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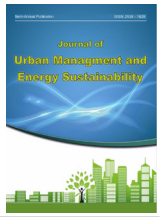

ORIGINAL RESEARCH PAPER

Explanation of urban resilience criteria in an Islamic City

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ABSTRACT

Islamic city is a multi-dimensional concept that can be studied and investigated from different aspects. Most of the studies conducted throughout history regarding the Islamic city were carried out by Orientalists, and most of these studies were conducted in the physical and morphological fields of Islamic cities. One of the most important things that appear due to the occurrence of accidents and incidents in cities, especially in the post-accident stage and the level of tolerance of cities in dealing with them, is resilience, which is conceptually borrowed from other sciences. It has opened its place in urban literature and has become one of the main approaches of this science. Resilience is not defined by itself. Rather, it can be discussed in the form of different dimensions. to examine the resilience in the Islamic city, we need to make the desired changes in the dimensions and components of resilience, according to the characteristics of the Islamic city. To achieve this goal, in the current research, by examining the existing literature both in the field of resilience and the Islamic city, the common points between these two aspects of urban resilience and capacity dimensions of the resilience of the Islamic city, through matching between the mentioned cases. It has been revealed that it is possible to further clarify this issue and reach the specific dimensions and components of the Islamic city's resilience in future research.

Running Title: Urban resilience criteria in an Islamic City

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1. Introduction

Humans changed the natural environment for their accommodation and started to create an environment suitable for their habitation, also in a group. The built environment of the world today has been formed from four great traditions: the urbanism tradition of the Far East, India, the Islamic world, the Christian world, and the Western world. The tradition of Eastern urban planning has established standards that demand symmetry based on stable values. On the other hand, the Western tradition established a model that demanded the efficiency of the built space from the beginning and expressed an ideology whose goal was continuous transformation (Galantay, 2008). Among these, what is considered in the current research are the habitats named after the Islamic city, which, as its name suggests, includes the biological complexes of the Islamic world. The prevalence of the expression "Islamic city" and its application to Muslim biological complexes - especially the naming of historical cities of Islamic countries or Muslim countries as "Islamic cities" - with the assumption that these cities, physically, are a manifestation of certain principles and values It is Islamic and in this way, they are different from the cities of other civilizations and cultures. It was started in the 19th century by the Orientalists. The Islamic city became a serious research topic for the first time in the first quarter of the 20th century. After that, various studies were conducted and articles were published in this field. In the late 1960s, distinct approaches and methodologies were identified from this study, which can be summarized under the existence of a model called the Islamic city, a detailed study of local conditions, and the investigation of a specific type of building such as a mosque (Grabar, 1969). Islamic, like all the different titles that are used to categorize and identify cities, faces issues and problems that many studies and researchers have tried to solve in different ways over time.

The fabric of cities in the pre-modern era had an organic organization and a coherent network, after modernity and as a result of modern interventions, they became fragmented in all their dimensions and the urban revolution process of cities faced fundamental challenges in their structures (Pelling, 2003). With these changes, urban communities were threatened by losing their previous cohesion. The occurrence of natural disasters and accidents is one of the main problems that have always threatened human societies over time, and in the event of ignorance and lack of preparation, irreparable damages can be caused in various dimensions of human life, including residential, social, economic, environmental, psychological and other fields (O'Brien et al., 2004). Natural hazards can turn into horrible and devastating accidents for human communities in the absence of risk reduction systems (Zhou, et al. 2009). With the expansion of vulnerability caused by accidents in cities in recent decades, in facing this problem, measures such as strengthening single buildings against the effects caused by accidents have been carried out, which unfortunately are one-dimensional and have multiple dimensions of urban settlements. It causes that these measures have other aspects such as physical, social, economic, and cultural in their scope of action and impact and do not cause the destruction of social infrastructures with only physical interventions like some previous measures. To reduce the effects and threats of accidents in their comprehensive dimensions, emphasizing the resilience of cities against accidents is of particular importance (Mitchell, 2012). The macro-resilience concept expresses an intellectual paradigm that mostly tries to predict and examine the principles and solutions to minimize these changes (Evans, 2001). Resilience is the amount of disturbance that a system can absorb and remain in the same state as before, or the system's ability to self-organize and to create and increase the capacity to learn and adapt (Carpenter, 2001). In such a way that dimensions such as social and economic traditionally about residential neighborhoods with institutional and physical dimensions should be presented as a spatial and functional relationship (Adger, 2000). In Islamic cities as well, the need to address this category is quite noticeable and especially the severity of this issue in the organic tissues in the central parts of some of these cities, which are of very low quality in many dimensions due to the lack of attention to these tissues. Therefore, to pay attention to this issue, it is necessary to

investigate and study this issue, especially in our metropolises, which face this problem more severely. For the study of resilience in the city, it is necessary to define the criteria and indicators for its evaluation in the form of existing and classic dimensions of resilience and at the same time appropriate to the studied context both in terms of scale and in terms of the existing context. Various and numerous criteria, indices, and metrics for measuring resilience are expressed in the form of different models and frameworks, and the majority of these models and frameworks are one-dimensional and one-sided. In some models, only the economic dimension is considered, and in others, only the cooperative and institutional dimension is considered. Therefore, in evaluating the concept of resilience in a context such as a residential neighborhood, we need to examine the indicators that are appropriate to the concept of the neighborhood and at the same time comprehensively examine the existing dimensions of resilience at the local scale. In the current research, to investigate this important issue in the Islamic city, the dimensions and components of the Islamic city, and its resilience capacities that have been investigated in previous research, are compared in a targeted comparative manner, with the dimensions of resilience and also the aspects of resilience. City, and by studying the overlaps between them, and considering the common points between them, we will focus on urban resilience regarding the Islamic city.

2. Materials and Methods

2.1. Islam and the city

Islam, on the one hand, is one of the religions and schools that has matured in the urban environment and generally has a very favorable and encouraging view towards urbanization, and on the other hand, it has a special attitude towards the congregation. And that is why he cannot be indifferent to various issues related to the city. In addition, the city is, first of all, a manifestation of the beliefs, ideals, and cultural values of the people; Secondly, it includes features, spaces, and elements that guide and help people in their way of life. Thirdly, it affects people's culture and behavior. A brief look at Islamic teachings also shows Islam's emphasis on this issue (urbanization). This importance is to the extent that Hazrat Ibrahim, after renewing the building of the Kaaba, asked Hazrat Ahadit to make that place (Mecca) a city: "O Lord, settle this uncultivated land and turn it into a city".

