazy	Talegan
1994	16156	3026	3121	6247	3531	231	
2002	27919	6247	6106	6527	8874	165	
The average annual growth	7.1	9.5	8.7	0.55	12.2	-4	
County Section Years	Ray				Pakdasht		
	The whole county	Kahrizak	Fshapuyh	Markazy	The whole county	Markazy	Sharifabad
1994	19445	14210	1267	3968	8846	6776	2070
2002	25260	12205	8488	4567	16984	10843	6141
The average annual growth	3.3	-1.88	26.8	1.8	8.5	6	14.5
County Section Years	Varamin				Damavand		
	The whole county	Javadabad d	Pyshva	Markazy	The whole county	Roodehen	Markazy
1994	9547	288	513	8746	1828	801	1027
2002	13786	487	861	12438	1898	613	1285
The average annual growth	4.7	6.8	6.7	4.5	0.47	-3.3	2.8
County Section Years	Tehran				Shemiranat		
	The whole county	Kan	Markazy	Tehran city	The whole county	Roudbar Qasran	Lavasanat
1994	373680	18	4953	368709	515	315	200
2002	456763	26	16613	440124	744	337	407
The average annual growth	2.54	4.7	16.3	2.2	4.7	0.8	9.3
The whole metropolitan area							
1994	504929						
2002	675101						
The average annual growth	3.7						

Source: Workshop Census of country, years 1994 & 2002 and author's calculations

Table 4. The present situation and ultimate capacity of employment in the industrial towns in Tehran metropolitan area

Industrial towns	Abbas abad	Ali abad	Shams abad	Charmshar & Salareih	Eshtehard	Total
The ultimate capacity of employment	45000	37000	37000	4750	48000	171750
Present situation (2011)	18576	4425	18173	2848	17283	61305
Percentage achieving employment	41	12	49	59	36	36

Source: The database of industrial towns of Tehran province and authors calculations

Table 5. Current Status of facilities and infrastructure and service facilities in industrial towns (2012)

Name of town Facilities	Eshtehard	Abbasabad	Aliabad	Charmshahr	Shamsabad
Water	the required amount for full utilization of the industrial town is 550 liters per second, which 108 liters per second has been funded	the required amount for full utilization of the industrial town is 216 liters per second, which 180 liters per second has been funded	the required amount for full utilization of the industrial town is 140 liters per second, which 80.5 liters per second has been funded	the required amount for full utilization of the industrial town is 240 liters per second, which 150 liters per second has been funded	the required amount for full utilization of the industrial town is 607 liters per second, which 222 liters per second has been funded
Electricity	the required amount for full utilization of the industrial town is 195 Mega Watt, which 60 Mega Watt has been funded	the required amount for full utilization of the industrial town is 257.3 Mega Watt, which 64 Mega Watt has been funded	the required amount for full utilization of the industrial town is 92.5 Mega Watt, which 16 Mega Watt has been funded	the required amount for full utilization of the industrial town is 50 Mega Watt, which 14 Mega Watt has been funded	the required amount for full utilization of the industrial town is 412.5 Mega Watt, which 136 Mega Watt has been funded
Gas	Yes	Yes	Yes	Yes	Yes
Phone	In operation	In operation	Yes	Yes	Yes
Optical fiber	The running	The running	Yes	Yes	Yes
Area green space	-	145.8 h	45.6 h	26.6 h	169.2 h
Shapping center	In operation	Yes	Yes	No	Yes
Bank	No	Yes	Yes	No	Yes
Clinic	Setting up	Yes	Yes	No	Yes
Firefighting	In operation	Yes	Yes	Yes	Yes
Wastewater treatment	In operation	Yes	Yes	Yes	Yes
Sewerage network	Yes	Yes	Yes	Yes	Yes
Reuse of wastewater	No	No	No	No	No
Specified the location for the disposal of solid waste	No	No	No	No	No

Source: Industrial towns Database of Tehran and Alborz province (2012)

The main points induced from the trend of the establishment of industrial enterprises in the metropolitan region of Tehran could be listed as follows:

- The highest growth rate is for Robat Karim (Golestan Region with 12.3% growth), Islamshahr (Chahardange Region with 16.5% growth), Karaj (Ishtehard Region with 23.87% growth), Tehran (Central Region with 16.3% growth), Rey (Fashapooye Region with 26.8% growth), Pakdasht (Sharif-Abad Region with 14.5% growth), Savojbolagh (Central, Chendar and Chahar-Bagh regions with an average growth rate of 10%).
- Respectively, a closer look at the position of industrial parks establishment in various regions of Tehran province (Fig. 4) reveals that except for Ishtehard, Fashapooye, Sharif-Abad regions all other regions lacked a planned industrial Park. This shows that with the increase in the request for the establishment of factories in this region, industrial parks have failed to attract new industrial enterprises. Yet regions outside these parks have attracted the factories. A comparison of these statistics with the statistics of residential regions with high population rates shows that they have overlap.

