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Inferences of Urban Resilience from Traditional Anatolian-Turkish City

Geleneksel Anadolu-Türk Kentinden Kentsel Dayanıklılık Çıkarımları

ABSTRACT

This study examines the connections between urban resilience and the characteristics of traditional Anatolian-Turkish cities. Throughout the centuries, Anatolian-Turkish cities have continued to grow while providing a prosperous environment for their inhabitants. The common features observed in these cities include the Waqf (charitable endowment) social structure and the İmaret (social complex) built with the support of this structure. Together, the waqf and imarets form a system that plays a significant role in meeting the needs of city residents and in the construction of cities. The combination of waqf and imaret systems enables the establishment of balanced connections between urban and rural areas, thereby facilitating healthy urban development. Furthermore, the social practices provided by this system have been utilized as positive and effective tools in addressing environmental and social problems encountered during the urban development process. With its characteristics, the waqf-imaret system presents an effective model for achieving urban resilience, which is a crucial requirement in today's context for economic, social, and environmental sustainability. This model contributes to balanced urban growth, a healthy urban lifestyle, and societal well-being. It should be considered as a guiding framework in efforts aimed at establishing urban resilience in contemporary cities.

Keywords: Urban resilience, Sustainable urban development, Anatolian-Turkish cities, Waqf system, İmaret system.

ÖZET

Bu çalışma, kentsel dayanıklılık ile geleneksel Anadolu-Türk kentlerinin özellikleri arasındaki bağlantıları incelemektedir. Yüzyıllar boyu bir yandan büyümelerini sürdürürken diğer yandan halkına refah ortamı sunan Anadolu-Türk kentlerinde ortak olarak görülen vakıf sosyal yapısı ve bu yapının desteğiyle inşa edilen imaretlerdir. Birlikte bir sistem oluşturan vakıf ve imaretler, kent sakinlerinin ihtiyaçlarının karşılanmasında ve kentlerin inşa edilmesinde önemli bir rol oynamaktadır. Vakıf-imaret sistemlerinin birleşimi, kentsel ve kırsal alanlar arasında dengeli bağlantılar kurgulayarak sağlıklı kentsel gelişmeyi mümkün kılmaktadır. Diğer yandan bu sistemin sağladığı sosyal uygulamalar kentsel gelişme sürecinde karşılaşılan çevresel ve toplumsal problemlerin çözümünde olumlu ve etkin araçlar olarak kullanılmıştır. Vakıf-imaret sistemi bu özellikleriyle, günümüzde çok önemli bir gereklilik olan kentsel dayanıklılığın ekonomik, sosyal ve çevresel açılardan sağlanabilmesi için etkili bir modeldir. Dengeli bir kentsel büyümenin, sağlıklı bir kentsel yaşamın ve toplumsal refahın sağlanmasına katkıda bulunan model, günümüz kentlerinde kentsel dayanıklılığın sağlanması konusundaki çalışmalarda yol gösterici niteliktedir.

Anahtar Kelimeler: Kentsel Dayanıklılık, Sürdürülebilir Kentsel Gelişme, Anadolu-Türk kenti, Vakıf Sistemi, İmaret Sitemi.

1. INTRODUCTION

As urbanization gains momentum, the concept of "resilience" emerges as a crucial principle in the realm of public security. It offers a scientific framework to tackle urban safety and security challenges and enhance the ability of cities to withstand catastrophic events. Consequently, the enhancement of urban resilience has become a pivotal factor in achieving sustainable development despite mounting urban pressures. While current research on urban resilience often describes or examines similar occurrences, it's important to note that implementing strategies to bolster urban resilience provides cities with the essential capacity to navigate and adapt to changes in the environment, economy, society, infrastructure, health, education, and in the face of disasters (Ahern, 2011; Albers & Deppisch, 2013; Chelleri & Olazabal, 2012).

