SUİTDER

SDÜ İNSAN VE TOPLUM BİLİMLERİ DERGİSİ

Suleyman Demirel University Journal of Humanities and Social Sciences

A Methodological Study on the Conservation of Traditional Isparta Houses[*]

Geleneksel Isparta Evlerinin Korunmasına İlişkin Bir Yöntem Araştırması

Yasin TEKİN[**] iD - Hasan Ş. HAŞTEMOĞLU[***] iD

Abstract

In this study, we discussed the traditional houses that have been inhabited since the Roman period and are registered and protected in the city center of Isparta, located in the Mediterranean region.

One hundred twenty-eight registered traditional houses located in the city center, archive scans, three-dimensional laser scans, and drone shots were examined to determine the current structural status of the traditional houses. Furthermore, the reasons for the loss of registered houses to date were investigated. The study examined traditional houses in terms of zoning, ownership, and transportation status using various analytical methods. The results obtained from these analyses were evaluated with the Analytical Hierarchy Process (AHP) method, and the weight of the criterion that weighs more and creates pressure on traditional houses was calculated. These analyses aimed to uncover the reasons and outcomes of the processes, commonly referred to as rent pressure and considered a contributing factor to the loss of traditional houses in Türkiye.

In conclusion, the analyses conducted under the headings of zoning practices, ownership structure, and transportation activities that contributed to the concept of rent emerging in traditional houses revealed that ownership was the primary factor in the gradual decline of registered building stocks, followed by zoning and transportation practices. Therefore, ownership should be taken as a basis for the studies to be carried out for conservation purposes nowadays. In this sense, it is believed that the current work can be an important source for conservation studies in Türkiye and will form the basis for similar research in the future.

Keywords: Isparta, City Centre, Conservation, Traditional Housing, Analytic Hierarchy Process

---

A Methodological Study on the Conservation of Traditional Isparta Houses

Öz

Bu çalışmada Roma döneminden başlayarak günümüze kadar iskân görmüş olan ve Akdeniz bölgesin de yer alan Isparta kent merkezin de bulunan tescillenerek koruma altına alınan geleneksel konutlar ele alınmıştır.

Kent merkezin de yer alan 128 adet tescilli geleneksel konut; arşiv taramaları, üç boyutlu lazer taramaları, drone çekimleri üzerinden incelenerek şu an ki yapısal durumları tespit edilmiş olup, bugüne kadar kaybedilmiş olan tescilli konutların kaybedilme sebepleri araştırılmıştır. Çalışmada yöntem olarak, geleneksel konutları imar durumu, mülkiyet durumu ve ulaşım durumları açısından ele alınarak farklı analiz yöntemleri uygulanmıştır. Bu analizlerden elde edilen sonuçlar Analitik Hiyerarşi Prosesi yöntemi (AHP) ile değerlendirilmiş ve geleneksel konutlar üzerinde diğerlerine göre daha fazla ağır basan ve baskı oluşturan kriterin ağırlığı hesaplanmıştır. Bu analizlerin sonuçların da Türkiye'de genel olarak rant baskısı olarak isimlendirilen ve Türkiye'deki geleneksel konutların kaybedilmesinin sebebi olarak görülen süreçlerin, nedenleri ve sonuçları ortaya çıkarılmaya çalışılmıştır.

Çalışmanın sonuç kısmın da geleneksel konutlar da rant kavramının ortaya çıkmasına neden olan imar uygulamaları, mülkiyet yapısı ve ulaşım faaliyetleri gibi başlıklar altında yaptığımız analizlerde, tescilli yapı stoklarının gün geçtikçe kaybedilmesin de en büyük payın mülkiyet kaynaklı olduğu daha sonra imar uygulamaları ve ulaşım uygulamalarının olduğu bundan dolayı da günümüz de koruma amaçlı gerçekleştirilecek çalışmalar da mülkiyetin esas alınması gerektiğini göstermektedir. Bu anlam da çalışmamızın Türkiye'de gerçekleştirilecek koruma çalışmaları için önemli bir kaynak olma potansiyeline sahip olacağı ve gelecek de gerçekleştirilecek benzer çalışmalara altlık teşkil edeceği düşünülmektedir.

__Anahtar Kelimeler:__ Isparta, Kent Merkezi, Koruma, Geleneksel Konut, Analitik Hiyerarşi Yöntemi

INTRODUCTION

While settlements in Anatolia date back thousands of years to the Neolithic Age, the region has hosted numerous tribes and civilizations throughout its history. In the relatively recent period after Christ, Anatolia came under the rule of the Roman, Seljuk, and Ottoman Empires, respectively. Therefore, their effects on the settlement patterns in Anatolia are more evident today. As the Turks began to settle in Anatolia from the 1000s AD onward, the castle city approach developed by the Romans, which is frequently seen in Anatolian settlements, transformed into settlements outside the castle over time due to the markets established around the castle gate during the Seljuk period, the supported trade approach, and the shelter needs of new settlers. After the conquest of Istanbul and the developments of cannon technology during the Ottoman period, the castle city approach weakened. Hence, instead of the castle settlement that gave the original form to cities, markets centered on the Friday Mosque and new housing settlements were established. Likewise, traditional housing construction techniques began to change due to the nomadic origins of the Turks, on the one hand, and the characteristics nourished by the Islamic mindset, on the other. Thus, while the Muslim Turkish people prioritized stone and permanence in public buildings such as mosques, madrasas, and baths, they preferred wood, a more temporary material, in traditional houses, unlike the settled Christian people. This process and understanding of settlement continued for about six centuries.

Another important transformation in Anatolian cities began with the declaration of the Republic in 1923. The reforms carried out by the new regime were evident in every field. While policies based

on statism and westernization efforts began to have an impact on Anatolian cities, the change was more pronounced in large cities such as Istanbul, Ankara, and Izmir. World War II, which began to be felt in the 1930s and continued until the 1950s, significantly slowed the physical transformation of Anatolian cities.

The social and economic changes and technological developments experienced during the period after 1950 led to radical transformations in urban settlements in Anatolia, as well as worldwide. In this process, public investments, which had slowed down from the 1930s due to the newly introduced liberal economic policies and had almost stopped until the 1950s, created significant pressure for change in urban settlements, fueled by the technological developments accelerated by World War II.