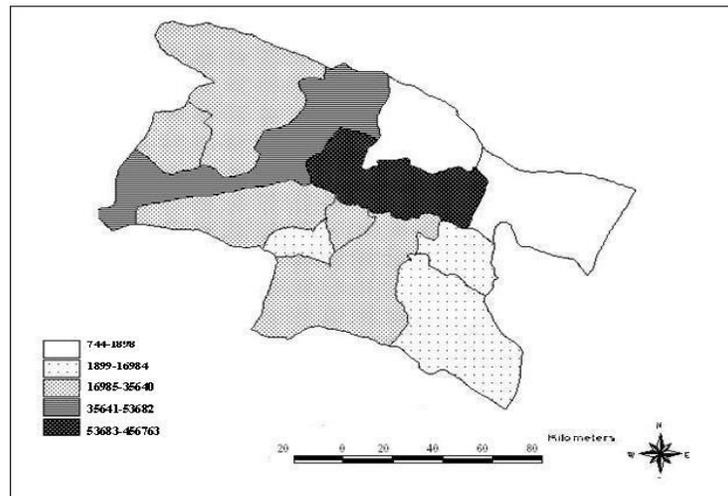


Fig. 3 Spatial distribution of industrial workshops in the Tehran metropolitan area divided by county (2002)

- A closer look at the statistics of the industrial parks in the region reveals that the total capacity of employment in these parks was 171750 of which only 36% was achieved. The percentage of achievement in the industrial parks of Charmshir, Salarieh and Shams-Abad was between 50 to 60%. However, in case of Ali-Abad industrial park, the percentage in only 12 and parks like Nasir-Abad and Kharazmi have the percentage of zero because of not being operative in the period under study. This study reveals that in spite of incomplete capacities in the planned industrial parks of the province, industrial enterprises are not located in these parks and are scattered in regions out of the planned areas.
- Investigating the condition of infrastructures and services in the sample parks under this study (Table 5) demonstrates that after about twelve years since the beginning of the operation, many of these parks lack proper and complete infrastructures. This delay in completing infrastructure facilities have caused numerous location and access problems and therefore, the industrial parks have been attracted and established by regions outside these parks.

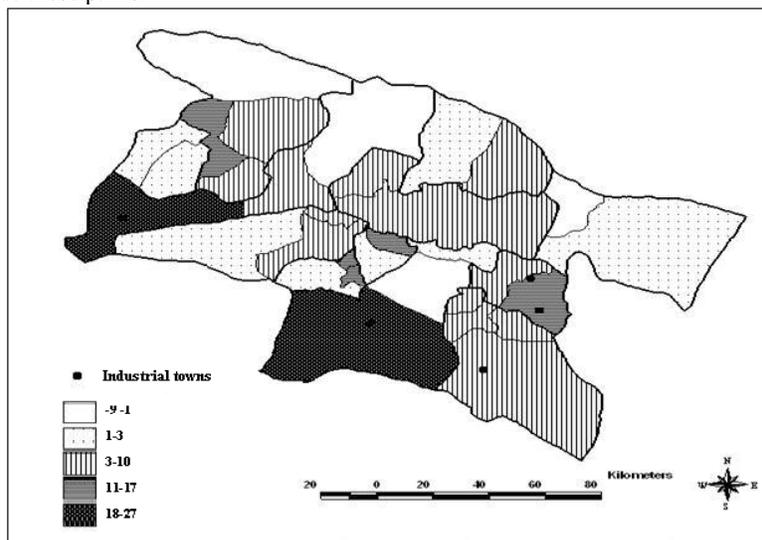


Fig. 4 The annual growth of industrial workshops in Tehran metropolitan area divided by county from 1994-2002

Table 3 shows that the growth rate of industrial factories in Chendar, and Chaharbagh regions of Savojbolagh was between 9 and 10%. In Golestan region, this rate was about 12%. Furthermore, in the central region of Shahriyar, the growth rate was about 7%. In other areas of the province with better climate conditions

and more fertile soil and mainly close to transportation routes near to the population centers and target markets, industrial enterprises have been greatly attracted.

It could be concluded that foundation of industrial parks was conducted in order to organize the establishment system of industrial activities in the metropolis region of Tehran; yet, despite great capacities created for all the industrial complexes and parks in the above-mentioned region, they have not played the predicted role in reaching their preplanned goals. Thus, attracting industrial enterprises and factories have no relevance to the plans and capacities announced (Table 4).

