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Industrial Location and Spatial Development in Iraq

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Abstract

The article provides a broad overview of the industrial location policy in Iraq. Since the early 1960s and 1970s, there has been a clear direction in Iraq emphasizing the necessity of spreading economic development and industry across all governorates; creating balanced spatial development; reducing economic and social disparities; distributing population in a balanced way; and stopping it from becoming concentrated in large urban areas. The industrial location policy is one of the policies adopted for both individual and large industrial complex projects.

The absence of a comprehensive spatial development policy in Iraq has reduced the significance of the industrial location policy. That is because it has not been used in a manner that achieves spatial development goals in a comprehensive way. This has, in turn, led to the concentration of population, as well as economic, social and urban activities in some cities but not others.

The concentration of industrial projects, the labor force and population continued to be remarkable in Baghdad despite its decline from the 1960s in last century to the 2020s, as the percentage of industrial projects decreased from 52.4. to 18.5. The labor force decreased from 60.3 to 37.2, and the population of Baghdad decreased from 25.4 to 21.3.

To strengthen the sustainable spatial development of Iraq and to provide a strategic spatial framework we have to establish a vision and conception of spatial development at the regional and national level, and formulate the regional conception of the distribution of selected activities in space while taking into account the characteristics of individual regional areas .

Keywords: Industrial Location ,Spatial Development, Importance of Industrial location Policy, Iraq.

1. Introduction:

The nature, scope and purpose of the activity called spatial planning have evolved from an initial emphasis on land use designation, design and development control to embrace the economic, social, political and environmental dimensions of development. It is about place-making at different spatial scales and thus requires planners to think and act across multiple scales and between different sectors of public policy. Spatial planning is intended to influence the distribution of activities and population and to manage spatial development towards sustainable development outcomes (Acheampong, 2018).

The spatial development is a dynamic process in which the central government would directing (limited) fiscal resources to specific industries and governorates. Spatial development aims primarily to distribute the fruits of the basic development process in a balanced and equitable way among the provinces. It seeks to reduce economic, social, and urban disparities among the regions of the country on the one hand, and between urban and rural areas on the other hand. It does so by exploiting and efficiently investing in potential and relative advantages available in each province or territory.

In other words, spatial development seeks to create relatively balanced development among regions; achieve some kind of balance by maximizing economic development growth rates on the national level; and create an even distribution of development benefits among the country's regions, achieving the principle of integrated development .

The question of the location of industries is a part of the general problem of the local distribution of economic activities. In each economic organization and in each stage of technical and economic evolution there must be a "somewhere" as well as a "somehow" of production, distribution, and consumption (CARL JOACHIM FRIEDRICH, 1929).

Economic activity is unevenly distributed over space. Population, income, and productive assets are largely concentrated in a few nations; within a nation, one or a few regions usually predominate; and a few cities and towns normally contain much of the productive assets and activity of a region. The immediate and most important task of location theory is therefore to provide reasons why activity is spatially concentrated. The causes adduced to explain the existence of areas of intense activity are then used as frameworks within which theory analyses the location of these concentrations, their size, and the activities present within them (Webber, 1972).

In developing countries, the forces of economic production have been concentrated in a few cities, especially state capitals, ports and major administrative centers. For manufacturing activities, these concentrations have usually been explained in terms of the specific principles of industrial location (Fagbohunka, 2014).

This paper provides a broad overview of the industrial location policy in Iraq. Examining the changes in spatial development over a period of time.

Understanding the spatial development policies components could also lead to identifying which policy have a particular competitive and structural advantage/s.

1.1 Problem Statement:

Industrial location selection is vital for optimizing a manufacturer's competitiveness. Today, successful location selection requires attention to many qualitative and quantitative variables. Location selection errors can reduce the operational and financial competitiveness of a manufacturing facility on a permanent basis. Industrial location is critical for business continuity and success of the organization. So it is important to avoid mistakes while making selection for a location .

The selection of appropriate locations is one of the most important factors that ensure the growth and prosperity of the industry, and this is what prompted the researcher to choose this topic to reach proposals and recommendations for the industrial location, which can spread social justice and equal opportunities among the different governorates to ensure the prosperity of the industry and move away from the negatives of concentration in specific places.

1.2 Significant of Study:

The importance of the research stems from the importance of choosing well-studied industrial location and the positive results that they can achieve:

1- Spreading the development process and reducing regional disparities.

2- Achieving greater justice in the levels of welfare between the different governorates.

3 - Avoiding further waste of time, effort , money, reducing economic, social and political problems.

1.3 Study Hypothesis:

The study is based on the following hypothesis :Choosing industrial locations (investments) in certain places yield jobs, growth, and prosperity while similar locations (investments) made in seemingly identical places fail to produce the desired results? this means that choosing the suitable locations will be fruitful for the industry and the society as a whole.

2. Industrial Location Concept:

Industrial location analysis may be defined as the study of spatial arrangement of industrial activity. Abler, Adams and Gould (1972) observed that 'what we call spatial processes are mechanisms which produce spatial structure of distributions'. Spatial processes can therefore give some view as to the processes that bring about spatial patterns of industries located for particular reasons. It can be grouped under two headings : Least cost approach and Market area approach (Abler, 1972).

Location of an industry is the idea and practice of establishing an industry by either government or an entrepreneur in a given area for economic,

geographical, social or political reasons. Industrial location can also be defined strategic placement of various economic activities in relation to some specific factors. Perfect location of industry depends on factors like land, labor, capital, transportation, etc. (Aliyu, 2018).

Location is a concept that means where something is in relation to other things. So industrial location means a statement not just of the spatial distribution of industry, but also of the relations between that distribution and other phenomena. Industrial location theory explains the spatial distribution of industry by referring to other aspects of society.