The principles of Islamic urban planning start from unity, which is a manifestation of monotheism, which reaches the identity of a Muslim, which represents the beliefs and beliefs of Muslims, and in turn, is another manifestation of monotheism; it considers all the dos and don'ts of Islamic and human life. The Islamic city has a fixed nature, which will have its special manifestation in every place and time. In other words, the Islamic city is a potential nature; which can interpret and express itself at any time and place concerning local culture and art - which is not in conflict with Islamic principles and values - and by using the technology, materials, and knowledge available to the Muslims of that particular society have

for the emergence of the "Islamic City"; First, the "people of the city" (and in a better word, the thought, and worldview of the city) must be following the characteristics mentioned in the divine word and following the characteristics of a perfect human being. Second, the "way of life" or "culture" of the people of the city must be the basis of the supreme teachings that Islam has determined and defined for the walk of man on earth must be organized and guided. The principles that are defined for life and communication with nature, society, and human works have been formed;

2.1.1. Islamic city

"Muslim city" refers to a city that has one or a set of the following characteristics: it was created in the Islamic period, it grew in the Islamic period, it was built by Muslims, it is located in the geographical area of Muslim countries and Finally, it should be more or less influenced by Islamic teachings and the principles and values emanating from it. Also, based on how Muslims have perceived Islamic standards and how they intend to apply them in planning, designing, and building the city, the city can be Islamic, or have a degree of being Islamic.

"Muslim city" can also be referred to as a city

where the majority of its residents are Muslims, Muslim cities can be considered Muslim cities. Muslim cities in the Islamic period, like many of their works, are not only Islamic because they were created by Muslims, but these works are called Islamic because they are inspired by the teachings of Islam, such as Sharia and Tariqat. These works make the truths and soul of Islam manifest in the world of existence (Nasr, 1992).

The Islamic city became a serious research topic for the first time in the first quarter of the 20th century. After that, various studies were conducted and articles were published in this field. In the late 1960s, distinct approaches and methodologies were identified from this study, which can be summed up under the existence of a model called the Islamic city, a detailed study of local conditions, and an investigation of a specific type of building such as a mosque. (Grabar, 1969)

The general method of Western researchers in the early years of the 20th century was to pay attention to Islam as a basis for morphological interpretation. However, this basis was not very broad and mainly depended on descriptive analysis of urban form and organization and architectural design. The initial reliance on Islam as a basis for analysis was fundamentally logical. However, the results of their work were greatly distorted due to methodology. They mainly followed a kind of descriptive analysis of the physical appearance of the city, without analyzing its construction process (Hakim, 2008).

The built environment of the world today has been formed from four great traditions: the urbanism tradition of the Far East, India, the Islamic world, the Christian world, and the Western world. The tradition of Eastern urban planning has established standards that demand symmetry based on stable values. On the other hand, the Western tradition established a model that demanded the efficiency of the built space from the beginning and expressed an ideology whose goal was continuous transformation (Galantay, 2008).

The prevalence of the expression “Islamic city” and its application to Muslim biological complexes - especially the naming of historical cities of Islamic countries or Muslim countries as “Islamic cities” - with the assumption that these cities, physically, are a manifestation of certain principles and values It is Islamic and, in this way, they are different from the cities of other civilizations and cultures. It was started in the 19th century by the Orientalists.

From that time onward, this expression - which referred to the cities built by Muslims and their living places - was gradually used in the writings and works related to the consequences of cities that investigated Muslim settlements - on the basis that with Physical or mental privacy is a manifestation of the society and culture that is different from other civilizations - it was established in Western literature with the introduction of orientalists. The theory of the Islamic city is confirmed or criticized and even denied in different ways by different people with different views. The main reason for this diversity and plurality of opinions can be seen in the intellectual foundations and the level of people’s mastery of the teachings and monotheistic worldview of Islam.

"Islamic city” in particular is a process that is evolving just like its people and will always adapt itself to the needs of time and place and its people, and of course by referring to Islamic concepts, principles, and values. In this way, the Islamic city is a fixed nature, which will have its special manifestation in every place and time. In other words, the Islamic city is a potential nature, which can be in any time and place according to local culture and art - which is based on principles and values. Islamic principles should not conflict - and by using the technology, materials, and knowledge available to the Muslims of that particular society, it should have its interpretation and manifestation.

Briefly, we say: an Islamic city is a concept whose foundations, pillars, attributes, and characteristics can be inferred from the Holy Qur’an; in this way, Muslims - and even non-Muslim cities - in different eras and lands and different knowledge, have different power in manifesting it; And in this way, every city is according to Islamic dimensions - and is closer to the real and exemplary model of the authentic and ideal city of Islam - which can be a manifestation of the foundations, principles, and values that the divine word has defined for the Islamic and divine

society.

2.1.2. The original and Quranic model of the Islamic city

Islamic thinking recommends simultaneous attention to human needs; And although it emphasizes the provision of human material needs, it never presents them as the principle and purpose of life. In fact, in this way, physiological needs are during spiritual needs and in the direction of preparing man and helping him to achieve his spiritual ideals. Considering the exclusive interpretation of the Holy Qur'an for Makkah, which it calls "Umm al-Qara" - which should act as a role model for other cities - and the fact that Prophet Ibrahim after renewing the building of the Holy Kaaba, for the city And its people make three supplications and ask for three things from God Almighty for its people, it is possible to provide a special division for the needs of man, which will be comprehensive and include all his material, psychological and spiritual needs.

Prophet Ibrahim has three main supplications for Mage, each of which focuses on one area of life - "body or physiology", "psyche or soul", and "spirit or the afterlife". In other words, by providing each of these needs (as the chain of needs of the desired area of life), the provision of other needs will also be provided.

In this way, not in terms of shape, but in terms of the facilities that a city should provide to its people and the conditions that it should provide for them, Makkah, and especially the prayers of Hazrat Ibrahim (AS) regarding it, are the best. It is the model of the Islamic city and an environment for human life; Naturally, these characteristics, which are aimed at responding to all human needs, affect the body of the city, the laws and regulations governing the city, the behavior of the people of the city, the communication between people and in a word, the pillars of the city - which will be explained later. It will have a fundamental effect.

The words related to the city that appear in the verses of the Holy Quran are:

• "Village" and its derivatives 57 times. "Al-Madinah" and "Al-Madinah" 17 times, apparently because the city of Medina is called because people reside there (Qureshi, 1371).

• "Balad", which appears in four forms, Balad, Belda, Belda, and Al-Balad, and a total of 19 times, is a place marked by a line, limited, and a place that gives people the peace and comfort of its inhabitants and their residence there (Ragheb Esfahani, 1412). .