In order to reach the preplanned goals, any form of factory foundation must be under regional development plans and in accordance with policies and economic structures, or aggregating them under these policies. Otherwise, the establishment of industrial parks not only does not end in development and systematic industries, but also wastes national resources. Moreover, the sites selected as the location of the industrial parks must be evaluated from effective factors' point of view such as their regional value.

In spite of the great importance of the issue, a close look at the condition of the infrastructures and infrastructure installations in industrial parks together with the geographical position of these parks reveals that there are examples of imperfection and inefficiency in following the preplans including distance from Tehran, Karaj and other populated market centers, problems induced by lack of infrastructure facilities like sewage system, water, electricity, gas, substructure operation etc [6]. In addition, lack of a decent transportation system and most importantly lack of a comprehensive management plan in the metropolis region of Tehran along with the competing cities' attempts to attract industrial enterprises outside predefined industrial parks, have taken many of the new enterprises to new sites outside industrial parks. Statistics demonstrate that the number and share of industrial factories with or without official permits have scattered vastly around the region are much more than the factories established in industrial parks. Yet, the main aim of the industrial parks in the region was to organize the scattered factories in the metropolis region of Tehran.

The process of the establishment of factories in this region was in a way that governmental institutions and municipal management including the municipalities and governing bodies began issuing permits for increasing their income on the one hand and the inherent interest of the investors for activities in population centers for low priced work force and transportation systems on the other hand have created unauthorized industrial centers in the metropolis region of Tehran. Accordingly, the central core of these industrial activities have formed in an unofficial way and continue their activity without any supervision and this expands their unofficial activity into unofficial industrial clusters that are impossible to be moved into official industrial parks. In this regard, the only possible solution will be the permits issued by the province's industrial parks company for newer industrial parks. Nevertheless, the concentration of these industries, not only destroys agricultural fields in the region, but also lacks the comprehensive plan for the expansion of infrastructure networks for industrial sewage, huge warehouses etc.

5- CONCLUSION

The present study investigated the establishment patterns of industries in the metropolis region of Tehran with a regard on the position of industrial parks. The study had several stages. In the theoretical framework of the study, a brief discussion was made about the theories concerning the location of industrial enterprises and the factors affecting them. The result was a set of principles and criteria for analyzing the establishment patterns of industrial enterprises in the metropolis region of Tehran. The principles included work force expenses, environment and quality of life, and different forms of taxes having crucial role in the process of selecting location. Various incentives like subsidies, and low interest rates, securing loans, tax and regulatory exemptions, providing lands and infrastructures for lower prices, lower rents for land and construction prices, energy prices etc. Later on, the distribution pattern of the factories in the metropolis region of Tehran and the position of industrial parks was investigated in this regard. Finally, through deduction from the findings, conclusions are made and some suggestions are given for better establishment of economic enterprises. The study reveals that inconsistent approaches, policies and spatial physical plans in physical expansion of the region along with late facilitation of the Parks with facilities and infrastructures have increased the disruption and scattering in the spatial physical nature of the region. Regarding these facts, the findings demonstrate that the share of scattered and unofficial factories in the region is much more than the ones established in industrial parks. Field observations conducted by the researcher shows that the establishment of industrial complexes in agricultural fields close to transportation routes have destroyed the natural resources and fields in the region and has imposed an extremely heavy traffic to its routes. However, beside destruction of the agricultural fields in the region, the sites for the concentration of these industries mainly lack proper infrastructures like sewage systems, huge warehouses etc. The concentration and scattering of these centers are affected by factors like the distance from Tehran, transportation routes industrial and service centers with large populations. This shows that planning and

policy making in the major physical elements of the region must be conducted coherently and this necessitates a unified management and planning structure in the region. Findings imply that the system of management and planning of industrial parks in the region suffer major weaknesses. This issue ought to be considered in national, regional and local policies and strategies. According to the points discussed and in order to achieve the goals of the spatial planning in the metropolis region of Tehran, following measures have to be taken:

- The need for a coherent management relative to the territory of the metropolis region of Tehran (an independent institute for management and council in this metropolis region) in order to prepare and guarantee any logistic plan along with a unified trend in the local and governmental managements. besides, opposing any local views in the views of the governmental institutions managing the establishment and using transportation routes and other infrastructures and therefore maximum consistence in giving permits for new industrial enterprises in the region
- One of the conditions of any physical plan and project in this region is hindering profit-oriented view toward land and construction. This could only be done by compiling and enacting laws and regulations by the government.
- Beside hindering profit oriented views toward lands and removing the problems of local and governmental managements concerning physical management and planning, incentives like subsidies should be offered to the owners of factories to facilitate the process for the main difficulty they face is the increasing prices and losing their market.
- Finally, all the institutions and governmental agencies in the region must stick to the plans in order to establish industrial enterprises in the framework of industrial parks and trying to equip and utilize the parks so that infrastructure facilities are provided for the industrial enterprises.

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