3. Objectives of Industrial Location Policy:

The objective of Industrial Location as a regional development Policy is:(Employment, 2020)

1. To promote the balanced development and national and international competitiveness of the regions.
2. To sustainably support and diversify the business structure of the regions and to promote economic balance.
3. To promote sustainable employment as well as the competence, equal opportunities and social inclusion of the population.
4. To narrow development gaps between and within regions and to encourage the full use of the available resources in a sustainable manner.
5. To enhance regional strengths and specialization as well as to promote regional culture; 6. to enhance the quality of the living environment and a sustainable regional and community structure.

The need, and importance of an industrial Location policy can be explained through following points :(chand, 1991)

- **Economic Objectives**: It is represented in: Reducing economic disparities in economic growth rates and rates. Income and economic activity between regions, Increase national income through increased employment And increase production. Helps in full deployment of natural resources of the country. The industrial policy envisages balanced industrial development of the country, It also facilitates balanced development of various sectors of the economy, and it facilitates increase in national income of the country.
- **Social Goals**: A regional policy can contribute to reducing the inequality that exists between regions, Preventing concentration of economic power in the hands of a few big industrial houses, The industrial policy helps in balanced regional development of the country, and greater social justice.
- **Political Objectives:** One of the goals of the political regimes is to continue ruling, and this is done in the case of electively by the people, and achieving political stability through developing backward regions.

4. Methodology of Research :

The present research aims to study the industrial location policy and its role in spatial development in Iraq .The study consists of two parts : The theoretical part reviews previous studies associated with industrial location, its theories, concepts, importance , to extract theoretical orientations. The practical - analytical - part of the study devoted to evaluate the industrial location policy in Iraq using the Economic analysis methodology to obtain more precise measure and quantitative description and to evaluate this policy in light of the available data during the studied period.

5. Theoretical Background:

The birth of industrial location theory is generally dated 1909, when Weber published his book entitled Uber den Standort der Industrien. This theory is later extended by Isard (1956), Moses (1958), Sakashita (1967), Bradfield (1971), Miller and Jensen (1978), and others (C. Mai, 1993). All their papers consider location in a heterogeneous cost space and define the optimum location in terms of the search for cost minimization or profit maximization under conditions where the demand factor is held constant and where locational interdependence of firms is disregarded.

The first major attempt to integrate Weber's least-cost and locational-interdependence theories was made by Greenhut (1956) in his famous book entitled Plant Location in Theory and in Practice. Greenhut achieved his avowed goal by taking profit maximization rather than cost minimization or revenue maximization as the criterion of optimum location (Greenhut, 1956).

However, it seems that Greenhut (1970) had adjusted his concept of an owner's personal considerations as intrinsically contained within the concept of maximum profits. In any event, Greenhut made a remark that the definition of the locator's objective in plant locations must be broader than the simple claim that the individual firm seeks maximum profits (C. Mai, 1993, Greenhut, 1970). Indeed, location theory offers insight into the objectives of plant location and the ways and the means by which plant managers seek to achieve their objectives in the selection of plant sites (C. Mai, 1993).

From the literature review, it is clear that no single location theory is capable of explaining industrial location but a combination of theories. Just as Weber was criticized for over-emphasizing supply, so also Losch was criticized for over-emphasizing demand. This limits the strength of these theories,. Subsequent attempts to integrate these two aspects of supply and demand by writers as Greenhut, M.J.(1970) and Isard, W. (1960) have not been totally successful. Thus intellectual debate over the spatial aspects of economic activity, set in motion by Weber and others continue in the geographical literature.

Alfred Weber formulated a theory of industrial location in which an industry is located where the transportation costs of raw materials and final product is a

minimum. He singled out two special cases. In one, the weight of the final product is less than the weight of the raw material going into making the product. Weber's model seeks to design a least cost industrial location sighting three basic economic factors; Transportation cost, Labor cost and Agglomeration economies (Aliyu, 2018).

Palander, in 1935 added market area analysis to Webber's work. Harold Hotelling, in 1929 introduced the notion of competition in location decisions and established the foundation of locational interdependence. He claimed that firms would tend to locate toward the center of the market area rather than disperse (Badri, 2007). attempted to integrate cost and demand factors into a theory to explain industrial location in a capitalistic framework.

Hoover stressed that due to freight rates, transportation costs do not increase proportionally with distance. Losch, in 1939 presented the maximum-profit theory and in 1954 developed the general location theory of location as set of equations. He rejected Webber's least cost assumptions, and introduced the notion of demand, to base his model of industrial location on maximizing revenue.

August Losch, a German economist, published his theory of 'Profit Maximisation' in the year 1954. The least cost location theory of Weber was wholly discarded by Losch. In fact, he suggested that, 'profit maximization' is the only objective of the entrepreneur, whether it is state or an individual. The theory states that the correct location of an industry lies where its profit is greatest (Aliyu, 2018).

By the 1950s these earlier ideas were paralleled by those emphasizing the locational interdependence of industry. Both were then criticized for preoccupation with optimality (when reality is sub-optimal); inability to deal with actual industrial organization; and ignoring political economy(Smith, 1981).Around 1980 major changes in thinking were occurring in the dimensions: much greater micro-focus on firms (a behavioral approach to decision making);linkages between firms were seen as important location issues (in organization, inter-industry interconnections, financing) in addition to "classical" location factors; technological innovation and diffusion came to be seen as a key to location i.e. utility of industry and product life cycles explains location; key labor requirements changed; and corporate ownership and control have been seen as important (Chakravorty, 2003).