Large-scale factory investments pioneered by the state create a need for large-scale labor. Schools, hospitals, and similar public services built in city centers create a new civil servant population, while attracting the rural population that wants to access these services easily. When the importance attached by the state to infrastructure projects is supported by technological developments, transportation, electricity, sewage, drinking water, telephone, and similar facilities make cities more attractive and considerably increase the comfort of urban settlements. Thus, a sudden and mass housing need arose in city centers in Anatolia. This problem was primarily tried to be solved with zoning laws, plans, and property laws. In addition to the urban planning studies that accelerated with the declaration of the Republic, the Zoning Law numbered 6785 was enacted in 1957. Then, in 1965, the Condominium Law was enacted, and property problems were tried to be solved during the apartmentization process. When the widespread use of reinforced concrete and developments in construction technologies were added to this situation, rapid apartmentization and rent pressure accelerated in Anatolian cities.

While the most tragic effects of these developments are evident in traditional housing textures, protection approaches have begun to emerge in response to this. Thus, in the historical process, the protection of traditional houses started relatively late, in the 1970s. The current study described this process as follows. Because, the traditional housing stock that is being protected by law continues to be lost due to "rent pressure". In this study, it was attempted to determine how the process that increases the concept of "rent pressure" for traditional housing stock works by analyzing ownership status, zoning status and transportation status.

1. Literature Review

The legal protection of ancient artifacts in Anatolia began with the Asar-ı Atika Regulations. With the Asar-ı Atika Regulations dated 1869, 1874, 1884, and 1906 (Çal, 1997, s. 35), attempts were made to protect archaeological artifacts and make archaeological excavations subject to permission; however, these efforts were deemed inadequate (Dağıstan Özdemir, 2005, s. 51). With the declaration of the Republic, westernization movements gained momentum, but laws aimed at implementation in the field of protection were enacted relatively late. The first law that draws attention is the Antiquities Law, numbered 1710 and enacted in 1973. With this law, the concept of protected areas was adopted, and the protection of parcels was transferred to area protection (Dağıstan Özdemir, 2005, s. 78). In 1983, the Antiquities Law was also deemed inadequate, and the Law on the Protection of Cultural and Natural Assets numbered 2863 was enacted. The Law, which used the concept of cultural heritage for the first time, assigned many duties to the protection boards. This law remains in effect nowadays (Nesli, 2018, s. 49). On the other hand, in addition to the published laws, an attempt has also been made to integrate Türkiye in the international arena for the protection of cultural heritage by becoming a party to some agreements issued by European countries to save the cultural heritage that started to disappear due to the First and Second World Wars (Kaderli, 2014, s. 27).

When this process is examined from a legal dimension to a field study in the context of traditional housing texture, the following observations can be made (Figure 1). Modernization efforts that gained momentum with the Republic, large-scale infrastructure constructions, and large-scale transportation projects that were rapidly implemented due to increasing vehicle traffic destroyed the traditional housing stock, except for monumental structures, in Anatolian city centers where roads were 5-7 m wide on average, dead-end streets were frequently used, and there was no water, sewage, or electricity infrastructure. The process experienced between 1950 and 2000 had a very destructive effect on the traditional housing texture in the city centers of Anatolia.
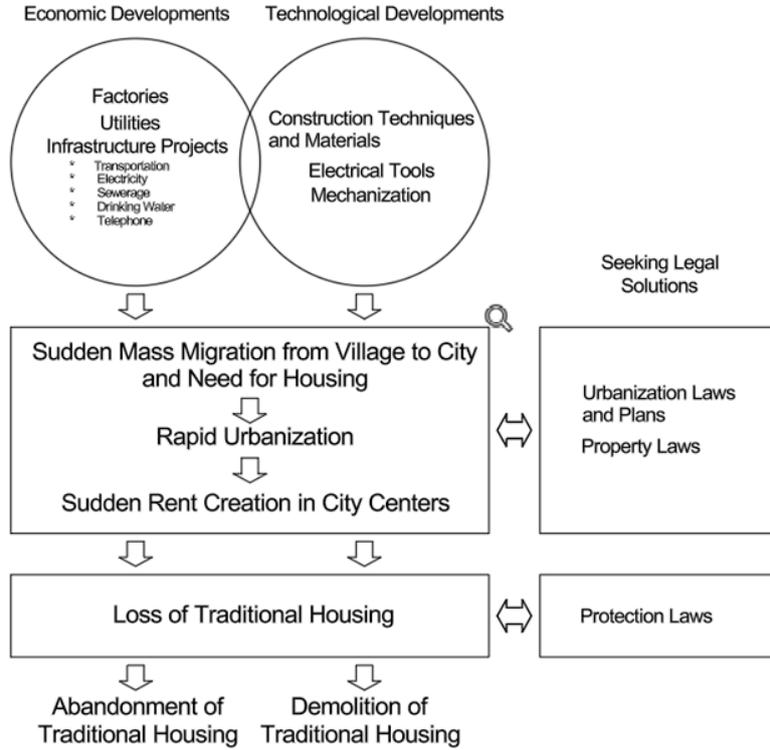
Table 1. Factors Affecting Transformation Processes in Cities During the Republican Period

The traces of this process can be clearly observed in traditional houses located in the city center of Isparta. As can be understood from the examples that have survived to the present day, the traditional housing concept and architectural features continued to exist in Anatolia without considerable change from the 1600s to the 1950s. The most important factors in the formation of traditional housing plan types and the development of plan types, apart from habits and technical possibilities, were the needs of individuals in their daily lives and the role that the family living in the house played in society (Balcı, 1984, s. 93).

