Indicators of Spatial Dominance of the Potential of Transformation in the Urban Hierarchy: A Comparative Analysis of Musayyib and Suwayrah in Iraq

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Abstract. The spatial dimension is the basis of the process of identifying the common interests and objectives of the parties involved in the planning process and it carries the flexibility to determine decisions related to economic and social development. The city is an integrated representation to the essence of spatial dimension. It is a purely social phenomenon and a state of interaction between human groups within economic and cultural dimensions. Cities are developed by human interaction, transportation, and communication; which is one of the means of this interaction that contribute to the growth of the urban center. Cities divided according to the functional classification often based on the existence and operation of primary, secondary and tertiary economic activities. The growth of cities developed by human interaction within economic and cultural dimensions. The current research suggests that the mechanism by which the change of the administrative unit approved are limited to the same bases used in determining the city rankings (including the transfer of the administrative ranks from districts to governorates in Iraq, especially a mechanism that does not provide an integrated view of spatial dimensions). This research aims to study the concept of urban transformation in the urban structure in an integrated manner according to the functional relations and its spatial implications with the two attributes of spatial dominance, and the urban hierarchy of cities within the urban system. The theoretical framework indicators were applied to the cities of Musayyib and Suwayrah in Iraq. The main conclusion of the study is that transforming these cities to a higher administrative rank does not change the hierarchical disparities along the country level while serving the city as a dominating city within its regional scope.

1. Introduction
The city is a purely social phenomenon and a state of interaction of human interactions. Cities are divided according to functional classification based on primary, secondary and tertiary sectors. Cities in the first sector activities include mining centers and the secondary sector, industrial cities while the third sector are historical cities that are not affected by manufacturing, administrative, religious and military centers. Cities are dependent on trade and the development of international markets and on the import of agricultural surplus. Small cities relied on trade between numbers of smaller cities. The major cities were their international trade, and cities grew with the growth of international markets and the means of exchange. The cultural accumulations that man created was the basis for the growth of urban society and thus the creation and growth of cities. The presence of cities within the ranking of districts in Iraq, which have reached the conditions of transition to the provinces as a result of its size and population (according to the mechanism previously approved). The goal of contemporary planning studies is no longer limited to classification. However, they work to verify the validity of administrative divisions. The principles of territorial division have been summarized in six important principles, including: The borders do not interfere with the movement of the population and their daily activity, so there was no separation between the workplace and the housing from natural or artificial barriers and follow lines or areas that the population does not condense. The Territory is a regional capital capable of being a center of regional life and mediating the region for easy access from all sides. The smallest area should be sized to justify local administration, it must include sufficient
resources, capabilities and expertise, and this size varies, of course, according to the size of the population of the country. No region should be large in population so as to disrupt administrative and service work. The boundary should follow water-dividing lines and be crossed by rivers or valleys, and the division should respect regional feelings and local traditions. The hypothesis of this research is based on the identification of integrated factors that are based on the formation of mechanisms for the administrative conversion process or the decision to transfer from administrative rank to the other. The concept of the province will be defined as the highest administrative rank in the urban structure in Iraq. Which is the target of the administrative conversion process in the urban hierarchy. "The province is a dynamic unit whose characteristics and boundaries change over time, and this aspect is of particular importance, because any specific division of the Iraqi provinces should take into account the dynamic nature of the development process. The province is a spatial term for the type of environment, where its components are precisely arranged and related with a functional spatial dimension, broad enough to create functional relationships among multiple and diverse human settlements, and enough to generate and develop diverse economic activities. The characteristics of a province are determined to maintain the characteristics of the scope of the effect of expressing mutual functional relationships between components, and with components in other provinces. Based on the principle of dependence and interdependence and is the functional relationship, and represents the basis of the process of adaptation. Cities are classified in the urban system in Iraq to the centers of the provinces and centers of districts and centers and neighborhoods and villages, this classification depends on the population size variable [1]. The former definition of the concept of province offers avenues for research in the basic pillars of the definition, namely, the existence of a central city representing the center and the city area interacting with them. Therefore, it is necessary to address the concept of the city and its territory and determine the size of the regions of the cities for controlling the urban size. This will control the increase of costs of management, and will reduce the adequacy of distribution and communication, and therefore it is desirable to be equal in size [2]. Transformation in this context means the establishing an administrative unit that may be within the one governorate or the creation of a province as an integrated administrative unit. This process has several motives related to several factors that work and are linked together can be summed up by the availability of a large geographical area of a particular governorate or provinces and a large population. This will cause a population bottleneck and a competition between centres. Therefore, the conversion process is "an act directed at changing the administrative hierarchy of a city or a population settlement in general due to a specific need within the economic, social and urban dimensions [2]. The measurement of the growth of urban centre more than others requires understanding and measuring the conversion process of interdependence relations. There is no agreed definition of the concept of territory, but the term means, part of the surface of the earth is characterized in one way or another by other parts. The territorial division is based on spatial units that contain distinct and consistent patterns of natural and human geographical phenomena. There are many and varied reasons for choosing a degree of regional excellence and territorial interdependence [1]. This concept emerged in the French regional planning, which defined three homogeneous regions: the Paris region and nine polarizing regions West and East (except for Paris). The eight cities were selected outside Paris based on their size. Some of which are composed of many cities such as Lille, Rouba and Turkouan, with the aim of decentralizing some regional functions by withdrawing them from Paris to these cities. This policy aimed at concentrating investments in the eight regional cities: a system of central armature urbane. The centres of these polarizing regions and their external regions or their margins by attracting inflows from the outer limit and directing them through a hierarchy of the smaller centres. There is a general region such as the natural region, the general human region and the climate region to define the relationship between the resources there was the economic classification of the region [3]. Similarities arise in terms of the coherence between the development of a framework for policies and procedures in space exploitation, environmental protection and sustainable development, and broader relationships, systems will evolve differently, adapted to their specific characteristics. For example, The development process of the EU in promoting multi-centre development, innovation through urban networks and cities. The
establishment of new forms of partnership, while ensuring the improvement of technical infrastructure (especially energy). The application of public interest services and the promotion of risk management, including climate change. New forms of management of protection of areas and the strengthening of environmental structures and cultural resources appeared; such as potential development, especially in areas that lag in development, in environmentally and culturally sensitive areas to produce functional - integration areas, and multimodal [3]. The decision to transfer depends on the legal basis, spatial dimension as strategies and plans, decisions and depends on the support available to implement the planning [4]. The regional division can be complex, (Sectorial). Regional integration is the most complex, integrated and organized. It takes into account all aspects of social development by interacting with the surrounding environment [5]. These and other definitions share the characteristics of natural and human components, phenomena and processes that occur in a given place and function in them. In order to build the integrated model for the applied study a set of theories and planning models will be discussed to the interpretation of the traits of urban domination and hierarchy.

