

The role of urban legislation in improving the mental images of the city (Erbil city as case study)

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Abstract- The laws and legislations are the basic tools that affect the performance, accomplishment, and continuity of the developmental objectives of the organizational plans. The rules and standards regulate the resources of urbanization as a material product, in addition, to achieve a kind of harmony and regularity in the urban land scene of the city and provide more space for the cognitive and visual aspect of the recipient who he has mental images of the urban scene through which can select the shape and features of urban identity. It illustrated by the introduction of Iraqi legislation that suffers from multiple problems, evidenced by the lack of legislation in the control of urban growth, and investigating the requirements of visual sustainability not only limited to functional, economic and social aspects. It is an integrated system works to create a sustainable urban environment. Hence, the importance of the development of Iraqi urban legislation representing by preparing the urban area in a new framework, through the control and treatment of its physical components by linking them to cultural, historical and civilizational elements within an appropriate environmental framework. The paper reviewing the urban laws in Erbil city within the previous periods of time as well as the various urban policies used in the city center, to benefit from the knowledge and evaluation of problems, and identify the legislative directions that can be adopted as suggestions for the development of urban legislation within the criteria, take the factors: social, cultural, functional, environmental and aesthetic, at the level of legislation.

Keywords: mental map, urban legislation, visual sustainable, urban policies.

1- Introduction:

In the 19th and 20th centuries, there was a tremendous development in the means of construction and its methods. In the planning of the city and the development of urban plans that prefigure what will result in it, which created a huge capacity for the engineering configuration of the city and architecture; this led to a distortion in the harmony and urban fabric of cities. Laws and regulations in a manner that preserves the urban fabric of the existing cities and preserves its heritage with the

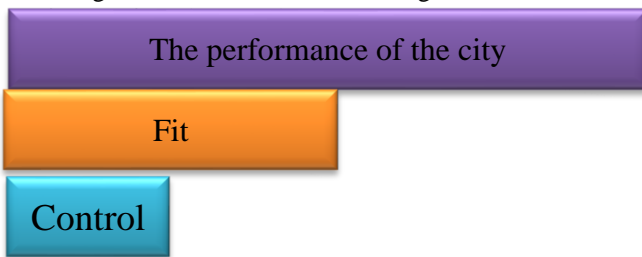
development of laws suitable for emerging and modern areas, while ensuring the possibility of creativity and formation within the scope of the law and under specific conditions. In the theoretical side, the research presents the problem of the lack of Iraqi legislation which needs to update and develop new policies linking all the physical, cultural, and historical elements of the urban land scene of the city, by achieving harmony within this urban environment to reach the realization of cognitive aspects and visuality to the recipient. In the practical side, research presented the analysis of two different views in the center of Erbil, the first have Negative effect of urban legislation in the creation of visual pollution of the urban land scene of part of the city center, besides the existence of a positive impact of the policies and systems in the implementation of urban integration and urban harmony, which increases the cognitive area of the recipient.

2- Mental map:

It is one of the forms of understanding and interpreting the city through the reflection of its perception and personal experience of living in it. Because of the ability to recognize objects in our environment is critical to our ability to act and function effectively in places, so the city image is important (Lynch, 1981). Thus, the ability of a city is somewhat depending on its ability to be easily found and identified in the city (Veselkova, 2010).

Also, the mental map of the urban environment is defined as "the mental formation of the viewer (user) to establish what he considers or see important components of the city after configuring spatial relations between them in a way that enables it to use later to guide its movement within the urban area." The mental impression is a selective process that is carried out by each individual based on his previous experience, his own beliefs and the culture of the group he belongs to. The repetition of one of these physical components earns special importance to the extent of the planner, the designer and the user with the possibility of its impact on priorities of dealing with the urban environment. These architectural elements are called "regulations of perception" because they are shared between different individuals and groups with different experiences. These elements are characterized by cultural or economic

advantages for their ease of dealing with them and their



guidance in the mind of the user and facilitate the movement can limit the importance of creating a mental impression on the urban elements on following points: (Ahmad, 2002)

- 1- Provide a sense of security and the ability to enjoy the urban environment for users.
- 2- Increase the ability of users to use axes easily and clearly.
- 3- The formation of spatial relationships between the elements of the environment, which has a clear identity.

To create a mental impression through an organized and sequential mental process and requires three virtues is essential (Ahmad, 2002)

- 1- Attention: where the components are included within the visual impression of the viewer if there is attention to the existence of this element and the sense of importance
- 2- Simplicity: Increase in the simplicity of the urban elements increases the balance of their representation (part of the mental impression of individuals and groups of these elements).
- 3- Structure: The element that is chosen to enter the mental impression has a spatial and strong relationship with the rest of the elements of the construction and the possibility of the formation of new spatial relations between them.

