URBAN OBSOLESCENCE: AN EVALUATION OF OBSERVED AND PERCEIVED CRITERIA IN THE CONTEXT OF ULUS HISTORIC CITY CENTER IN ANKARA

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ABSTRACT

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Ulus, the historic city center of Ankara, has been experiencing a steady urban obsolescence process, which threatens the cultural values inherited from prehistoric civilizations to the early republican period and the ongoing urban life in the quarter. Although there are many concepts in the literature that defines urban depression in cities, such as urban decline, blight, and shrinkage, they all have nuances in their theoretical background in terms of causes and effects. In the case of Ankara city and Ulus historic city center, the process of urban depression occurred in a rather different socio-economic pattern than the urban decline processes in modern capitalist cities. For this reason, in this study, the concept of urban obsolescence was applied to identify the problems of Ulus.

The problems that historic city centers faced is a long-discussed subject in the academic field especially with the aspects of causes and prevention. There are generally accepted transformation approaches such as revitalization for preserving the assets of these areas while providing a function as a dynamic part of the cities. However, it is recognized that these activities cannot eventuate as successfully as

desired in Turkish cities. It is assumed that one of the many reasons behind this situation can be the top-down and expert-based practices in the planning system. In this study, it is hypothesized that there might be important differences between the observation of experts and the evaluations of users. In the light of this assumption, an urban obsolescence identification method is formulated to test whether there are remarkable differences between the analyses of an expert from the profession and academy and the evaluations of users of historic quarters.

Keywords: Urban Obsolescence, Obsolescence in Historic City Centers, Expert-Based Approach, User-Based Approach

ÖZ

KENTSEL ESKİME: GÖZLEMLENEN VE ALGILANAN ÖLÇÜTLERİN ANKARA TARİHİ KENT MERKEZİ ULUS BAĞLAMINDA DEĞERLENDİRİLMESİ

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Ankara tarihi kent merkezi Ulus, tarih öncesi uygarlıklardan erken cumhuriyet dönemine miras kalan kültürel değerleri ve alanda süregelen kentsel yaşamı tehdit eden istikrarlı bir kentsel eskime süreci yaşamaktadır. Yazında kentlerdeki sorunları tanımlayan kentsel gerileme, kentsel çöküntü, küçülme gibi pek çok kavram olmasına rağmen, hepsinin kuramsal arka planında neden-sonuç ilişkileri bakımından ayrıntılar bulunmaktadır. Ankara kenti ve Ulus tarihi kent merkezinde yaşanan süreç, modern kapitalist kentlerdeki kentsel gerileme süreçlerinden oldukça farklı bir sosyo-ekonomik örüntüde gerçekleşmiştir. Bu nedenle bu çalışmada Ulus tarihi kent merkezinin sorunlarının tanımlamak için kentsel eskime kavramına başvurulmuştur.

Tarihi kent merkezlerinin karşılaştığı sorunlar, özellikle nedenleri ve önlenmesi bakımından akademik alanda uzun süredir tartışılan bir konudur. Bu alanların değerlerinin korunması ve kentlerin dinamik bir parçası olarak işlevlerine devam edebilmelerini sağlamak için yeniden canlandırma gibi kabul görmüş dönüşüm

yaklaşımları bulunmaktadır. Ancak bu faaliyetlerin Türkiye kentlerinde istenildiği kadar başarılı olamadığı da bilinmektedir. Bu durumun arkasındaki birçok nedenden birinin planlama sistemindeki yukarıdan aşağı ve uzman temelli uygulamalar olabileceği varsayılmaktadır. Bu çalışmada, uzmanların gözlemleri ile kullanıcıların değerlendirmeleri arasında önemli farklılıklar olabileceği varsayılmaktadır. Bu varsayım ışığında, meslekten ve akademiden bir uzmanın analizleri ile tarihi mekân kullanıcılarının değerlendirmeleri arasında dikkate değer farklılıklar olup olmadığını test etmek için bir kentsel eskime tespit yöntemi formüle edilmiştir.

Anahtar Kelimeler: Kentsel Eskime, Tarihi Kent Merkezlerinde Eskime, Kullanıcı Temelli Yaklaşım, Uzman Temelli Yaklaşım

To the little girl I once was, and who is still with me

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CHAPTER 1

INTRODUCTION

1.1. Problem Definition

The process of urban depression in historic city centers has been discussed with various concepts such as blight, urban decline, and shrinkage, especially in the USA and Western European countries while searching for a remedy to the destructions caused by World War II and the following crises of major capitalist cities in the postwar industrial decentralization period. The effect of these crises on historic city centers and old settlements has been devastating. Cities are faced with depopulation, economic recession, and disinvestment; thus, they have been subjected to physical deterioration and depreciation in all aspects with the change of socio-economic structure. In the case of Ankara city and Ulus historic city center, the process of urban depression occurred in a rather different socio-economic pattern than the urban decline process in modern capitalist cities. For this reason, the concept of obsolescence, which appears to be a more convenient concept, is preferred for examining the observed urban problems Ulus.

The notion of obsolescence is usually associated with "a range of consumer products that we discard, typically long before they have broken or worn out, simply because newer, more advanced, and (presumedly) better replacements are available" (Iselin & Lemer, 1993, p. vii). The introduction of the obsolescence concept to urban planning literature initially occurred in the USA in the 1900s; when New York real estate companies have invested substantial amounts of money in constructing large new buildings to produce the newest and the most advanced buildings with the latest equipment. The ceaseless developments in the construction sector have resulted in the devaluation -namely, obsolescence- of even the most recently built accommodations. Consequently, an uncontrollable process of destruction and reconstruction began at

the beginning of the twentieth century, which led to unpredictable market movements for the investors (Abramson, 2016). Afterward, as the destructive effects of the Great Depression began to appear in the 1930s, the architectural obsolescence paradigm was extended to the urban realm. The concept of obsolescence became an essential component of the urban renewal activities after the mid-twentieth century as a justification mechanism for massive destructions. However, the concept has been discussed substantially in architectural and financial fields, and few academic studies are available in the urban obsolescence field.

It is essential to identify urban problems accurately to provide adequate recovery policies. In the literature review, it has been observed that most of the urban obsolescence studies are grounded on expert-based and top-down identification methods, which comprise only the general observations and analyses of researchers. However, these obsolescent parts of cities are mostly used and experienced by "underprivileged" people (Lichfield, 1988), especially from the lower economic classes of society. However, this top-down approach, which has been criticized in urban planning with concepts such as pluralism, advocacy planning, and participatory planning, is encountering "bottom-up" resistance, as Healey (2003) pointed out. One of the essential reasons for the inconvenient urban transformation practices in such areas is considered as the incoordination between users' and experts' perceptions.

The **hypothesis of this study** is that, today, in the field of city planning and especially in urban transformation activities, analyzes and even most of the academic studies are carried out with a top-down approach. It is considered that this contributed to the failure of projects in which desired success was not achieved. It is also assumed that this is important for future revitalization studies to be conducted in historic city centers.

In the light of these concerns, **this thesis aims** to conduct a study that determines how the state of obsolescence can be identified in historic city centers adequately with an approach that combines the perceptions of experts and users. Accordingly, a general obsolescence framework model is formulated for declining historic quarters, which is applied to historic city center of Ulus in the next step for identifying the state of urban obsolescence. In this way, it is intended to provide a pre-study for any further interventions in the area.

1.2. Research Questions

Before formulating the research question and sub-questions (SQ's), the primary concern was whether the problem of urban obsolescence in Ulus could be observed and identified with perceptible indicators for every part of the community. In this respect, the following questions are formulated to be illuminated in a reasonable order.

Research Question: How can obsolescence situation in historic city centers be observed and identified coinciding with observations of the experts and perceptions of the users?

- **SQ 1:** What is obsolescence?

It is essential to elaborate on the obsolescence terminology since it primarily refers to the devaluation of consumer products, technological devices, and the financial value of the real estate. Obsolescence is commonly defined as the process of decline in utility and exchange value of a product according to the perception of the actors involved, even though the product still functioning as it was designed. There are two significant attributes of the concept. First, obsolescence refers to a process of degradation rather than demonstrating an area's 'ultimate worse condition'; second, it refers to relativity that enables to measure the evaluations of both insiders and outsiders.

- **SQ 2:** How has the term obsolescence been integrated into urban planning literature?

From the Renaissance until the late nineteenth century, the primary concern of the architectural tradition of Western cities was fixity and permanence. Although structures wear out over time, it was believed that this process would be relatively slow and could be recovered; therefore, structures would endure for generations. For this reason, the concept of obsolescence has not been mentioned in architectural thought and practice before the late 1800s.

This shift in the architectural paradigm occurred due to the industrial revolution and the role and experience of cities in this process. Cities have evolved in accordance with the socio-economic dynamics of capitalism. A class of professional experts

emerged in the modern capitalist cities comprised of engineers, economists, and accountants. The primary objective of these groups was to enhance industrial productivity and profit management for the capitalist investors. In addition, they seek to identify and minimize the financial losses caused by depreciation. Consequently, the concepts of depreciation and obsolescence emerged as a financial management tool (Abramson, 2016).

The real estate and accounting professions pioneered the paradigm of obsolescence in the built environment at the beginning of the twentieth century; then, it was introduced to architectural and urban practices. After a period of intense capitalist urban growth in the 1950s, cities have witnessed massive destruction and redevelopment movement, especially in their historic cores. However, the economic stagnation of the 1970s has decelerated redevelopment projects, and the paradigm of renewal (promoted by obsolescence) has been replaced by sustainability and preservation ideas.

- **SQ 3:** How has the term obsolescence been integrated into historic city centers?

Although there are limited numbers of discussions that focus on obsolescence in historic city centers, it is a promising subject. All of the available literature which reviews the concept of obsolescence with historic fabric is part of a broader revitalization study. In all of these studies, obsolescence is referred to as the adverse and threatening conditions that districts were suffering from, and it has to be eliminated by revitalization.

- **SQ 4:** How can the concept of obsolescence be identified in historic city centers?

After answering these sub-questions in the conceptual framework for obsolescence notion in the literature review chapter, the methodology of this study guides the research question, which aims to formulate a method for identifying obsolescence together with the perceptions of users in historic city centers. In this thesis, it is aimed to formulate a general obsolescence framework model for declining historic quarters. Subsequently, the model is applied to Ulus for identifying the process and the level of obsolescence. In this way, it is intended to provide a pre-study for any further revitalization projects in the area.

1.3. Methodology

This thesis aims to conduct a study that determines how the state of obsolescence can be identified in historic city centers adequately with an approach that combines the perceptions of experts and users. According to this criterion, a three-step urban obsolescence identification model is proposed to be implemented in the historic city center of Ulus. In this model, both expert-based and user-based analyzes were used to identify obsolescence in Ulus historic city center. Expert-based analysis, which covers the first two steps of the study, was conducted with the data obtained from document research and field observation. In the third step of the model, a 5-point Likert scale questionnaire with nine close-ended questions and one open-ended question was used in order to be able to gather data on the perceptions of obsolescence of the users in Ulus.

In documentary research, which is the first step of the model, Lörcher Plan, Jansen Plan, Yücel – Uybadin Plan, Ankara 1990 Master Plan, Ulus Historic City Center Conservation-Reclamation Plan, Declaration of Ankara Historic City Center Renewal Area, 2023 Capital Ankara Master Plan, Ankara Historic City Center Renewal Area Conservation Plan, Ulus Historic city center 1/5000 Conservation Plan and Transition Period Projects (2008 – 2014 & 2015 – 2019) are examined. The field observation was made on 02.06.2021 and 05.06.2021. During the field trip on June 02, a general observation was made within the boundaries of Ulus historic city center. Then, after the fields to be studied were determined, urban obsolescence indicators were observed within the given areas in the field study, which took place on June 5th. Thirdly, the obsolescence questionnaire was conducted on 14-15 June, 28 June, and 30 June 2021.

With the synthesis of information gathered from the document analysis, field observation, and user survey, in other words, the three-step model of this study; it is possible to say that identification of obsolescence in historic city centers with observations of the experts and perceptions of the users would be managed.

1.4. Thesis Structure

The structure of this thesis is formulated to provide a systematic way of understanding for the obsolescence phenomenon in historic city centers. The starting point of this study is converted to the main research question of the thesis. Therefore, the model that this study proposes is designed to answer the research question.

In **Chapter 1**, the study's approach to the obsolescence in historic city centers is introduced in the problem definition section, and the research question and sub-questions are provided in the next section. Followingly, the methodology, structure, and contribution of the thesis are discussed.

Chapter 2 defines a conceptual framework for the notion of obsolescence. In the first section of the chapter, SQ1 (What is obsolescence?) is answered by definitions, categories, approaches, and the significance of the obsolescence concept. SQ2 (How has the term obsolescence been integrated into urban planning literature?) is illuminated by research on the historical evolution of the concept in the architectural and urban planning literature. After that, SQ3 (How has the term obsolescence been integrated into historic city centers?) is answered with a historical perspective. And finally, the SQ4 is answered (How can the concept of obsolescence be identified in historic city centers?) by the analyses of the methods of obsolescence studies in the built environment.

After answering the sub-questions and defining a conceptual framework for the concept in Chapter 2, the proposed model of obsolescence and its methodology of implementation in Ulus historic city center is provided in **Chapter 3** to be able to answer the research question of the thesis. Finally, in **Chapter 4**, the results of the proposed model are discussed in the context of differences and similarities between documented, observed, and perceived obsolescence criteria.

1.5. Contribution of the Thesis

During the literature review, it is observed that there is a deficiency in studies that aim to evaluate in detail obsolescence in historic city centers. Instead, the concept of obsolescence is mainly studied in the manufacturing and technology sectors. Moreover, obsolescence in the built environment is studied mainly on individual

buildings scale, then in neighborhoods. The majority of the studies defined concepts and categories of obsolescence without a particular identification/measurement method.