When theoretical and applied studies are examined, it can be observed that resilience in a city can be understood as having good health, a safe environment, social harmony, and prosperity. Considering the unique characteristics of cities is vital for conducting a comprehensive resilience assessment and creating strategies for enhancing resilience. By learning from a city's history, its traditional form, and cultural heritage, strategies can be developed to make the city more resilient while preserving its unique identity. In this study, the traditional Anatolian-Turkish city, taken as a significant example with its unique urban development model, has been considered as a case through which important inferences can be drawn to

ensure urban resilience. The study is organized into four sections, covering an introduction to resilient cities, the characteristics and development process of Anatolian-Turkish cities, the interrelation of historic urban development with the dimensions of resilience, and the implications of Anatolian-Turkish city formation for urban resilience. The developmental process of the resilience concept in the literature and the position of the urban resilience concept within cities' development agendas can be briefly summarized as follows:

Ribeiro and Gonçalves (2019) point out that the concept of resilience was first introduced to scientific research and initially linked to ecological systems in 1973 by Holling. This ecological framing of resilience, viewing ecosystems as dynamic, complex, and adaptive, laid the groundwork for socio-ecological system theory, which extended Holling's ecological principles to encompass the "social" by conceptualizing the interconnectedness of nature and society as a coevolving system. Resilience in socio-ecological systems involves the system's capacity to endure perturbations, self-organize, and adapt and learn (Folke et al., 2002).

In the 1990s, resilience was introduced to urban management (Tobin, 1999). The International Council for Local Environmental Initiatives (ICLEI) proposed the concept of "resilient cities" in 2002, sparking research into urban resilience within urban and disaster prevention studies (Motesharrei et al., 2016). Resilience is commonly defined as the ability to navigate changing social or environmental conditions while maintaining key structural, functional, and identity elements (Cinner & Barnes, 2019). Resilience involves persistence, adaptation, and transformation in response to changing conditions (Bruce et al., 2020).

Urban resilience is analyzed across five dimensions: physical, natural, economic, institutional, and social. These dimensions are supported by eleven key attributes: redundancy, diversity, efficiency, robustness, interdependence, adaptability, resources, independence, ingenuity, inclusion, and integration. This forms the basis for an operational assessment tool (Allan & Bryant, 2011; Godschalk, 2003; Kim & Lim, 2016; McLellan et al., 2012; Spaans & Waterhout, 2017; Wardekker et al., 2010).

Resilience serves as a guiding principle in improving planning, recovery, and adaptation at various urban scales. The concept is employed in urban design to enhance the ability of places, communities, or cities to adapt to future changes affecting urban systems. Beyond the technical definitions, urban resilience is also seen as the capacity of individuals, communities, institutions, businesses, and systems within a city to thrive despite chronic stress and sudden shocks (City Resilience Index 2014). The Resilient Cities Network (R-Cities) was established in 2020 as an evolution of the 100 Resilient Cities Program. The R-Cities initiative seeks to improve the well-being of city dwellers and reduce vulnerability across the globe. The City Resilience Framework highlights eight functions of a resilient city: delivering basic needs, safeguarding human life, enhancing assets, promoting relationships and identity, fostering knowledge and innovation, upholding the rule of law, supporting livelihoods, and stimulating economic prosperity. These functions correspond to health and well-being, economy and society, infrastructure and environment, and leadership and strategy dimensions (Croese et al., 2020).

2. THE BASIC CHARACTERISTICS OF TRADITIONAL ANATOLIAN-TURKISH CITY

Tanyeli (1986) states that the urbanization of Turkish settlements in Anatolia is of such a nature that it cannot be fully comprehended with existing models. Tanyeli emphasizes that starting from the late 11th century, a significant number of Turks migrated to Anatolia and developed cities where they integrated their cultural characteristics within unique spatial and temporal conditions, despite encountering a weakened Byzantine culture and urban order. Therefore, it is not possible to consider Anatolian Turkish cities as a product of a shared understanding with the settlement patterns in Central Asia and Iran, or with those in Arab countries. In his study, where he examines the urban history of Anatolia during the Turkish period primarily between the 11th and 15th centuries, covering the Seljuk, Beylik, and Early Ottoman stages, Tanyeli (1986) argues that the nomadic-sedentary dichotomy persisted until the second half of the 15th century and considers it as the main factor shaping the urban evolution.