The mental process passes through the mind of the user in three main steps to form the mental impression (Al-Meghary, 2015):

- 1- Perception: The reception of the effects from the environment is done through the dialogue of the person (user) after receiving a large collection of different effects of the surrounding physical and then these effects provide the basis (raw material) to form the impression of the intellectual.
- 2- Cognition: After receiving the effects, the five senses begin to add meaning to these influences through the experiences gained and the individual and collective cultures and the context in which the actor was received.
- 3- Image Making: The final stage during which the selection of a number of images of spatial elements and selectively with a strong sense to create a mental impression of it within the mind. This choice governs according to the unique culture and habits of the community and other influences that create the impression of the number of some elements or neglecting others.

The performance of the city is affected by the configuring of the mental image of the city this performance is determined by its ability to provide biological, psychological, social and cultural requirements to its inhabitants. As these requirements have been specified, estimation could be made offering to which degree the city is good. (Good city form), a book of Kevin Lynch, summarized these requirements in five points, which are called performance dimension: figure (1)



It is possible to understand how the visual perception of the city's urbanist, which is through the urban scene, combines all the physical elements of the city environment, as well as the correlation between these elements and the meanings that reflect their identity.

3- The urban sense:

The urban scene represents the integrated vision of the total visual and sensory effects of the components of the city. Consisting of the method of processors and mass and spatial associations that vary from environment to another depending on the nature of society, the main inputs of the urban scene are spatial, physical, behavioral, Which is the result of the relationships between buildings and spaces and between buildings with each other to include the city as a whole, which the human eye sees in the city and senses and interacts with it in the urban environment (Kinoshita & others, 2004). The urban scene is also known as the area between individuals and society, for coexistence and interaction of the internal and external places (Tucker, 2010). There are two basic criteria for the urban scene: the first is the sense of unity where the city is perceived as an integral whole, in which two senses are exercised as a sense of unity, and the other is a sense of loneliness (other than separate and unrelated parts) (Land Planning and Design Associates, 2010). The physical elements of the urban scene are:

- 1- The buildings.
- 2- The movements of access (streets and pedestrian).
- 3- The landscape (open spaces).
- 4- The public spaces.

3-1 The components of the urban scene:

The components of the urban scene and its characteristics are of great importance, because they give to the architectural forms and structures, expression and meaning. (Al-Zubaidi, 2016) As the main components of the urban scene are divided:

- 1- Physical Components: They are expressed in the apparent form of buildings, structures and spaces.) The apparent form is affected on the pattern of land use, the movement, and the activity. The physical components with a strong influence on the recipient are: - shape, color, arrangement (Which increases the sense of strength and clarity of the physical form of perception and sensitivity.

- 2- Cultural components: these components are concerned with the meanings contained in the urban environment, Elements of the urban scene of the traditional (local) or historical nature in the character of the urban scene.

3-2 harmony in the urban scene:

Characteristic or property that generates an impression of unity is to find the unity in the design that makes it a good (Sherzad, 1985). The sufficient diversity that gives excitement and suspense the result of the good application and appropriate for the principles of design (Beitler & Lockhart, 1969) and continuity in the formal characteristics of the elements of the facades and relations among them in a single format to achieve unity and continuity in the urban scene (Al-Musawi, 2002). The importance of organizing the urban scene relies on the urban designer, where he must record his impression of the city and the organization of space and enclosure and the unit of measurement and place and formal relations between parts.

The "characteristics" affecting the harmony of the urban scene were classified into two parts: (Urban Design Handbook, 2009)

- 1- First: General characteristics: characteristics that are familiar to most people and that most contemporary modern designs have standards to regulate those characteristics, which give a sense of association with the original fabric.

- Reversing the street.
- Spaces between buildings.
- Height.
- Mass: how to configure the size of the main building.
- Interface and direction ratios.
- Building Materials and finishes.
- Arranging the openings and the proportion.
- Color.
- Measure: how the building is perceived in relation to human size.

- 2- Second: stylistic characteristics (historical and non-historical): The characteristics that related to the traditional fabric and that the achievement of homogeneity and unity with them are done by that these characteristics are general lines only to create unity in the urban scene and dealing with the details and treatments themselves.

- It is also possible to achieve harmony of the urban scene through which can be analyzed according to the following visual characteristics of a group of buildings. (Askari, 2009)
- The line of construction: The organization of the construction line is the basis of visual continuity of a group of buildings and the unification of the building line, the facades along the street affect the way the buildings look and their relations affect each street personality and identity and strengthens the sense of place and thus shows the importance of regulating the rebound distance of buildings And their impact on formal harmony.

- The height of the buildings and the skyline: The issue of height of buildings and its relationship to the skyline of the most prominent visual problems of a group of buildings and the difference in the height of the building breaks the line of the sky, which affects the harmony of the formal urban scene.
- Unit display: Unifying the display of building units contributes to the cohesion of buildings and harmony.
- The quality of the details and materials: The use of local materials prevailing gives a strong sense of visual unity and contributes to the use of the new structure to ensure the continuity of visual for the city and construction of buildings in different ways, and different materials break the rhythm, lines, color and texture.
- Attaching the openings of the windows to the wall: The regularity of the openings of a group of adjacent buildings contributes to the harmony and visual continuity of the urban scene and the contrast in the openings leads to harmony and break the continuity of the urban scene.
- Space containment: In order to achieve harmony, attention should be paid to the formal characteristics surrounding the building to avoid the acquisition of buildings with weak characteristics and visual harmony.