Additionally, in historic city centers, obsolescence is considered a negative process occurred with the aging and natural wear of structures; therefore, it needs to be recovered with proper revitalization strategies. In these studies, however, the concept of obsolescence is not researched in detail; instead, the general problems of historic centers are accepted as the obsolescence indicators. This thesis aims to provide a comprehensive literature review and discuss the term on a theoretical basis. In this way, a more solid foundation can be obtained for the obsolescence identification method in historic city centers, which can be used to make more accurate analyses for further revitalization strategies.

During the literature review, it was noticed that obsolescence identification studies majorly vary according to their scales and approaches. There is a scale/approach matrix formulated in accordance with these variables. As a result, there are four categories obtained as A- ‘studies that are identifying obsolescence on single building scale with expert perspective’ B- ‘studies that are identifying obsolescence on territory scale with expert perspective’ C- ‘studies that are identifying obsolescence on single building scale with expert and user perspective’. D- ‘studies that are identifying obsolescence on territory scale with expert and user perspective’. As observed from the matrix, there is a deficiency in group D, which was expected to include studies identifying obsolescence at a neighborhood scale by combining user and expert behavior. The method of this study will contribute to this field with the expert-based and user-based approaches on the scale of a historic territory.

CHAPTER 2

LITERATURE REVIEW – CONCEPT OF URBAN OBSOLESCENCE

The primary objective of this chapter is to establish a comprehensive conceptual framework for urban obsolescence in the light of a detailed literature review. In the first section, the concept of urban obsolescence is elaborated in terms of definitions, the significance of the concept, historical evaluation in the urban planning literature, approaches, and categories under which the notion is discussed. The second section evaluates the identification of urban obsolescence in historic city centers within the scope of the methods of the available urban obsolescence studies in the literature.

Before progressing to the analysis of the concept, it is important to provide the method and scope of the literature review. First of all, the database of the research is listed as:

- Google Scholar,
- Turkish Council of Higher Education Thesis Center (*YÖK Tez Merkezi*),
- METU Library Catalog,
- The academic databases which Middle East Technical University provides in the webpage of the library (under the section of databases by subject/type, and the category of architecture & planning & design).

These databases were searched with the following keywords:

- urban obsolescence
- obsolescence in cities
- obsolescence in the built environment
- obsolescence in historic city centers

After the abovementioned databases were searched with these keywords, studies were selected/eliminated on the condition that they contain at least one of the topics of

‘definition’, ‘categorization’, and ‘identification’ of urban obsolescence. The selected studies are composed of 36 journal papers, six books, two book chapters, one conference paper, and one Ph.D. thesis. Subsequently, the first section compiles the concept of urban obsolescence, definitions, approaches, and categories from these studies.

2.1. Concept of Obsolescence

Obsolescence notion is studied most commonly in accounting, manufacturing, and, in real estate -by the early 1900s-, architecture and urban environment -by the 1930s- (which is mentioned in detail in chapter 2.2.2). There are also obsolescence studies in linguistics, education, and psychology.

In manufacturing and technology sectors, obsolescence refers to “the (premature) end of the active use of a product [which] leads to products being discarded and replaced earlier than necessary” (Proske & Finkbeiner, 2020, p. 495). As a consequence of technological improvements, consumers demand newer and more fashionable products; therefore, many previous products became obsolete even though they still function. It is worth mentioning that there is a design strategy in the market called ‘planned obsolescence’. It can be defined as the expected and intended short life of products, which is designed to manipulate customers to repeat purchases in a short time (Bulow, 1986).

In the accounting profession, the obsolescence concept represents the negative effect of inventions and technical developments upon the products that are currently being used. These effects might be too powerful and immediately suppresses the previous asset, or they might only reduce the utility of the asset, which would still be able to function with less preferability (Green, Jr. & Sorter, 1959). Calculation of obsolescence level for the producers and investors is an essential branch of accounting.

As Urban (2006) claims, Karl Marx pioneered the obsolescence theory with the concept of ‘technological obsolescence’, which he mentioned in the first volume of Capital. Marx defined obsolescence as the loss of exchange-value, “either by machines of the same sort being produced cheaper than it or by better machines entering into competition with it” (1887, p. 404). While material depreciation in

industrial machines causes physical deterioration, the progressive change in standards and requirements results in obsolescence, or what Marx called, 'moral depreciation'. Weber defines obsolescence as "something out of date - a product, place, or concept displaced by modernization and progress" (Weber, 2002, p. 522).

2.1.1. Definition of Urban Obsolescence

In all of the definitions from various fields of discussion, the term obsolescence is commonly defined as the process of decline in utility and exchange value of a product, according to the perception of the actors involved, even though the product still functioning as it was designed. It is encountered in the literature review that the abovementioned meaning of obsolescence is valid in all fields of discussion.

The key points in the obsolescence concept are that; it is a process rather than an end state, it is a relative term, and it is defined by the perceptions of multiple actors. As Pinder and Wilkinson defined, "obsolescence describes the relative degree of uselessness or disutility as assessed by the occupants themselves. This process of decreasing utility occurs when the perceived usefulness… falls below that which is expected" (2000, p. 4). It is a process of declining usefulness and becoming outmoded, which brings a product's life to a premature end. It is not directly related to physical deformation; instead, it arises from the changes in technology and consumer expectations. As Lichfield (1988) defined, it is a mismatch between the demands of users and the supply of the built environment; created by the constantly changing needs and desires of the society during the long life of the built environment. It is unpredictable and occurs suddenly as a result of the rapid behavioral changes in society (Grover & Grover, 2015).

The above-mentioned definitions can be applied to the built environment and architectural obsolescence without a doubt. Almost all buildings are established with physical permanency and spatial fixity. Nevertheless, in contrast to buildings' inherent persistency and inflexibility, their future life is highly unpredictable because of the rapidly changing technological developments (Nutt et al., 1976). Tiesdell et al. emphasize this fixity dimension by defining obsolescence as a "consequence of change -either expected or unexpected- and the relative fixity of the built fabric and its location" (Tiesdell et al., 1996, p. 22).

Despite regular maintenance and renovation, buildings and the built environment experience a process of aging and deformation in time. However, there are multiple factors behind structures' current condition. Therefore, it is vital to elaborate on the reasons behind a structure's current state, whether it suffers from obsolescence or not. Obsolescence is a multidimensional and dynamic process rather than an end-state.

A structure suffers from building obsolescence when there is a considerable value difference between its actual rental income and the potential rent acquired from a new building with the latest equipment. This is what Smith and Williams (1986) defined as the 'rent gap' between the present land use and the potential rent of the "highest and best" use (Smith & Williams, 1986, as cited in Bryson, 1997, p. 1444).

There is confusion with the use of the terms 'obsolescence' and 'obsolete'. As Nutt et al. distinguished,

> [a]n item of equipment or mode of operation is obsolete when it becomes absolutely useless with respect to a specified function when judged against current standards. Obsolescence, on the other hand, refers to the tendency of objects and operations to 'become obsolete', referring therefore to a process of increasing uselessness.
>
> (1976, p. 5)

'Obsolescence' refers to the process of depreciation before reaching the terminal 'obsolete' state; or as Buitelaar et al. defined, the "change before a building reaches a socially unwanted state" (2021, p. 1). With regular maintenance and improvement, most structures continue to function for a long time under the effect of obsolescence; before becoming obsolete. "Buildings are only truly defined as obsolete when they have become completely useless with respect to all uses that they might be called upon to support" (Nutt et al., 1976, p. 5). However, buildings are generally demolished before reaching the state of obsolete.

2.1.2. The Significance of Obsolescence Concept

Especially after the devastating effects of WWII, various concepts and theories have been produced in order to define and recover from the urban depression experienced in major cities in the American and European context. In most of the studies, these concepts have been used interchangeably for defining urban depression. There are no clear-cut differences or universal consent between all these definitions in the urban

planning literature. Nevertheless, it is possible to observe some basic distinguishing features for each definition. The most frequently used concepts are given below (sorted by relevance to obsolescence):

- Blight
- Depreciation
- Deterioration
- Decay
- Decline
- Shrinkage
- Counterurbanization (or deurbanization)

Cities are subject to continuous spatial change caused by upper-scale socio-economic relations. The projection of these relations in cities has appeared as a drastic physical and social unevenness. In this perspective, the first four concepts can be regarded as the conclusions of much broader processes in urban movements, which are mentioned as urban decline, urban shrinkage, and counterurbanization. The reason why the concept of obsolescence was selected for this study is mentioned in the last part of this section.

- *Blight*

This concept is most commonly used in urban obsolescence studies, in some cases, without any difference in meaning (Herrold, 1935; Adams & Burdell, 1936; Halpern, 1995). Alternatively, in some other studies, blight is defined as the ultimate stage of obsolescence (Nutt et al., 1976; Lichfield, 1988; Pinder & Wilkinson, 2000; Weber, 2002; Abramson, 2016). Especially with its natural references, blight means an end-state, at which there is nothing left but demolition and rebuilding. Therefore, while blight refers to an ultimate state, obsolescence refers to a process. In this thesis, the same approach is accepted; blight is used as the end-state of the obsolescence process, namely, the state of being obsolete.

Abramson (2016) claims that when the concept of obsolescence entered the American planning literature, it was used synonymously with the concept of "blight". The notion of blight was evaluated within a framework that has connotations similar to human

nature. Like parks as city's lungs, avenues as arteries, or food markets as stomach, blighted areas resembled cancer. It was a disease that could spread from one building to another until it conquered the whole neighborhood; blighted or obsolescent areas needed to be entirely removed as the cancer of the city (Halpern, 1995).

Blighted areas are often characterized by a dire picture: high levels of negligence and physical deterioration, irregular ownership pattern, lack of service facilities, desolation, despair, crime, and disease. The specific lifestyle and activities of neighborhood residents repel outsiders and widen the gap between other citizens from the city (Breger, 1967). These areas cannot pay their share in the essential municipal services for their maintenance; or any facility for their internal repair and renovation (Smith & Williams, 1986).

Alternatively, the concept of obsolescence was associated with "devalued performance, an accelerated emptying of usefulness and value caused by competition with something new and better" (Abramson, 2016, p. 42). The economic perspective of the obsolescence made the concept empirically more suitable to be examined with quantitative methods. While obsolescence was mainly a threat to the profitability potential of the property owners in the field, blight created serious physical difficulties for dwellers, causing an increase in disease and crime rates (Weber, 2002). From this perspective, the distinction between these two concepts has been clarified as follows. Blighted areas, or namely slums, were at the highest degree of obsolescence. Slums were visibly decayed areas with poor inhabitation and unsafe conditions; they were deemed a social and economic liability. On the other hand, obsolescent areas are not absolute slums but were harder to recognize because they were not completely deteriorated. The disambiguation of blight and obsolescence can provide a specific technique for wholly obsolete slums and merely blighted obsolescent areas (Abramson, 2016).

Lastly, it should be noted that as Beauregard (2002) claims, there is a distinction between slums and blighted areas. While slums belong to the residential districts in a city, blight, on the other hand, is situated in central business districts.

- *Depreciation*

In the late 1800s and the early 1900s, depreciation and obsolescence concepts have developed as a financial management tool by the class of professional experts consisting of engineers, economists, accountants. However, there is an essential difference between these two concepts. Unlike obsolescence, depreciation has resulted from a gradual and somewhat predictable physical wear and tear process. Karl Marx indicated in the first volume of Capital that "moral depreciation" in other words, obsolescence, can be defined as the loss of exchange-value, "either by machines of the same sort being produced cheaper than it or by better machines entering into competition with it" (Marx, 1887, p. 404). It is the decline of a commodity's financial worth; even it is still physically and/or functionally operating. In short, it is possible to say that depreciation is physical while obsolescence is economic (Abramson, 2016).

Grover and Grover (2015) emphasize the importance of distinguishing 'depreciation' and 'obsolescence' concepts, both in definition and practice. These two concepts are originated from different processes and will have different impacts on the built environment. Obsolescence is not the direct result of physical deformation; instead, it is a process that arises from the changes in technology and consumer expectations. It is unpredictable and can occur suddenly as a result of the rapid behavioral changes in society. On the other hand, depreciation is "the financial result of the combined effects… brought about by exterior causes" (Bolton, 1922, pp. 52–53).

Depreciation is used as an accounting tool "designed to enable businesses to recover the cost of long-lived assets during their lives and the profit made in the trading period to be computed" (Grover & Grover, 2015, p. 311). It is a technique for balancing a property's depreciation value over its estimated operation time. The expected physical decline in building material and infrastructure is counted when determining a building's depreciation costs. Along with the physical factors, depreciation is also a consequence of diminishing service flow that a building can supply for a new product, technology, or business model (Grover & Grover, 2015).

- *Deterioration*

This concept is used in various fields and merely describes the downfall of the physical structure and integrity. It does not contain multidimensional processes or sociological relations. As Bolton explained, "[d]eterioration is the physical result of the natural insufficiency of the foregoing processes of maintenance, upkeep, and repair, all of which are dependent on human agencies, wholly to forestall the effects of wear and tear, of age, decay, or accident" (1922, p. 52).

Physical deterioration, unlike obsolescence, occurs directly in the functionality of the structure. These are basically calculated and foreseen (except the extreme externalities like natural disasters of wars) physical factors reducing and eventually eliminating the building's functionality. However, there are also many non-physical factors that affect a building's functionality. The outcomes of these non-physical factors are quite different from those generated by the physical deterioration process. They cause buildings to be exposed to different types of obsolescence; and be demolished before they are entirely deteriorated (Pinder & Wilkinson, 2000).

- *Urban Decay*

The meaning of the word decay includes both a decline in health and strength and a gradual decrease in size and quantity. Urban decay has a similar connotation to the concept of blight. It is used for describing the worsening conditions of inner-city neighborhoods, or sometimes simply for slums. The following explanation for a decaying neighborhood is the familiar picture for every notion that implies urban depression. As indicated by Andersen (2002), urban decay results from physical and socio-economic changes in cities. Decaying, or deprived, neighborhoods are both the victim and the further contributor of social inequality and segregation. "The[se] areas can be seen as magnetic poles that attract poverty and social problems, and repel people and economic resources in a way that influences other parts of the urban space" (Andersen, 2002, p. 154).