2. Theories for Determining Urban Hierarchy Distribution
Several studies have attempted to shed light on the explanatory factors of urban hierarchical distribution and spatial variables, including the relationship between population distribution and the dominance of city center. "Some researchers tried to establish a regular relationship between the first city and other cities in the same state, it is possible to know the size of a city if we know the rank of that city and the size of the first city [6]. In 1939, Mark Jefferson used the concept of the first city as a distinctive phenomenon of the size of major cities in developing countries (its presence in developed countries). He noted that the differences in the size of the first and second cities in developing countries are greater than in the developed countries. The general average of the city's population (30%) For the population of the first city and the third city (20%) This reflects the polarizing phenomenon that characterizes the growth of capitals in developing countries. Cities, according to the Jefferson’s study, are distributed to the primary city, the middle cities, the small, and continue to gradient to the centre of its smaller stability [7]. The Rank-Size Rule for George Ziff clarified the relations between numbers and sizes of cities. The hierarchical applications in most of the governorates show a concentration of population in a major dominant city. The urban system in the governorate is not far from this vision, as it is possible to refer to a dominant city within the urban system of the governorate and represent a development center in the governorate. All levels start from a city as a nucleus and base for the planning region and all the regional planning units revolve around a central city, the components of the spatial structure can be defined as (land area, central nucleus and network of roads). Therefore, it is not possible to develop a vision of spatial space except by understanding and defining these four axes [1]. The Concept of the Contractual Region (within the theory of general systems) based on variables, which are; Location, population and technical factors interact with each other in an internal interaction, overlapping and complementarity. The study of the functional regions was carried out in the framework of the study of systems according to a set of functional relations that exist within the systems G.S.T. In this sense, the province appeared in the early twentieth century in the writings of a number of geographers, including Galvin J Galpin, 1925, but evolved and crystallized in the writings of Park Park, R 1915. Dickinson and Christaller in the 1930s, after extending the concept of the continental region to include areas of economic and social organization in which functional relations are evident. Levy considered the functional region as a region that served by a large city, and the area of the various functions of this city. It can be defined as; "an equal employment lines, limits of the administrative, health, commercial, and educational or recreational services of the city, which is the center for delivering these services to the Surrounded areas [8].