• "Dar", "Darkam" and "Darham" a total of 32 times, with this credit, the city is called "Dar" which has a wall and a fence around it (Ibn Manzoor, 1993), the sum of which is "Al-Diyar", "Diarkam", "Diyarna" and "Diyarham" are mentioned 16 times in total. By thinking about the meanings of the words, it is clear that in the model of religious foundations of Islam, the word "city" is taken from the written laws of Sharia. Living in the Islamic way, which is based on the goal of human excellence, will not be possible without trying to apply the instructions following religious values. The Qur'an (in verse 205 of Surah Al-Baqarah) and the Sunnah explicitly condemn disorder in every aspect of life and consider it necessary to use all facilities and organized measures to achieve Islamic values. The design and regulation of urban development (building the environment), which has a significant effect on realizing and strengthening the social principles of Islam, is one of these efforts. In the meantime, certain goals and principles are vital to pay attention to in planning the Islamic "environment" and the methods of its implementation and realization (Mortaza, 2007).

2.1.3. The foundations of the Islamic city

One of the distinct characteristics of humans is choosing and following and trying to resemble individuals, groups, and societies that can be cited as role models; As a result, their works are also presented as models.

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All the original Quranic model of the city: due to the exclusive interpretation of the Holy Quran for Makkah, which it calls "Al-Qara" -

which should act as the mother model of other cities - and the fact that Prophet Ibrahim after the renewal of the building Kaaba Sharif makes three supplications for the city and its people and asks three things from the Almighty God for its people. It is possible to provide a special division for the needs of man, which are comprehensive and include all his material, psychological and spiritual needs. The prayer of Hazrat Ibrahim (AS) is as follows:

And Abraham said, Lord, make this safe and provide for my family.

And when Abraham said, O Lord, make this city a place of safety and comfort, and make the sustenance of its people who believe in God and the Day of Judgment abundant (Baqarah 126); And in another place, he prays:

And Ibraheem said, Lord, make this country safe and secure, and its people worship idols:

Remember when Abraham said, O Lord, make this city (Mecca) a safe and secure place and keep me and my children away from idolatry (Ibrahim 35).

It can be seen that Prophet Ibrahim has three main supplications for Mage, each of which focuses on one area of life - "body or physiology", "psyche or soul", and "spirit or the afterlife". In other words, by providing each of these needs (as the chain of needs of the desired area of life), the provision of other needs will also be provided.

In this way, not in terms of shape, but in terms of the facilities that a city should provide to its people and the conditions that it should provide for them, Makkah, and especially the prayers of Hazrat Ibrahim (AS) regarding it, are the best. It is the model of the Islamic city and an environment for human life; Naturally, these characteristics, which are aimed at responding to all human needs, affect the body of the city, the laws and regulations governing the city, the behavior of the people of the city, the communication between people and in a word, the pillars of the city - which will be explained later. It will have a fundamental effect.

2.1.4. The pillars of the Islamic city

The most important element and the main component and agent of the city is "man" or "city dweller" or someone whose city is his habitat and the place of his activities, which is in two main groups "citizen" (city dweller) and The city manager can be classified; The meaning of "city manager" is all those who are somehow involved in the emergence, construction, developments, management, planning, regulation of relations and supervision of life in the city.

After "man", there are laws and regulations, customs, manners, behavior, and ethics of the city dwellers, which relate to the relationship of the city dwellers and all parts of the city with each other, with nature, with human creations, and with existence in different spiritual and material realms. adjust life;

And finally, there is the "body of the city" which is affected by two other factors in addition to specific environmental, economic, technical, scientific, and artistic conditions.

In short, the three main areas that shape the city are related to humans. Naturally, the first aspect is the intellectual and religious aspects of a person. The second aspect is the cultural, moral, behavioral, and practical aspects of human beings. And finally, the third aspect is the physical aspect, which is the result of human action and the atmosphere of behaviors, and the manifestation of his beliefs.

In this way and comparison, it can be said that for the emergence of an Islamic city, the adaptation and overlapping of three "spaces" or three elements, as its "elements", is necessary. These three spaces are intellectual space, practical space, and objective space or physical space.

The Islamic city is not only the body, and in addition to the body, two other important categories also play a role in defining the Islamic city and its manifestation. The main element is the human (or believer), which of course is the most important category related to His "intellectual aspect" or in other words his faith. In this way, the "faith" of the people of a city can be called the most important factor and element that shapes and defines the "Islamic city". The next element is the rules governing the city and all relationships. It is between humans (both the city manager and the people of the city) and nature and human works.

2.1.5. The structure of the Islamic city

To achieve a structured analysis of the orderliness of Islamic urban spaces, at the three levels of the city, neighborhood, and thoroughfare, and with the titles of urban cohesion, the political existence of the city/guilds, urban neighborhoods, and urban thoroughfares, we investigate and explain the body of the urban fabric.

urban cohesion;

As mentioned, the various elements and buildings in traditional Islamic cities form a single organized and formed complex of passages and communication arteries. This space, with its protective windings, is in the form of spiral circular forms, which contrasts with the broad map of the European city. Communication ways, which are sometimes hidden, make the whole city a single house. In this way, the city is not only presented as architecture but also with those who live in it. The very word city brings to mind a society that should be coherent, warm, and united. In this case, streets and alleys are corridors and houses are vaults used by a family. The whole city forms one house (Bamat, 1990).

The neighborhoods of Islamic cities were specific to ethnic and religious groups (Bane Velo, 2005) and had a different structure from European examples, which is related to the political existence of the city.

the political existence of the city/guilds;

According to Weber's claim, religion never overcame the rural restrictions of Arab tribal and tribal associations but was accompanied by ethnic and tribal groups alongside the conquering military forces (Ibid). Therefore, Islamic cities were mostly a collection of sub-communities and divided and not in the form of united communities. With the absence of independent urban associations and unions, cities were divided into neighborhoods or sections, and each section had a homogeneous community and its markets (Turner, 2010) (Turner, 1976).

Urban Neighborhoods;

"The local community was an important aspect of Muslim urban life. A society that is based on socially homogeneous neighborhoods, distinct boundaries of public space and transportation systems, according to ethnic or tribal affiliations, religion, trade or followers, spaces between houses and places of use such as shops, and political leaders he was religious. In contrast, the absence of independent associations and cells is limited. This system was completely different from the economic model, there were strong ties in the neighborhoods" (Lapidus 1973).

Neighborhoods, towns, and cities were usually formed with a main street of homogeneous and small communities of religious, ethnic, and professional groups, and a strong sense of group solidarity, commitment, and social mission flowed among them. Although the neighborhood had a tight network of group relationships and had security and social identity, there was always an interaction between this self-sufficiency and social distinction and the participation of the neighborhood in the public and economic affairs of the city. It is said that during the night and days of disorder, the gate of the neighborhood was protected. But in terms of architecture, it was not very strong and it was naturally connected with the nearby buildings and neighborhoods. Residents of a neighborhood usually extended their communication range in all directions and supported their neighbors. Although the people of each neighborhood had a close relationship with the life of their neighborhood, they were also dependent on another unit, the family, which is the basic and unchanging unit of social life (Peter Bridge, 2000).