4- Urban Legislation:

It is a set of technical, legal, economic and social measures that must work towards compatible and harmonious growth of the urban forms (Hemedan, 2008). So it's a set of written legal rules issued by the competent authority that governs and controls the urban planning at all levels, national, regional and local, and all its basic and subsidiary inputs, and determines the form of relations between the parties related to the urban planning, and determine The regulatory procedures and administrative requirements for the purposes of urban planning.

4-1 Master plan (the use of lands):

It defined as a plan that specifies, including a governmental character, the residential and industrial uses and the general facilities of a particular area. The environmental impact of its implementation - as well as an outline of the future vision and identification of the road network and uses (Asaad, 2006). It is not inconsistent with the planning principles and the planning program. It is representative of the current state of the city or town and the future urban expansion in all areas. It should be accompanied by an integrated system that defines the structural and urban bases. It must be a true state that reflects the historical, economic, social, environmental, cultural and political content of each city.

4-2 The importance of urban legislation:

The importance of urban legislation affects the level of urbanization of countries, and is the basis for upgrading the urban level through its main tasks:

- Entities are assigned the process of the urban planning process and their responsibilities and powers in managing the planning process. And consecration, working on the codification of procedures and

requirements of the urban principle of clarity and credibility, and achieve planning justice.

- Organizes and defines the relationship between the public Governmental organizations responsible for urban planning and the relevant parties, with their rights and obligations.
- Achieve harmony and balance in urban patterns by applying unified planning legislation that defines the urban character of the city.
- Lead to the achievement of architecture compatible with the needs and requirements: urban, functional, and achieved a distinctive identity.

It is the planning laws that determine the urban fabric of the city as a result of the type of land use, building height, area and density of use, road spaces and sidewalks, building facades, and the quality of materials used. The absence of law in certain areas, especially the residential communities, and the lack of attention to the standards and principles of planning and design of the city as a whole, and changes in the use of the land randomly led to the emergence of many marginal areas as well as abuses on the controls of all municipalities and thus the fabric of random and heterogeneous as well as Distorted accommodation (Jawad, 2008).

4-3 The relation between urban scene and urban legislation:

The nature of the relationship between urban scene and urban legislation is determined by two basic levels

- The first level: relations at the level of all (public formation): These relations are represented in:
 - Organizing the edges of the shapes and creating a sense of the unified exterior shape.
 - Combining the buildings and not leaving the spaces between the blocks.
 - The volume deal with the neighborhoods in order to determine the urban standard of the street. Organization of the skyline, organization of the construction line
 - Proportional relations between the height of the building and the street display, contributing to the achievement of spatial containment situations of the urban land scene.
 - The direction of the urban land scene, which is determined by the flexibility of shapes and the way they are formed and arranged in the land scene.
- Level 2: Relationships at the level of parts: the relationship of a part with a part within a single shape and its visual relationship to the parts of the adjacent shapes.

From this, it becomes necessary to form a sequence in the urban scene to create unity and visual continuity and to organize the relations between the blocks on the level (texture, color, materials, scale, which produces from continuity) the model of the whole and the part which we organize to get the whole series of the urban scene (Abdulbaki, 1985).

Table (1) The relation between urban scene and urban legislation :(The researchers)

Urban legislation and laws of building	
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Urban planning legislation	Building controls
Land use	Height of building
The division of plot area	Set back
The pattern of street	Colors of buildings
The land scape	Texture of material
The organization space	The ratio of openings
The pedestrian movement	The pattern of building
The providing of infrastructure	The elements of elevation for buildings

4-4 Harmony of the urban environment and the urban legislation:

To achieve harmony in the urban environment of complex issues because of the overlap of influences, many countries have sought to reduce the negative effects on the physical environment by enacting legislation and regulations to achieve harmony.

E.g., the British government in the early 1980s called for indirect safety which related to the aesthetic aspects of the urban environment are subject to taste and opinion, so the aesthetic aspects of the urban environment are subjective Objectivity and cannot be agreed among members of society. (Levy, 1994)

In this regard two types of subjectivity can be put forward in the aesthetic aspects: First, the individual subjectivity is not shared by the others, the second is the common subjectivity, that the aesthetic vision of the person converges with the visions of others to form an agreed reality so there may be differences in visions between the members of each slide of the different cultural backgrounds between the segments of society, but it remains there, a collective consensus on the aesthetic aspects and confirmation of this assumption determines the objectivity in the aesthetic vision two basics:

- 1- Objectivist means having common things agreed upon.
- 2- There are substantive differences based on cultural foundations among the segments of society, so patterns aim at creating homogeneous contextual urban scenes that achieve the visual and urban integration between the different buildings without resorting to intellectual selectivity and random references. This means there is a physical aspect between the old and the new (Levy, 1994).