3. Theories identify the characteristics of transformation in the internal structure of cities
The growth of the size of cities is not just a random change. It is a phenomenon of changes that related to (rules, laws, factors, and variables) that control the changes in city’s size. A set of theories, models and rules have been developed to explain the factors influencing cities’ positions, sizes and numbers, and how these urban centers are distributed in their regions [9]. Central Place theory was formulated in 1933 by the German geographer Walter Christaller as a general theory of reasoning, designed primarily to determine the size, number and distribution of cities. This theory is mainly concerned with the process of census of urban centers. So, if we look at the content of this theory, we found it embedded in a series of concepts, and the logical results of what we can call (in chronological order of urban centers), according to its functions there were, for example, the village Hamlet, Village, Town and City. This arrangement was mainly associated with market areas and the transport network [10]. In the light of these concepts, Christaller concluded a coherent hierarchical system of central places, which vary in numbers and population sizes. But “There are regions that are not affiliated to any of the centers, and the state of the intersection of districts where some regions overlap with more than a supplementary area, or a hexagonal system [11]. Growth Poles theory by Fransoi Perroux first developed in 1955. The essence of this theory lies in the existence of one or more regions, which have certain economic, social and geographic features. These features define the center or the pole of development. Perroux fined that the development of that pole affects the development of areas within its sphere of influence. This pole can directly or indirectly, cause the relationship between economic activities, and the manner of their performance. Albert Hirschman refers to the poles of growth as a somewhat similar expression of growth points, i.e., those areas in which forces have a special influence on the spatial concentration of economic growth in the state, or the phenomenon of unbalanced growth of the state, or the region and its neighbours, or even among certain groups within a single region. Louis Davin distinguishes between two types of growth poles active pole and the potential pole. The key step remains to finance the growth pole from the passive to the active stage, identifying the priorities of this potential pole or its preferences in terms of quality of the industries needed for it [7]. The Human Ecology direction referred that the city cannot be seen as merely an economic structure, a physical structure, an architectural form, or an administrative unit. (Sociology) plays an important role in drawing the framework of the human ecological trend related to the issue of urban growth. The concept of an ecological compound is composed of four main components: environment, population, social organization, and technological level. In his book Urban Sociology, Morris R.N.Morris attempts to limit a number of ecological processes within a city and identify them in three processes; Concentration and de-consternation, Centralization and Decentralization, and Invasion and Retreat [12]. Invasion as an ecological process refers to the arrival of several groups of different class affiliations to a region for the first time for the purpose of action and profit [13]. Communication Theory perceived the city through interaction; transport and communication. The main reason for the growth and expansion of urbanization is the ease of communication between individuals and the transition from one place to another. The technical progress of the means of communication, the transport structure, and the resulting congestion in the city's transportation systems will create alternative means of communication that facilitate interaction between individuals within the urban centre or with other urban centres. The efficiency of this network depends on what can be called the convergence of means of communication [14]. The above theories represent the basis on which different models of urban growth and urbanization showed in (table 1).

**Table1.** A model for the interpretation of the traits of urban domination and Hierarchy according to a set of theories and planning models, prepared by the researcher.
### 4. Integrated factors for spatial structure

The characteristics of the spatial structure of the studied areas (in Iraq) affect the nature of the factors adopted in the study of the stable and the extent of their impact. By evaluating the integration of the basic models to study, the spatial structure of the cities at the administrative level, according to which we shall determine the integrated factors adopted in the applied study.

#### 4.1. Dominance factors

The Dominance of the city is affected by population size and the ability of the city to attract certain groups (not just the number of its population), the availability of the transport network and accessibility are among the general bases in defining the territory, as well as the importance of economic resources and capital availability. The function of the city and its contribution to the activities that stimulate the development process, the presence of specialized activities (industrial health education, trade and large markets).