In this regard, traditional housing construction in various regions of Anatolia can be grouped by similar characteristics displayed in the context of spatial structure, despite varying materials, structures, and climatic data. Wood, stone, and adobe, which are obtained from the immediate environment, are the local materials used in traditional Anatolian housing architecture. In traditional houses in various regions of Anatolia, the choice of materials used, including wood, stone, and adobe, depends on the region's material possibilities, climatic conditions, and geographical characteristics of the land (Sözen & Eruzun, 1992, s. 112). When examined in terms of these data, it is possible to classify traditional houses in Anatolia as follows:

- Black Sea and Northern Anatolian Traditional Houses,

- Central Anatolian Traditional Houses,

- Aegean and Western Anatolian Traditional Houses,

- Mediterranean or Southern Anatolian Traditional Houses,

- Southeastern Anatolian Traditional Houses

Within this classification, traditional Isparta houses are included in the group of traditional Aegean and Western Anatolian houses, known as the "Eğirdir, Isparta, and Burdur trio." The region's borders can be accepted as Çanakkale-Balıkesir in the north, Uşak-Sandıklı-Eğirdir in the east, and Antalya in the south (Eldem, 1984, s. 81). In this respect, the traditional housing stock in the city center of Isparta is remarkable for its civil architectural works, which possess unique values and an original architectural understanding.

When the historical process of protecting civil architecture in the province of Isparta is examined, it is evident that a process parallel to that of the country as a whole is observed. However, in relatively small-scale Anatolian cities like Isparta, legal regulations were implemented 3-5 years later than in larger cities. For this reason, the first registration and protection works in the city center of Isparta started in 1977. During these works, 61 of the 128 traditional houses currently under protection in the city center of Isparta were added to the protected list. However, with a decision taken by the Immovable Cultural Heritage High Board of the Ministry of Culture and Tourism in 1984, this area lost its status as a protected area. With this decision taken in the city center, the historical texture was severely compromised, and multi-story buildings were constructed in the city center and its surroundings toward the end of the 1980s. During this process, three traditional houses were taken under protection in 1984. Furthermore, with the comprehensive work carried out in 2007, a total of 62 traditional houses were registered and taken under protection. With the protection of 1 house in 2018 and 3 houses in 2021, the number is expected to reach 128 by 2025.

First, this study aimed to determine the actual status of 128 traditional houses protected in official records. Then, it aimed to document the extent to which these houses are protected and reveal the reasons why they are not.

2. Method

In the study, the current structural conditions of all 128 traditional houses in the city center of Isparta were classified under three headings through archival scanning, drone imaging, 3D laser scanning of the structure, and field studies.

- Restored traditional houses have been restored with qualified applications by public institutions, local governments, and property owners (Figure 2).

- Traditional houses that have undergone simple repairs are traditional houses that the owners have tried to protect with repairs that can be defined as simple repairs (painting, changing the joinery, repairing the roof, etc.) (Figure 3).

- Damaged traditional houses have been abandoned by the owners and are structurally unusable (Figure 4). Demolished traditional houses have been completely lost due to structural damage and fires (Figure 5).

Of the 128 traditional houses under protection in the city center of Isparta, 26 were restored by 2025, 29 underwent simple repairs, and 57 remain in a damaged state. Sixteen traditional houses were demolished.

Second, the study aimed to determine whether the prevailing opinion in the literature and societal mentality —that traditional houses are lost due to unplanned urbanization and zoning rents —align with the actual situation. In this respect, the building stock, consisting of 128 houses in the

city center of Isparta, was analyzed in accordance with the following criteria: ownership status, zoning status, and transportation status.

The obtained data were evaluated using the "Analytical Hierarchy Process" method, and the most important criteria were determined. The Analytical Hierarchy Process (AHP) method, proposed by Thomas Saaty in 1980, is a powerful tool for making complex decisions and selecting the optimal option for the decision-maker. The obtained data were analyzed with the AHP method, and the order of importance was determined among the effects of property, zoning, and transportation on traditional housing loss.

Figure 1. Isparta Center, 405-131 parcel, restored traditional house

Figure 2. Isparta Center, 408- 24 parcel, simply repaired traditional house

Figure 3. Isparta Center, 189-8 parcel, damaged traditional house

Figure 4. Isparta Center, 8013-3 parcel, land of the completely demolished house
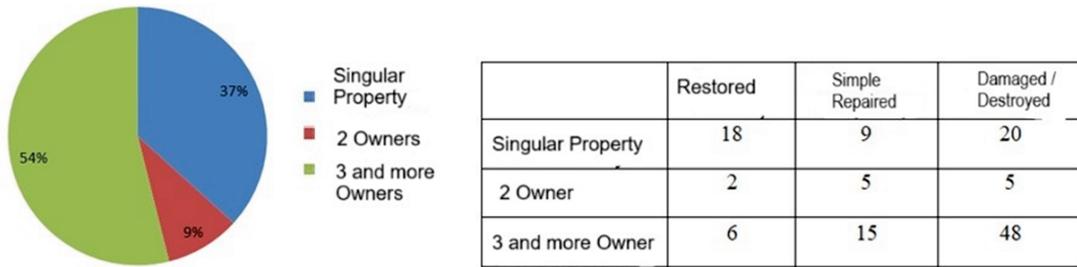
3. Findings

3.1. Ownership status analysis

The legal amendment, numbered 6217 and enacted in 1954, has had the greatest impact on the traditional housing stock in terms of ownership status. The amendment to the Land Registry Law

enabled the possibility of condominium ownership in buildings, causing the demolition of 1-2 story buildings and the construction of new multi-story buildings. This has led to intensive construction in city centers and the rapid loss of traditional houses. The fragmentation of ownership in the structural context is reflected in the use of houses that can be defined as large-scale, especially by dividing traditional houses into two among owners. These solutions, which structurally damage traditional houses, deteriorate their plan scheme. On the other hand, during the ownership analyses, the parcel sizes were determined and classified, and their relationship with the structural status of traditional houses was examined.

Of the traditional housing stock, 47 out of 128 houses have single ownership, whereas 81 have a fragmented ownership structure. While only 12 of the traditional houses with a fragmented ownership structure have two owners, 69 have three or more owners (Figure 6).