Deichmann et al (2008) has provided a detail literature survey of the crucial factors of industrial location in the developing countries. In the standard industrial location theory factors like good market access, forward and backward linkages between firms, thick labor markets, knowledge and technology spillover effects etc. have significant effect on industrial location decision. The evidence from the developing countries shows that, factors like high factor prices, labor and regulations etc. have negative effect on the industrial location decision, whereas good market access, financial incentives, transport, social and economic infrastructure, power, firms in supplies industry and firms in own industry etc. have positive effect on location decision(Deichmann, 2008). In

general, the most important factors of determining industrial location decision are good market access, availability of infrastructure, transport &communication, land laws & regulations, availability of finance & equipment, human resources, forward and backward linkages, technology & knowledge spillover, agglomeration economies, organizational behavior, chances, state regulations (such as environmental and pollution standards, incentives in lagging regions or for emerging technologies) etc. and the general level of political support (Deichmann, 2008).

The role of public investment policies and fiscal and monetary incentives is worth mentioning in the literature of industrial location. Countries have used a variety of instruments to influence the relocation of industry to achieve regional development objectives. Most important among these instruments are the provision of public infrastructure, and tax reductions, subsidies, and other incentives that attract firms to lagging regions. Fiscal incentives have been widely used to attract industries and stimulate the growth potential of lagging regions. The rationale for doing so is that to attract firms, lagging regions need to offset the costs associated with transport and logistics, weaker infrastructure, higher factor prices, and lower levels of public services and amenities..

Recent studies show that:

A. Technological change and more efficient transportation have reduced the importance of access to raw materials.

B. Unionization, quality of education, quality of life, and business climate are becoming more important .

C. Taxes and other financial incentives have little impact on choice of industrial location.

In summary , Industrial location theory has emerged over many years of research and study and it continues to change as industry and the general economy change. In its earliest stages, the focus was on factors that affected costs of production and marketing, namely raw materials, transportation, labor costs and proximity to markets. These factors are still considered significant in today's economy, but the list of significant influences has been expanded to include such factors as competitiveness of markets, profit maximization, industrial organization, community attributes, personal factors and other considerations. The number and definition of factors affecting location vary in each case and they sometimes run into the hundreds. The breakdown of location factors examined usually included :Raw materials Water, Transportation Capital ,Markets Industrial Energy ,Labor Community factors. They are interrelated and interdependent so that the desired location usually requires a compromise among factors (Woods, 2002).

6. Industrial Development in Iraq:

In the 1950s, the monarchy used oil revenues to undertake large infrastructure projects, but most manufacturing industry remained in private hands. After the overthrow of the monarchy and extensive nationalizations of industry in 1964, industrial development was characterized by extensive state planning and public

sector control of industry. Generally, however industrial development programs sought to advance common goals, namely:(Sanford, 2003).

1. To diversify the economy and to lessen reliance on oil revenue.
2. To provide employment opportunities for the labor force.
3. To develop and exploit local resources.
4. To encourage import substitution industries.

Large scale industrialization expanded during the oil boom in the late 1970s. With more money in hand, the government was able to purchase heavy industrial plants from foreign contractors on a turn-key, ready-to-operate, basis. Several industrial zones sprang up in this fashion, notably at al-Qaim (minerals processing), Khor al-Zubair (including a large French-contracted iron and steel plant) and a petrochemical complex near Basra. Light manufacturing, including textiles, food processing, and household goods, was centered around Baghdad (al-Khudayri, Sanford, 2003).

The Soviet Union and other eastern bloc countries also contracted for the construction of several projects in the 1980s. Among these were steel works and an electrical equipment manufacturing plant in Baghdad, a tractor works in Musayib, and a pharmaceutical plant in Samara. Romania provided two cement plants, in alQaim and Sinjar. They reportedly produced 7.5 million tons of cement in 1987, of which 4.5 million tons were exported. Iraq purchased these facilities through Economic Cooperation Agreements signed with various eastern-bloc countries beginning in 1985, which provided credits arrangements considered to be more favorable to Iraq than those offered by western creditors at that time.(Sanford, 2003). To diversify away from petroleum dependency, Iraq sought to develop its mineral resource industry. Sulphur mining and processing has been conducted in northern Iraq near Mosul since 1972. Proven sulphur reserves in 1988 were reportedly 515 million tons. At its peak in 1989, production was estimated at 1.4 million tons, of which 1.2 million tons were exported. Sulphur production was enhanced by the opening of a sulphur recovery and sulphuric acid plant built by Japanese firms in 1988. Phosphate extraction and processing is located in the northwest region of the country in mines around Akashat. The reserves of the Akashat mine, opened in 1981, have been estimated at 3.5 billion tons. Phosphate is processed in al-Qaim, in a plant built by a Belgian firm in 1984. Production was estimated at 1.2 million tons in 1989, of which 766 thousand tons were exported. Before the first Gulf war, Iraq was self-sufficient in fertilizers (Sanford, 2003).

The future outlook for the manufacturing sector is clouded. Most facilities have been destroyed by war or degraded by sanctions. Few new inputs have been put into the sector since 1990. Iraqi manufacturing is saddled with aging, if not damaged, equipment and infrastructure. The capacity and skills of the labor force have deteriorated over time. In addition, much of the economic rationale for Iraqi industry has evaporated, since much of the capacity built in the 1970s and 1980s was based on national prestige, import substitution, or other non-market considerations. New policies to facilitate and encourage the growth of industry on better and more sound foundations will be needed. Given the large

size of the urban population and the limited growth prospects for agriculture, new employment opportunities in industry likely will be needed. Iraq will need to take care not to allow its currency to appreciate so much in value (due to large oil exports) that the incentives and prospects for industry and other sectors are unnecessarily diminished (Sanford, 2003).