- *Urban Decline*

Unlike the concepts of slums and blight, which denote the deterioration of the urban environment based on the neighborhood scale, urban decline represents cities with an

overall decrease in spatial and demographic quantities. Appearance and conceptualization of urban decline studies in the literature date back to the 1970s, as the effects of changing modes of production in advanced capitalist countries, in other words, the processes such as post-Fordism and industrial decentralization, have started to be realized and discussed by the academic circles in that decade. For example, in the book *Urban Decline*, Clark (1989) has studied the appearance, reasons, and symptoms of the concept in detail. Before he starts modeling decline, he draws a common picture for British metropoles; in which,

> inner urban decay, crime, racial tension, riots, mass unemployment and falling standards of service provision are some of the more obvious and disturbing indicators of a general and deep-seated deterioration in the social, economic, political and financial fabric.
>
> (Clark, 1989, p. 1)

Even though this study is based on British experiences, the author draws a picture of *a representative Western city*, "with strong roots in nineteenth-century industrial technology" (Clark, 1989, pp. 5–6).

In other words, he exhibits the lifecycle of advanced capitalist cities, which were directly and firmly engaged with the processes of capitalist production. Referring to the Western metropolis as the most advanced settlement form, he emphasizes three main patterns of change experienced in such "mature" British, U.S., and European cities, whose current status and size were based upon the nineteenth-century industrial developments. *Urban depopulation*, *decrease in employment levels*, and *diminishing power and autonomy of cities as local government units* are the three main indicators of urban decline. The migration from rural to urban trend reversed, and urban population decentralized through fringes of cities and outer towns. The net out-migration levels were higher than the excess numbers of births over deaths. In addition to depopulation, the employment levels were falling due to the decentralization of labor-based industries. Along with these changes, as part of the neoliberal doctrine, urban administrations lost a considerable amount of their authority and financial autonomy; their responsibilities in service provision diminished (Clark, 1989, p. 8).

These three indicators are adequate to determine a general urban decline model for large metropoles. However, as it was emphasized, urban decline is a consequence of large urban movements and specific to the 'representative Western cities'. Even

though the appearance of decline in inner-city neighborhoods is very similar to blight and obsolescence, the driving forces are specific to early industrialized capitalist cities.

- *Urban Shrinkage*

Urban shrinkage represents the long-term and persistent decrease in population observed in specific geographical borders. Usually, accompanied by population loss, there is a downward quantitative tendency in the size of the economy and built environment. The shrinking parts of cities witness declining employment and occupancy rates (Weaver et al., 2017). This term is used very similarly to the preceding urban decline and the following counterurbanization concepts.

- *Counterurbanization (or Deurbanization)*

Counterurbanization refers to urban population loss and decline caused by suburbanization. While urbanization is the process of concentration in population, especially observed extensively in the American and Western European capitalist cities in the late 1800s and the early 1900s, counterurbanization stands for the exact opposite of this phenomenon. It is a process of de-concentration in population with decreasing densities and increasing local identities. It can simply be defined as the "growth of the periphery and decline of the core" (Berry, 1980, p. 20).

The Significance of Obsolescence Concept

There are some reasons behind the preference of the obsolescence concept to evaluate the historic city center of Ankara. First of all, the obsolescence concept defines a process of degradation rather than demonstrating a picture of an area's ultimate worse condition (in other words, blight). Every component that worsens or tends to worsen in a particular area experiences this situation in different forms and patterns. Therefore, although the area is in overall decline, every worsening element of must be evaluated separately. Moreover, classification of the areas according to their obsolescence levels (either obsolescent or obsolete - blighted) can facilitate the maintenance of these areas that have not become obsolete yet and have not lost their functionality, with reasonable and cost-efficient interventions.

Secondly, the obsolescence concept has the potential to change people's perspectives on historic city centers. A territory might be intimidating for outsiders, partially or entirely, while it is a functional and appealing place to live for the insiders. "Time makes certain structures obsolete for some enterprises, and they become available to others" (J. Jacobs, 1961, p. 189). With a comprehensive and relative approach, it is possible to produce mediating solutions for insider users and outsider citizens instead of total destruction. These solutions also increase the chance of decision-makers and local authorities to intervene in historic city centers, rather than sticking to two totalitarian approaches, which are either destruction and redevelopment, or to left historic centers to their fate.

Last but not least, it seems easier to reconcile the concept of obsolescence with conservation and rehabilitation notions. Such an approach is of great importance, especially in such a multi-layered area with high historic value like Ulus.

Table 1: Concepts to Define Problems of Historic City Centers

Decline	The first three terms represent broader processes in cities with an overall decrease in spatial and demographic quantities
Shrinkage	
Counter-urbanization	
Blight	Refers to an end-state
Depreciation	Refers to financial decline
Deterioration	Refers to physical decline
Decay	Refers to an end-state
Obsolescence	Refers to a process and relative perceptions

Why Obsolescence?

- Refers to a process of degradation rather than demonstrating the ultimate worse condition for an area.
- Comprises relativeness that enables to consider the evaluations of both insiders and outsiders.

Source: Prepared by the author

2.1.3. Evolution of the Concept in the Urban Planning Literature

From the Renaissance until the late nineteenth century, the primary concern of the architectural tradition of the Western cities was fixity, permanence, and gradual change. Although structures wear out over time, it was believed that this process would be relatively slow and could be recovered; therefore, structures would endure for generations. Rapid urban changes could appear occasionally, but even in these

situations, the change itself was not expected to be permanent. For this reason, it was not possible to come across the concept of obsolescence in architectural thought and practice before the late 1800s.

In the 1870s, Friedrich Engels claimed that the value of buildings, like a machine, could be measured with concrete indicators. According to Engels, the lifetime of a building was about a hundred years. After that, it had to be demolished and replaced with a new one. As Urban claimed, this determination underpinned the urban obsolescence paradigm that prevailed during most of the twentieth century (2006). The concept of obsolescence started to be considered a condition of urban change from the beginning of the twentieth century. From this date on, with the rise of the concept in the urban planning literature, the ceaseless replacement of structures began to be regarded as a normal activity (Abramson, 2016).

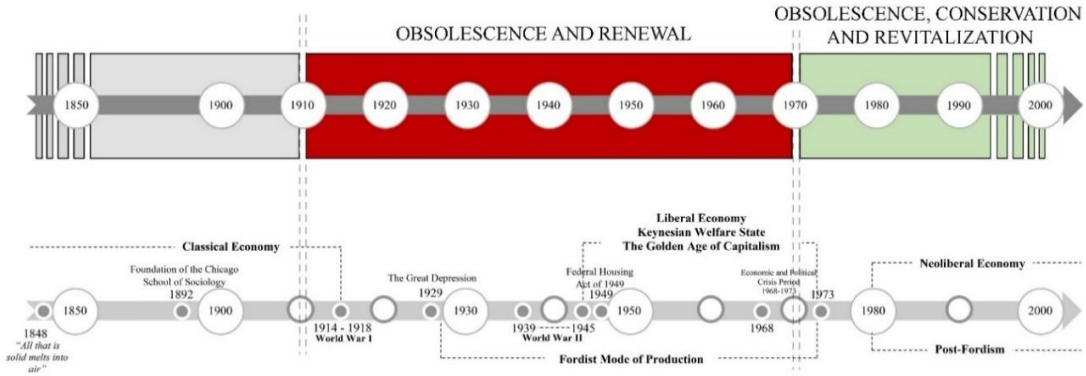
This shift in the architectural paradigm was one of the outcomes of the industrial revolution in the urban context. Since every age produced its own architecture; there began to appear architectural structures that reflect the industrial character of the era. With the rise of capitalism, a class of professional experts began to emerge, consisting of engineers, economists, and accountants. The purpose of these groups was to provide industrial productivity and profit management, in other words, constant development and change, and more production in less time, with less cost. One of the major concerns of the modernist accounting system was the change that time caused in the value of any commodity. The identification and evaluation of financial losses caused by depreciation have provided industrial investors an advantage in utilizing their resources. As a result, the concepts of depreciation and obsolescence emerged as a financial management tool (Abramson, 2016).

The notion of obsolescence has been discussed in two different contexts after its introduction to urban planning literature at the beginning of the twentieth century. With the rise of modern urbanism, the areas which were identified as obsolescent or obsolete resulted in demolition and redevelopment. However, with the criticism of modernity and the manifestation of post-modern thought in the field of urbanization in the 1970s, the perception of obsolescence changed. Since the 1970s, the areas which identified with obsolescence have been re-evaluated with conservation and revitalization practices instead of demolishing and renewal. In the following part of

this section, the evolution of the concept of obsolescence in the urban planning literature is discussed in two different periods in which it is associated with the renewal and conservation paradigms.

In the figure below, evolution of the concept in the urban planning literature is visualized by dividing it into three periods: the process that paved the way for the concept to emerge in the planning literature, the process in which it was associated with urban renewal, and the process in which it was associated with conservation and revitalization.

Figure 1: Evolution of the Concept in the Urban Planning Literature



Change in obsolescence paradigm is conceptualized together with the prominent incidents in the political-economic history from the late 1800s.

Prepared by the author.

Obsolescence and Renewal (the 1910s – 1970s)

After associating the obsolescence concept with the built environment, the architectural obsolescence paradigm initially emerged in the USA in the 1910s. Since the 1890s, real estate companies in New York have invested substantial amounts of money in constructing large new buildings. The desires and demands of the society for the most advanced buildings with the latest equipment (the latest plumbing, heating, and elevating technologies); have a significant impact on devaluation (namely, obsolescence) of even the most recently built accommodations. For this reason, an uncontrollable process of destruction and reconstruction began at the beginning of the twentieth century. Structures that were built 10 to 20 years ago were demolished in a short time, and new skyscrapers were built instead. An early saying of Marx in the Communist Manifesto for the rapid destructiveness of capitalism was

becoming real for the built environment; all that was solid was melting into air (Marx & Engels, 1888). The rapid urban change and development resulted in unpredictable market movements for the investors. All this growth and speculation initiated a continuous destruction and rebuilding process and was followed by a boom-and-bust era. On the one hand, demand for new construction was rising; on the other, the emerging excess supply posed a significant threat to capitalists. New York, real estate professionals started to carry out various studies in such an unpredictable market to restore foresight and control over the market (Abramson, 2016).

The concept of obsolescence has gained importance in the real estate sector with the introduction of the U.S. federal corporate income tax. Towards the end of the nineteenth century, accounting professionals and large modern U.S. companies developed new accounting systems that regarded obsolescence-related losses. The U.S. government paid attention to this accounting system when preparing the tax regulation of the 1910s. In this system, the probable devaluation that the investors or the companies will experience was calculated and counted as companies' costs. In this way, possible income losses due to obsolescence were deducted from the income tax applied to the enterprises. This practice was critical for investors to balance their income. However, this allowance was manipulated by property owners, which concluded in the increase of obsolescence. "The higher the rate of depreciation allowed, the less income would have to be reported; Thus, less tax would be paid, and owners would keep more of their money", as Abramson indicated (2016, pp. 20-21).

Nevertheless, the U.S. government did not intervene in this situation to avoid discouraging investors; on the contrary, tax rates were determined with respect to the auctions made with industry leaders. In this way, businesses set the most tolerable depreciation rates for the government and the highest depreciation rates for themselves. Consequently, companies were unwilling to invest in maintenance and repair facilities; thus, this situation made an essential contribution to the spread of architectural obsolescence.

As the devastating effects of the Great Depression began to appear, the architectural obsolescence paradigm was expanded to the urban realm. American city planners and sociologists started to study this concept, approaching it from a more academic and theoretical perspective. While urban planners and architects examine buildings and

neighborhoods, the Chicago School of sociologists has studied large-scale urban movements. Chicago school has introduced the concept of "zone of deterioration" to describe slum areas. This notion refers to the residential areas between the central business district and the outlying middle to high-class neighborhoods in a typical American city. They are generally characterized by heterogeneous demographic structure, noise, overcrowding, pollution, and rapid changes in land use and social structure (Abramson, 2016). Although the Chicago sociologists did not explicitly mention the obsolescence term when specifying these definitions, their conceptualization of the "zone of deterioration" entirely coincides with what was later described as obsolescence. Following Chicago School, city planners further developed the theory of urban obsolescence in the 1930s. They combined the real estate industry's technical approach and quantitative data analysis methods with the broader perception of sociologists; to solve the deterioration-related problems in the metropolitan area (Abramson, 2016).

By the end of World War II, there was significant unemployment and housing crisis in American cities, especially in the poor neighborhoods inhabited mainly by different races and ethnicities. Moreover, the inner parts of most cities were depopulated by the middle and high-income groups of the society, which preferred to live in the suburbs. With the post-war depression and the fear of renewed economic crisis, the federal government decided to intervene in cities to prevent economic decline (Halpern, 1995). As Keith indicated in an article written in the mid-1950's

> the hard core of the crisis of American cities lies in the physical obsolescence of much of their central sections and that feasible solutions to that crisis must involve ways and means of removing those obsolete physical structures. In short, this is the principle of urban redevelopment.
>
> (Keith, 1954, p. 341)

It can be said that his assertion reflected the general idea for urban obsolescence in the mid-nineteenth century.

The principal regulatory document for urban redevelopment was the Federal Housing Act of 1949, which is determined to eliminate substandard housing by demolishing and renewing blighted areas. The intention of the Act to provide "a decent home and a suitable living environment for every American family, thus contributing to the

development and redevelopment of communities and to the advancement of the growth, wealth, and security of the Nation" (Housing Act of 1949). When the concept of obsolescence entered the American planning literature, it was used synonymously with the concept of "blight". To perform successful urban renewal projects in American cities, the federal government authorized local governments to identify and prepare plans for blighted neighborhoods. Generally, non-white and lower-class neighborhoods in inner cities, which were abandoned by the middle and upper classes, were subject to urban renewal. Local governments and their related units prepared reports on the obsolescence of these areas and provided renewal plans; then, they submitted them to the federal government. In return for the planning efforts, local governments acquired federal funds to operate renewal projects. With the encouragement of state policies and the postwar rise of the capitalist economy, the 1950s and 1970s witnessed massive urban demolition and renewal activities in U.S. cities. These activities were the implementation practices of the obsolescence idea on a metropolitan scale.