In this way, the ideals of the neighborhood or group loyalty with the desire to preserve the family group from dispersion and pollution and the concept of the state as an external institution, despite which no one can approach the privacy of another, but rather wants to leave the realm of his personal and family life. Dory Gezand replaced the concept of the city as an identity or a community (Von Grunebaum 1961).

Urban Pathways;

The structure of the Islamic city is limited to the spaces between houses and places of use such as shops and cells to create distinct boundaries of the public space and transportation system. This system is completely different from the Western planning model, which gives priority

to thoroughfares and preserves places for the street and public gathering, and plots of land for different uses, as well as subdivisions that lead to the square., Galantay (1986), the Islamic city is the answer to the problem of living in the desert or a perspective without a place with a uniform and endless expansion. Therefore, the Islamic city is formed from the addition of houses with courtyards enclosed to each other, and what remains as a break in the space between these seemingly irregular houses, but decorated following the social system of Islam, It has become a city, so the dead-end alley that characterizes this city is a manifestation influenced by the environment of the family unit (Norberg Schultz, 1387).

In this way, residential areas are often built far away from the market area and busy roads, with narrow and winding alleys. Alleys cannot be compared in any way to the streets of European cities, even medieval neighborhoods, because the ventilation and lighting of Muslim houses are provided from their inner courtyards, not from the street. In the map of Islamic cities, next to the main streets of the country, there are a series of dead ends and winding alleys, which are the way of many houses. These houses are small, narrow, and attached, yet separate from each other, self-sufficient, and facing the sky (Burkhart, 1995).

But the exterior of these houses does not show the shape of the interior or their importance, because the exterior of the building is alien to Islamic culture. The building hides its gaze from the outside, pays attention to the inside, and is turned inward. The windows overlooking the passage also mesh so that people inside can see the outside without being seen. Even the alley is a continuation of the house and is considered more like an internal corridor than a local passage for trade and sightseeing. These streets and alleys extending up to the front door of the houses do not give any picture of the nature or dimensions of the neighborhood (Bane Velo, 2015; Bamat, 2016).

Therefore, interpretations such as disorderly and irrational for Islamic cities are inappropriate interpretations that result from a misunderstanding of the cultural system of Islam. What if it is accepted that the city with twists and turns and dead ends is a cultural issue and to give priority to the inner private space and create hierarchy?

Surely these plans will appear structured, rational, and regular. According to Whitley's writing, the Islamic city has a well-defined and logically planned organization. In this regard, the system of dead ends that branched off from the streets and alleys provided an efficient and economical way for semi-private access to the largest number of residential units so that people could enter through the narrow passages that penetrated deep into the complexes. become houses Each of the houses formed a part of the complex and no more than two or three families shared it (Wheatly, 1976). Also, if the purpose of building urban roads is to transport people and goods, the network system of Open streets will be rational, but if the goal is to create more restrictions and levels of movement and divide it, the narrow and winding street system will be more efficient (Brown, 1973).

2.1.6. Islamic city

In the model of an Islamic city, the dominant factor is the religion of Islam, since the Islamic city is influenced by believing Muslim Islamic citizens who give it an identity, and the urban planning and body of the city is organized based on special religious and Islamic models and criteria, which management in It will demand the estuary and will have a meaning and spirit that will reveal the identities of the city. The Islamic city consists of theoretical foundations and theories related to the principles and values that must be observed in the design and planning and creation of the living environment of Muslims and govern the relationships of humans with the natural and artificial environment and with other fellow human beings. These principles and values will be extracted from Islamic teachings and include important elements of national culture that do not conflict with them. In short, it should be said that the main source of the principles governing all the actions of Muslims, including their urban development, is the Holy Quran and the Sunnah of the Prophet (PBUH) (Naghizadeh, 1379).

Being Islamic for the city indicates that this place should be a manifestation and reminder of

Islamic values. In the Qur'an, the city is referred to as suitable for living, and in fact, the Islamic city is compatible with the needs of man and his type of worldview. It is natural that in this way the living space should also be in harmony with the way of life defined by Islam. Being has also brought with it a rich and rich history of intelligent experiences.

The Islamic city consists of theoretical foundations and theories related to the principles and values that must be observed in designing and planning and creating the living environment of Muslims and on the fourfold relationship and communication of man with God, himself, the environment, and other fellow human beings. be the ruler These principles and values are derived from the Holy Qur'an and the Sunnah of the Prophet (PBUH) and include the conditions and requirements of the time and place.

In an Islamic city, the attribute of Islam can be applied to the city when the city was created based on Islamic teachings and was placed at the service of man, and while responding to his material needs, he leads him towards excellence and values. Islamic guidance. The expression for the city is also an example of the location of the city. Islamic city is the result of Islamic beliefs.

2.1.7. The concept of resilience

In the Oxford culture, resilience is defined as the ability of people or things to quickly recover feeling better, after aftershocks and misfortunes, and to return to their original state after being bent, stretched, or compressed (Oxford, 2016). The word resilience is derived from the Latin word "resilient", facing back; There is a difference of opinion about the origin of this word, some consider it from ecology (Batabyal, 1998), others from physics. Theoretical studies state that the study of resilience was derived from the psychological and psychiatry practices of the 1940s, which were largely developed by Norman Gramsci, Amy Werner, and Roth Smith (Zhou, 2009). The first use of the word resilience in engineering was in 1858, by William Color, a Scottish engineer, to describe the strength and softness of steel axles. It was also used to mean resistance to the effects of earthquakes in the reconstruction of Shimoda after the 1854 earthquake. In 1973, the term was renewed by linking it to systems theory to analyze the reliability of ecological collections. Later, in the work of economists such as Battabial 1998, and geographers such as Adger 2002, in the late 1990s, the path changed from natural ecology to human ecology (Alexander, 2013). In the field of ecology, this word became popular after the publication of the main work of Hallowing called Resilience and Sustainability of Ecological Systems in 1973 (Blaikie, 1997). Haloing, in the comparison between the resilience and stability of ecological systems, introduces the system under the influence of external changes and facing unexpected issues, and therefore the importance of the reliability of its internal relationships is greater than the stability of its behavior, and resilience is the ability to return to the balance of the system. , after a temporary disturbance (Gross, 2008). At this stage, the faster the return to balance and the lower the fluctuations, the more stable the system is. Many meanings are used, such as jumping, adapting, overcoming, and maintaining strength. Resilience as a concept is promising because it encourages the researcher to bridge between dynamic adaptation and static resistance (Alexander, 2013). Resilience is looking for ways to manage an unbalanced society (Zoli, 2012). Resilience can be both a normative concept and a descriptive concept (Speranza et al., 2014). Currently, several definitions of this term are proposed, and today resilience is proposed as a way to strengthen societies by using their capacities (Kärrholm et al. al., 2014). In the 1990s and two decades after the first mention of resilience, this term was introduced in urban planning, and still with time, urban resilience lacks a clear definition in the face of all the crises that the city faces, including economic changes, Globalization, technological, and cultural are discussed (Lu & Stead, 2013).