#### 4.2. Hierarchy factors

| Spatial structure | Modeling the conceptual dimension to interpret the structure of the place | Integration of factors of hegemony of place and urban hierarchy according to each model | Evaluate the integrity of the form |
|-------------------|--------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|----------------------------------|
| A) Demographic models. | Models focus on the feature of population dominance by factors of population polarization (availability of services) | The individual dimension as a motive to form the characteristic of attractive cities |
| Mark Jefferson model | | |
| (B) a set of economic models | Models focus on the dominance of the site with distinct economic activity (availability of jobs) | The characteristic of dominance depends on the existence of the distinctive economic pattern |
| Von Thunen and Webber model. | | |
| C) A set of social change models that view cities as centers for generating social transformation. | Models focus on the analysis of cities with a distinct social structure that has the potential to evolve | The dominant feature of cities of a distinct social type |
| D) Models that study urban growth as a complex network of relations. | These models focus on the internal structures of cities within the network of urban interactions within the dynamics of introducing new factors constantly to analyze real transformations | Integration of factors that support the dominant feature within the urban hierarchy |
| (E) A set models that view the city as a combination of land uses (Burgers, Humreh, Harris, and Ullman) | Analysis of the internal structure of the city according to the different uses of the land | The dominant feature of cities with diverse uses of urban land |
Most of the studies that attempt to determine the city's territory spatial structure derived originally from the theories and models of gravity used in natural sciences. Which states that the spatial interaction between any two cities is directly proportional to the size of the two cities and vice versa with the distance between them. Measures to measure the size of a city include factors such as population, number of households, size of investments, and number of employees, regional gross product, and size of local newspapers or day-to-day work. The distance uses is the distance between the two cities or the time or the cost of transport. The differentiation in properties characterises the spatial unit and its surroundings (natural and human), which enhances interaction. The Hierarchy is a system of relations between the mentioned factors and the transformation process depends on the disparities that defined the urban arrangement within the system. The two groups of these factors and their indicators illustrate in (table 2).

5. Applied Study
This part of the study is about the implications of the above indicators on a real case.

5.1. Al-Musayyib city;
It is Located in the district of Musayyib, the city until 1791 was a village of no more than thirty families living in its palm-roofed huts and mud houses. It was a station for the rest of the caravans passing by and going to the holy shrines to mediate between the cities of Baghdad and Karbala. The city has expanded over time and its riverbanks became ports for sailing ships, boats and water bodies coming from the cities of Hit, and Fallujah, where agricultural, commercial and vegetable products are transported. During the First World War, Mussayab was administratively part of Baghdad region. Its small side was administratively linked to Karbala Brigade (the province was called a brigade under the previous administrative divisions), and became Musayyib after the formation of the national government, especially in (1926) district linked to the banking Hila and the areas of (Sadda, Jurf Al Sakhr, and Al Iskendariya). This site depends on several factors such as the population and their proportion of the total number of the province, region, country, location and area occupied by the city with its administrative limits at the national level. It is the center of one of the four districts of the province, where the city is a gateway to maintain the main road. Musayyib is the twelfth place in terms of area, with the area of the judicial center (257) representing (4.5%) of the total area of the province of Babylon and represent (27%) of the area of Musayyib district. As for the population of the city of Musayyib, it is considered one of the largest cities in comparison to the cities that are located around it or in the whole of the governorate. The population in 1997 is 40779 people, representing 3.4% of the total population of Babylon province. The largest urban population in Babylon province. The city accounts for 7.2% of the total urban population in the governorate and 31% of the same population. The city with the Hashemite city represents the only two tribes that are devoid of rural populations. Babylon province is divided into four main districts (Hila, Mahaweel, Hashimiyah, Musayyib). Each of these districts also includes a number of areas which constitute a total of (12) districts and each area has a center, villages or municipalities of different types'figure 1'.