However, in the mid-1970s and 1980s, postwar modernism encountered a major resistance in every field, including architecture and urbanism. It is also possible to find some early critiques and countermoves in the 1960s. In the case of production and commodification of the built environment, urban modernity was about to be challenged by three main forces: the concern for limited resources, bottom-up social movements that emphasize the identity of the individual, and the desire to recall the historical and authentic values of the built environment.

- Concern for Limited Resources

Postwar economics and capitalist production were based on unlimited growth and consumption. The rise of the Fordist industry and increasing purchasing power with the help of the welfare state resulted in a consumer society. People disposed of their still-functional commodities with manipulative marketing methods and poor-quality and cheap products (compared to the artisanal and craftsmanship commodities) because of minor problems. As Abramson (2016) indicated, this superficial product obsolescence caused a tremendous waste of both natural and economic resources. However, the economic crises of the 1970s have triggered the revaluation of the obsolescence idea in this perspective. It was observed in the production of the built

environment, as well as industrial goods. The practice of ceaseless destruction and redevelopment of the urban fabric was abandoned. Paradigms of conservation and revitalization have risen against obsolescence.

- Social Movements and Rise of Individual Over Society

In terms of the societal organization of the people and the government, the modern state was highly authoritarian. In this respect, production and management of the built environment and regulation of capital flow towards the urban realm were organized by a top-down urban planning intervention. The projection of modernist implementations on the planning field was the paradigm of rational comprehensive planning, which mainly aimed to analyze and design urban space by subjective and quantitative data, and scientific techniques. Nevertheless, the civil rights movements towards the end of the 1960s, especially in Western European countries and the USA, have undermined the doctrine of modernism that glorifies society over the individual. Together with the social unrest, factors such as the upcoming economic crises, increasing unemployment rate, and environmental concerns have contributed to the decline of the Keynesian welfare state in America and other liberal governments in Western Europe.

With the decline of liberal states in the 1970s, the power and domain of top-down city planning were decreased. Urban renewal projects that completely demolished and redeveloped the land, especially in the mid-1900s, were replaced by partial and local implementations. Especially after the 1980s, the ideology of liberalism was revisited and modified by the neoliberal approach. According to the neoliberal model of government, modern planning institution was not merely a technical tool but was under the pressure of politicians and highly manipulated by the elites of the society. The repressive and top-down organization of modernist planning was criticized. The bottom-up resistance of the citizens was at least accomplished to formulate an alternative social structure in which the values and desires of individuals and small groups were taking into consideration.

- Recall for Authentic Values against Monotony of Modernism

With the abovementioned civil rights movement and approach of liberal ideology that prioritizes the individual, one of the essential emphases of postmodernism has become

the authentic and unique value in every commodity. The expendable, mass-produced commodities and environments, which were the very essence of modernity and Fordist industrial production, have fallen into disfavor. They were criticized for lacking character, history, and authenticity. One of the most visible environments of this monotony was suburban development. According to Abramson, "[m]odern suburbs epitomized this apparent emptiness: cookiecutter housing, overconsumption, alienation. In contrast, older urban centers once deemed obsolete came to be revalued" (Abramson, 2016, p. 109).

Obsolescence, Conservation, and Revitalization (the 1970s - onwards)

As mentioned above, the obsolescence paradigm emerged from the beginning of the twentieth century, initially in the real estate and accounting professions; then, it was introduced to architectural and urban practices. After a period of intense capitalist urban growth in the 1950s, cities have witnessed massive destruction and redevelopment movement, especially in their historical cores. However, the economic stagnation of the 1970s has decelerated redevelopment projects, and the paradigm of renewal (and obsolescence) has been replaced by conservation and revitalization.

In the early years of conservation thought, the focus was primarily on the protection of individual artifacts, structures, and buildings with monumental value. This first stage was called the historic preservation period, in which the artifacts were preserved according to their nationalist and/or religious values. They were either a symbol of the nation's history or the sacred buildings of established religions. By the nature of their scale and particular concern on reversing the apparent damages, these preservation activities have minimal effects (Tiesdell et al., 1996).

The unwelcomed urban renewals and the replacement of old architecture with modernist structures in the mid-twentieth century have reinforced the desire for conserving existing and traditional urban values in the early 1970s. With the increasing public and legal oppositions for the demolition of obsolescent buildings and neighborhoods, the scope of preservation was broadened from individual structures to the everyday fabric of the city (Lamprakos, 2014). Area-based conservation arose as a reaction to the evident social, cultural, and physical disruption of citizens caused by clearance and redevelopment policies of the welfare state. Since

the 1970s, historic districts have been reevaluated from sustainability and conservation perspectives.

The second wave of conservation was introduced to planning literature with area-based policies and strategies. In this period, the main perspective was the conservation of historic buildings and clusters, and the spaces between them. According to Tiesdell et al., the difference between the two periods was not only in terms of their scale, but also their approaches to the notion of change. While preservation aimed to minimize and prevent (if possible) the change in monuments, conservation has accepted the inevitability of change and aimed to manage it instead of avoiding it (1996).

However, despite all the positive effects of increasing the conservation paradigm, the one-sided prevention approach was gradually "turning the town into a museum" (Tiesdell et al., 1996, p. 2). Area-based conservation policies have a holistic approach for the preserved areas, rather than assessing their individual and distinct values. Many ordinary and everyday historic buildings became subjected to control and restrictions. These mundane buildings neither could all become museums nor contribute to the economy with conservation-related functions.

Nevertheless, conservation of the historic centers requires commitment for permanent maintenance, renovation, and rehabilitation, which cannot be achieved only by the public expenses. Consequently, preserved historical buildings without new functions became idle and transformed the city into an open-air museum. With the awareness of the ineffectiveness of solely preservation projects and the increasing need for economic revitalization, functional and economic concerns were introduced to the conservation paradigm (Tiesdell et al., 1996).

By the 1980s, historical quarters were considered non-renewable cultural resources, which inherently imply an economic value for being a resource. They could generate economic gains with adequate management (Lamprakos, 2014). With the contribution of economic concerns, the conservation paradigm has gained revitalization and enhancement dimensions. In the first two waves of conservation, architects and art historians were dominant professional bodies in this field. However, the paradigm shift brought forward the planners and economic development-related professionals. By virtue of this shift, the demographic and social composition of the quarters, current

and future land uses, and traffic circulation becomes involved in conservation projects (Tiesdell et al., 1996).

Revitalization of historic quarters has been a part of urban growth management since then. Planners have aimed for historic quarters to be able to return the investments made for their revitalization and generate further income. As Tiesdell et al. indicated, the first wave of preservation policies had been concerned with 'the pastness the past' while the subsequent were planning a 'future of the past' (1996).

2.1.4. Obsolescence in Historic City Centers

> First the back gardens and the breathing spaces disappear, since the land is becoming too dear for such open areas: then the original residential areas are eaten into from within, as if by termites, as the original inhabitants move out and are replaced by lower economic strata: then these overcrowded quarters, serving as an area of transition between the commercial center and the better dormitory areas become in their disorder and their misery special breeding points for disease and crime.
>
> (Mumford, 1970, p. 245)

In the paragraph above, Lewis Mumford depicts the general conditions of historic city centers, whether they were located in the USA, the UK, Western Europe, or the Middle East, North Africa. Historic city centers in many parts of the world face similar problems. It is necessary to approach these areas, which involve both a rich historical and cultural background and a dynamic urban life, with a unique strategy.

Historic quarters are essential parts of cities; however, they were not always adequately appreciated in this respect. On the contrary, as Tiesdell et al. (1996) indicated, until the 1960s, they were neglected, excluded from the whole, regarded as obsolete areas, and subjected to complete clearance and redevelopment. In the 1970s, the protection and preservation of these quarters acquired importance. Since then, various approaches have developed to revitalize these quarters, from urban policymaking, urban design, conservation planning, and urban economics.

Identifying and Defining Historic Quarters

Historic quarters must be defined and evaluated as holistic units, not just as "fragmentary remnants of previously much larger entities" (Tiesdell et al., 1996, p. 9). As suggested by Tiesdell et al., there are three components to identify historic

urban quarters, that are physical boundaries, character, and identity, functional and economic linkages (1996). In addition to these three components, the Washington Charter of 1987 has specified the following descriptive qualities for historic quarters. Any threat to these qualities, partial or entire, would mean a decrease in the authenticity of the historic areas:

a) Urban patterns as defined by lots and streets;

b) Relationships between buildings and green and open spaces;

c) The formal appearance, interior and exterior, of buildings as defined by scale, size, style, construction, materials, colour and decoration;

d) The relationship between the town or urban area and its surrounding setting, both natural and man-made; and

e) The various functions that the town or urban area has acquired over time.

(Directly quoted from the *Charter for the Conservation of Historic Towns and Urban Areas*, 1987).

Every historic district is unique and has distinctive characteristics. They are differentiated by their historical background, cultural and social composition, architectural style, and many more features. However, the mechanisms leading to their obsolescence seem highly similar. These settlements, which were once the center or an important part of the city, were abandoned by the middle and upper classes and reclaimed by working and low-income classes and immigrants. Correspondingly, in the period of globalization, cities are experiencing an increasing uneven development, resulting in the agglomeration of poverty, especially in historic centers. Moreover, with the withdrawal of the Keynesian welfare state policies and modernized laissez-faire government style, responsibility for managing and repairing the properties was left to the landowners or occupiers, who obviously cannot perform these facilities in such settlements (UNESCO, 2008).

In addition to the similar driving forces, some common problems in historic city centers have been specified that are reducing citizens' quality of life as follows. Regardless of its geographical location (whether in the Middle East or Western Europe), these problems can be observed in every obsolescent historic city center that has not been subjected to any intervention:

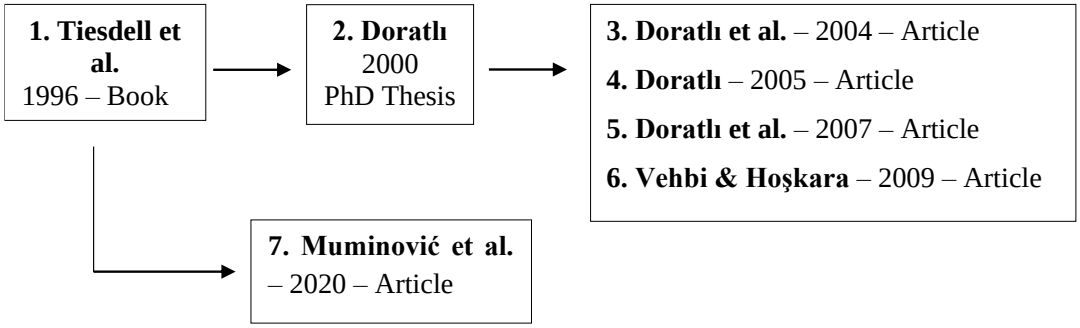
- Demographic pressures, depopulation of the middle-class, or total abandonment in severe cases,
- Demographic expansion from rural areas,
- Occupation of lower classes,
- Unhealthy and overcrowded dwellings, especially in historic buildings and commercial centers,
- Physical deterioration, especially in the old buildings,
- Environmental and visual degradation,
- Lack of infrastructure (transport, water distribution, and other networks) and public amenities,
- Lack of maintenance and improvement in old buildings,
- Change in scales and methods of commercial production and the shift from craftsmanship to mass production, which demands larger spaces than historical areas can provide,
- Negligence to the functional, cultural, and historical values of the fabric,
- An apparent incompatibility between the historic fabric and its environment,
- High levels of poverty, unemployment, disease, and crime,
- Corruption of social fabric and identity loss,
- Functional and social segregation from the rest of the city,
- Uneven levels of property prices compared with the received service,
- Disinvestment and ignorance by private and public agencies,
- The poverty of the residents and the consequent lack of self-maintenance of the buildings they inhabit,
- High vulnerability to natural effects, risk of spontaneous collapse in buildings

- A significant waste of material and energy, caused by the - avoidable- demolitions
- Increasing use of private motor in the historic streets which were not designed for motor vehicles and the pollution and destructive vibration generated by them,
- Changing microclimate and increasing air pollution caused by surrounding development of high-rise buildings.

(Adapted from Feilden & Jokilehto, 1998; Pickard & De Thyse, 2001; and UNESCO, 2008).

Although there are limited numbers of discussions that particularly focus on obsolescence in historic city centers, it is a promising subject. It is observed that in the available literature, the concept of obsolescence in historic city centers is discussed as part of broader revitalization studies (please see Doratli, 2000, 2005; Doratli et al., 2004, 2007; Muminović et al., 2020; Tiesdell et al., 1996 and Vehbi & Hoşkara, 2009). In all of these studies (given in the figure below), obsolescence is referred to as the adverse and threatening conditions that historic districts were suffering from, and it has to be eliminated by revitalization. These studies formulated a general framework for drawing an obsolescence picture, based on the studies of Tiesdell et al. (1996) and Doratli (2000). Figure 2 demonstrates the relational diagram of these studies, of which the methodologies are examined in the following.

Figure 2: Studies of Obsolescence in Historic City Centers



Prepared by the author.

Despite the contribution of these studies, within the given limits and scope of the literature review, no specific study focusing particularly on obsolescence and its identification in historic city centers is encountered. This thesis aims to contribute to

the urban planning literature by formulating a general framework of an obsolescence identification method that can be applied in historic city centers.