Cities are subject to gradual and sudden changes. Early detection of these changes and their effects on the city and design and planning based on this diagnosis can significantly improve the resilience of the city against changes (Desouza & Flanery 2013). Resilience, on the one hand, defines the system that must be resilient, and on the other hand, the type of crisis that the system must be resilient against, and accordingly, it has

physical, social, institutional, livelihood, spatial dimensions, etc. (Lu & Stesad, 2013). Resilience has a capacity that can be included in the natural disaster management cycle, before, during, and after the disaster (Ndersen & Cardona, 2013). Resilient cities benefit from the positive and negative results of changes (Ozel & Mecca, 2014). Folke does not always consider resilience as a return to the past and balance, but also the possibility of adaptation and transformation in the existing situation and the possibility of survival and changes in the future (Folke, et al., 2010). According to Carpenter (2012), resilience is the capacity of an environmental and social system to absorb disturbance, reorganize, and thus sustain consequences (Carpenter, et al., 2012). According to the definition by the International Association of Environmental Projects, resilience is the capacity and ability of a society to resist stress, survive, adapt, and bounce back from a crisis and disaster (Stumpp, 2013). Evans (2011) introduces resilience as a goal that is caused by climate change and is a process to adapt to crisis conditions and return to the previous situation and considers the best way to achieve it is through experience, and from Rose and Krasman's point of view, the complexity of the mechanism and the heterogeneity of regions and countries make it very difficult to define a single term, specify indicators and measure them (Rose & Krausmann, 2013).

2.1.8. Dimensions of resilience

Despite the absence of a codified framework and indicators, it is only based on the theoretical consensus of the scientific community, resilience is a multifaceted concept with social, economic, institutional, and physical dimensions (Rezaei et al., 2010).

The social dimension is obtained from the difference in social capacity among societies and expresses the capacity of social groups and societies in the process of returning to the initial state or giving a positive response to them. Important and useful concepts of this field are major forms of capital, especially social capital in the fields of risk and disaster. Social capital indicates the quantity and quality of social cooperation in the field of community resilience (Mayunga, 2007). Among the types of capital, social capital, which determines the role and involvement of community members in a way of neighborhood bonds, trust, and social institutions directly in risk reduction programs, will be vital.

Economic dimension, in economics, resilience is defined as the inherent response and adaptation of individuals and societies to risks in a way that enables them to reduce potential losses caused by risks (Rose, 2005).

The institutional dimension contains features related to risk reduction, planning, and experience of previous disasters. Here, resilience is influenced by the capacity of communities to reduce risk, the employment of local people in risk reduction, the creation of organizational links, and the improvement and protection of social systems in a community, so that at the local level, institutional resilience can be The city of the people of the society should be explained from the state of the institution to the group (Norris et al., 2008).

The physical-environmental (infrastructural) dimension evaluates the community's reaction and recovery capacity after the disaster, such as shelters, vacant or rented residential units, and health facilities; Also, these indicators provide a general assessment of the amount of private property that may be particularly vulnerable to permanent damage and possible economic losses. One of the most important vulnerable infrastructures is low-durable houses that are sensitive to a catastrophic event (Rezaei, 2010).

2.1.9. Urban resilience

Urban resilience also encompasses a wide range of methods, and urban change extends over diverse strands of time. For years, studies on urban resilience show that in cases such as sudden changes - such as earthquakes, hurricanes, or terrorist attacks (Coaffee, 2009) (Pelling, 2003) (Savitch, 2008) - and transformation processes in the economy, Community and environmental fields, these concepts have special importance in the structure of the city. (Müller 2010) Researchers who focus on how cities cope with damage in terms of restoration, (Prasad, et al., 2009) (Vale & Campanella, 2005) (Clark et al., 2010), usually identify The properties of urban systems that

show the least "resilience" have explained the most fundamentals and intellectual approaches. Change can create alternating effects in different types, which usually include spatial scales and social organizations that do not include a specific scale. Therefore, there is an urgent need to use flexible analysis methods at different scales.

In contrast, the analytical organization Resilience Alliance emphasizes the importance of the following four aspects that comprise the life and functioning of cities.

- Metabolic flows: production, supply, and consumption chain that cities need to maintain, urban functions, human well-being, and quality of life.
- Governance networks: Institutions that demonstrate the ability to learn, adapt, and reorganize in response to urban challenges.
- Social dynamics: demography, human capital, and inequality of citizens, communities, and consumers
- Built environment: physical patterns of urban form and spatial relationships and communications

Urban resilience is possible as a feature in the relationships between spatial, physical, social and cultural, environmental, and economic aspects of the city, which is classified and described in various patterns. Nevertheless, dimensions of resilience such as "economic resilience", "social resilience" or "environmental resilience" are completely under the radius of concentrated achievements of resistance, durability, and adaptability in certain aspects of the city.

Resilience measurement indicators

Resilience may be presented as a function of development and environmental changes and the individual's interaction with these changes over time. By comparing the dimensions and indicators of resilience, it is possible to compare the regions and identify those that need resilience. Of course, according to Constes and Brett (2013), the basis of the degree of resilience of societies cannot be measured directly, for this reason, there is a need to create indicators that we specify according to the case under study (Bene, 2013). Various indicators are defined and used globally for resilience, and little research is being done on determining these indicators regularly (Berke & Glavovic, 2012). The criteria representing these indicators are trust or credibility, leadership, collective efficiency, collective capital, cohesion and social sense, social participation, standards, attitudes, existing values, and communication and information (Rafiian et al., 2013:29).

In 2008, Kater started his studies in the field of indexing for resilience, and in his initial studies, he identified six dimensions, and based on each of the dimensions, components, and variables were extracted and tested (Table 1).

To express the resilience of societies, several

Table 1: Resilience indicators of communities based on the studies of Kanter and her colleagues in 2008 (Cutter et al., 2008:598)

Dimensions	description
environmental	The extent of wetlands and their reduction, erosion rate - the percentage of impervious surfaces and biodiversity - coastal defense structure
social	Demographics (age, generation, demographic classes, gender, and occupation), social networks, the amount of local community integration, and the functioning of organizations.
Economic	Employment, land value, rich generation, income, and financial resources of municipalities
institutional	Risk reduction plan – emergency services, zoning and construction standards, emergency response plans, intercommunication, continuity and sustainability of operations plans
Infrastructure	infrastructures related to crisis management, transportation network - age and storage of residential houses and the establishment of commercial infrastructures
Competence and competence of communities	Local perception of risk - consulting services, health, and treatment - the quality of life (high level)

frameworks examine the features that reduce the vulnerability of societies to the consequences of hazards. Since there is no framework or general evaluation of how to measure and evaluate resilience to quantify and study resilience, several conceptual models and frameworks have been presented (Kulig, 1996; Tobin, 1999; Adger, 2000; Buckle 2007; Foster, 2006; Tierney, 2009; Mayunga, 2007; cutter, 2007)

In general, most of these frameworks are based on similar factors such as; focus on economic resources, funds, skills, information and knowledge, support and support networks, access to services, and common values of society (which can reduce vulnerability and increase the resilience of society following threats such as natural disasters).