Negative Value
Positive Value

Figure (2) the positive and negative effects of urban legislation on the mental perception for the urban scene: (The researchers)

4-5 Urban legislation in Iraq:

The legislation in urban planning and land use in Iraq was divided into many laws, decisions and regulations. And many systems, which constitute a large legacy affecting the Roads and Buildings Law until the Basic Design Law No. 156 of 1971 which was dissolved and neglected and considered some of the articles contained in the Roads and Buildings Law in the above law to be worthless due to the fact that these laws are not compatible with the establishment and growth of cities. This leads to the fact that the laws and general legislation lack comprehensiveness and, the familiarity with all modern developments, this reflects on urbanization and city management and planning to meet the requirements of society (Mowaffaq, 2014). The urban planning in Iraq is based on several systems, laws and legislation governing were changed by 6 different decisions, which caused confusion in the authorities in the implementation, which led to the lack of control of different areas and deterioration in various services and conflict in the implementation procedures (departments and executive institutions). (Ministry of justice, 1979-2003)

The Iraqi laws lack follow-up and modernization in line with the development and technological progress and population growth and urbanization of the Iraqi cities, which generates a deficit and lack of coping with the needs of the population, while Western laws concern the cities first and how to expand them to serve the population and achieve them the economic benefits provided maintain their environment and different aspects of the process to serve them. (Kareem, 2015)

5- The research problem:

From here, the research problem may be the lack of urban legislation and building controls in achieving harmony, coordination and cohesion in the urban scene of the city to give mental images to the recipient to create a mental impression of the physical environment and the meanings it carries to reach the sense of urban, architecture identity of the city.

6- The aim of the research:

To increase the mental image of the urban land scene of the recipient by enhancing the cognitive aspect in the urban legislation and building controls as well as linking the functional, economic and social aspects with the historical and urban aspects of the urban fabric in those legislations as they work together to achieve the urban identity of the city.

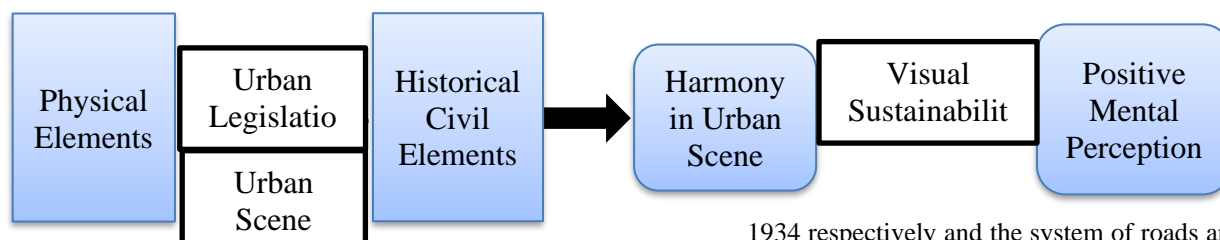


Figure (3): The role of Urban legislation in investigation the mental maps of the city. (The researchers)

7- The hypothesis of the research:

The mental impression between the recipient and the urban environment is realized through the extent to which he understands the symbols and the different details surrounding

the space and the other physical elements of this environment. The interpretation of this is based on his habits, traditions and cultural background, so it acts as a visual reference system for mental images of the recipient in the city.

8- Erbil City Centre as case study:

Erbil city center was selected as a case study for this research according to these following points:

- 1- Cultural Heritage value: Historically, Erbil is one of the oldest continuously inhabited cities in the world. (Riyadh, 2010) Some of the main attractions include the 8,000-year-old Citadel of Erbil, which is one of the longest continuously inhabited walled cities (Tourist Guide: Erbil - Dohuk – Sulaimaniya, 2005)
- 2- Location importance: Erbil city center is considered a centralized city that makes it the beating heart of the city and the center for commercial activities.
- 3- Architectural and planning value: Erbil city center has architectural and planning values that appeared by the traditional houses and markets in and outside the citadel, such as the traditional houses in Arab and Khanqah neighbors, and the Qaissyria type of the Great Bazar.
- 4- In this area, we can see two different images of the urban scene, one of which represents the policies of conservation and rehabilitation of the castle and a section of the neighborhoods, which gives a clear picture of the factors for harmony in the urban scene and the other opposite image, which represents the negative side of the urban scene, which reflects the visual pollution caused by all aspects of irregularity and disconnection in the urban scene.