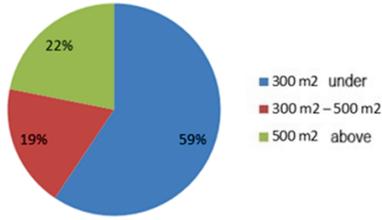|	Restored	Simple Repaired	Damaged / Destroyed
Singular Property	18	9	20
2 Owner	2	5	5
3 and more Owner	6	15	48

Table 2. Ownership status analysis

When the property status of traditional houses under protection was examined in terms of their structural condition, specifically in terms of their classification into restored, simply repaired, and damaged/demolished, the following results were obtained (Figure 7).
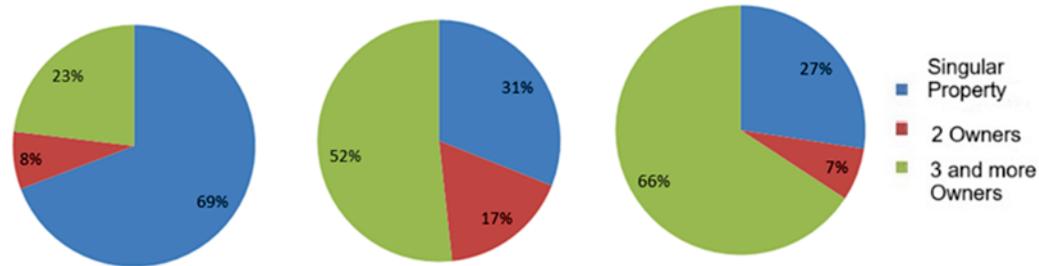
Table 3. Ownership status specific to the classification into restored, simply repaired, and damaged/demolished

The analysis results, as presented in the graphs in Figure 7, clearly reveal the relationship between ownership status and structural status. In restored traditional houses, sole ownership is prominent at a rate of 69%. Of the 18 restored houses with single ownership, six belong to the Municipality and the Provincial Special Administration. Of the damaged/demolished traditional houses, 66% have intense fragmentation of ownership and have three or more owners. While this situation affects decision-making processes, on the one hand, it also causes owners to avoid assuming responsibility for traditional houses, on the other hand.

Additionally, parcel sizes were determined during the ownership analysis phase of the study. The examination revealed that 76 of the 128 protected traditional houses had parcels smaller than 300 m², 24 had parcels between 300 m² and 500 m², and 28 had parcels larger than 500 m² (Figure 8).

	Restored	Simple Repaired	Damaged / Destroyed
300 m2	20	17	39
300 m2 – 500 m2	5	7	12
500 m2	1	5	22

Table 4. The situation of parcel size of traditional houses in terms of ownership

When the effect of parcel sizes is analyzed in terms of the protected traditional housing stock classified as restored, simply repaired, and damaged/demolished, the following analysis results (Figure 9) are reached.
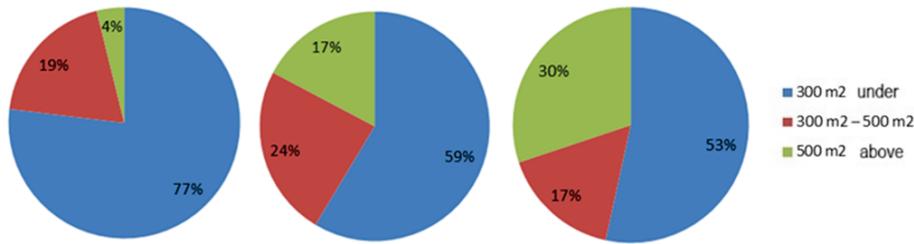
Table 5. Analysis of traditional houses classified as restored, simply repaired, and damaged/demolished, based on plot size

The most striking relationship between parcel sizes and structural condition is that 77% of restored traditional houses have a parcel size under 300 m2. However, 22 of the 28 large-scale parcels, with an area of over 500 m², are in a damaged/demolished structural condition, accounting for 78% of the total.

3.2. Zoning analysis

The first zoning plan studies for the city of Isparta began between 1938 and 1943. Another study conducted in the area for zoning purposes was the cadastral study, which took place between 1955 and 1956. Then, zoning plans were created in 1967 and 1968. The zoning plan developed in 1977 is the first significant planning study for the city of Isparta in terms of protection. In 1977, the traditional houses to be protected were identified, and the first protected areas were included in these plans. However, the protection decisions were canceled in 1984, and new zoning plans were prepared in 1988. Although no new zoning plan was created during the period from 1988 to 2007, studies continued with the development of additional zoning plans and revisions. The conservation zoning plan, which determines the protection areas and decisions in the city center of Isparta, was completed in 2015. The zoning status analysis of the study was based on three zoning plans by considering the zoning planning processes experienced in the past. These are the zoning plan dated 1977, when the first registration procedures were carried out; the zoning plan prepared in 1988, after the cancellation of the protected areas in 1984; and the current zoning plan in use as of 2024, following the 2015 conservation planning studies. Accordingly, first, 128 buildings were identified in these zoning plans, and the zoning parcel containing the registered traditional house and the zoning block containing its immediate surroundings were analyzed in detail. The analysis was conducted in accordance with the following criteria outlined in the zoning status analysis.
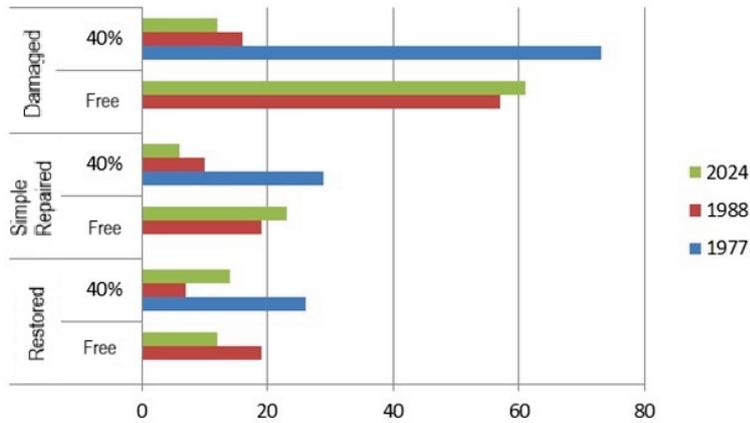
Number of floors and changes in the zoning block where traditional housing is located (Figure 10).