2.1.5. Approaches to Urban Obsolescence

Within various studies on urban obsolescence, the researchers mostly visited three main approaches: physical, economic, and political approaches. Physical and economic approaches discuss the concept of obsolescence within the framework of definition, categorization, identification, and measurement, majorly based on tangible indicators. They are focusing on the concrete and technical factors that lead to obsolescence in the built environment. Their identification methods for estimation and prevention of obsolescence depend on the physical and economic attributes of the structures. On the other hand, the political approach evaluates the concept relatively with socio-economic and political dynamics of the time. The studies with a political approach focus on the relations of obsolescence with the capitalist production paradigm and mostly refer to Joseph Schumpeter's notion of 'creative destruction' (1942). In this section, economic, physical, and political approaches are analyzed.

i. Economic Approach

From the economic perspective of obsolescence, the most important factor is an asset's exchange value. In fact, economic obsolescence can clearly be defined as the loss of exchange value. This approach was dominant, especially between the 1910s-1920s' depreciation studies. The primary concern was determining whether a building can produce income higher than its costs (including all the expenditures for maintenance and repair and the taxes it is subjected to).

In the first half of the twentieth century, the economic approach was usually combined with the physical approach. In the early studies, building obsolescence was identified with financial (in terms of price and rent) or physical (mainly in terms of aging) indicators. However, there is a significant difference between physical and economic factors contributing to an asset's obsolescence. Physical indicators were related to a building's use-value, while economic indicators comprise all the external factors that reduce the commodity's functionality. Obsolescence decreases the building's rental income and exchange value, but it may not diminish its use-value despite its physical decline in internal qualities.

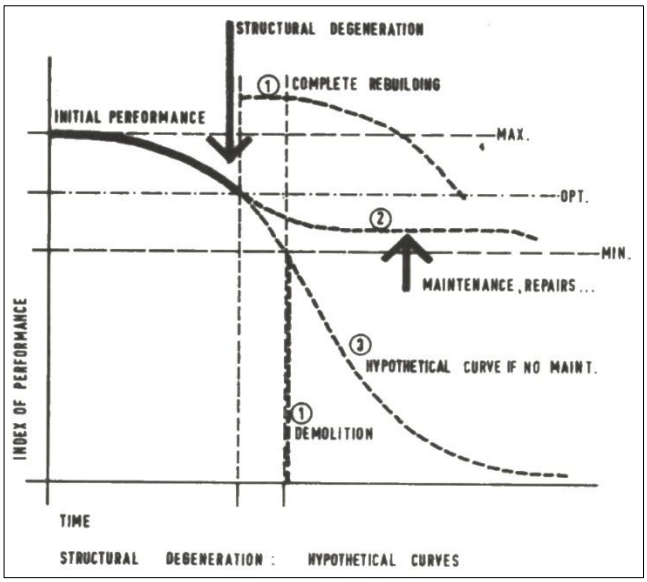
Since it was not about the natural physical processes, economic obsolescence ran faster than physical decay. It is about the rapid functional improvements that outperformed the inadaptable previous, even it was still young and operates as intended. In the measurement and implementation processes of obsolescence, architecture's value was reduced to financial quantity inventories. Buildings were appointed with estimated lifetimes according to their function, which was not realistic considering the physical durability of a structure. In this approach, depreciation was physical while obsolescence was economic, and after it was diagnosed, demolition was the only possible solution in modernist thought.

ii. Physical Approach

The rise of the physical approach in obsolescence studies was observed in the post-WWII period. After the economic determinants of a building's exchange value, physical determinants which generate a structure's functionality and use-value became an important indicator of obsolescence. Physical obsolescence (or as used interchangeably in the literature, blight, and deterioration) is associated with structural deficiencies in the building scale, slums and neglected housing, narrow streets with cramped sidewalks, unsightly street patterns, and façades in an urban area. To identify obsolescence in these kinds of areas, real estate officials and assessors used quantitative appraisal methods.

A structure inevitably experiences a wear and tear process (namely physical deterioration) from the moment it starts to function. This process is generally observable and predictable except for unusual external factors; moreover, it can even be partially prevented or slowed down by regular maintenance and repair activities. In the curve below, Cowan (1964) hypothetically demonstrated the relationship between a structure's performance index over time.

Figure 3: Index of Performance Over Time



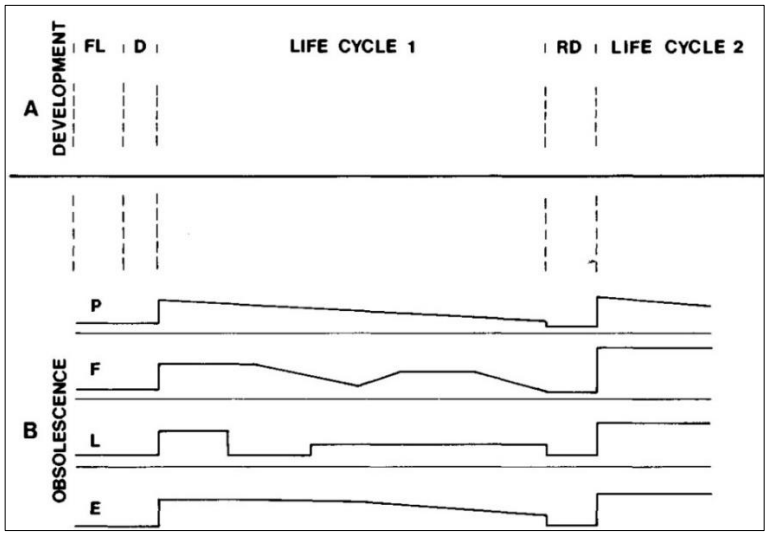
Source: Cowan, 1964, p. 105

The graph shows that the structural performance gradually decreases, which starts at the maximum level when the building is newly constructed. Once the performance of the building reaches the optimum level, different scenarios arise for its future life. If the structure is rebuilt, its initial performance will be higher than its previous life due to developments in the construction sector. Otherwise, there are two paths for its remaining time. Without maintenance and repair, the building's performance will gradually decline until it no longer has a use value. However, with adequate maintenance and repair facilities, the building's lifespan and performance can be extended. Nevertheless, even the building is repaired and maintained, its initial structural performance can never be reached again (Cowan, 1964, p.105).

Alternatively, Lichfield (1988) defines obsolescence with the lifecycles in the built environment. The first lifecycle of a built environment starts with the development in an empty area or farmland. It is expected that the urban built fabric will be standing for a long time. It is also expected that the quality of the built environment will decrease in the course of time. Before the built fabric gets completely exhausted, it becomes obsolescent. In this stage of the lifecycle, the physical life of the buildings can be prolonged with some rehabilitation or renovation activities.

> This process will be repeated, once or more, before the degree of obsolescence is such that a different line of renewal takes place, that of redevelopment, the replacement of the fabric by new construction, for similar or different use. This is the beginning of a life of new built fabric on that site, the second life cycle on the original site.
>
> (Lichfield, 1988, p.21)

Figure 4: Lifecycle and Obsolescence of Lands



The abbreviations in the row are FL: Farmland, D: Development, R.D.: Redevelopment; in the column are P: Physical, F: Functional, L: Locational, and E: Environmental.

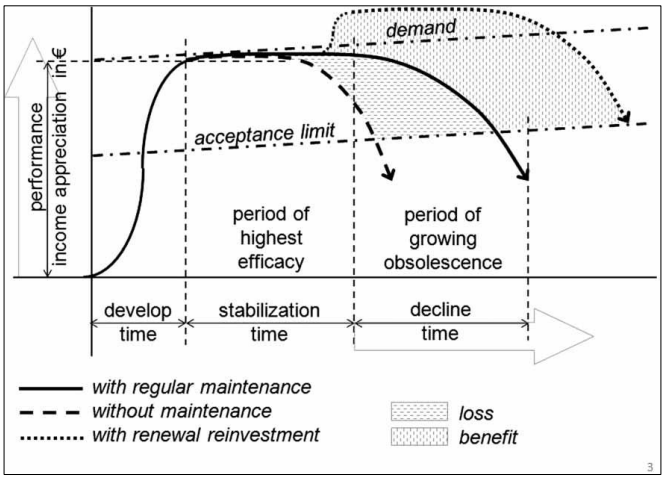
Source: Lichfield (1988, p.28)

> At B is traced the obsolescence under the four heads introduced above. In each case the completion of the initial development introduces the building with hoped for zero obsolescence. Thereafter the change in obsolescence under the four heads does not follow a uniform pattern. It declines gradually in physical terms; it remains constant in functional terms, then to fluctuate with changes in fashion, demand, etc.; locational change is constant until there are introduced some external factors which first increase and then ameliorate the obsolescence; and finally, the environmental obsolescence is shown to be constant and then gently decline. In all cases redevelopment removes the building and thereby the degrees of obsolescence, only to start the cycle again on completion.
>
> (Lichfield, 1988, 27)

In addition to Lichfield's conceptualization, obsolescence is referred "as the beginning of the end-of-life phase of buildings" (Thomsen & van der Flier, 2011b, p. 356). In the graph below, the lifecycle of a building is given as a function of performance capacity over time. A building performs its highest use for a time after its construction, which is defined as the 'stabilization time' in the graph. Since a building is constructed according to the contemporary standards and expectations of

the users, the building can meet their demands in the stabilization time. However, over time, users' demand and acceptance limits increase due to technological improvements. When the performance of a building falls behind users' rising expectations, the process of obsolescence starts. Regular maintenance with additional improvements and renewals can extend the efficiency period and prolong the service life of a building by approaching it to the rising expectations of the consumers (Thomsen & van der Flier, 2011b).

Figure 5: The Lifecycle of a Building as a Function of Performance Capacity over Time



(Thomsen & van der Flier, 2011b, p. 356)

In summary, according to the physical approach, there will be natural end life for almost every structure which usually eventuates with demolition, except heritage structures or abandoned ones without any financial value that no one will demolish. However, with adequate maintenance and renewal, the process of obsolescence and the consequent demolition can be postponed.

iii. Political Approach

Political approach mostly visited by researchers who question the underlying reasons of obsolescence studies and subsequent renewal operations. They reevaluated the effects of the top-down obsolescence paradigm from a bottom-up perspective. The political perspective sought to enlighten the user side (namely the people) for these operations.

In the mid-twentieth century, most cities were under the thread of losing their middle- and upper-income populations and becoming settlements with low-income immigrants and African American populations. The American government introduced the Housing Act of 1949 and the amending Housing Act of 1954 to control and intervene in the decaying conditions of these cities. In this context, the state provided federal aid for urban redevelopment, especially in the inner territories of cities. The condition for receiving this aid was for cities to prepare development plans, establish legally authorized renewal agencies, and develop new mechanisms to facilitate devalued properties quickly. Local governments have developed quasi-scientific methods to detect "blight" in order to benefit from these funds as much as possible. With this motivation, urban scientists developed appraisal methods to determine the blighting factors in an area. The checklist consisted of indicators like building age, density, and population movements (population loss or gain), over-crowdedness of lots, structural deficiencies in buildings, (in some surveys) public health conditions. However, these surveys were conducted in a very biased political environment. The excessively non-white settlements were labeled as blighted, even though some of them were not (Weber, 2002).

Apparently, the identification process of blight and obsolescence was highly biased, and the government has operated minimum control over the urban renewal processes of the era. City Hall requested only twenty percent of housing classified as obsolete in a neighborhood to approve renewal projects and force people to move out with expropriation. Many poor neighborhoods were demolished in the interest of local governments and private investors, even though they were still convenient for inhabitants. Local governments' implicit objective with these projects was to dissociate city centers from the usage and habitation of the African American migrants and other lower classes of the society (Halpern, 1995).

The reason for the widespread use of the concept of blight instead of obsolescence in this period was that experiencing the blight of an area was the precondition of receiving funds for redevelopment. Because while obsolescence was mainly a threat to the profitability potential of the property owners in the field, blight created serious physical difficulties for dwellers, causing an increase in disease and crime rates. In other words, blight was more justifiable than obsolescence. "In the context of

American-style welfare capitalism, targeting blight instead of obsolescence allowed the state to destroy with a public purpose—the laudable goal of "healthy" cities—as the moral overtones of blight blurred the boundaries between public and private responsibility" (Weber, 2002, p. 527).

The circulation of the capital in the built environment takes place rapidly. However, since resources are not equally distributed during this flow, a non-negligible portion of the built environment has been made up of deteriorated and abandoned areas. While the abandoned carcasses of once-industrial areas remained in this state for decades, renovation of an area near the central business district and construction of luxury residences could only take a year or less. The reason why the second case realized such rapidly is obviously that the profit it promises to the capitalists is higher than the first case (Weber, 2002). The constant redevelopment made by capitalists in order to generate profit and the devaluation of the old by introducing the new to the market evokes the concept of Schumpeter's 'creative destruction'. In this dynamic commodification process of the built environment, everything that falls behind the development is considered obsolete. Therefore, cities are exposed to a continuous process of creative destruction and reconstruction as a result of the structural changes in the economic and social organization (Bryson, 1997). The faster these changes occur, the more frequently the cycle of creative destruction and reconstruction will appear.

As Weber indicated, capitalism had a self-evaluation system for the devaluation conditions in the built environment.

> If the building in question is located in an area of concentrated poverty, it may become marginalized as a "long-turnover" because the short-term rent gap is not sufficiently wide to warrant rehabilitation. Its carcass may be left for scavengers, and illegal uses as it falls into ruin and Capital moves out to other more lucrative opportunities. When the value of the structure declines faster than the ground rents increase; however, it becomes "short-turnover," and demolition—a potent spatial fix—prepares the land for gentrification and building upgrading.
>
> (Weber, 2002, p. 523).