Table 2. Interconnection and Interaction between Factors in Developing Spatial Structure in Cities to Enhance Dominance within the Urban Hierarchy Structure, prepared by the researcher.
### Influential factors

| Indicators                                                                 | Dominance | Hierarchy |
|---------------------------------------------------------------------------|-----------|-----------|
| Population sizes                                                          |           | +         |
| Demographic characteristics of the population (social and tribal dimension)|           | +         |
| The function of the city and its contribution to the activities that stimulate the development process, the presence of specialized activities (industrial health education, trade and large markets) |           | +         |
| an economic relationship with the surroundings                             |           | +         |
| The attractions                                                            |           | +         |
| Urban dimension and structural structures of roads and infrastructure       |           | +         |
| Distance between cities and population numbers "Hierarchy". Within the stable environment (determining the degree of dominance) |           | +         |
| Socio-economic linkages and their facilitations of transport lines (beri railway or air transport) |           | +         |
| The consequent degree of dependence of the ocean on that city and its integration to form a functional unit within the spatial dimension. |           | +         |
| The convergence of properties between the stable and its surroundings (natural and human characteristics), which enhances interaction |           | +         |

### 5.2. The urban reality of the city of Musayyib
The city of Musayyib, according to the administrative rank, is relatively large within the structure of the province of Babylon in central Iraq. It suffers from the deterioration of the infrastructure sector, lack of superstructure, complete absence of modern urban landmarks and incomplete water and sewerage systems, causing visual pollution and obstruction within urban road networks. The city is a link between several governorates and represents a major market for commodities and agricultural crops (according to statistics, a market for five million people). It also represents a transit point for religious visits to the provinces of Najaf and Karbala. Which includes large areas and settlements of the judiciary. It includes a number of important industrial sites and contains agricultural potential and livestock wealth. It is characterized by a wide transport network represented by roads and railways, poverty in the level of services, lack of efficient cadres and high overcrowding. We conclude from the previous analysis that the region affected and influenced by the city of Musayyib directly (the feature of hegemony), ring depth (3-8) km of Al Hindiah, Jarf Sakhr and indirect impact zone ring (20-30) Km include Alexandria and the rock and some other stabilizers ‘figure 2’.

5.3. Suwayrah District:
The District was established under Royal Decree No. 27 in 1923 with an area of 937 square kilometers. The district of Suwayrah is the largest district of Wasit province. It is bordered by Baghdad, the city of Mada'in and Jabla in the province of Babylon to the west. Located in the north of Wasit province, 120 kilometers away from Al Kut. The population of the city reached 125036 according to the results of the last census. The district of Suwayrah is located 140 kilometers northwest of Kut, it has a local name for the ancient city people but it is not common now (Al-Sira). The center of the district of Suwayrah is ranked sixth in terms of area with a total area of 1345 km² with a rate of 7.84% of the governorate area. The population density in the district reached 136 people / ha in 2015 and is expected to reach 156 people / ha in 2020. The percentage of fertile land is approximately 85% of the total area of Suwayrah district, which is a high percentage compared to the other districts in Wasit governorate, where there is a small percentage of industrial establishments, which represent only 1% of the total establishments at the governorate level.2 % of total workers at governorate level. The industrial sector faces problems such as weak infrastructure, technical failure, environmental pollution, lack of coordination between government departments and non-governmental bodies, lack of research and advisory centers, overlapping of industrial, commercial and service uses, and weak
funding capacity. The number of beds in the city 116 beds in the only general hospital, while the district of Suwayrah follows Kut in the number of major operations in the hospital of the District and may be due to the large number of population and preference by many medical professionals to the near Baghdad and the growth of its population ‘figure 3’.