8-1 The urban legislation in Erbil:

In Erbil city, the urban form has passed through dramatic changes through different periods. These changes were correlated to legislation factor in parallel to social, economic, and politic determinants over four subsequent periods. The first period was from 1920 when the Iraq state was established until 1958. The effective legislation in this period was the law of municipalities' management numbers 84 and 24 in 1931 and

1934 respectively and the system of roads and buildings no. 44 in 1935. In this period the organic pattern was affected by the issuance of the new regulations and faced transformations. The second period starts from 1958 continues until 1991. Some new legislations were issued and several amendments were

made on the system of roads and buildings of 1935 which in general aimed to increase the density by minimizing the plot sizes and then reducing the differences between the different urban area categories.

These were because of the economic, social, and political circumstances of the period. The third period is from 1991 until 2003, relatively limited changes in the urban form happened in this period due to the economic siege, some illegal quarters were the result of the absence of applying regulations. This led to the appearance of a non-organized form. The last period starts after 2003 when Iraq became a federal state. A considerable fast growth happened in this period. Master plan preparation for the city and its center by the ministry of municipalities and the issuance of investment law by Kurdistan parliament were the facilitators of this fast growth. However, some of these policies have a limited imprint on the urban form of the city due to their limited adoption firstly and they have been in force for a short period secondly (Sabr, 2014)

It should be noted here that the stages passed by all the laws and structural systems in Arbil are the extension of the same laws and urban legislation in Iraq except for the period that followed in 2003, where the design of the master plan of Erbil as well as the large investment plan set by the government in the Kurdistan region. To the emergence of new patterns building used modern technology in the field of construction and the emergence of high buildings changed the skyline of the city and not comply with all the considerations of the old urban and building legalization.

8-2 The urban legislation in the study area:

There was specificity in dealing with it because of the existence of historical and civilization elements where recently, the upper citadel town interacted organically and functionally with the city below. In other means, there was a strong and mutual relationship with each other and a clear and historic symbiosis between them. In addition, the building growth of the lower town was only several floors in height and, therefore, did not affect the visual dominance of the citadel. Although there were some exceptions these high-rise buildings were not very close to the citadel

It is very important to maintain the visual dominance of the citadel around the city. It is thought that a "Buffer zone" (A buffer zone is generally a zonal area that lies between two or more other areas which have various purposes, like preventing violence, protect the environment, protect residential and commercial zones from industrial accidents or natural disasters) planning circle around the citadel of no less than 300-400 meters- i.e. beyond the second ring road should be designated. This buffer zone will limit any building inside to more than 3 floors (about 10 meters). In addition, important visual images must be preserved from all streets and other angles and not to be obstructed or disturbed.

Of course, such a proposal would face immense opposition by landowners and other greedy speculators who, as always and anywhere, look for any loopholes in municipal laws to achieve their ends. Naturally, the lack of such stringent zoning policies helped such people to exploit the situation. Recently, unfortunately, a huge shopping center has been allowed to build just 200 meters from the south side of the historic castle. (Akram & others, 2016)

The city's last master plan, prepared by the Kurdistan Regional Government's Ministry of Municipalities in 2007, does not seem to take this important factor in the visual safety of the castle into consideration. It is hoped that the proposed

conservation plan will take this factor into account, propose this buffer zone and support it with law enforcement.

The master plan for the city of Erbil until 2030, prepared by Dar Al-Handasah - a Jordanian engineering consultancy company, shows the city of the future as a series of central circular roads that start from the castle and extend more than 30 kilometers in all directions. In essence, this projected future plan begins with "bull's eye" - the castle's circle and the rest of the radial growth like ripples in the water. The massive growth of the city of Erbil is likely to have direct consequences for the future of the citadel - a factor that the proposed conservation plan cannot ignore. (KRG. Ministry of planning, 2007)

8-3 Urban policies in the historical center of Erbil:

It is possible to identify two types of urban policies that have been adopted in the development of the urban area of the historic center of Erbil:

1 - Conservation policy: This policy was followed in the area of the castle by the United Nations where the area included the castle in the list of World Heritage where the residents were evacuated from the area and maintenance and maintenance of existing buildings in addition to the modification of the effectiveness within these buildings. This policy has given good results to the tourist attractions, where the castle remains as a historical and symbolic attraction, in addition to preserving the urban identity of the region and trying to take advantage of the traditional building style of buildings in connection with this pattern of subsequent urban development policies. On the level of events and services, the attempt to change the career in the buildings of the castle has given new events such as cultural and entertainment events and this increases the flow of tourism to the region.

2 - Rehabilitation policy: This policy was followed in part of the old market area, especially the Qaysiris located in the market where the old motor axes were taken into account and removed part of the buildings and the reconstruction of the old style and the packaging of all buildings inside the Qaysariat and beyond building a building and use Architectural elements compatible with old building styles. This policy has contributed significantly to the creation of tourist attraction in terms of commercial and marketing as well as its integration with the cultural and folklore content of the region in terms of formality and space in addition to providing the requirements and events needed by the visitor to that region.