Building density and changes in the zoning block where traditional housing is located (Figure 11).
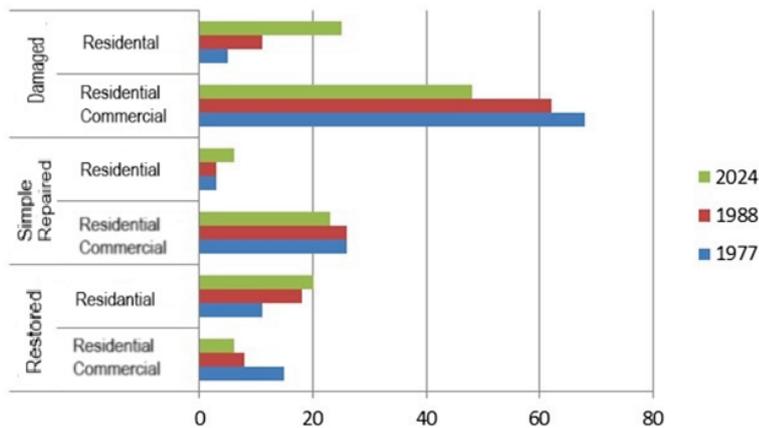
Usage decisions and changes in the zoning block where traditional housing is located (Figure 12).
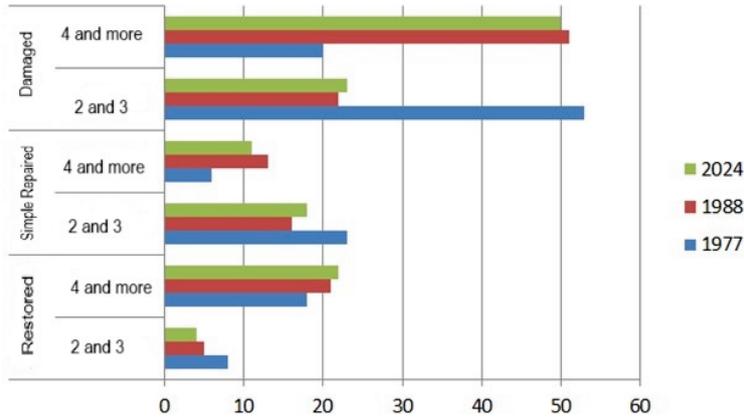
Table 6. Changes in the number of floors of traditional houses classified as restored, simply repaired, and damaged/demolished over the years

Table 7. Change in the density of traditional houses classified as restored, simply repaired, and damaged/demolished over the years

Table 8. Change in the usage decision of traditional houses classified as restored, simply repaired, and damaged/demolished over the years

In this respect, changes in the zoning block where traditional housing is located were classified. While the number of floors was categorized into two groups: 2-3 floors and 4 floors and above, two different construction densities were observed, specifically 40% and free. The usage decisions within the block were determined as residential and residential/commercial. The primary purpose of these analyses is to evaluate the impact of rent increases resulting from the number of floors, construction area, and commercial use on traditional houses under protection. On the other hand, when these analyses were examined in terms of the structural conditions of traditional houses under protection, specifically in terms of restored, simply repaired, and damaged/demolished classifications, the following results were obtained.

In general, when the zoning status around traditional houses is examined in terms of the criteria above, the following results are reached. As the number of floors and apartment buildings around traditional houses increases, the process of abandoning these houses also increases. The process of abandoning traditional houses increases with the decrease in construction density around these houses. As commercial use around traditional houses increases, the likelihood of restoring these traditional houses also increases.

3.3. Transportation analysis

The study examined transportation analyses of the roads facing the parcels where traditional houses are located under the three subheadings below:

• Width of road facing the parcel where traditional houses are located (Figure 13)

• Type of road facing the parcel where traditional houses are located (Figure 14)

• Distance of the parcel where traditional houses are located to the city center (Figure 15)

In Türkiye, in terms of highway classification, vehicle lane widths of 3.00 m are considered appropriate for secondary roads with less traffic, such as third-class or village roads, 3.50 m for second-class roads, and 3.60 to 3.75 m for first-class main roads. Lane widths applied on urban roads generally vary between 3.00 and 3.65 meters. According to the design rules for pedestrian paths and sidewalks in TSE 12576, the width of pedestrian paths should be sized according to the density of use and the road class and group, and they should be constructed in accordance with TS 7937. In line with these standards, the roads to which the parcel where the traditional house is located has frontage were categorized into two: roads over 10 m that meet the minimum requirements and roads under 8 m that do not meet the standards and have to be used in existing settlements. According to this classification, 74 out of the 128 traditional houses have frontage from roads with a width of less than 8 m, whereas 54 traditional houses have frontage from roads with a width of more than 10 m (Figure 13). When the effects of road widths on the structural situation are analyzed, the following conclusions are reached.
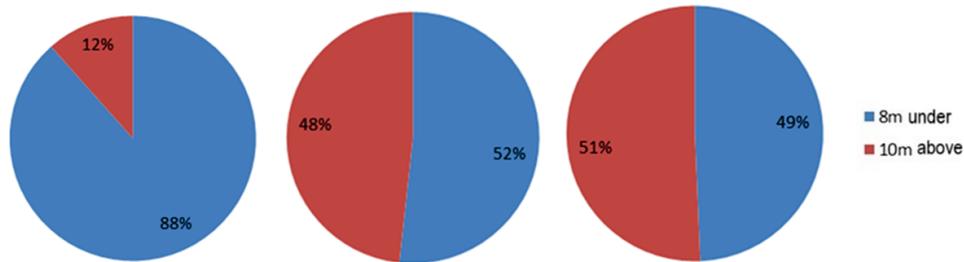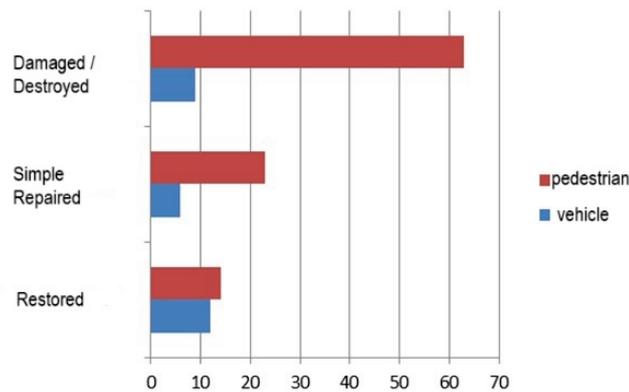