2.1.6. Categories of Urban Obsolescence

There is a confusing variety of the causes and types of obsolescence in the literature. The following types are mentioned in different sources (some of them were overlapping although they were classified under different headings): aesthetic, architectural, building, community, control, cultural, design, ecological, economic, environmental, equipment, fashion, financial, functional, image, legal, locational, market, official, physical, political, regulatory, rental, site, social, statutory, structural, style, sustainable, symbolic, technical, technological, tenant, tenure, use, utility and visual (Abramson, 2015; Allehaux & Tessier, 2002; Bryson, 1997; Buitelaar et al., 2021; Burton, 1933; Butt et al., 2015; Cowan, 1964; Doratli, 2000, 2005; Doratli et al., 2004, 2007; Goetz, 2012; Grover & Grover, 2015, 2015; Ian Chaplin, 2003; Iselin & Lemer, 1993; J. L. Jacobs, 1941; Khalid, 1994; Kintrea, 2007; Lichfield, 1988; Mansfield & Pinder, 2008; Muminović et al., 2020; Nutt et al., 1976; Nutt & Sears, 1972; Pinder & Wilkinson, 2001, 2000; Pourebrahimi et al., 2020; Reed & Warren-Myers, 2010; Reilly, 2013; Thomsen et al., 2015; Thomsen & van der Flier, 2011b, 2011a; Tiesdell et al., 1996; Vehbi & Hoşkara, 2009; Weber, 2002; Wilkinson et al., 2014).

In this section, types of obsolescence are regrouped under simplified and generalized categories, which are:

- Physical obsolescence
- Functional obsolescence
- Economic obsolescence
- Locational obsolescence
- Image obsolescence

These categories are the essential classifications in the available obsolescence literature. The reason for focusing on these categories is that they are the most frequently encountered categories in the urban obsolescence literature, and therefore, they have more indicators for identifying and measuring urban obsolescence. It should be noted that these obsolescence types will not be homogeneous for any individual building. Nor would the obsolescence levels be in a steady increase over time.

i. Physical Obsolescence

This type of obsolescence refers to the expected material deterioration of a building or structure over time. It occurs gradually and can be controlled by maintenance and repair. This is also called structural or, depending on the scale of the case, building obsolescence in different studies. Obsolescence is observed in the built environment on ranging scales (separately or in combination) of building parts and material, construction systems, separate individual buildings, blocks, quarters, and whole neighborhoods. "It can be regarded as a range of diseases, spreading over and mutually affecting different levels of scale" (Thomsen & Flier, 2011, p. 354).

Physical obsolescence defines the decline in material conditions of the built environment over time, affected by internal factors like quality of material used, the function of the building, or the effectiveness of maintenance services; also, external factors like weather, earth movement, traffic vibration. The fabric needs further repair and improvement than its regular maintenance services when it becomes physically obsolescent (Lichfield, 1988).

Building obsolescence, likewise, is observed on the inherent elements of a property related to the design and quality functions of the building. A building's value decreases when its users evaluate it as substandard. Another factor that determines this type of obsolescence is the interaction of these internal qualities with the changes occurring exterior environment of the building (Pinder & Wilkinson, 2000).

Although there is an essential emphasis on the physical factors behind this phenomenon, human behavior is one of the fundamental driving forces in terms of positive (like maintenance and development) and harmful (like neglect and disregard) contributions. Buildings require regular reinvestments in maintenance and adaptation; therefore, negligence of these facilities will lead to a decline in the building's potential performance, and finally, it will become obsolescent (Thomsen & Flier, 2011).

ii. Functional Obsolescence

The contemporary needs and expectations of society change faster than the estimated lifetime of built fabric. The fabric becomes functionally obsolescent when it is still physically convenient but cannot meet its designed function. Both internal and

external factors can cause functional obsolescence. For example, an office building without modern communication facilities or access to the Internet will not attract any users in an active business area (Lichfield, 1988). Alternatively, external factors like insufficient parking space or narrow streets and traffic congestion can result in a building or an area becoming functionally obsolescent. Therefore, historic quarters' street patterns that cannot bear the contemporary traffic causes functional obsolescence for such areas (Tiesdell et al., 1996).

According to Weber (2002), appraisers generally use two categories of obsolescence to examine a structure's condition: functional and economic. Functional obsolescence occurs in structures that are unsuitable for new developments, while economic obsolescence encompasses all the external factors that reduce the commodity's exchange value. Obsolescence reduces the building's rental income and exchange value but may not diminish the use value. For example, the structural conditions of a building may not appeal to the landlord yet may satisfy the demands of its inhabitants. However, if the property owner does not perform the minimum required maintenance and repair due to obsolescence, this negligence will be followed by a decrease in physical conditions and an eventual deterioration (Weber, 2002).

In terms of building category, residential and non-residential buildings have essential differences. Housing function generally has a more stable and long-life expectancy, instead of non-residential structures such as office, retail, leisure, trade, and industry, which usually have a relatively short life cycle expectancy (Thomsen & Flier, 2011). There are some predictions for the lifespan of buildings (even though they are not precise and not very common), especially for several types like residential or commercial. The United States Department of the Treasury has established an index of lifespan regarding structural degeneration and functional obsolescence. According to Cowan:

> They do not allow for extraordinary or special obsolescence, due to fundamental changes in function since the property was constructed. In 1947 the normal range of life span for buildings varied between 50 years for apartments and hotels, and 75 years for warehouses. By 1962, however, all these estimates of building life were reduced by about 25%. Since these data are intended to cover depreciation on new buildings, it seems that the increasing rate of technological change is causing buildings to become obsolete, more quickly.
>
> (Cowan, 1964, p. 105)

Buildings marked as obsolete might continue to function, yet they function at lower levels from the contemporary standards because obsolescence occurs when the changing needs and expectations of the users exceed the functionality level of a structure. This consequent decline in building value is created by the changing perception of the users as a result of external factors, not by the interior features of the building (Pinder & Wilkinson, 2000).

iii. Economic Obsolescence

Economic, or financial, obsolescence is referred to as one of the factors that derive financial depreciation. The majority of theoretical and empirical studies can be found in economic literature, particularly in property investment and real estate fields. In other sources, it is commonly defined as the diminishing performance of a building over time until the end of service life, which finally results in demolition (Thomsen & Flier, 2011).

When a building is faced with physical or other types of obsolescence, the financial costs and returns of rehabilitation become an issue for the owner/occupier/investor. As Lichfield indicated, economic obsolescence occurs when the cost of rehabilitation of a building is higher than the return after rehabilitation. In that case, investors tend to abandon the building to deteriorate. However, sometimes the return of redevelopment might be higher than the return of rehabilitation. Consequently, even if one building is not economically obsolescent, it would still be left to deteriorate (Lichfield, 1988).

Tiesdell et al. (1996) defined financial and economic obsolescence in two different categories. Economic obsolescence is an artificial type of obsolescence created by accounting and taxation procedures. Buildings are capital assets, which have a tax liability. They have estimated depreciable lives, which is when the building's economic value can offset its taxes. However, when this period expires, the building is excluded from the company's balance sheet. In other words, it has no longer any tax value. Especially in big companies with strong economies, these buildings become dispensable before their physical or functional lives are over, and eventually, they are demolished. On the other hand, economic obsolescence occurs "with regard to the cost of alternate opportunities" (Tiesdell et al., 1996, p. 26). As previously stated,

obsolescence is not an absolute concept; it is relative to other parts of the built environment. Therefore, since the cost of investments in the historic urban quarter is relatively higher than the alternatives, they become less attractive for the investors and consequently become economically obsolete.

iv. Locational Obsolescence

Locational obsolescence refers to the external factors that cause a building to decrease in value due to its specific location. These may be various factors such as infrastructural insufficiencies, negative environmental impacts, and transportation difficulties. (Pinder & Wilkinson, 2000). Alternatively, as defined by Tiesdell et al., it is the consequence of "the fixity of a particular location relative to changes in the wider pattern of accessibility and labor costs" (1996, p.25). In other words, when the location of a building is determined, some factors like the accessibility to interrelated other uses, proximity to market, and transport infrastructure are considered. However, the area becomes locationally obsolescent if the conditions to which it depends on abandon the area.

Moreover, locational obsolescence occurs when one of the interrelated uses in a system leaves the area and left the other uses ineffective by themselves. To illustrate, if the fabric were designed dependent on a specific function, for example, hotels and shops around a railway station or pharmacies and medical shops around a hospital, that fabric would be locationally obsolescent when that specific use (in these examples, the railway station or the hospital) abandoned the area (Lichfield, 1988).

Another case that results in this type of obsolescence is the migration of the central business district. With the introduction of modern building codes in the early 1900s, downtown areas have undergone some redevelopment activities. While these activities were performed 'in situ' in the European cities, the CBDs were shifted to new locations in the American cities. Consequently, the abandoned areas became locationally obsolete (Tiesdell et al., 1996).

v. Image Obsolescence

This type of obsolescence is an outcome of people's perception of a building or an area. Rather than an area's physical or functional capabilities, it is determined by

users' value judgments. For example, inner-city centers are labeled by citizens as places suffering from overcrowding, noise, and air pollution. This is a negative image and makes the area obsolescent by its image. Nevertheless, perceptions can be manipulated or simply can change over time. For instance, in the postwar period, older buildings were demolished and replaced with new ones with the 'image of modernity'. However, older buildings became desirable in the following period due to their historical and traditional values. Nonetheless, even though the perceptions can change and do not originate from physical or functional variables, they still have an important role in people's decision-making process (Tiesdell et al., 1996).

Finally, the changes in the social, economic, or natural environment in a territory might decline the attractiveness of the built fabric. The most common example of image obsolescence is the unattractiveness of inner-city centers due to air and noise pollution, overcrowding. Additionally, some changes like occupation by different population groups, increasing crime rates, decreasing income levels of the residents might cause a place to become environmentally unsuitable for its former dwellers (Lichfield, 1988).

2.2. Identifying Urban Obsolescence

As previously stated, obsolescence is the process of decline in utility (i.e., use value) and exchange value of an asset, even though it is still functioning as it was designed. This notion is being discussed in many areas such as accounting, manufacturing, real estate, architecture, and technology. The primary aim of these studies is to prevent obsolescence before a product comes to a premature end (Pinder & Wilkinson, 2000). Therefore, whether it was in a built environment or not, obsolescence is considered a serious thread. For this reason, in the first step, it is crucial to determine the types of obsolescence and identify its indicators. However, it is not simple to predict, identify and prevent obsolescence due to the following obstacles.

Firstly, the process of obsolescence starts as soon as a building starts to function. At the beginning of a building's lifecycle, whatever purpose it will be used for, it is expected to be suitable for all the contemporary needs and demands of the users. However, society's contemporary needs and desires change constantly during the long life of the built environment. The building's capacity to meet the demands of existing

or potential users decreases. These changes are often observed as adopting new standards, increasing expectations for building performance, technical innovations, organizational improvement, and changing aesthetic values. As Pinder and Wilkinson (2000) claimed, the difficulty of obsolescence is that this decline in demand may occur instantly as a result of the changes mentioned above.

Secondly, obsolescence can occur in any part of the city with multiple scales and complexities. It can be observed on a single building, on a street, in a certain part of the city, or in a large territory, and experienced differently according to the needs and perceptions of various groups and generations living in the city. "Thus in any moment of time, there will be varying degrees of what will be perceived by occupiers as obsolescence" in a built fabric (Lichfield, 1988, p.22).

Lastly, obsolescence causes a decrease in both the use value and exchange value of an asset, while the majority of the existing studies only focus on the decrease in exchange value. However, to be able to measure the decrease in use value, a combined method should be applied to evaluate the preferences of the users. Users' preferences are dynamic and complex fields. Therefore, the quantitative indicators used for measuring exchange value are insufficient for measuring use value. For these reasons, it is observed that creating a method to identify and/or measure obsolescence -especially one that will be generally accepted- is not easy.

In the following part of this study, the obsolescence identification method is given, which is applied in the historic city center of Ankara. While this method was being constructed, as mentioned above, the identification methods of the existing studies encountered in the literature were examined due to the lack of a generally accepted method. For this purpose, firstly, urban obsolescence studies were divided into two categories, according to whether they recommend an identification method or not. The first column in Table 2 demonstrates the studies that were not concerned with identifying obsolescence. They mainly focus on the definition, types, categories, causes, and effects of obsolescence in the built environment.

In the second column, on the other hand, it is observed that the available studies range according to the character and scale of the area; hence, their identification methods and indicators were formulated in accordance with these variables. Therefore, in order

to generate some insights for the methodology of the case study of this thesis, available examples are examined with respect to their identification methods in the scope of the abovementioned literature review.