5.4. The urban reality of the city of Suwayrah:
Suwayrah is the second largest urban gathering in Wasit Governorate after the governorate center. It contains 9842 dwellings, most of which are built of brick and block, 99%. The residential density in the urban population is estimated at 517.9 dwellings / km2. The average number of dwellings (7,638 dwellings) is estimated to be 50% of the total number of houses and 40% of them are built with brick. The average rate of works in rural Suwayrah is 0.95 households / dwellings. The potential of the Zubaidiyah area is characterized by the existence of some archaeological hills that have gained the historical importance of the area. These locations can be a source of future attraction for the expected archaeological tourism, which is reflected positively on the residents of the Zubaydiyah area with the potential of providing jobs, Zubaydiyah Maayarab consists of (22) sites, and in a radius of 5 km to the city of Zubaidiya. The city contains three hills and archaeological sites are located in Tal Abu Hussein, Ashan Abu Safi and Tallul Al Kebab. The reality of the infrastructure services is still low in the city, three power generation plants with diverse generating capacities. There is a project under construction design card 48000 m3 / person / day, and in the Taj Eddin district of the judiciary project is designed only 34000 m3 / person / day, and the actual energy of water projects is less than the design energy. The city of Suwayrah located on the Tigris River as well as the Zubaidiyah area, making the city a distinct area in its location as well as its proximity to the international road (Baghdad-Kut-Basrah). The District includes large areas of agricultural land and orchards and the Tigris River penetrates the District from north to south and provides the necessary water resources for any agricultural and rural development in the region. The area of Suwayrah characterized by the availability of tourism resources such as water, green areas, archaeological and historical areas, and can be exploited to form a tourist area. The District has a good animal wealth of sheep, cows and goats that can be the basis for the production of animal production. The main power plant is located in the Zubaidiyah area. It is the basis for agricultural and industrial renaissance in the governorate. The proximity of the capital to Baghdad is encouraged by the process of foreign and domestic investment, especially that the land is available in the region and is one of the fundamentals of investment in the agricultural and industrial sectors as well as tourism and housing. The existence of a good network of transport links in the District is associated with the districts of the province, such as Aziziyah, Nu'maniyah and Kut as well as its geographical proximity to the capital Baghdad through Baghdad - Kut as well as the province of Babylon and other provinces close to the region. Some of the small administrative units (areas) associated with the District of Suwayrah are now ready to be districts such as Zubaida and Taj Eddin, while there are many canes and villages that can be transformed into areas in the district of Azizia. When these changes are made in the gender of cities and towns, Suwayrah is an integrated province, Three districts and more than ten areas. Suwayrah has a population and economic weight and is most important in that it is far from Kut, the center of the province of Wasit about 140 km and this itself burden on the population during their review of the central districts in Kut. There were plans to transform Al- Suwayrah to be a province, after the removal of cities; Al Latifia, Jbala, and Nahrawan, and some areas from the provinces of Baghdad and Babylon and Diyala and annexed to the proposed Rashid province. The center of the District has now been expanded and some aspects have been developed in it, especially the residential neighborhoods and the nearby areas. These administrative units are under the geographical area of Suwayrah as a new governorate. Human determinants can be summarized by the social factor, which is the presence of some customs and traditions that stand in the way of development, such as the suspension of female education in certain stages of study. Some jobs, such as training, or not accepting work in vegetable growing for social reasons or unwillingness to work in some professions for religious reasons such as the beverage industry, etc. The difficulty is to achieve development without adequate economic costs; so many
development projects did not achieved because of the lack of material resources and sufficient amounts. Such as the establishment of rural and agricultural projects, and transport projects, especially railways. The historical factor is that there are many archaeological and historical areas in Wasit Governorate that serve as a cultural barrier to development plans, especially oil extraction and agricultural development. The experience factor is a hindrance due to lack of experience among the residents of the governorate, poor training and low levels of educational attainment, especially among women, which prevents the success or success of some industrial development processes, especially modern industries that require high technological expertise ‘figure 4’.

6. Comparison of the potentialities and determinants between the districts under study
Data on administrative units under study and comparison of indicators, showed in ‘figure 5’, ‘figure 6’, ‘figure 7’, and number of administrative units, economic potential, services, transport network and interfaces, provide data for location analysis, regional linkage, and service attractiveness are organized in (table 3) and (table 4). These tables based on the structural plan of Babylon governorate [15], the spatial development plan for Wasit Governorate by 2020 [16], and the Economic and Social Survey of the Family in Iraq in 2014 [17].
Figure 5. Comparison of population and area at the level of the district (for the two study areas), prepared by the researcher.

Figure 6. Urban hierarchy through the indicator of the number of population between the provinces of Iraq (the reality of the situation according to the current administrative division), prepared by the researcher.
Figure 7. Urban hierarchy through the indicator of the number of population among the provinces of Iraq if the conversion of the cities of Musayyib and Suwayrah to two provinces and it is clear that the urban hierarchy will suffer more irregularity with the survival of spatial dominance of the city of Baghdad and Basra and Nineveh.