Table 9. Road width of the parcel where traditional houses classified as restored, simply repaired, and damaged/demolished are located

Regarding the parcels where restored traditional houses are located, 23 out of 26 traditional houses face roads with a width of less than 8 m, and three face roads with a width of more than 10 m. Contrary to expectations, the fact that the parcel has a road-facing width below the standard has no negative effect on the restoration processes. On the other hand, in terms of the parcels where simple restoration has been done, 15 out of 29 traditional houses face roads with a width of less than 8 m, and 14 face roads with a width of more than 10 m. The fact that the parcel has a road-facing width below the standards does not have a significant effect on traditional houses that have undergone simple restoration. However, in terms of the parcels where damaged and demolished traditional houses are located, a similar situation is observed for traditional houses that have undergone simple restoration. Thirty-six out of 73 traditional houses face roads with a width of less than 8 m, whereas 37 face roads with a width of more than 10 m. Therefore, the width of the road facing the parcel is below the standards and does not have a significant impact on damaged and demolished traditional houses.

Concerning the type of road that the parcel on which the traditional house is located faces, except for the street rehabilitation/urban design works carried out by the municipality in the city center of Isparta and the pedestrian paths located in a small number of dead-end streets, traditional houses usually face vehicle roads. When examined in this context, the most significant effect of the road type criterion is evident in the restored traditional houses group, due to the street rehabilitation/urban design works carried out by the municipality. Twelve out of 26 restored traditional houses face pedestrian paths, which corresponds to approximately 46%. Whereas this ratio in traditional houses that have undergone simple repairs is 6/29, i.e. approximately 20%, it is 9/64, i.e. approximately 12% , in damaged and collapsed structures. Although the analysis of these proportional changes reveals that pedestrian paths positively affect restoration processes, since pedestrianization occurs after restoration, it cannot provide meaningful data (Figure 14).


Table 10. Types of roads facing the parcels where traditional houses classified as restored, simply repaired, and damaged/demolished are located

On the other hand, the analysis of the distance of the parcel where traditional houses are located to the city center determined the walking distances accepted in accordance with the provisions of the spatial plans construction regulations in Türkiye as follows:

"ARTICLE 12 – (1) Walking distances in zoning plans; the access distance of the population in the service impact area of education, health, and green areas is planned by considering topography, construction, density, existing texture, and natural and artificial thresholds.

(2) In zoning plans, children's playgrounds, open neighborhood sports areas, family health centers (FHCs), nurseries, kindergartens, and primary schools can be planned in the service impact area that should be reached on foot by taking into account approximately 500 m for playgrounds, open neighborhood sports areas, FHCs, nurseries, kindergartens, and primary schools, apporximately 1,000 m for secondary schools, and approximately 2,500 m for high schools.

Thus, the study accepted 500 m as the appropriate walking distance, and the study area was divided into three regions with diameters of 1000 m and 1500 m, with Kaymakkapı Square (junction) as the center, which is considered the city center of Isparta. In fact, the farthest traditional houses from the city center are located 1,440 m away in the Doğancı Neighborhood, specifically in block 1687. These houses are located on parcels 11 and 12. Most of the 128 traditional houses located in the city center of Isparta (Figure 15) are within walking distance to the city center.

0 - 500 m	82 resident
500m -1000m	26 resident
1000m - 1500m	20 resident
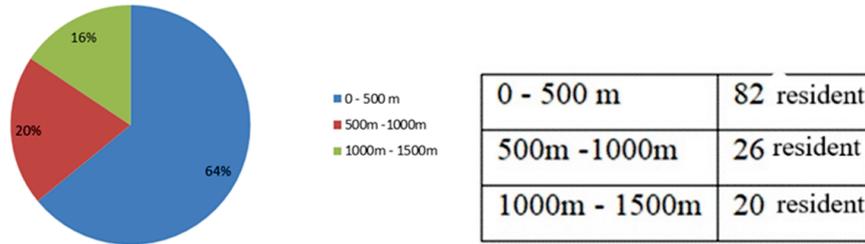
Table 11. Distance of traditional houses to the city center

While classifying traditional houses in terms of their distance from the city center, the study aimed to investigate the impact of the distance from the city center on restoration, simple repair, and damage. The investigation of the restored traditional houses revealed that 19 of the 26 restored traditional houses were within walking distance to the city center. While seven houses were within a range of 500 m to 1000 m, none of the 20 traditional houses located more than 1000 m from the city center were restored. This indicates that the distance from the city center is a crucial criterion in restoration processes (Figure 16).
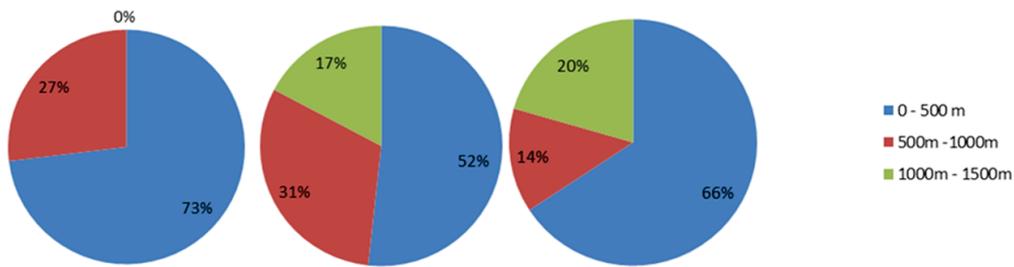
Table 12. Distance of traditional houses classified as restored, simply repaired, and damaged/demolished from the city center

However, it is impossible to make clear judgments about the distance of the traditional houses that have undergone simple restoration and have been reclaimed/demolished from the city center. The most striking point here is that none of the 20 houses located at the farthest distance from the city center have been restored and 15 have been reclaimed/demolished. This supports the notion that distance from the city center is a crucial criterion in restoration processes.

4. Discussion

The discussion section examined the effects of the obtained data on the actual situation by analyzing the ownership, zoning, and transportation status factors that affect houses according to their structural status (restored, underwent simple repair, and damaged/demolished) in the traditional houses located in the city center of Isparta.