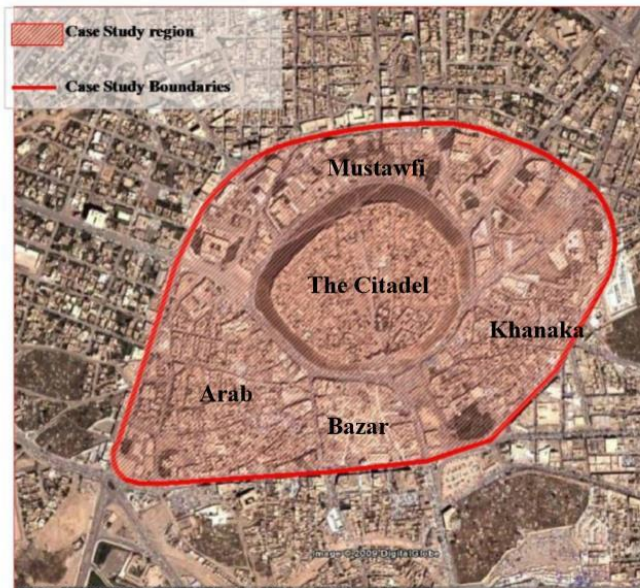
3 - Policy of redevelopment: This policy has been followed in the section in front of the castle by removing all the old buildings and the establishment of a large commercial building (Market Nishtman) modern building patterns and new building materials that changed the urban context of the place and increased the commercial effectiveness there, The urban space of that place and did not offer any direct tourist attraction to the area.

8-4 Practical analysis of area study:

The case study limits include districts that are encircled by the second ring road (figure 4). This includes the following quarters: (1. The citadel 2. Arab neighbors 3. grand Bazar 4. Khanaka neighbors 5. Mustawfi neighbors)

1- Land Uses: Land uses were classified into three main uses (figures 12 from the appendix):

- Residential: represented by the citadel and most of Arab neighborhoods, and many housing units in the Mustafa and Khanka regions. In 2006, the citadel was cleared out from residents for conservation issues.
- Commercial: this is mainly concentrated in Bazar and Khanaka districts.
- Institutional (Governmental): this is concentrated on Mustawfi district. Mixed uses are limited and generally constrained in Arab district, due to its origin as a residential district, that parts were transformed into commercial, also some of the commercial stores of this district were transformed into commercial/lodging uses. In general, the most of area for commercial use because the bad conditions of building for residential use.



- 2- The height of the building: From the figure (13) in the appendix, it can determine the following points:
- The Citadel: this includes old residents which heights range between 1-2 stories merely.
 - Arab District: buildings in the inner (residential) part in ranges from 1-2 stories, while the commercial buildings range from 3-4 stories.
 - Bazar district: the buildings on the external edges range from 3-4 stories, while buildings on the internal part range from 1-2 stories.
 - Khankah district: facing the old Bazar and Mustawfi district, building heights range from 3-4 stories, the rest range from 1-2 stories.
 - Mustawfi district: generally building heights there range from 3-4 stories, except several buildings that height is less than 3 and the building of “Burj Erbil” which rises up for about 19 stories.
- 3- Buildings Conditions: From the figure (14) in the appendix, it can determine the following point:
- The Erbil city center has poor building conditions in general, especially the old districts, such as the Citadel and the residents in Arab district, as shown in figure (4-5). This was caused as a result of the progress of time and frequent neglect and lack of maintenance.
- 4- Infrastructures: The city center suffers from a severe shortage of services and infrastructure, for many reasons such as negligence, overload by users and lack of maintenance, which leads to damage to many of the previously created services and lack of interest in the newly created services.
- 5- Traffic and Circulation: From figure (15) in the appendix, it can determine the following point:
- Circulation roads include two main types: pedestrians and vehicles. They are divided into three forms: - Ring roads around the citadel, - Radial roads: perpendicular on ring roads, radial from the citadel; - Organic streets in the citadel and the old zones in Arab district.
- 6- Landscape and Open Space: From figure (16) in the appendix, it can determine the following point:
- Open spaces are not widely dispersed in the downtown area, although plans for a higher percentage of open spaces are available throughout the development of the large city. The current parks are large scale parks, which do not meet the needs of local residential communities or commercial areas. Spaces for children, teens, families and the elderly should be provided in the residential areas, and shaded sitting areas for coffee, conversation, and lunch should be provided for commercial area
- 7- Building patterns: Can determine the building patterns prevailing in the following
- A- The typical building patterns make up 60% of the total building area.
 - B- Building patterns affected by the regional pattern of building, which dates back to the 1930s of the twentieth century until the 1980s.
 - C- Building patterns influenced by traditional patterns and associated with the elements and building materials used in the historic center through the policies of urban renewal, which was followed on parts of the old area, especially the market area of the castle.
 - D- Modern building patterns, which represent a large part of the market (Nishman) where the use of modern building materials as well as the impact of this style of postmodern architecture and this is evident through the introduction of traditional elements in this building style.