7. Spatial Development Policies in Iraq:

Iraqi national interest in the spatial dimension of development began in the 1960s, as the 1965-1969 National Development Plan emphasized the concept of spreading industries throughout several Iraqi provinces, such as the paper, glass, and mechanical industries that took hold in Alexandria. This affected rural-to-urban migration and from there came the initiative to spread development outside the major urban areas of Baghdad, Mosul, and Basra.

Systematic thinking and adoption of spatial development as a method of planning development in Iraq began in the early 1970s. This led to the establishment of government agencies specializing in the spatial dimension (1972 Regional Planning), which took responsibility for the various aspects of the spatial development planning tasks. Interest in spatial dimensions continued, and several studies and province development plans were completed. In addition, indicators were defined for regional development and urban planning systems in Iraqi cities, based on the potentials and features of spatial development in the provinces.

Spatial development aims primarily to distribute the fruits of the basic development process in a balanced and equitable way among the provinces. It seeks to reduce economic, social, and urban disparities among the regions of the country on the one hand, and between urban and rural areas on the other hand. It does so by exploiting and efficiently investing in potential and relative advantages available in each province or territory. In other words, spatial development seeks to create relatively balanced development among regions; achieve some kind of balance by maximizing economic development growth rates on the national level; and create an even distribution of development benefits among the country's regions, achieving the principle of integrated development.

There are many factors behind directing investments in its various forms (public or private) to some areas while excluding others. Some of those factors are related to the capabilities of one area—also known as the spatial advantage—and the availability of financial and human resources to receive these investments as compared to areas that cannot fulfill that requirement. This applies to production, industrial, agricultural, and tourism activities, some of them market-related, others dependent on the areas' need for services and infrastructure.

Successive state economic plans have attempted to focus on spatial development. Indeed, they have emphasized the mitigation of the dual spatial development phenomenon characterized by developed and less developed cities. They have also worked to find a spatial development pattern that is better suited

to developmental requirements in the country. This work has included distributing and spreading investment and development projects, particularly those unrelated to vital underground resources, in a way that enhances sustainable spatial development while protecting the environment from pollution and achieving consistency between development and environmental policies (Planning, 2010b).

8. Industrial Location Policy :

Since the early 1960s and 1970s, there has been a clear direction in Iraq emphasizing the necessity of spreading economic development and industry across all provinces; creating balanced spatial development; reducing economic and social disparities; distributing population in a balanced way; and stopping it from becoming concentrated in large urban areas. The industrial site policy is one of the policies adopted for both individual and large industrial complex projects. Industrial development indicators, consisting of workforce distribution and value added for each province, reflect a clear trend towards lowering Baghdad's dominance of the industrial structure in Iraq. It went from accounting for about 60-70 percent of the value of these indicators in the early 1970s to about 39-42 percent at the beginning of this decade. However, the absence of a comprehensive spatial development policy in Iraq has reduced the significance of the industrial site policy. That is because it has not been used in a manner that achieves spatial development goals in a comprehensive way. This has, in turn, led to the concentration of population, as well as economic ,social and urban activities in some cities but not others (Iraq, 2010).

9. Evaluation of the Industrial Policy in Iraq:

In order to evaluate the regional policy in Iraq, it is necessary to review the industrial Location policy Which is one of the most important is urban and regional policies. However, the lack of a comprehensive urban policy in the country reduces the importance of this policy, if it is not used in the direction that achieves the goals of spatial policy or spatial trends in Diameter (mahmud, 1985).

What reinforces the absence of a policy for the industrial location in the country is the absence of spatial or location studies for the majority of economic projects in the national development plans 70 - 974, 76 - 980, 81 - 1985, except for some of them, as studies on these projects are limited to the so-called studies Economic feasibility, in which you refer to the project site as a passing reference without explaining the reasons for choosing it and not offering other on-site alternatives. This stems from the fact that the economic policy in Iraq is a sectoral policy and not a spatial policy, despite the presence of spatial trends aimed at strengthening the balance and social justice (mahmud, 1985).

Most of Iraq's cities and governorates are characterized by economic backwardness, so signing any project in these cities or provinces will have positive effects, but this does not necessarily mean the existence of a spatial policy, rather it is often called a geographical spreading and distribution of economic projects.

The economic development policy in the country has created deviations in spatial development, expressed in the concentration of population, economic and social activities, and urban establishments in cities without others, due to the lack of coordination between the sectoral and regional planning levels. This was confirmed by the Regional Planning Commission by studying the impact of development on the spatial aspects of the country (the study of the spatial Balance for development), as it assessed the developmental impacts on the country's governorates and revealed the existence of large deviations between governorates (The Ministry of Planning, 1984).

Accordingly, this study referred to "the necessity of a regional development policy, in its urban and economic sides, and in the urban and rural sectors" in order to achieve the objectives of the spatial budget. This indicates the absence of a spatial urban policy under which the sectoral economic policy is implemented. To assess the industrial location policy and its role in spatial development, we will review the stages of spatial development in Iraq from the 1960s until now, as follows:

9.1 The Beginning of Spatial Development Phase 1960-1970:

Since the early 1960s and 1970s, there has been a clear direction in Iraq emphasizing the necessity of spreading economic development and industry across all provinces; creating balanced spatial development; reducing economic and social disparities; distributing population in a balanced way; and stopping it from becoming concentrated in large urban areas. The industrial location policy is one of the policies adopted for both individual and large industrial complex projects. Industrial development indicators, consisting of workforce distribution and value added for each province, reflect a clear trend towards lowering Baghdad's dominance of the industrial structure in Iraq. It went from accounting for about 60-70 percent of the value of these indicators in the early 1970s to about 39-42 percent at the beginning of this decade.