The period dominated by Seljuk urbanization between the 11th and 13th centuries is the era in which the nomadic-urban dichotomy is most strongly evident in Anatolia. According to Özcan (2005), the Anatolian Seljuk cities are spatial products that combine the cultural accumulation and settlement practices transferred from Central Asia and Iran to Anatolia with the Byzantine settlement culture inherited from Anatolia. Özcan (2010) and Özcan and Yenen (2010) argue that Anatolian Seljuk cities are common spatial products that have been adapted or combined on the Eastern Roman-Byzantine settlement culture heritage

in Anatolia, influenced by the nomadic lifestyle and settled living traditions carried by the Turks during the approximately two-century-long migration process from Central Asia and Iran to Anatolia. They believe that Seljuk urban models are unique urban spatial organizations that have been shaped by the social, cultural, and economic interactions between these different cultures, developed in Anatolia's distinctive geographical conditions, with a dominant Turkish-Islamic influence. Tanyeli (1986) indicates that three types of cities emerged during this period: "Open city," "Closed city," and "Frontier city." In Frontier cities, which formed disconnected nuclei from the sparse structure and settled around their surroundings, it was observed that nomadic Turkmen people transitioned to settled life, detached from the existing Byzantine settlements. In open and closed city models that developed around existing Byzantine fortresses and their immediate surroundings, it is believed that the migrating people, who were already urban dwellers in their places of origin, were able to live in harmony with the existing non-Muslim population (Tanyeli, 1986).

Tanyeli (1986) evaluates the period of urbanization during the Beylik (Principalities) era, which he identifies as a period characterized by a significant demand for settlement in Western Anatolia, as a time when almost every city took on a different form according to its own conditions. The political fragmentation of the era prevented the physical and spatial development of settlements due to the resulting limitations. During this period, many cities in Central and Eastern Anatolia were unable to surpass the Seljuk era, while in Western Anatolia, they remained in an intermediate stage between the Byzantine and Ottoman periods of transition.

Tanyeli (1986), considering the Early Ottoman period as the third stage of the Turkish urbanization process in Anatolia, states that a "contrasting-focused" urban model emerged during this period. The first focus of urban development was the castellation (citadel), while the second focus consisted of zaviyeli mosques constructed by the Turks in the surrounding areas and the settlement areas that emerged around them. Thus, the city grew both from within and from outside. The social groups spreading outward were already accustomed to urban life, while those who formed the settlement areas around the zaviyeli mosques were of nomadic and peasant origins, gradually adapting to a settled life in the process of expansion towards the center. This indicates the adoption of a balanced urbanization policy that aims to equally address the needs of different social groups (Tanyeli, 1986).

Yenen (1999, 1992) similarly emphasizes that the common needs of the people played a significant role in the development process of the Turkish city during the early Ottoman period. In this process, several scholars (if time permits, their names will be added) have noted the influences of (1) the nomadic background of Turks and the cultures of Asian-Turkish societies, (2) elements of the Islamic world, and (3) cultural accumulations of earlier Anatolian-Byzantine civilizations. Yenen also stated that, in addition to these factors, the Turkish city developed under (4) the influence of the wakf and imaret systems, which were products of the settlement policies of the early Ottoman period (Yenen, 1999).

Yenen (1999, 1992) states that the spatial structure of the Turkish city during the early Ottoman period was composed of three main parts as; (1) center-at inner fortress the administration zone, near/adjacent to it the commercial zone, (2) communal facilities- the complexes/single service building, the zaviyes forming the nuclei of the quarters from which the city spread, (3) residential quarters- housing areas surrounding service buildings.

The imaret system, an ancient institution in the Near East, was adopted and enhanced by the Ottomans in the construction of their cities. This system manifested as an imaret center, a comprehensive complex. The complex comprised various buildings that provided free and equal access to worship (mosque or zaviye), education (medrese), culture (library), health (hospital, bathhouse, public toilet), social assistance (charity kitchen, traveler's hostel), and water infrastructure (public fountain, reservoirs). Additionally, the complex accommodated the residents of these buildings and offered environmental improvements like roads and bridges. Typically, these facilities were clustered around a mosque, while markets, shops, inns, and warehouses were usually located separately from the main body of the imaret center. These imaret centers can be regarded as institutions that (1) directed the development of the existing old fortress settlement by encompassing the potential settlement macroform from all sides, (2) delimited future residential areas, (3) provided nourishment, hygiene, health, and worship services to those settling in vacant lands outside the fortress, and (4) shed light on future urban development (Yenen, 1999).