A building pattern Reproduced of traditional architectural elements as well as the use of local materials



Figure (6) the relation of citadel with open public

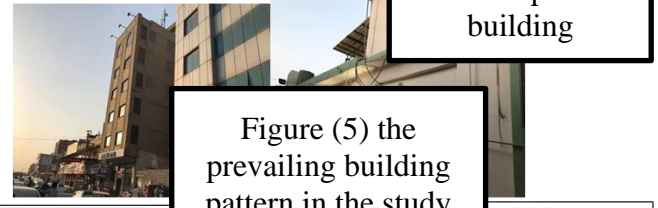


Modern pattern



Old Traditional pattern building

Figure (9) The ring road around Ci



Modern pattern building

Figure (5) the prevailing building pattern in the study area (researchers)



Figure (10) The lack of urban legalization for control the different building pattern



Figure (7) The rehabilitation policy in the commercial



Figure (11) The lack of building controls for the organize the uses and visual pollution, in addition to distortion of building elevations



A building pattern Reproduced of traditional architectural elements as well as the use of

Figure (8) The pattern building in front of open spaces

9- The conclusions and recommendations:

9-1 The conclusions:

After the procedure of a practical analysis of the study area, the conclusions will be on two levels and according to the table no. (1), which sets out the relationship between legislation and physical elements. These conclusions include areas that are subject to previous legislative laws and areas that have been subject to conservation, rehabilitation and renewal policies.

1- Land use:

- Most of the use of the land is commercial and this led to the creation of chaos and lack of organization in the exploitation of spaces because the lack of understanding the existing spaces of this clear trade flow and can be braced to the inability of the legislative systems to determine the use or try to add new spaces to accommodate this increase in use, or Future plans for this legislation.
- As for residential use, it suffers from loss of privacy due to the creeping in commercial use and the recourse of most residents to housing in other areas for the apparent deterioration of residential buildings and the absence of housing policies that limit this transition. In addition, the study area is considered one of the tourist areas in Erbil. Of course, this added new burdens to the region and the absence of clear tourism policies that correspond to the organization of use in this area that relates to commercial residents like hotels, motel, and apartments.
- The use of culture and civilization is limited and this is due to the lack of laws to encourage this use creates a variety of use and increase the cognitive space of the viewer and link the historical content of the region and this use.
- The presence of this diversity makes the area operates throughout the day because it is a central area of the city, but now most of the commercial activities in the region become dead during the night.
- About the area under the policy of rehabilitation, commercial use is dominant in the region but better organized in addition to the existence of more space for viewing and storage with the lack of residential and cultural presence in addition to the existence of optical link between the inside and outside and in this area, unlike other areas where commercial use exists abroad either The interior is frantic or non- existent.

2- The movement system:

- Lack of clarity for junctions between pedestrian and vehicle circulation.
- The cut of pedestrian circulation between the citadel and the surrounding traditional districts, which isolates the citadel and weakening of its importance as part of the whole center.
- The intersection of pedestrian circulation by vehicle circulation in overloaded zones and the lack of good and sufficient parking areas in the district in general.

- The main function of the area is commercial-cultural, which requires the dominance of pedestrian circulation, but the intersection between the two types of circulation caused overloading.
- The two types of circulation suffer from the lack of gradient, which caused a negative fusion between them.
- The use of the ring system of the main streets increases the visual pleasure of the observer and creates the element of surprise, while the secondary streets, which use the gridiron system is still unable to provide cognitive opportunities to the recipient because of the similarity and lack of moving gradient in the transition.

The main problem here is that there is no mobility system for pedestrians except for sidewalks, most of which are busy with commercial use. People visiting the area prefer to walk in the streets and of course, this reduces the safety factor for people.

In the area of rehabilitation, we see the existence of a mobility system of pedestrians with a clear movement hierarchy and of course, this increases the visual space and mental images of the recipient as the enjoyment of his journey and increases the safety factor.

3- The open spaces and landscape:

- The percentage of open spaces in the study area is low due to the commercial momentum and the lack of systems determined by the spatial organization of the area, which gives the recipient greater opportunity to enjoy the physical elements of the urban environment and the existence of open spaces and green areas creates a kind of diversity of space in the area and reduce the monotony and boredom in seeing the scene Urban and increases the mental image of the recipient.
- In the area under the policy of rehabilitation, we see the existence of clear spaces between the commercial buildings and the castle, which provide static spaces within the movement system of people and this gave a kind of visual interaction between all elements of historical and renewable and modern to achieved a sense of cognitive satisfaction in the recipient As well as the provision of factors that increased cognitive interaction through the Green Zone in the general area and the identification of this area with water areas and seating places.

4- The height of the building:

- By determining the height of buildings in the study area there are different heights of buildings, this is due to the lack of urban legislation that determines the required elevations in the urban area according to the spatial containment as well as its correlation with the historical and cultural elements in the urban environment.
- Despite the castle's fortification in urban areas, but there is no harmony between the heights of buildings and this effect on the cognitive side of the skyline within the urban area as well as most of the buildings with a low rise and this is not suitable with the height

of the castle, which is a visual reference in Urban area.