Iraqi national interest in the spatial dimension of development began in the 1960s, as the 1965-1969 National Development Plan emphasized the concept of spreading industries throughout several Iraqi provinces, such as the paper, glass, and mechanical industries that took hold in Alexandria. This affected rural-to-urban migration and from there came the initiative to spread development outside the major urban areas of Baghdad, Mosul, and Basra.

Interest increased during this stage In the industrial sector in terms of the percentage of privatization and the pursuit of diversifying the industrial base.
The industrial sector acquired (25%) of the total allocations of the development plan 1965-1969 which amounted to (1500) million dinars.This stage was the beginning of balanced geographical distribution of industrial investments in line with the trends of achieving economic and social development within the under developed geographical governorates by create job opportunities Suitable and stabilizing the population ,despite the adoption of this approach, factors related to the economic efficiency of the project, proximity to primary raw materials, local market areas and the skilled workforce continued to play a major role in

allocating industrial projects, especially within the centers of major cities (Baghdad, Mosul, Basra) as well as the presence of a clear concentration of industrial investments within these Cities and a percentage (41.8%) of the total allocations for the industrial sector, as shown in Table (1,2).

Table 1.Geographical distribution of investment allocations for the industrial sector during the development plan 1965-1969

Governorate	Investment Allocations(ID)	%	Rank
Nineveh	7882000	4.2	5
Salah Al-Din	=	=	=
Kirkuk	10832000	5.8	4
Diala	482000	0.3	10
Baghdad	35341000	**18.9**	**1**
Al-Anbar	7382000	4.0	6
Babylon	30257000	16.2	3
Kerbala	482000	0.3	10
Al-Najaf	=	=	=
Al-Qadisiya	482000	0.3	10
Al-Muthanna	=	=	=
Thi-Qar	4282000	2.3	8
Wasit	5582000	3.0	7
Maysan	482000	0.3	10
Basra	35082000	18.7	2
Duhok	=	=	=
Erbil	484000	0.3	10
AL-Sulaimaniya	1632000	0.9	9
Total	187200000	100%	

(AL- Hadithi, 1988)

Table 2. Geographical distribution of large industrial Projects by governorates during the period 1960-1970

Governorate	Industrial projects	%	Labor force	%
Nineveh	62	5	6472	7.60
Salah Al-Din	=	=	=	=
Kirkuk	32	2.5	1190	1.40
Diala	21	1.7	1699	2
Baghdad	779	**62.40**	55319	**65.10**
Al-Anbar	11	0.90	417	0.50
Babylon	42	3.40	2935	3.50
Kerbala	72	5.80	2652	3.10
Al-Najaf	=	=	=	=
Al-Qadisiya	17	0.30	1453	3.70
Al-Muthanna	=	=	=	=
Thi-Qar	18	1.40	591	0.70
Wasit	10	0.80	1296	1.50

Maysan	30	2.40	1036	1.20
Basra	135	10.80	8016	9.40
Duhok	=	=	=	=
Erbil	12	1.0	297	0.40
AL-Sulaimaniya	7	0.60	1622	1.90
Total	1248	100	84995	100

(AL- Hadithi, 1988)

9.2 The Moderate Growth Phase 1970-1980:

Systematic thinking and adoption of spatial development as a method of planning development in Iraq began in the early 1970s. This led to the establishment of government agencies specializing in the spatial dimension (1972 Regional Planning), which took responsibility for the various aspects of the spatial development planning tasks. Interest in spatial dimensions continued, and several studies and province development plans were completed. In addition, indicators were defined for regional development and urban planning systems in Iraqi cities, based on the potentials and features of spatial development in the governments.

The National Development Plan 1976-1980 explain the proportion of investments in Baghdad, Basra, Nineveh, were 20.7, 21.2, 4.7, respectively, represent 46.6 % of total investments, and these percentages in the National Development Plan 81-1985 were 37.5, 10.1, 9.3, respectively, represent 56.9% of total investments. And investment ratios for the rest governorates ranging between 2.5% and 1% of the total investments , except Kirkuk governorate 5.3% , Alanbar governorate 10.2%, and Salah al- Din 6.9% within the National Development Plan 1981-1985 (Ministry of Planning, 1989).

The industrial sector witnessed during this stage, especially during the period 1971-1980, an increase in investment allocations to the industrial sector within the economic development plan (1971 -1974,1976- 1980. The proportion of allocations of the industrial sector reached (839) million dinars, at a rate of (28%) of the total allocations of economic sectors, then the allocations of the industrial sector rose in(1980) To (4,490) million dinars, at a rate (37%) of the total - during the development plan (1976-1980).

The 1970-1974 plan ushered in the Baghdad governorate's prominence in regards total investment allocations, with a share of 23.9 percent, followed by the Basra province, with a share of 14.8 percent. In other words, 38.7 percent of total allocations were concentrated in two governments. This preferential treatment continued during the implementation of the 1976-1980 development plan, with a few exceptions consisting of the emergence of new growth attractions (Salah al Din and Anbar) with 6.2 percent and 9.9 percent, respectively, of that plan's investment allocations. This seems a significant shift in spatial dimensions toward new places that represent growth attractions and reduce the dominance of traditional central attractions.