Table 2: Obsolescence Studies with and without Identification Methods

Urban Obsolescence Studies **without** an Identification Method*	Urban Obsolescence Studies **with** an Identification Method*
· Abramson, 2015 · Adams & Burdell, 1936 · Bryson, 1997 · Buitelaar et al. 2021 · Burton, 1933 · Butt et al., 2014, 2015 · Cowan, 1964 · Dunse & Jones, 2005 · Goetz, 2012 · Hughes & Jackson, 2015 · Ian Chaplin, 2003 · Iselin & Lemer, 1993 · Kintrea, 2007 · Mansfield & Pinder, 2008 · Muminović et al., 2020 · Pinder & Wilkinson, 2001 · Pourebrahimi et al., 2020 · Reed & Warren-Myers, 2010 · Thomsen & van der Flier, 2011a · Tiesdell et al., 1996 · Urban, 2006 · Weber, 2002	· Akyurek & Ciravoğlu, 2017 · Allehaux & Tessier, 2002 · Bolton, 1922 · Boston West End Urban Renewal Project, 1951 · Crane, 1943 · Doratli, 2000, 2005 · Doratli et al., 2004, 2007 · Grover & Grover, 2015 · Herrold, 1935 · Jacobs, 1941 · Jones, 1967 · Khalid, 1994 · Lichfield, 1988 · Nutt et al., 1976 · Nutt & Sears, 1972 · Pinder & Wilkinson, 2000, 2001 · Reilly, 2013 · Thomsen et al., 2015 · Thomsen & van der Flier, 2011b · Vehbi & Hoşkara, 2009 · Wilkinson et al., 2014

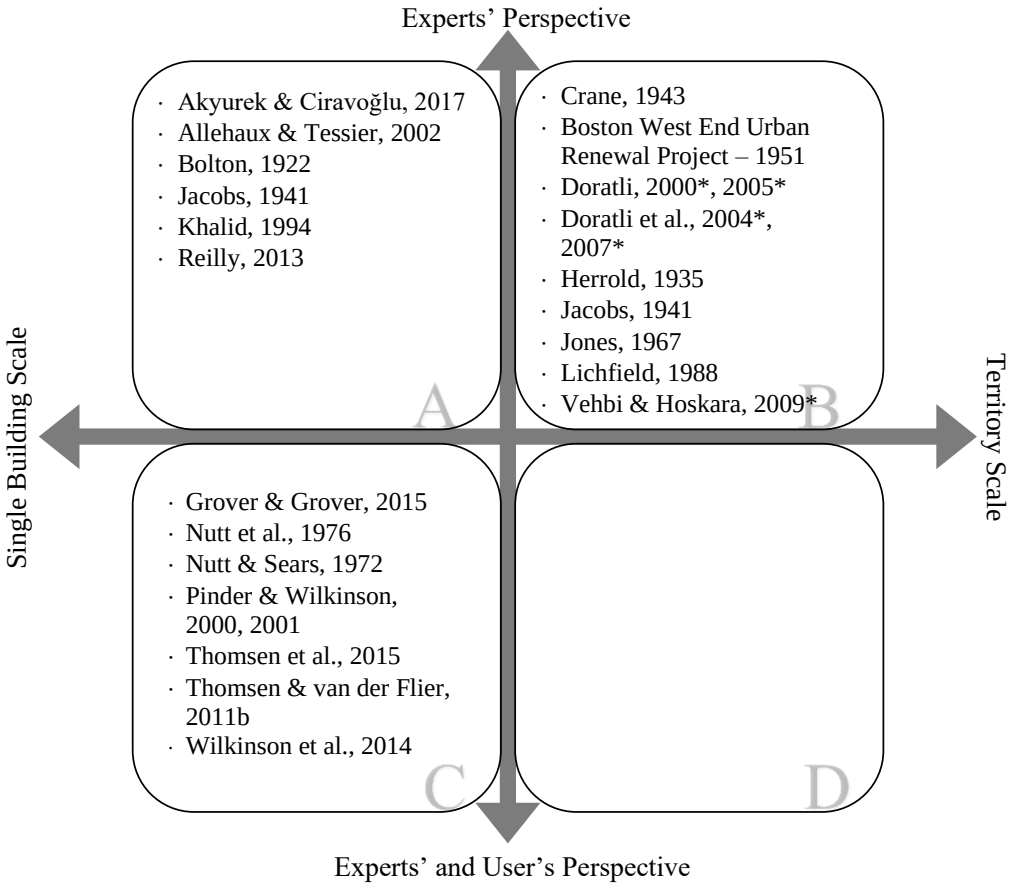
*The ones that were encountered in the literature review, of which the methodology was given in detail in the introduction of Chapter 2.1
Prepared by the author.

While examining the studies in the second column, it is detected that the most significant variable among the identification and measurement methods is the scale of the study area. The studies on an individual building scale are mostly based on the quantitative and technical characteristics of the structure. These methods basically include a number of calculations based on detailed quantitative data. On the other hand, in the studies conducted on a territory scale (here, territory refers to the scale of a neighborhood or quarter), it was observed that the suggested methods are based on observations, undetailed but covering more general information about the area. For

this reason, the scale of the study area is selected as one of the criteria while compiling the case studies in this thesis.

The second criterion was whether the studies included the behavioral approach -an identification method that also evaluates the users' perspective-, which is the significant aspect of the thesis. According to Nutt and Sears (1972), there are two distinctive measurement perspectives in the available literature. The first type assesses objective indicators such as physical, financial, environmental, and functional obsolescence. The second type focuses more on the subjective indicators that concern the behavioral dimensions of users and relationships between landlords and occupiers. With respect to these determinants, the matrix below was formulated in order to examine and compile the identification methods of urban obsolescence studies.

Figure 6: The Approach and Scale Matrix of Urban Obsolescence Studies



*These studies especially focus on historic city centers.
A: Studies that are identifying obsolescence on a single building scale with expert perspective.
B: Studies that are identifying obsolescence on territory scale with expert perspective.
C: Studies that are identifying obsolescence on a single building scale with expert and user perspectives.
D: Studies that are identifying obsolescence on territory scale with expert and user perspective.
Prepared by the author.

As demonstrated in the matrix, the referenced sources are distributed in the groups A, B, and C. Studies in group A propose obsolescence identification methods at a single building scale, which mostly consist of indicators that can be measured by quantitative data and based on only the perspective of the researcher (in other words, expert perspective). These indicators are measured with a checklist prepared by an appraiser or an institution and contain detailed information about the physical characteristic of the structure. The studies were carried out with the author's external and top-down perspectives.

The studies in group B, on the other hand, identify obsolescence with a method based on the observations of the author instead of an appraisal method or a calculation based on only quantitative data. However, these studies are also conducted by an expert approach at the scale of territory/neighborhood. As mentioned above, as the study area scale gets higher, the details of the quantitative indicators decrease. Nonetheless, it is possible to make more comprehensive observations on a larger scale with observable qualitative data. Studies in this group did not include user behavior while identifying obsolescence.

Studies in group C, similar to studies in group A, use the obsolescence identify method consists of indicators made by an expert, which can generally be measured with quantitative data at a single building scale. However, in addition, user behavior is included as a variable in the identification process.

During the literature review, it was noticed that obsolescence identification studies majorly vary according to their scales and approaches. The purpose of this table is to observe how the studies are grouped according to these criteria and whether a significant result can be drawn from it. As can be clearly seen in the table that there is a deficiency in group D, which was expected to include studies that identify obsolescence at a neighborhood scale by combining user and expert behavior.

As discussed earlier, obsolescence is a severe threat to the built environment, as it does in many other fields. It causes buildings in central areas to be demolished long before they reach the end of their useful life and creating unsustainability in the built environment; while in discredited areas, it causes commodities to be neglected, lack maintenance and abandoned even though they are still functional. For this reason, it

is vital to conduct studies to prevent urban obsolescence from being able to obtain a sustainable urban environment in every aspect. At this point, identifying urban obsolescence can be the initial step for preventing and recovering from the adverse effects of the phenomenon.

The sources given in the second column (titled obsolescence studies in the built environment 'with' an identification method) of Table 2 are the studies that propose and identification method for obsolescence in the built environment. It is observed that these studies identify urban obsolescence with two different methods. In the table below, the sources are categorized according to these methods. The studies in the first column of the table measure urban obsolescence with a quantitative method, and the ones in the third column apply a method based on observation of the determined indicators. The ones in the second column, on the other hand, include both of these methods and combine them by proposing to convert observable qualitative data into quantitative variables. In the following part of this chapter, these studies are examined in accordance with their identification methods.

Table 3: Obsolescence Identification Methods of the Studies

CALCULATION & SCORING		OBSERVATION
· Akyurek & Ciravoğlu, 2017 · Bolton, 1922 · Boston West End Urban Renewal Project, 1951 · Jacobs, 1941 · Khalid, 1994 · Nutt et al., 1976 · Nutt & Sears, 1972 · Reilly, 2013	· Allehaux & Tessier, 2002 · Grover & Grover, 2015 · Pinder & Wilkinson, 2000, 2001 · Thomsen et al., 2015 · Thomsen & van der Flier, 2011b · Wilkinson et al., 2014	· Crane, 1943 · Doratli, 2000, 2005 · Doratli et al., 2004, 2007 · Herrold, 1935 · Jones, 1967 · Lichfield, 1988 · Vehbi & Hoşkara, 2009
1	3	2

Prepared by the author.

The reason for the columns to be numbered in a sequence of 1-3-2 is that they are explained according to this sequence. Firstly, the studies that are only based on calculation and scoring (column numbered 1) are examined. Secondly, the studies that

are only based on observation are examined in column number 2. Finally, studies with a method that combine these two approaches (the ones in column number 3) are examined under the title of identifying urban obsolescence by a mixed method.

The following results have emerged from the combined evaluation of this table which classifies the studies according to identification methods and the above approach/scale matrix:

- While the majority of the studies in the single building scale were measured by calculation and scoring, all of the studies in the neighborhood scale were based on the observation method.
- The use of quantitative data decreases, and the use of qualitative data increases from left to the right in the table.
- The detail of the data used decreases, but its scope expands from left to right in the table (For example, while the studies on the left evaluate the multiple and detailed technical features of a building such as walls, floors, infrastructure system; the studies on the right can make inferences in a larger area only with the knowledge of the construction date of the buildings).
- Most of the studies evaluating calculation & scoring, and observation together include user behavior; in addition, user behavior is evenly distributed among the studies.

2.2.1. Identifying Urban Obsolescence by Calculating & Scoring

In this category, studies that measuring urban obsolescence with calculation and/or scoring methods were included (Akyurek & Ciravoğlu, 2017; Bolton, 1922; Boston City Planning Board, 1951; J. L. Jacobs, 1941; Khalid, 1994; Nutt et al., 1976; Nutt & Sears, 1972; Reilly, 2013). The methods of these studies were examined and observed that there are several techniques used such as obsolescence formula, building appraisal form, building lifetime estimation and comparison of obsolescence level techniques. The reason for this sub-categorization is to draw a general framework for the studies under each category. These methods are described below, with examples from the studies.

· *Obsolescence Formula*

One of the most cited sources in the literature in the field of urban obsolescence is Nutt and Sears (1972), which proposes a quantitative model for measuring obsolescence. The authors later extended their model for measuring housing obsolescence in larger areas (please see Nutt et al., 1976). This study aims to develop an early warning system that will enable property holders to prevent and recover the effects of obsolescence.

In this study, obsolescence is defined as "an increasing 'misfit' *or mismatch* over time between activity requirements and physical provisions" (emphasis added); therefore, a model to measure this level of misfit is proposed (Nutt & Sears, 1972, p. 14). In this equation model, [*B*] denotes the behavioral system, and [*P*] denotes the physical system. [*B*] is the vector of measurable behavioral attributes in the system, which describes the relationship between the number, duration, and frequency of the activities and the number and type of people involved. On the other hand, [*P*] is the vector of measurable physical characteristics, composed of size, condition, subdivisions, spatial arrangement, services, and environmental standards.

Since obsolescence was defined as the mismatch between the provision of the structure and the users' requirements, the 'degree of uselessness' can be measured with the vectors of [*B*] and [*P*]. In other words, obsolescence can be detectable by observing the changing relationships between physical provisions and behavioral requirements. As the authors represent more formally, the following equation can be useful to measure the potential mismatch (Nutt & Sears, 1972, p. 15):

$[M] = f([P], [B])$

In addition to studies such as Nutt & Sears that formulate field-specific obsolescence formulas and indicators, there are also studies that integrate some of the techniques developed and widely used for the finance industry to measure urban obsolescence. For example, Reilly (2013) distinguishes property obsolescence into two categories. The first one is functional obsolescence, which results from the mismatch between the original and current functions of a building. The common indicators of functional obsolescence are "excess operating and/or maintenance costs", "excess capacity and/or excess capital costs" and "structural and/or capacity superadequacies or

inadequacies" (Reilly, 2013, p.49). Reilly proposes to measure functional obsolescence by either:

1. capitalizing the property's excess operating costs over the property's expected remaining useful life (RUL),
2. reducing the property's superadequacy cost measurement (however defined) by the amount of capital costs related to the excess capacity, or
3. estimating the amount of capital costs required to cure the functional deficiency or structural/capacity inadequacy.

Secondly, external obsolescence, which is caused by either locational or economic factors, can be quantified by three common methods (Reilly, 2013):

1. The shortfall method
2. The paired sales analysis
3. The market extraction method.

Still another method is the implementation of Hedonic Price Estimation into the built environment, proposed by Khalid (1994). In this method, the financial impact of obsolescence on a building is measured by the difference between the highest rental price of the buildings in the market and the rental price of the building in question. Khalid claims that every attribute of obsolescence associated with rental differences (which consist of groups, subgroups, and individual variables of obsolescence) can separately be measured by using this technique. Some of the variables and sub-variables proposed by Khalid are as follows (1994):

Table 4: Variables and Sub Variables for Obsolescence

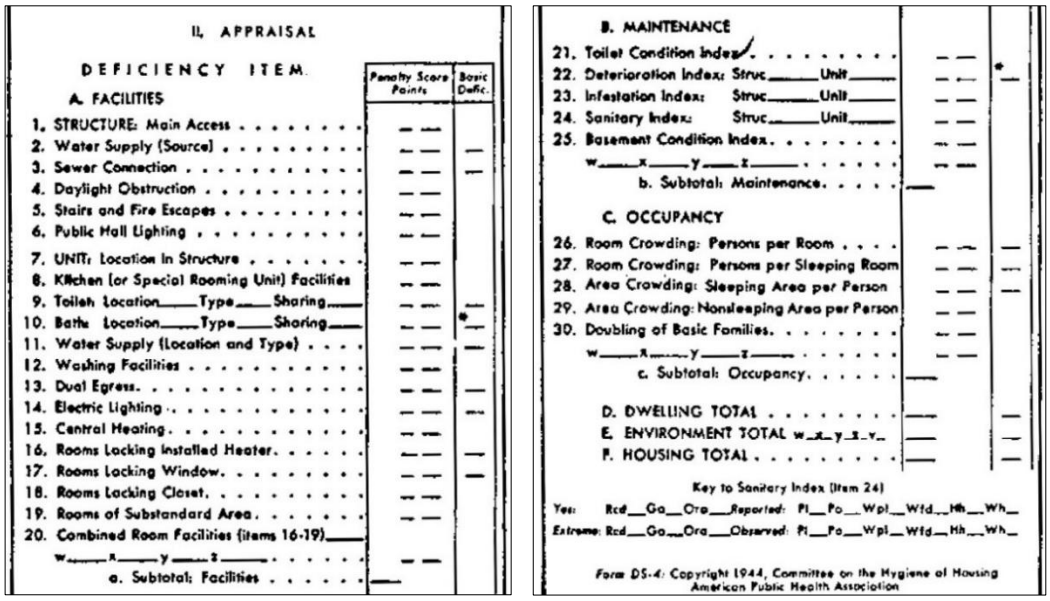
Variables	**Sub Variables**	
· Physical Appearance · Building Age · Flexibility · Location · Quality of engineering services · Accessibility · Amenities · Changes in the utilization of space · Image of the building	· Information technology · Quality of lifts · Energy control using building automated · Building height · Capacity of lifts · Main ceiling finish · Column free · Using automated control systems · Main floor finish · Main wall finish · Lifts landing zone	· Main entrance ceiling finish · Main entrance finishes · Main entrance floor finish · Main entrance wall finish · Quality of finishes · Additional space for storage · Stand-by generator · Speed of lifts · Net rentable area · Tenant's image and its compatibility

Adapted from Khalid (1994)

· *Building Appraisal Form*

The most comprehensive and most cited appraisal form for appraisal of the buildings is ‘An Appraisal Method for Measuring the Quality of Housing’, which was developed by American Public Health Association (APHA) in 1945 (Jones, 1967; Abramson, 2016).