Therefore, the most limited of these frameworks is focusing on one or more dimensions of resilience and they do not address this concept on a wider level (Rezaei 2010).

In terms of the operationalization of the models that were presented, they show more of the conceptual aspect of resilience than measurement, frameworks such as; Berneo framework (Berneo et al., 2003), sustainable livelihood framework (DFID, 2005), capital-based framework (Mayanga, 2007), SERRI framework (Rezaei, 2009) and models such as; Tobin's model (Tobin, 1999), linear-temporal model (Davis, 2006), DROP spatial model (Cutter 2008), BRIC baseline index model (Cutter et al., 2010) and CBDM community-based disaster management model, which The mentioned models, some of them such as the sustainable, linear-temporal and capital-oriented livelihood model, examine certain aspects of resilience, but it is necessary to consider the multi-dimensional nature of resilience (social, economic, institutional, and physical-environmental (which there is a scientific consensus in this field), models should be presented and proposed that somehow, in addition to considering all these dimensions, also pay attention to the role of local communities through participation. Therefore, in the present research, Among the existing models, a combination of BRIC, DROP, and CBDM has been used to evaluate resilience. In this research, resilience is measured and evaluated in social, economic, institutional, and physical-spatial dimensions. Creating a set of indicators and then checking it in the real sample is the next step of this model. To complete the dimensions and indicators of the conceptual model, physical dimensions from the DROP model, economic and institutional dimensions from BRIC, and social dimensions from CBDM were obtained and finally, this model gives the output to determine the type and amount of social, institutional and physical interventions to improve overall resilience

2.1.10. Resilience capacity of Islamic cities

To evaluate the resilience of a certain society, all dimensions must be examined. Each dimension represents an aspect of society and all aspects must be taken into consideration to create a resilient society. Human aspects should be considered along with the physical aspects of society to achieve the goal of creating a resilient society. In some societies, it can be seen that some dimensions have sufficient resilience and as a result, they adapt to the conditions and suffer less damage in various incidents. However, the connections were with the residents, and the main and big roads and the markets were taken care of by government officials this was one of the main differences between the traditional Islamic environment and the Western environment because in the West, the responsibility of the roads is with the governments and It is local authorities (Pirbabai, 2017).

A city is an interconnected and complex system of various cultural, social, political, economic, and physical elements. that resilience and capacity to bear it must exist in all these dimensions. "The three basic aspects of a system are structure, function, and development. The structure is the sum of elements and the connections between them. The function is related to the flows that move between the connections. Development refers to changes in structure as well as in function that may occur during Time will take place" (174: Holt-Jensen, 1376

The capacity development approach is based on the theory of systems, and in terms of methodology, it provides appropriate practical methods for each of the macro, medium and micro levels. To check the resilience of the city, which

is the bearing capacity, the capacity evaluation model can be used. Based on this, the city is considered an open system that takes data and resources in certain fields and uses its capacities to process these data into outputs (both services and products).

To evaluate the capacity, we pay attention to the outputs - services, and products - what are they and have they been transformed and presented with new features in different periods and urban changes and transformations? The contexts, data, resources, structures, institutions, as well as the people of the city, are examined and the changes are examined from their aspect.

Capacity assessment is a structured and analytical process whereby different dimensions of capacity are assessed within a wider system. Also, evaluation is done from the point of view of organizations and people inside a system, and its special emphasis is on the use of existing capacities. These evaluations can be done at different levels such as micro level, medium level, and macro level. Here, the review and evaluation of the capacity of the Islamic city are done at the macro level and with a systems approach. Capacity at this level has different dimensions such as general and public environment, rules and regulations, management and responsibilities, resources and processes, and relationships, each of which is defined by the relevant components. The basis of the city is considered an open system that takes data and resources in certain fields and uses its capacities to process these data into outputs (either services or products). Capacity dimensions include; General and public environment, examination of the general environment, and public policies through the analysis of socio-political factors, government/ public sector factors, economic/technical factors, and environmental and physical factors. Laws and regulations include laws, regulations, software, and standards that govern the system. Management/Responsibilities, organizations, institutions, or persons (groups or individuals) who manage the system and are responsible for the activities of design, management and implementation, coordination, monitoring and evaluation, and all other related capacities at the system level. Resources, including human, financial, and informational resources that may be available within the system for the implementation and development of capacities and programs. Processes and relationships include inter-relationships, dependencies, and interactions between institutions and organizations, as well as inter-relationships between organizations and institutions in terms of the flow of resources, information, official and informal popular networks, and even the support of communication infrastructures.

2.2. Research Background

According to the subject investigated in this research, we present the studies conducted in different fields as the background of the research. At first, studies were conducted on urban resilience and its dimensions and evaluation, then studies were conducted on the Islamic city and several interpretations were conducted on this concept, and finally, on the Islamic city resilience. In the field of conceptualization and measurement and evaluation of resilience, there have been many internal and external studies, and in each research, different dimensions and indicators of resilience have been studied, evaluated, and analyzed according to the case sample or the desired goals. From the example of internal studies, we can refer to; The article, Indicators of Resilience Study in Residential Areas, (2018), Pirbabai and Jedi, in which components have been extracted for the assessment of resilience in residential areas by using a combination of different tests of resilience assessment. or the article with The title examining the level of environmental resilience using the causality network model, Salehi et al. (2009), in which the proposed dimensions and components for environmental resilience are specified and the environmental resilience model based on the causality network model is presented. The conceptual explanation of resilience and its indexing in community-based disaster management is the result of the work, which explains the indicators of desirable indicators in social, economic, institutional, and physical-environmental dimensions and describes resilience models. Farzad Behtash and others (2013) in an article entitled Determining the dimensions and components of Islamic cities,