As seen in Figure 17 below, the following results were obtained from the examinations specifically designed to investigate the relationship between the ownership status and structural status of traditional houses.

Property	Restored	Simple Repaired	Damaged
Singular	69,2	33,1	27,4
2 Owner	7,7	17,2	6,8
3 and more owner	23,1	51,7	65,8

Table 13. Property status/structural status results

According to these results;

- Single ownership status is an important criterion in restoration processes, with 69.2%.

- Ownership fragmentation with three or more owners is an important reason for buildings to remain abandoned, with 65.8%.

As seen in Figure 18 below, the following results were obtained from the examinations specifically designed to investigate the relationship between the parcel size and structural status of traditional houses.

Property	Restored	Simple Repaired	Damaged
300m2 under	76,9	58,6	53,4
300m2 - 500m2	19,3	24,1	16,4
500 m2 above	3,8	17,3	30,2

Table 14. Parcel size/structural status analysis results

According to these results;

- Of the restored traditional houses, 76.9% are located on plots smaller than 300 m2, which can be interpreted as small-scale traditional houses being preferred more due to high restoration costs.

As seen in Figure 19 below, the following results were obtained from the examinations specifically designed to investigate the relationship between the zoning status and structural status of traditional houses.

Construction status		Restored	Simple Repaired	Damaged
Floor	2-3 Floor	15,4	62,1	31,5
	4 and more Floor	84,6	37,9	68,5
Density	%40	46,2	79,3	83,6
	Free	53,8	20,7	16,4
Usage decision	Residential	23,1	79,3	65,8
	Residential / Commercial	76,9	20,7	34,2

Table 15. Development status/structural status analysis results

According to these results;

- Restoration processes increase with the increased number of floors in the zoning block where the traditional house is located.

- As the density of construction in the zoning block where the traditional house is located increases, the number of abandoned traditional houses also increases.

- Restoration processes increase with increased commercial use in the zoning block where the traditional house is located.

As seen in Figure 20 below, the following results were obtained from the examinations specifically designed to investigate the relationship between the transportation status and structural status of traditional houses.

Transportation		Restored	Simple Repaired	Damaged
Road width	8 m under	88,5	48,3	49,3
	10 m above	11,5	61,7	50,7
Road type	Vehicle	53,9	79,3	87,7
	Pedestrian	46,1	20,7	12,3
Distance from center	300 m under	73,1	51,7	65,7
	300 - 500 m	26,9	31,1	13,7
	500 m above	0	17,2	20,6

Table 16. Transportation status/structural status analysis results

According to the results obtained;

- The width of the road that the zoning parcel, where the traditional house is located, faces has no significant effect on restoration processes.

- As the number of restored traditional houses increases, pedestrianization around them also increases.

- Most of the restored traditional houses are within walking distance to the city center.
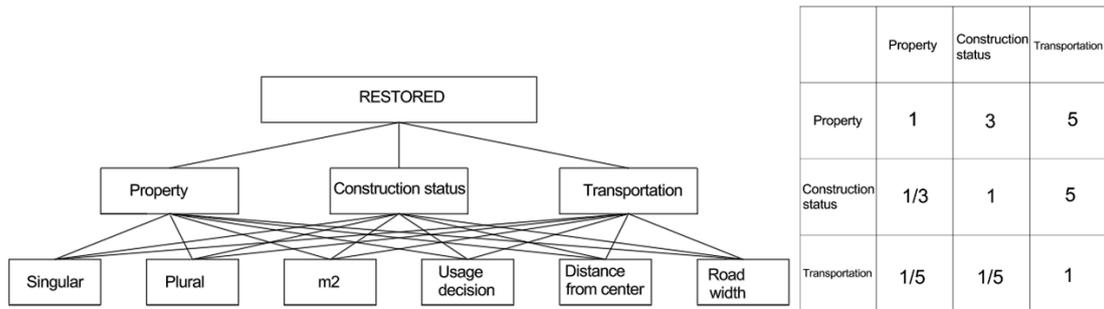
In the context of these results, the data obtained were evaluated using the AHP method, and an attempt was made to identify important criteria among them. To this end, a standard preference table was prepared at the first stage (Figure 21). The standard preference table is a scale table consisting of odd numbers and containing the value definitions of the criteria. Even values are called compromise values.

| Importance Values	Value definitions
1	Equal Importance
3	Slightly More Important (Minor Superiority)
5	Very Important (Superior)
7	Very Important (Very Superlative)
9	Extremely Important (Absolute Superiority)
2,4,6,8	Intermediate values (Specialization Values)

**Table 17.** Standard preference table values

Standard preference table values are derived from expert opinions in applications. In this context, the data and relations obtained from the analyses were used as expert opinions in the study. Therefore, calculations were made by preparing standard preference tables and a criteria matrix in terms of ownership, zoning, and transportation criteria for traditional houses that have been restored, simply repaired, and damaged (Figures 22, 23, and 24). However, the road type variable was not taken into consideration because it established a relationship in terms of result, not cause. On the other hand, the number of floors and the density of construction included in the zoning criteria were considered together and evaluated as the construction area (m2).

	Property	Construction status	Transportation
Property	1	3	5
Construction status	1/3	1	5
Transportation	1/5	1/5	1

Table 18. An AHP relationship diagram and comparison matrix

for restored traditional houses

	Property	Construction status	Transportation
Property	1	1	3
Construction status	1	1	3
Transportation	1/3	1/3	1
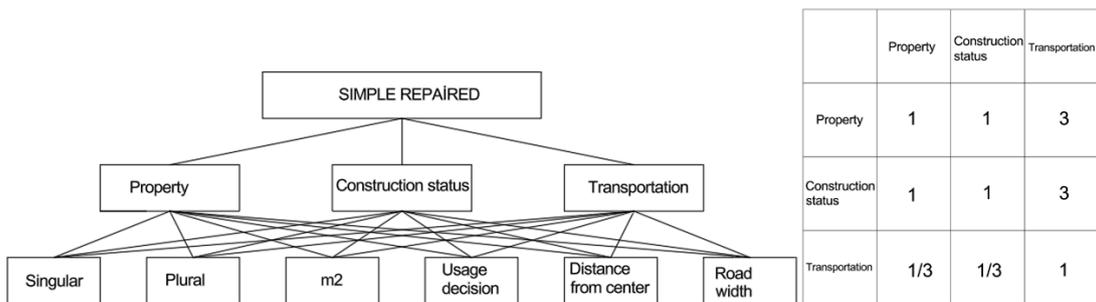
Table 19. An AHP relationship diagram and comparison matrix