Table 3. The final evaluation of the spatial and urban dominance indices between the cities of Musayyib and Suwayrah, prepared by the researcher.

| Factors influencing the evaluation of the potential of the cities under study for the transfer of the administrative rank | Characteristics of the transformation and development of spatial structure of the city of Musayyib according to dominance indicators | Characteristics of transformation and development of the spatial structure of the city of Suwayrah according to dominance indicators |
|---|---|---|
| Population sizes | 374865 person | 204158 person |
| Demographic characteristics of the population (social and tribal dimension) | Lack of labour experience | High population density |
| Urban dimension and structural structures of roads and infrastructure | Infrastructure services | Infrastructure services |
| | Electricity stations, a clean water project, sewage project, roads and railways | Electricity stations, a clean water project, sewage project and roads |
Table 4. The final evaluation of the spatial and urban hierarchical indices between the cities of Musayyib and Suwayrah, prepared by the researcher.

| Factors influencing the evaluation of the potential of the cities under study for the transfer of the administrative rank | Characteristics of the transformation and development of spatial structure of the city of Musayyib according to hierarchy indicators | Characteristics of the transformation and development of spatial structure of the city of Suwayrah according to hierarchy indicators |
|---|---|---|
| Inter-city spacing and population preparation "Hierarchy". Within the city environment (determining the degree of dominance) in the urban system | Area; 1008 sq KM | Area; 937 sq KM |
| Socio-economic linkages and their facilitations of transport lines (roads, railway or air transport) | Affiliate Units; Three small towns | Affiliate Units; Two small towns |
| The convergence of properties between the city and its surroundings (natural and human characteristics), which enhances interaction | Distance from city center; 50 KM | Distance from city center; 120 KM |
| | Location; 65KM from Baghdad, 30KM from the related small towns The river breaks through it and it is a connection nod among a number of provinces | Location; 65KM from Baghdad, The Tigris river breaks through it from Al-Zubaidiya and from AL-Shuhaimiyah |
| | Short distances between the district and the Affiliated Units | Long distances between the district and the Affiliated Units |
| | Weak service sector Problems of land reclamation Security problems Weakness in architecture | Desertification problem Weak service sector Weakness in architecture |
| | A very near strong urban center (city of hila) | Large distance from the nearest urban centre |
| | Shortage of economic activities attracting qualified workers | Shortage of economic activities attracting qualified workers |
| | lack of level and diversity of urban services | Severe lack of level and diversity of urban services |

The consequent degree of dependence of the region on that city and its integration to form a functional unit within the spatial dimension.
7. Conclusions
1. The decision to transfer the administrative unit to a higher rank must be linked to the administrative rank indicators according to the criteria adopted at the country level. Adopts the approval of the transfer to population requests and studies carried out by the administrative unit separate from a comprehensive vision at the country level.
2. The spatial dominance of the city is a feature that depends on the size and characteristics of its population, functions, environment, population, social organization, transportation systems and technological level.
3. The hierarchy of the urban system depends on the number and distribution of cities with certain economic, social and geographic features of the region, market areas, and regional transport network.
4. The geographical and economic disparities of the administrative units in their internal characteristics and its relation within the governorate to which they belong are a basic for any decision making.
5. The research adopted a comprehensive model that based on theories of “urban hierarchy distribution” and theories of “internal structure of cities” and used their indicators in the applied study.
6. The study showed that the indicators of internal structure of cities were both found in the two cities that made these cities suitable for transformation into a higher rank. This potential transformation related basically to financial aspects to elevate the quality of services and infrastructure in the two cities. But the urban hierarchy distribution is related to the urban system of the whole country.
7. When applying indicators for the multidimensional model to the two cities under study, the research found that converting these cities to a higher administrative rank does not necessarily change the hierarchy at the country level, while serving the city as an administratively dominant city only in its regional scope.

8. Recommendations
The process of conversion from one administrative level to another must be in accordance with an integrated strategy with a clear vision for the future according to economic conditions requires the integration of the study in a descending from the national level to the local level, including the following axes:
1. Balanced development that suitable with the urban hierarchy should be a basic objective take into consideration in the transformation processes.
2. The reality of the governorate and its administrative units and the impact of the decision on the governorate and the possibility of violating their development potential or contribute this decision to solve the problems of population concentration and low efficiency of services.
3. The impact of conversion at the regional level and the impact on neighboring provinces.
4. Studying the costs and benefits of the transfer decision and the possibility of replacing the policy of raising the administrative rank with developmental policies such as improving services, developing the transport network and raising human development indicators for the administrative units.
5. The comprehensive and detailed planning strategy should be adopted by the local administrations to develop local resources in order to achieve the type of development that fits and maintains the region spatial character within the country while the transformation process.
9. References

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