Table 3.Geographical distribution of investment allocations for the industrial sector during the development plan 1981-1985

Governorate	Investment Allocations(ID)	%	Rank
Nineveh	162610000	5.3	6
Salah Al-Din	626638000	20.6	1
Kirkuk	162449000	5.3	6
Diala	39092000	1.3	12
Baghdad	533986000	**17.6**	**2**
Al-Anbar	327674000	10.8	4
Babylon	81508000	2.7	8
Kerbala	178583000	5.9	5
Al-Najaf	49610000	1.6	10
Al-Qadisiya	19295000	0.6	13
Al-Muthanna	79855000	2.6	9
Thi-Qar	43553000	1.4	11
Wasit	40529000	1.3	12
Maysan	48076000	1.6	10
Basra	508873000	16.7	3
Duhok	4429000	0.1	15
Erbil	4655000	0.2	14
AL-Sulaimaniya	130447000	4.3	7
Total	3041862000	100	

(AL- Hadithi, 1988)

Table 4. Geographical distribution of large industrial Projects by governorates during the period 1980-1985

Governorate	Industrial projects	%	Labor force	%
Nineveh	120	8	11472	7.0
Salah Al-Din	30	2	7419	4.50
Kirkuk	32	2.10	2954	1.80
Diala	66	4.40	2999	1.80
Baghdad	**703**	**47**	**71362**	**43.50**
Al-Anbar	50	3.30	4482	2.70

Babylon	65	4.30	11262	6.90
Kerbala	33	2.20	3316	2.0
Al-Najaf	24	1.60	3428	2.10
Al-Qadisiya	27	1.80	4516	2.80
Al-Muthanna	16	1.10	2169	1.30
Thi-Qar	30	2	4002	2.40
Wasit	17	1.10	4479	2.70
Maysan	44	2.90	6512	4.0
Basra	107	7.10	14200	8.70
Duhok	24	1.60	658	0.40
Erbil	52	3.50	3432	2.10
AL-Sulaimaniya	58	3.90	5302	3.20
Total	1498	100	163964	100

(AL- Hadithi, 1988)

9.3 The War Period 1980-1990:

The first phase of the economic decline came during the Iran-Iraq war (1980-88), and second during the first Gulf War and under the subsequent UN sanctions. The Iran-Iraq war dealt a devastating blow to the Iraqi economy. The war destroyed a large part of Iraq's capital stock, reduced oil production and exports, and depleted much of its foreign assets and foreign exchange reserves (Nordhaus, 2002).

The 1981-1985 development plan stressed the need to reduce the economic and social development divide among Iraqi areas and to work toward improving the balance between developed and less developed areas. The plan also confirmed expanded provisioning of public services to low-income groups, and increased attention to reducing spatial inequalities between rural and urban areas. Despite these objectives, however, reality shows the continuing disparity among governorates. Indeed, Baghdad continued to receive the majority of allocations, at 37.5 percent. This confirms the disparity in spatial distribution of this plan's investments. Among the indicators confirming the opinion that regional disparity persisted is the indicator measuring the magnitude of labor working in the industrial sectors in the Baghdad governorate. That indicator was 52.1 percent as compared to the total population, which was 24.07 percent.

The 1986–1990 plan indicators show that there was a clear decrease in the relative magnitude of allocations earmarked for the Baghdad governorate, 21.7 percent as compared to 37.5 percent in the 1981 - 1985 development plan. There was continued relative focus on the two new development poles, Anbar at 13.9 percent, and Salah al-Din at 6.6 percent. These governorates attracted several vital projects, for example, the highway in the Anbar governorate and the

construction of industrial and university projects in the Salah al -Din governorate.

Per capita investment in the 1981-1985 plan reached 976 dinars. Some provinces exceeded the national average, Anbar and Salah al Din, for example, where the per capita investment was 2,678 and 2,394 dinars, respectively. This reflects a trend of redistributing income toward new governorates outside main development attractions. It also reflects the superiority of the two major attractions, the Anbar and Salah Al-Din governorates, over other governorates. Therefore, investment distribution in this plan was not careful to distribute development benefits over a larger number of governorates.

The 1986-1990 plan confirmed continued and complete support for the military and promoted the economic objectives related to raising the standard of living among the population and achieving balanced development by analyzing the reality of spatial development. The plan concluded that it was crucial to reduce the concentration of spatial investments in traditional governorates. The plan also concluded that the actual reality did not represent the optimal solution because of continuing disparities in development levels per the plan's diagnostic criteria. The 1986–1990 plan indicators show that there was a clear decrease in the relative magnitude of allocations earmarked for the Baghdad governorate, 21.7 percent as compared to 37.5 percent in the 1981 - 1985 development plan. There was continued relative focus on the two new development poles, Anbar at 13.9 percent, and Salah al-Din at 6.6 percent. These governorates attracted several vital projects, for example, the highway in the Anbar province and the construction of industrial and university projects in the Salah Al-Din governorate.

9.4 The Period of The Economic Blockade1990-2000:

War and Sanctions had a negative impact on all economic sectors, especially the industrial sector Aside from the internal weaknesses in the sector, war and sanctions also crippled Iraqi manufacturing. Much of the industrial infrastructure that survived the Iran-Iraq war was destroyed or severely damaged. For industries not destroyed, the sanctions regime in effect between 1990 and 2003 closed off the possibilities of obtaining inputs or spare parts or exporting manufactured products legitimately .

The sanctions regime in effect between 1990 and 2003 closed off the possibilities of obtaining inputs or spare parts or exporting manufactured products legitimately. Reconstruction efforts did not concentrate on the revitalization of the manufacturing sector, but rather focused on the more lucrative oil industry and on instruments of the regime's power (Sanford, 2003).

The reality and level of decline in industrial settlement trends is evident according to the following considerations:

1. Difficulty in providing requirements for industrial activities in terms of primary raw materials and imported spare parts.
2. Shortage of foreign skilled manpower.

3. The low volume of capital invested in the industrial sector and the difficulty in obtaining currencies
4. The difficult situation despite the existence of investment allocations for the industrial sector in the various regions of the country
5. Weak production efficiency of industrial activities during this stage, and many of them stopped production In whole or in part.

This can be demonstrated by comparing and analyzing the data of Table No. (5) with the industrial settlement indicators during the previous stages.