for traditional houses with simple repairs

	Property	Construction status	Transportation
Property	1	7	5
Construction status	1/7	1	3
Transportation	1/5	1/3	1
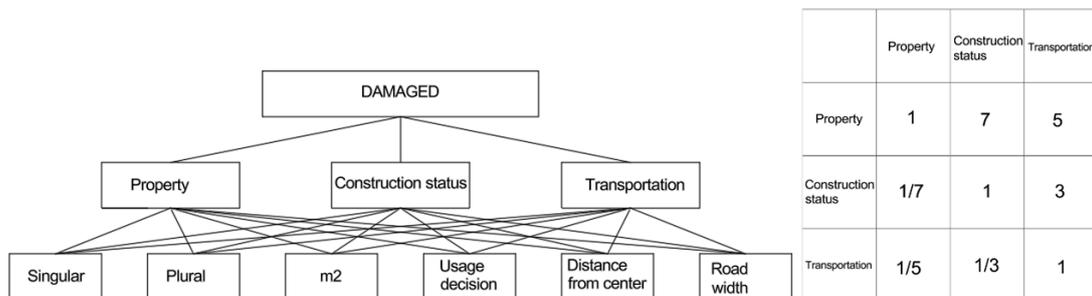
Table 20. An AHP relationship diagram and comparison matrix

for damaged/demolished traditional houses

When we proceed to the calculation part, the values in each column of the comparison matrices are collected one below the other and added to the bottom of the table. The values in the same table are divided by the totals found. Here, the sum of the values in the newly formed column should be 1. These calculations were performed in the same manner for all comparison matrices, and the row averages were determined. After the row averages for all criteria were found, the matrices in Figure 25 below were reached.

	Restored	Simple Repaired	Damaged
Restored	1	3	7
Simple Repaired	1/3	1	5
Damaged	1/7	1/5	1

	Restored	Simple Repaired	Damaged
Property	0,607	0,429	0,713
Construction status	0,303	0,429	0,187
Transportation	0,090	0,142	0,100

Table 21. Criteria and row average matrices for traditional houses in terms of structural condition

Then, all calculation steps were processed using the same calculation method as the criteria matrix, and the importance scores were obtained by multiplying the weight matrix in Figure 26 below and the two matrices obtained.

Criterias	Weight
Restored	0,643
Simple Repaired	0,283
Damaged	0,074

	Scoring		
Property	0,562	%	56
Construction status	0,330	%	33
Transportation	0,108	%	11

Table 22. Weight matrix and importance scores

CONCLUSION

When the calculation results are evaluated, it is seen that the property structure of the traditional house (56%) is the most determining criterion in terms of restored, simply repaired, and damaged traditional houses. The property structure is followed by the zoning status criterion (33%), while the transportation status (11%) is less determining than the other criteria.

According to these results, the transportation status of parcels hosting traditional houses had little effect on restoration processes in the city center of Isparta. The most important reason for this may be that, although most of the roads are under 8 m, most of the traditional houses are within walking distance to the city center.

On the other hand, the increase in the number of floors in the immediate vicinity of the parcels hosting traditional houses, the increase in the density of construction, the increase in commercial use, and therefore the rent increase caused by the factors above suppress the use of traditional houses as housing with their original functions. On the other hand, the emerging rent phenomenon and the valued parcels contribute positively to restoration and reuse processes.

However, the results obtained in terms of ownership showed that it is essential to prevent zoning practices similar to Article 18, especially the inheritance route, which deteriorate the ownership structure in traditional housing, through legal legislation. At this point, it is necessary to prevent the fragmentation of agricultural lands, similar to preventing agricultural lands under 5,000 m2 from having shared ownership, and to prevent parcels containing traditional housing from becoming shared ownership in any way.

As a result, from the analyses of ownership status, zoning status and transportation status, the most significant factor in the loss of traditional housing stock is the ownership status criterion.Therefore, in regions with traditional housing stock, it would be appropriate to; develop urbanization policies accordingly, enact necessary legal regulations to reduce fragmented ownership, carry out projects to raise the awareness of property owners, increase resources to accelerate restoration processes. Hence, the study can serve as a basis for future research on the conservation of traditional houses in Anatolian cities of a similar scale, such as Isparta. Since the current research determined how urban conservation areas, which are generally thought to be under pressure for rent, are shaped in line with the criteria that create rent (ownership, zoning, and transportation), it sheds light on the direction of future conservation studies.

REFERENCES

Balcı, P., (1984). *Mimaride Türk Milli Üslubunda Geleneksel Türk Evi, Mimaride Türk Milli Üslubu Semineri*, Kültür ve Turizm Bakanlığı Eski Eserler ve Müzeler Genel Müdürlüğü.

Çal, H., (1997). Osmanlı Devletinde Âsâr-ı Atîka Nizamnâmeleri, *Vakıflar Dergisi*, Vakıflar Genel Müdürlüğü Yayınları.

Dağıstan Özdemir, M. Z., (2005). Türkiye'de Kültürel Mirasın Korunmasına Kısa Bir Bakış, *TMMOB Şehir Plancıları Odası Yayını*, (31).

Eldem, S.H., (1984). Türk Evi I, *TAÇ Vakfı Yayınları*, İstanbul.

Kaderli, L., (2014). Kültürel Miras Koruma Yaklaşımlarının Tarihsel Gelişimi, *TÜBA-KED 12*, Ankara.

Nesli, A., (2018), Eski Eserlerin Korunmasının Hukuk Tarihi Yönüyle İncelenmesi, *Dokuz Eylül Üniversitesi Hukuk Fakültesi Dergisi*, 20 (1).

Sözen, M. & Eruzun, C., (1992). *Anadolu'da Ev ve İnsan*, İstanbul: Emlak Bankası Yayınları.

NOTE: All figures not credited belong to the authors.