used the model of capacity evaluation with an approach based on a systemic approach and finally determined the dimensions and components proposed for the resilience of the Islamic city. The article, the role of local management in promoting local resilience against natural disasters, Badri et al. (2013), examines the role of local management in the principles of natural disaster management to promote resilience. Evaluation and analysis of dimensions and components of the resilience of the Cairo metropolis, Farzad Behtash et al. (2013), studied the resilience of the Cairo metropolis in different dimensions and components and used the opinion of experts. Rezaei (2012) in an article entitled "Assessment of Economic and Institutional Resilience of Urban Societies", evaluated the level of resilience of households living in the neighborhoods of Tehran by studying indicators and factors affecting economic and institutional resilience. Fallahi et al. (2013) proposed resilient reconstruction from the point of view of urban design, and Afzali (2014) evaluated and analyzed the dimensions and components of the resilience of Kerman City using the opinion of experts. And in the research conducted abroad on the axis of resilience, the following cases can be examined as examples; The growth of the entire populated area of Buffalo Niagara Falls in the period of 1970-2000 was evaluated by Catherine Foster (2000), using population density indicators, the percentage of the working population, the percentage of heads of income, and the percentage of the population below the poverty line. Gadshak (2003) has studied the factors influencing the resilience of cities after disasters. Weil and Campanella (2005) investigated the effect of rehabilitation and planning on the resilience of urban reconstruction concerning the concept of identity. and reviewed the managers' policies. In a research entitled, place-based model for Understanding the Resilience of local communities against natural disasters, Kotler et al. (2008) evaluated the resilience of local communities in the form of environmental, social, economic, institutional, infrastructural dimensions, and competency. has done Bhandari et al. (2010), studied the benefits of social capital in disaster resilience in Kishiwada region of Japan, and Kotler et al. (2011), They have conducted another study in the field of "Designing Resilience Criteria and Indicators against Natural Disasters" whose main goal is to compile and design a risk resiliency index to test or determine the criteria of the resilience of societies. And they examined their selected indicators in the dimensions of social, economic, institutional-infrastructural, and capital resilience of the society. Regarding the Islamic city, the article "Model, foundations, pillars, attributes and Principles of the Islamic City" (2012), by Mohammad Naghizadeh, studied various interpretations and definitions of the Islamic city as well as its principles and foundations, or Jaber Danesh, in his article, Foundations of Formation and Physical Organizational Principles of an Islamic City, (2009), has studied such things as urban cohesion, unity and spirituality in Islamic cities. Mohammad Reza Bamanian's article, (2013), with the topic, meaning, and conceptualization of the Islamic city; Theoretical foundations, and examples, which studied Islamic cities and management cases in such cities, as well as the article on the Islamic city as a text; Historical-theoretical foundations of creating a model for the sociological reading of the city and its components, written by Arion Naseri, (2013), which has investigated the architectural values and their sociological effects in Islamic cities. And in the field of the resilience of the Islamic city, considering the limited number of studies, we are limited to only two articles, one of which is an introduction to the resilience of Islamic cities, by Mohammadreza Farzad Behtash et al. Islamic studies in resilience, and another article that continues and completes this research, under the title, Explaining the dimensions and components of the resilience of Islamic cities, Mohammadreza Farzad Behtash et al., (2013), explaining the dimensions, components, and indicators of resilience The development of the Islamic city has been investigated from the perspective of urban capacities. As is obtained from the review of previous studies, no independent study has been conducted on the resilience of the Islamic city, and even the latest cases have examined it from the perspective of urban capacities, therefore, in the present study, These two studies and the completion and verification of the study of resilience in Islamic cities are an attempt

to advance the foundations and concepts and achieve an efficient and usable result in future studies.

2.3. Research Methodology

The current research is a descriptive-analytical method and is practical in terms of purpose, and the research strategy is comparative and the method of data collection is in the form of a library (documents). In this research, the classic dimensions of resilience have been explained concerning the existing theoretical foundations, and several models and frameworks presented in this field have been examined in the form of these dimensions. Among the models and frameworks reviewed, 3 models, each In a specific dimension of resilience, the criteria and indicators of that dimension have been fully introduced and the indicators of these frameworks have been used to complete the desired framework. Study indicators of physical dimensions from the DROP model, economic and institutional dimensions from BRIC, and social dimensions from CBDM are extracted and the final model is presented in a combined form. Then, by matching the aspects of urban resilience and the dimensions of resilience, with the components of the Islamic city as well as the capacity dimensions of the Islamic city in resilience, the overlap and unity between them are highlighted and as a result, the resilience in the Islamic city comes from their application. has been extracted.

3. Findings and Discussion

First, the concept of the city, which is in two different fields of Islam and resilience, has been examined in this study, and it gives combinations such as the Islamic city and, on a higher level, the Islamic city, and in other branches, the concept of urban resilience has been studied. By studying the existing theoretical foundations and extracting common derivations between the overlapping concepts and their one-to-one matching and correspondence, an attempt has been made to get closer to the concept of a resilient Islamic city. In this research, the conceptual model has been explained in three different layers, which have been more detailed at each stage and have become one step closer to the desired topic, which is the resilient Islamic city. The easiest way to reach this concept and the first layer of the conceptual model of this research (Figure 1), we reach from the city with the combination of Islam and resilience, the resilience of the Islamic city or the resilient Islamic city.

In the second layer, as shown in the conceptual model (Figure 2), the connections and one-to-one correspondence between resilience dimensions and aspects of urban resilience on the one hand and connections between the components of the Islamic city and the capacity dimensions of the Islamic city on the other hand. Avari, taking into account the commonalities in the Islamic aspect of both of them, has been displayed and shows a degree of connection between these two categories and determines the possibility of a more and more detailed investigation.

By studying the research and surveys conducted in the field of resilience and the classical dimensions available for this concept, as well as the topic of urban resilience, which has four aspects that correspond one to one with the dimensions of resilience and can be combined or replaced with each other. Also, the components of the Islamic city and the capacity dimensions of the Islamic city in resilience, which are not completely overlapping in the previous cases, but with a degree of tolerance, perhaps a percentage of the cases can be chosen equally from both sides and their semantic connection studied, have been