5- The pattern building:

- Building controls did not specify the type of building patterns used in the urban area and this created a lack of harmony between the types of patterns and visual distortion of the facades of buildings whereas known the more complex led to the less cognitive area of the recipient in addition to the absence of any visual link between these building patterns. See figure 10&11.
- On the other side of the study area, there is a visual harmony between the reconstructed building styles and the historical reference style of the castle. It works as an integrated system that gives the visual and cognitive space to the recipient and increases the mental images to reflect the identity of the urban land scene of the area. See figure 8&9.
- This supports the hypothesis of the search for taking legislation and policies of the elements Historical and civilization as important references in developing perceptions of the urban area as well as functional, economic, social and environmental aspects to achieve urban sustainability, including visual sustainability.

6- The building details:

- Architectural details such as colors, openings, finishing materials used, facade elements and advertisements are not subject to specific building laws. This creates a kind of visual distortion where every detail cancels the effect of the other.
- There is no reference in the use of these details, so this is only due to the subjective aspects of the designer and this reverses the principle of optical interconnection between the parts to act as a common system in providing the cognitive side of the receiver.
- There is a serious issue in this aspect is the use of modern imported materials and leaves no opportunity to create architectural details with historical references and civilization, especially that the area possesses these elements.
- As for the urban area subject to rehabilitation, there is a unity of the formal and visual theme through the consistency and harmony in the use of architectural details taken from the historical elements of the old area,
- As well as the use of local materials as finishing materials and the addition of elements of tradition, arches and columns. This confirms the hypothesis of research in the exploitation of historical and heritage elements as references to building laws and legislation to access mental and cognitive images of the urban land scene, and use and employment the potential of the urban environment to harmonize all the physical elements of the urban land scene of the city.

9-2 The recommendations:

- 1- Procedure periodic adjustments to the current laws and legislation, and in line with the issues of planning and

architectural emerging at the local and global levels, and modern theories such as sustainability and advanced technology.

- 2- The need to consider the aspects related to urban planning, aesthetic and environmental aspects and the need to introduce new materials in the building laws such as the use of color and proportions and quality in the facades of buildings and must be the prior approval of the competent authorities, which sets the aesthetic determinants that limit the ability of the designer to overuse Colors In order to ensure that the designer does not leave the general layout of the building, this system falls under the specific: aesthetic and specific schematic and finding a common denominator in all buildings according to a certain vision in order to ensure homogeneity and harmony between the elements of the city, On building aesthetics.
- 3- Removal of the encroachment as they distort the urban appearance and to make the procedures and legislation related to planning violations and penalties. Remove special exceptions from the laws to be followed and existing planning legislation, and work transparently and clearly.
- 4- Enhancing the role of the municipalities and supporting them as legal persons and enhancing their supervisory and executive role in the investigation of irregularities. All the competent authorities issuing the building permits shall comply with the engineering drawings that comply with the technical rules and requirements. They shall be issued by a design authorized body or an engineering office registered with the Engineers Syndicate and also the role of the architects shall be activated.
- 5- The need for public awareness about the commitment to the building codes, through the use of images, films, and legislations related to the media.
- 6- Raising the intellectual movement in the field of architecture and urban planning, through lectures and seminars and establishing associations interested in the science of building
- 7- Taking advantage of the Arab and international experiences in this field, introducing the concept of sustainable development, and adopting a set of indicators to evaluate the urban legislation in force.

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Appendix:

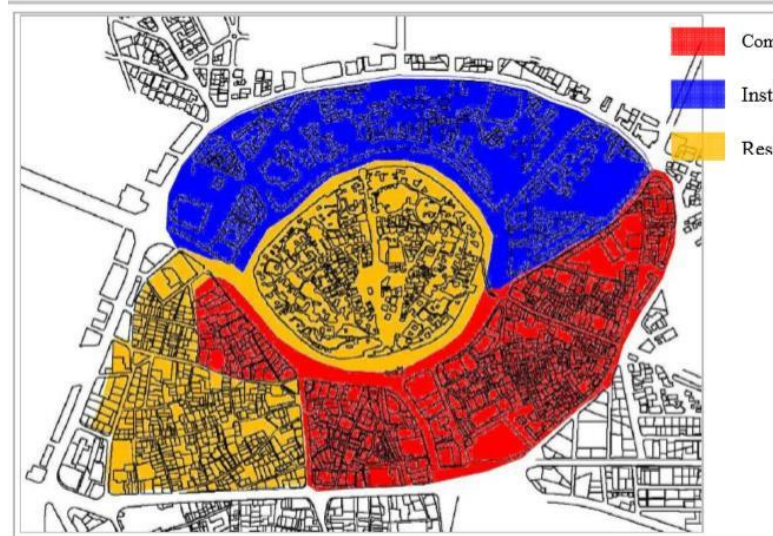


Figure (12): Main land uses distribution in Erbil City (The researchers based on Google Earth)