3. INFERENCES OF RESILIENCE FROM TRADITIONAL ANATOLIAN-TURKISH CITY

The purpose of this study is to reveal the connections between urban resilience dimensions and the characteristics of traditional Anatolian-Turkish cities, taking into account the city's development process. It is believed that the findings will shed light on efforts to achieve urban resilience, which is of great necessity in today's world. The concept of resilience, which is approached and defined with different priorities by various disciplines, is accepted in this study in accordance with Folke's social-ecological perspective. According to Folke (2002, 2006), resilience is defined as the capacity of any system to absorb disturbance and reorganize while undergoing change so as to retain essentially the same identity, as determined by its function, structure, and feedbacks. According to Feliciotti (2018), Holling and Ewing (1971) were the first to propose that urban systems and ecological systems have common properties, including resilience, and cities serve as prime examples of self-organizing complex adaptive systems. Therefore, it is necessary to define the concept of urban resilience at this point. Within the context of this study, the term urban resilience is defined as the ability of an urban system and all its constituent socio-ecological and socio-technical networks across temporal and spatial scales to maintain or rapidly return to desired functions in the face of a disturbance, to adapt to change, and to quickly transform systems that limit current or future adaptive capacity. A comprehensive literature analysis conducted by Meerow et al. (2016) resulted in an inclusive definition, which can be summarized as follows: In addition to important studies in the literature on resilience and urban resilience, the conceptual framework has been formed by incorporating data from case studies and fieldwork. The Resilient City Network has identified eight key attributes that are expected to be possessed by a resilient city (Research Report, 2014). The identified attributes can be summarized under four main themes as follows: (1) health and well-being, which focuses on ensuring the health and well-being of all individuals residing and working within the city, (2) economy and society, which emphasizes the social and financial systems that enable urban populations to live harmoniously and collaborate effectively, (3) infrastructure and environment, which encompasses both man-made and natural systems that provide essential services, safeguard the environment, and facilitate connectivity among urban residents, and (4) leadership and strategy, which underscores the necessity of informed, inclusive, integrated, and iterative decision-making processes within cities. The ongoing part of the study has been structured in parallel with these four themes.

It would be appropriate to briefly explain how the process unfolds to clearly state that traditional Anatolian-Turkish city encompasses the four themes that include resilient city characteristics. The Anatolian-Turkish cities recognized the "waqf" as a means to meet the socio-economic needs of society by establishing service facilities and buildings. The institution of waqf also established and managed imaret centers (complexes). This waqf-imaret system played a significant role in the formation and growth of Anatolian-Turkish cities. The waqf as an urban institution and its impact on the urban structure will be elucidated through the explanation of its role. At this point, it is necessary to make the following statement: The resilient city attributes mentioned earlier, namely infrastructure and environment, and leadership and strategy, are associated with the Waqf system, while health and well-being, and economy and society are related to the Imaret system. The Waqf system plays a role in serving the aspects of "infrastructure and environment" and "leadership and strategy". The Waqf, which can be described as a charitable institution, possessed financial and administrative autonomy and its own legal identity. It encompassed two types of facilities. The first type consisted of public amenities that were accessible to the community free of charge, including mosques, educational institutions such as medrese (higher education buildings), schools for children, libraries, traveler hostels, hospitals, public fountains, charity kitchens, bridges, and roads. The second type of facilities was also intended for public use but involved charges, such as inns, bathhouses, bazaars, shops, and warehouses. The waqf system financed all of these community facilities and social welfare services, with administrators and affluent individuals serving as the primary sources of funding (Yenen,1992).

The structures collectively referred to as "Imaret" encompass a combination of benevolent facilities such as worship, education, culture, healthcare, satisfaction buildings, and public fountains, as well as for-profit structures such as housing, lodging, cleanliness, and commercial buildings that are utilized for a fee in an organized manner (Fig.1). Imaret serves as the core of neighborhoods within the larger context of the city, with residential areas evolving around it. Potential neighborhoods in a newly planned or existing city are developed around imaret sites (complexes) in the region. Imarets, with their diverse functions, fulfill the daily needs of the population, safeguard them, and shape their social lives. Imarets that cater to fundamental needs such as healthcare and education contribute to the resilient city discourse by providing health and well-being for every citizen, a prominent requirement in today's context. Furthermore,

infrastructure projects such as roads, bridges, water structures, and inns built through waqf financing protect and connect people by providing essential services.