Table 5.Geographical distribution of investment allocations for the industrial sector during the development plan 1995

Governorate	**investment allocations(ID)**	**%**	**Rank**
Nineveh	1361519	11.36	6
Salah Al-Din	1932590	16.12	2
Kirkuk	44400	0.37	10
Diala	87750	0.73	9
Baghdad	1731857	**14.45**	**4**
Al-Anbar	1596231	13.32	5
Babylon	1744800	14.56	3
Kerbala	=	=	=
Al-Najaf	268500	2.24	7
Al-Qadisiya	=	=	=
Al-Muthanna	3230	0.03	13
Thi-Qar	8000	0.07	12
Wasit	=	=	=
Maysan	237000	1.98	8
Basra	2959378	24.69	1
Duhok	=	=	=
Erbil	10000	0.08	11
AL-Sulaimaniya	=	=	=
Total	**11985255**		

(Commission, 1995)

Table 6. Geographical distribution of large industrial Projects by governorates during the period 1996

Governorate	**Industrial projects**	**%**	**Labor force**	**%**
Nineveh	52	9.7	3845	3.3
Salah Al-Din	9	1.7	9051	7.7
Kirkuk	20	3.7	1717	1.5
Diala	67	12.5	4668	4
Baghdad	207	**38.7**	45866	**39.2**

Al-Anbar	15	2.8	6455	5.5
Babylon	35	6.5	12481	10.7
Kerbala	22	4.1	1013	0.9
Al-Najaf	12	2.2	2965	2.5
Al-Qadisiya	17	3.2	4198	3.6
Al-Muthanna	8	1.5	1089	1
Thi-Qar	77	1.3	4098	3.5
Wasit	19	3.6	1308	1.1
Maysan	27	5.1	2687	2.3
Basra	18	3.4	15462	13.2
Duhok	---	-----	=	=
Erbil	-----	------	----	----
AL-Sulaimaniya	-----	-------	----	-----
Total	535	100	116903	100

(Planning, 1996)

Table 7. Geographical distribution of large industrial Projects by governorates during the period 1996-2010

Governorate	**Industrial projects**	**%**	**Labor force**	**%**
Nineveh	47	8.9	12202	6.4
Salah Al-Din	10	1.9	13369	7
Kirkuk	24	4.6	5756	3
Diala	54	10.3	5635	2.9
Baghdad	97	**18.5**	71279	**37.2**
Al-Anbar	19	3.6	10074	5.2
Babylon	31	5.9	16175	8.4
Kerbala	30	5.7	2936	1.5
Al-Najaf	18	3.4	8383	4.4
Al-Qadisiya	30	5.7	5156	2.7
Al-Muthanna	37	7	5791	3
Thi-Qar	21	4	5917	3.1
Wasit	33	6.3	7086	3.7
Maysan	57	10.8	3049	1.6
Basra	18	3.4	18903	9.9
Duhok	=	=	==	=
Erbil	-----	-----	----	----
AL-Sulaimaniya	-----	-----	----	----
Total	526	100	191711	100

(Planning, 1996),(Planning, 2010a)

Table 8. Population Distribution by Governorates for 2018

Governorate	**U+R Population**	**%**	**Urban Population**	**%**
Ninevah	3729998	9.78	2261929	8.49
Kirkuk	1597876	4.19	1181106	4.43
Diala	1637226	4.29	805537	3.02
Al-Anbar	1771656	4.64	886115	3.32
Baghdad	**8126755**	**21.31**	**7110234**	**26.70**
Babylon	2065042	5.41	996885	3.74
Kerbela	1218732	3.19	814872	3.06
Wasit	1378723	3.61	829783	3.11

Salah Al-Din	1595235	4.18	719341	2.70
Al-Najaf	1471592	3.85	1050966	3.94
Al-Qadisiya	1291048	3.38	739601	2.77
Al-Muthanna	814371	2.13	369833	1.38
Thi Qar	2095172	5.49	1344810	5.05
Maysan	1112673	2.91	821853	3.08
Basrah	2908491	7.62	2362123	8.87
Erbil	1854778	4.86	1544091	5.79
Duhouk	1292535	3.39	957135	3.59
AL-Sulaimaniya	2162279	5.67	1832119	6.88
Total	**38124182**	**100**	**26628333**	**100**

(Iraq, 2017).

Table 7. Population Concentrations , Investments, Industrial projects and labor force in **Baghdad** for the Period 1965–2015

years	**1965**	**1977**	**1987**	**1997**	**2007**	**2015**
Population concentration as a percent of total in Iraq	25.4	26.6	23.5	24.5	24.1	21.3
Investment as a percent of total in Iraq	30.7	20.7	37.5	37.6	16.4	=
Industrial projects	62.4	56.8	49.6	38.7	18.5	18.5
Labor force	60.3	52.7	53.3	39.2	37.2	37.0

(Mahmud, 2014), (Planning, 2010b), (Iraq, 2017).

9.5 The Period of Regime Change 2000-2010:

Planners, after 2004, adding the spatial (regional) dimension to development plans, to distribute development benefits among Iraqis, Establishing a balance between the needs of the population of different public services and infrastructure and the capabilities of the production sectors, including a wide range of sectors. Balancing developmental decision-making based on the three dimensions of sustainable development: economic, social, and environmental, using environmentally friendly technologies and proper handling of the negative environmental effects accrued over the past decades, also focuses on social and humanitarian aspects (Mahmud, 2014).