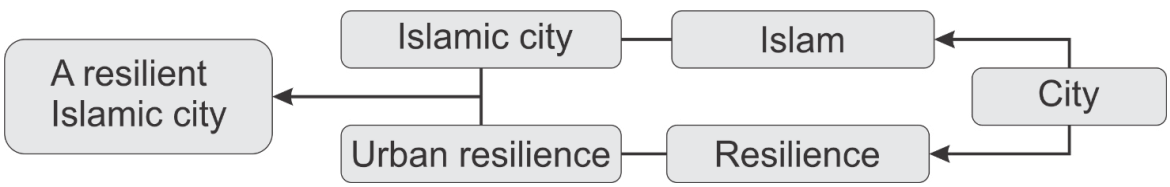

Figure 1: simplified model of an Islamic resilient city

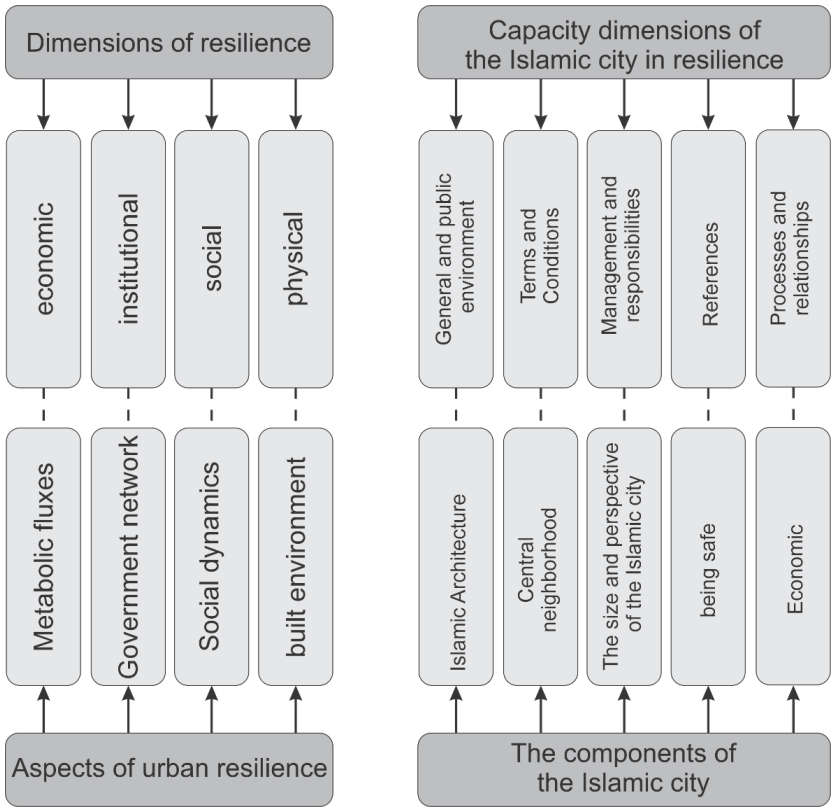

Figure 2: the conceptual model of communication dimensions, components and aspects of resilience, urban resilience, and the Islamic city

compared with each other. In the third layer of the research conceptual model (Figure 3), a comparative comparison between the constituent components of the capacity dimensions of Islamic city resilience and the constituent components of the urban resilience dimensions has been discussed, which shows us a very high similarity between the two and the possibility Achieving specific dimensions of a resilient Islamic city, with components and indicators that are appropriate and responsive to the dos and don'ts of this city, reveals that it can be the subject of research for researchers in the future.

4. Results and Conclusion

In examining the concept of resilience and observing its constituent classical dimensions, taking into account the multiplicity and variety of existing definitions and interpretations of this concept and the lack of a single definition accepted by all thinkers in this regard, we concluded that by choosing optimal frameworks In each of the investigated dimensions and presenting a combined model of them that was done in the previous study, it can be used better than the existing models and frameworks in evaluating and investigating this issue. Therefore, we use dimensions of resilience with overall and one-to-one compatibility with aspects of urban resilience, which practically both express the same issues, as desired components to evaluate resilience in different dimensions. In the context of the Islamic city, with the studies that have been carried out in the existing theoretical foundations, various aspects of the Islamic city have been investigated, from the most basic ones, which are the beginning of the formation of this concept, to the most detailed cases in this regard. During these surveys, things like the pillars and foundations of the Islamic city, which indicate its

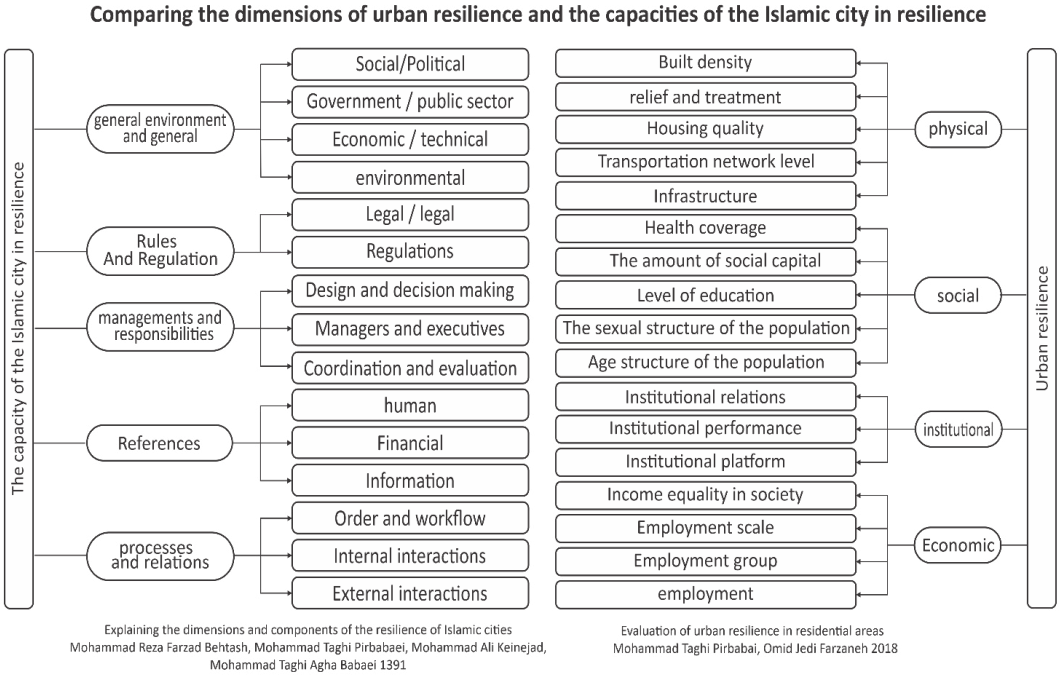

Figure 2: matches the constituent components of the dimensions of urban resilience and resilience capacities of the Islamic city

multidimensionality and responsiveness to needs at different levels, have been identified. And in the review of the proposed components for the Islamic city, this issue has also been confirmed, and in the next and last section, in the review of the capacity dimensions of the resilience of the Islamic city, and the comparison of the constituent components of these dimensions with the components of the urban resilience dimensions of residential neighborhoods, the semantic convergence And we see the high correspondence of these components with each other, which indicates that it is important that with the more and deeper investigation in the form of future studies, specific criteria can be obtained to evaluate the resilience of the Islamic city. But considering that both the concept of Islamic city and resilience do not have precise definitions, and each of them is defined in multiple and scattered ways by different people in one or more dimensions. Therefore, it is first necessary to obtain comprehensive and complete definitions with refined frameworks and models that indicate the general dimensions and the components and indicators that make them up, to provide a suitable platform for these studies, and then by using the obtained redefinitions, try to Reaching the desired concept about the Islamic city made it durable.

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