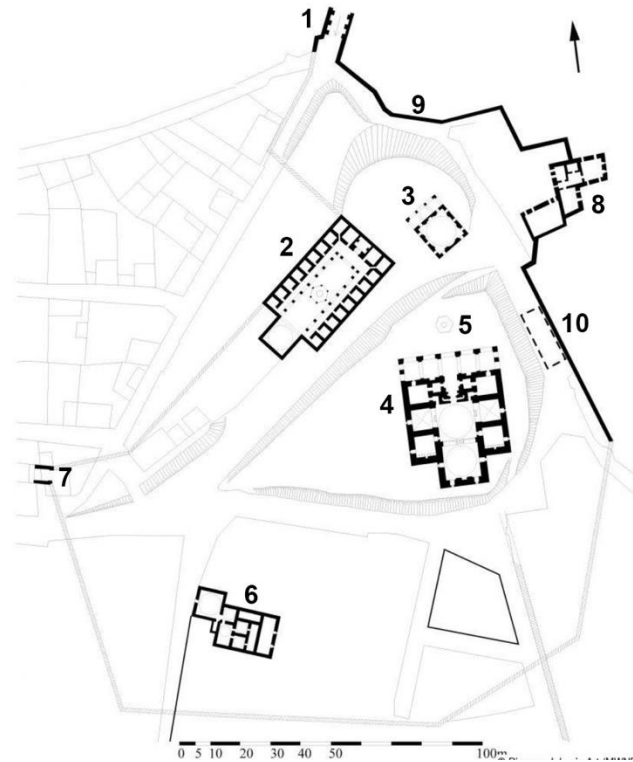


Fig 1. Yıldırım İmaret

The selection of imaret sites determines the direction of urban development, making them the initial examples of urban planning strategies. In this regard, they signify the strategic planning process that a resilient city should possess. The revenue generated from fee-based facilities such as baths, inns, and commercial buildings, constructed through waqf funding, covers the maintenance and operation costs of free-access buildings such as mosques, schools, and soup kitchens. The waqf, responsible for the maintenance, repair, and operation of imarets, employed a significant portion of the population for these tasks, providing them with salaries. This contributed to strengthening the socio-economic structure of the city, aligning with the principles of resilient cities.

4. CONCLUSION

In this study, the positive effects of social practices in the establishment and development processes of traditional Anatolian-Turkish cities on their socio-cultural and physical developments were presented. It is believed that these findings can shed light on the solutions to the problems faced by today's chaotic cities. As highlighted in the UN-Habitat World Cities Report (2022), urban resilience in economic, social, and environmental terms is crucial for the future of livable and sustainable urban environments.

Although in the previous section, the waqf system was associated with infrastructure and environment, and imarets were related to health and wellbeing, as well as economy and society dimensions, the combination of waqf and imaret contributes to the realization of the four dimensions in a complementary manner. This dual system enables the traditional Anatolian-Turkish city to grow around a central core in a systematic way and maintains strong connections between urban areas and rural settlements, thus ensuring various balances in multiple aspects.

The waqf system can be considered an important mechanism for the systematic construction of links between rural and urban areas and the controlled sustainability of these connections. The support provided by affluent individuals with urban lifestyles to the production mechanisms in rural life and thus ensuring the sustainability of rural living significantly reduces opportunity inequality, which is one of the major challenges and threats to resilience today. Furthermore, it enables the achievement of the "urban-rural linkages" emphasized in many international reports to reach the SDG2030 goals.

Imarets, built and supported by waqf resources, serve the basic needs of both urban and rural populations, safeguarding human life. These imaret sites, which organize urban life and promote the organized and sustainable use of natural resources, exist both in urban centers and in the periphery, as well as in rural areas. They support education and knowledge via education buildings and mosques they include. They also facilitate human relationships and develop public identity.

In conclusion, the positive impacts of traditional Anatolian-Turkish cities' social practices, can offer valuable insights for addressing the challenges faced by contemporary complex cities. The combination of the waqf system and imarets contributes to balanced urban development, strengthens rural-urban linkages, and ensures sustainable living. This study highlights the importance of urban resilience in economic, social, and environmental aspects while demonstrating the critical role of imarets constructed with waqf resources in preserving urban life and human well-being. Thus, future endeavors should draw inspiration from the social practices of traditional Anatolian-Turkish cities to create more livable, sustainable, and resilient cities.

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