The heavy reliance on oil has made the economy unable to create jobs. Due to the lack of front and back linkages in the oil sector, unemployment rates aggravate, the economy becomes unable to create jobs. Other sectors which traditionally absorb the labor force also become more dependent on the oil revenues. It is enough to highlight the conflicts aroused by this challenge. (Planning, 2018). The total investment allocations for the period 2007-2011 amounted to more than $ 80 billion, Nevertheless, it is difficult to see real achievements on the ground in exchange for the large investment spending by state institutions in the center and the governorates.

9.6 The Period of Economic Decline 2010-2020:

The national development plan 2010-2014 has determined many important planning principles have been adopted at the national level to achieve many goals included the social justice ,urban-Rural balance, reduction of the development gap between urban and rural areas, rational use of natural resources: optimized use of natural resources, environment protection, Competitive Private sector: encourages privatization and transfer to the private sector to achieve an interactive, participatory, and competitive private sector that supports sustainable growth, good Governance ,and Promoting Sustainable Development.

On the other hand, ministry of Planning directed all planning units to create a comprehensive spatial development in Iraq's governorates so as to create equitable opportunities for access to public services and infrastructure, decentralization can foster greater accountability and responsiveness in service provision and can strengthen citizens' ability to participate in the decision-making process and claim their rights. The spatial planning plans for governorates 2012-2020 were prepared at the end of 2012 (Mahmud, 2014).

The National Development Plan 2018 – 2022 explain the main spatial objectives as follows:

1. Limiting the bilateral spatial development, and reducing the developmental disparity between the governorates .
2. Strengthening rural infrastructure.
3. Improving the hierarchy of the urban system and urban renewal of city centers
4. Activating the urban administration and organizing the cities .
5. Integrating the various transportation systems (improving the transportation system between the governorates and developing the urban transportation (Promoting decentralization, transferring of powers and participating in the management of development between governorates (Planning, 2018) .

Despite the existence of a trend and setting goals for balanced spatial development, there were enormous political and economic challenges in this period prevented Iraq from the implementation of these plans include: (Iraq, 2019)

1. Institutional Challenges: represent with institutional Confusion, low efficiency of institutional performance, large government administrative system and low productivity , and administrative and financial corruption.
2. Economic Challenges include corruption, deterioration of the investment climate, distortion of sectoral structure, increase of public debt, under develop Banking System, and the limitation of the Private Sector's role.

3. Political challenges represent with Poor Coordination between local and federal levels and between them are still weak and the federal budget direction in the economy is still unclear.
4. Social Challenges can be summarized with the continued failure of the state and the society to absorb the youth and provide them with decent work opportunities, which threaten the pillars of stability and social security, and some of them to migrate outside the border. the continued decline in the level of health services, their poor deployment, and their inability to meet the real needs of the population, with the increase of the migration of medical skills abroad….etc.

As a result of the absence of a strategic economic and development vision that includes various economic sectors, and the lack of interest in national productive activities, the sector of industry have received only a small share of allocations in the general budgets. This share did not exceed 1.5 percent. This was reflected in the meager budget allocations for the investment. On the other hand, the armed forces received the largest share of the allocations, it was more than 15 percent in the 2011 budget, and in 2012 was 14.7 percent of total expenditures. The investment budgets after 2010 were varied from year to year according to oil revenues, and although there were good allocations in some years, they were not implemented, in addition to Iraq's preoccupation with the war on ISIS and the lack of security, corruption and institutional challenges (Party, 2020) .

10.Conclusions:

1. Industrial location theory has emerged over many years of research and study and it continues to change as industry and the general economy change.
2. Location factors are interrelated and interdependent so that the desired location usually requires a compromise among factors.
3. There is a clear duality in development in Iraq. Indeed, there are major developed and underdeveloped centers in the cities and governorates.
4. Growth can be noted in those areas due to the rise in sectoral growth rates for various sectors of economic activities.
5. The economic development policy in the country has created deviations in spatial development, expressed in the concentration of population, economic and social activities, and urban establishments in cities without others, due to the lack of coordination between the sectoral and regional planning levels.
6. Although, Iraqi national interest in the spatial dimension of development began in the sixties of the last century, Iraq did not formulate special policies to achieve spatial development, but rather adopted the method of distributing industrial projects without clear criteria and there was not clear industrial location policy. As well as the difficult conditions that Iraq went through

Since the eighties of the last century until now, including wars, sieges, and corruption that prevented it**.**

11.Recommendations:

The main scientific results of the study can be used to improve policy of spatial development of the economy in Iraq. Based on the conducted research, we made the following recommendations:

1. The need for industrial location policy within comprehensive spatial regional development.
2. The basic element of spatial development policy is the process of selecting urban centers that must be developed, as the development of all cities and governorates is not possible.
3. The process of identifying urban centers to be developed is preceded by an assessment of the reality of the situation, as there is a need to evaluate the sources of wealth and material and human potentialities.
4. Provision of spatial development and economic growth should be considered as the need to achieve the increasing the level of living of the population , rising real per capita incomes in all regions; expansion and increasing of equality of opportunity of access of the population of all territorial entities of the country to social services .

The spatial development policy should take the following consideration into account:

1. Limiting the bilateral spatial development, and reducing the developmental disparity between the governorates.
2. Promoting decentralization, transferring of powers and participating in the management of development between governorates.
3. Laying the foundations for decentralized spatial development .
4. Excluding the developed governorates from allocating industrial projects in it.
5. Giving priority to the governorates that are overstretched or poor in choice as sites for industrial projects to promote them and reduce the disparity between them and developed governorates .
6. Adopting a set of criteria in selecting the location, among them: economic , Social, strategic, and environmental criteria, according to the size and nature of the project and its importance to the national economy.
7. Conducting studies and surveys at the national level to indicate its resources, the existing economic activities in each governorate , income levels, immigration, infrastructure ... etc. And mapping industrial projects according to the capabilities available in each governorate.

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