Table 5: 1945 Housing Appraisal Form of American Public Health Association



II. APPRAISAL

DEFICIENCY ITEM	Penalty Score Points	Basic Defic.
A. FACILITIES		
1. STRUCTURE: Main Access		
2. Water Supply (Source)		
3. Sewer Connection		
4. Daylight Obstruction		
5. Stairs and Fire Escapes		
6. Public Hall Lighting		
7. UNIT: Location in Structure		
8. Kitchen (or Special Rooming Unit) Facilities		
9. Toilet Location____Type____Sharing____		
10. Bath: Location____Type____Sharing____		*
11. Water Supply (Location and Type)		
12. Washing Facilities		
13. Dual Egress		
14. Electric Lighting		
15. Central Heating		
16. Rooms Lacking Installed Heater		
17. Rooms Lacking Window		
18. Rooms Lacking Closet		
19. Rooms of Substandard Area		
20. Combined Room Facilities (Items 16-19)____		
w____x____y____z____		
a. Subtotal: Facilities		
B. MAINTENANCE		
21. Toilet Condition Index		*
22. Deterioration Index: Struc____Unit____		
23. Infestation Index: Struc____Unit____		
24. Sanitary Index: Struc____Unit____		
25. Basement Condition Index		
w____x____y____z____		
b. Subtotal: Maintenance		
C. OCCUPANCY		
26. Room Crowding: Persons per Room		
27. Room Crowding: Persons per Sleeping Room		
28. Area Crowding: Sleeping Area per Person		
29. Area Crowding: Nonsleeping Area per Person		
30. Doubling of Basic Families		
w____x____y____z____		
c. Subtotal: Occupancy		
D. DWELLING TOTAL		
E. ENVIRONMENT TOTAL w_x_y_z_v_		
F. HOUSING TOTAL		

Key to Sanitary Index (Item 24)

Yes: Rcd__Ga__Ora__Reported: Pl__Po__Wpl__Wfd__Hh__Wh__

Extreme: Rcd__Ga__Ora__Observed: Pl__Po__Wpl__Wfd__Hh__Wh__

Form DS-4: Copyright 1944, Committee on the Hygiene of Housing American Public Health Association

Obtained from Abramson, 2016, p. 49

One of the prominent examples of this technique is the urban renewal project in the West End neighborhood of Boston, the capital city of Massachusetts. In 1951, the Boston City Planning Board produced an urban renewal scheme to perform redevelopment in a large part of the city. West End, one of the city’s neighborhoods, was displayed as “An Obsolete Neighborhood” in this plan.

> In the APHA’s five-grade classification system, fewer than 30 penalty points in a total housing quality score represented grade A, “good to excellent housing.” Over 120 penalty points indicated grade E, “thoroughgoing slums.” Right in the middle stood the obsolescent area, a 60- to- 89- point grade C score representing “mediocre housing districts in which extensive blight and obsolescence can be expected.
>
> (Abramson, 2016, p. 48)

APHA’s Appraisal Method was used in many studies in the mid-1900s to measure the obsolescence and blight conditions of inner parts of American cities. It is evident in

the form that there are no subjective indicators to determine obsolescence. This study was being conducted by city professionals and local state governments without considering the evaluations of inhabitants of these neighborhoods. It reveals the top-down, authoritarian approach of the welfare state.

- *Building Lifetime Estimation*

This study was conducted by Reginald P. Bolton and published in three editions between 1911-1922. As mentioned earlier, at the beginning of the nineteenth century, New York real estate professionals started to carry out various studies to predict the building life of commercial structures in fluctuating and unpredictable market conditions. Bolton suggested that the depreciation of structures was not experienced in the same way in every type of building. He proposed a theory of differential obsolescence and ranked various types of structures in a table titled "Economic Existence of Buildings". Bolton estimated a lifetime for each function based upon projected changes in use, technology, and fashion.

> The longest-lived banks received forty- four to fifty years, offices twenty-seven to thirty-three years, and hotels fifteen to eighteen years. The most short-lived "taxpayers" (twelve to fifteen years) were one- or two-story buildings, the income from which could cover the taxes on a site until more lucrative development could occur.
>
> (Abramson, 2016, p.18-19)

Table 6: Economic Existence of Buildings

TABLE D

ECONOMIC EXISTENCE OF BUILDINGS

Type of building	Life in years
"Taxpayer"	12–15
Hotels	15–18
Apartment-houses	18–21
Store buildings	21–25
Tenements and flats	25–27
Office and business buildings	27–33
Lofts and factories	33–37
Residences	37–44
Banks and institutions	44–50

Source: Bolton, (1922); cited in Abramson (2016)

Additionally, Bolton calculated the hypothetical 'average life' of 48.36 years for a steel-framed office building based on the physical life (rather than economic life) of all components of the building (walls, paints, windows) given in the table below.

Table 7: Components of a Building which Determine its Physical Life

TABLE C

METHOD OF ASCERTAINING MEAN LIFE OF A BUILDING

Example of a steel-frame fireproof office building

Material	l Life rel. to 66 yrs.	c Cost rel. to total cost of bldg.	$l \times c$
Foundations	100%	5.3%	530.0
Steel framing	100	7.6	760.0
Masonry	100	33.7	3370.0
Fireproof floors	100	2.0	200.0
Ornamental iron	73	6.3	459.9
Heating	50	3.3	165.0
Plumbing	50	1.5	75.0
Electric wiring	50	2.0	100.0
Partitions	70	1.2	84.0
Joinery	70	3.4	238.0
Fixtures (plumbing)	29	12.6	365.4
Roofing (tile)	59	2.0	118.0
Plastering	54	3.8	205.2
Marble	54	9.6	518.4
Elevator	30	3.1	93.0
Hardware	37	0.5	18.5
Glass	14	1.3	18.2
Paint	10	0.8	8.0
Totals	...	100	7327.6

Mean, $\frac{7327.6}{100} = 73.276\%$ of 66 years, or a mean life of 48.36 yrs.

Source: Bolton (1922)

Another method is proposed by Akyurek & Ciravoğlu (2017) that makes lifetime estimation for buildings and determines obsolescence accordingly. The authors suggested the following formula to measure obsolescence with a quantitative method:

$$Ai = \alpha 1L + \alpha 2F + \alpha 3P + \alpha 4K + \alpha 5H + \alpha 6O + \varepsilon$$

Ai: Age of a building where 'i' represents the age in a given period,
L: Increases in the land value,
F: Floor area ratio,
K: Proximity to the city center,
P: Physical condition of the buildings,
H: Registration of buildings as historical structures,
O: The resident of the building, whether as owner or tenant.

Akyurek & Ciravoğlu express that depending on the contextual and regional differences, the variables may change, and their numbers may be increased. Moreover, it is accepted that the equation does not just explain all the coefficients and age. Therefore, ε is added to explain other variables that were not considered in this equation (2017).

· *Comparison of Obsolescence Level*

As J. L. Jacobs (1941) suggested, urban obsolescence of residential buildings and neighborhoods can be determined by analyzing their characteristics and comparing property values in different areas. The value of both the land and the buildings is directly affected by neighborhood conditions, both physically and economically. They create the conditions that contribute to or detract from the stability of property value.

A neighborhood rating system is proposed to generate estimates of obsolescence resistance or obsolescence resilience in each neighborhood. High scores indicate that there is no obsolescence or exists in an ignorable level due to locational advantages, while low scores indicate the probability of obsolescence. The indicators used for determining the weighted scores of the relevant neighborhoods are given as:

- Ratio of the built-up area
- Ratio of the residential use
- Street improvements and public utilities
- Character of general planning
- Appearance
- Home ownership rate
- Occupational status
- Race
- Nationality
- Design and condition of buildings
- Transportation services
- Schools, churches, and recreational facilities
- Population growth
- Changes in financial status
- Proportion of properties for sale
- Position with relation to city growth
- Age of district
- Special advantages or hazards

2.2.2. Identification of Urban Obsolescence by Observation

In this category, studies identifying urban obsolescence with observation methods were included (Crane, 1943; Doratli, 2000, 2005; Doratli et al., 2004, 2007; Herrold, 1935; Jones, 1967; Lichfield, 1988; Vehbi & Hoşkara, 2009). It was observed that the studies in this method were gathered in three categories. The reason for this sub-categorization is to draw a general framework for the studies under each category. The first category consists of studies that depict obsolescence at the scale of a neighborhood. The other two categories likewise define urban obsolescence on a neighborhood scale, but particularly in historic city centers. In these categories, urban obsolescence has been considered a phenomenon that historic city centers suffer from and has been studied in revitalization and sustainability concepts.

- *Obsolescence in Neighborhoods (Crane, 1943; Herrold, 1935; Jones, 1967, Lichfield, 1988)*

One of the urban obsolescence studies on a neighborhood scale was conducted by Herrold, is a residential district from St. Paul, Minnesota. When local improvement and some speculative incentives were brought to the agenda, the financial value of the district increased in return. However, after speculators have abandoned the district without any improvements or incentives when they attained the highest values for the land, it was subsequently abandoned by the homeowners because they lost their confidence. “The first rented house (even though rented to a very desirable family) in a district of single-family owner-occupied homes is the beginning of obsolescence” as Herrold precisely indicated (1935, p. 73).

There are physical and non-physical causes of obsolescence defined by Herrold. The physical causes of obsolescence include the shift in transportation facilities, new housing standards, the increasing number of apartment blocks, and fictitious land values. Herrold’s study demonstrated the holistic approach of its time. He accepted the Concentric Zone Model, provided by the Chicago School of Sociologists. This approach was concerned with the high-scale demographic, economic, and sociological movements based on industrial urbanization. Therefore, obsolescence was perceived as a result of these superior processes, and it is observed the same in every industrial city.

Another urban obsolescence study on the neighborhood scale was conducted by Crane (1943). Crane analyzes old residential neighborhoods in Syracuse, New York, which were "obsolescent but not yet blighted" (1943, p.120). The author proposes the sampling technique to identify obsolescence at the neighborhood level, which means dividing the area into homogenous parts, such as a few blocks, and conducting the obsolescence study among them. After the neighborhoods were divided into similar units, a conclusion can be drawn from the implication of the obsolescence indicators. Crane proposes economic and technical indicators to be able to identify obsolescence in the particular units, which are demonstrated in Table 8.

Table 8: Economic and Technical Indicators of Obsolescence:

Economic	**Technical**
- Size and ownership pattern of the parcels, proportion of owner-occupancy - Tax delinquencies - Assesses value of land and buildings - Ratio of cleared lands by demolitions and condemnations - Rent levels and rental incomes - Stability of the present occupancy - Population characteristics	- Approximate age and size of buildings - Building conditions - Hazards from present occupancy - Type of construction - Type of occupancy (land use) - Traffic circulation and the condition of streets - Community facilities serving the area

Source: Adapted from Crane, 1943

Still, another study is conducted in an old settlement that has always been served for residential functions in Liverpool, England. The physical conditions of the area are given as follows: A neglected housing cluster mainly consisting of three-story brick houses, a quarter of which had been bombed during the war, occupied by mostly low-income families; broken pavements, dilapidated railings, and balconies. Houses in the area did not have a consistent use or ownership pattern. This description has been partially created by using some part of the records of various studies in the field; however mostly based on the observations in the physical environment (Jones, 1967).

The most important change in this area has been the transformation of family structure and individuals' use of space. If the texture of the place is not suitable for change, this will limit the range of households able to use the space according to their needs; and this will be particularly important in a changing society. Moreover, the functional relationship of a building with its exterior environment is also important. Deficiencies in uses such as clinics, schools, shops, parks will contribute to obsolescence as much as any deficiency in the interior conditions (Jones, 1967).

Additionally, The Town and Country Planning Act of 1947 prohibited the conversion of dwellings in the area to any non-residential use, such as offices. For this reason, although this law contains provisions for the maintenance of the buildings, it has caused the area to experience a constant decline. If the buildings were allowed to be converted to offices, there is no doubt that maintenance standards would be higher by virtue of the higher incomes generated from the assets (Jones, 1967).

Lastly, Lichfield suggests an alternative approach to define the degree of obsolescence in an area concerning the socioeconomic levels of dwellers (1988) as the gap between the demands of users and the supply offered by the fabric widens, user behavior changes accordingly. The rental value of the fabric decreases, which is abandoned by its current users due to obsolescence, and it becomes appealing to the groups of lower socioeconomic opportunities. In this case, the author claims that it can be inferred that the places preferred by "underprivileged" people in society are also obsolescent.

- *Obsolescence as part of revitalization (Doratli, 2000, 2005; Doratli et al., 2004, 2007)*

The study of Doratlı (2000) draws an operational framework for the conservation and revitalization of historic urban quarters and applies this framework to the cities in Northern Cyprus. According to the author, revitalization should be a complex implementation that involves the physical and aesthetic concerns about the heritage value of the district and satisfies the demands of contemporary economic, political, and social standards. She suggests that revitalization is the process of addressing, terminating, and reversing the obsolescence in historic districts (Doratlı, 2000). Therefore, a revitalization project needs to analyze obsolescence to develop strategies and tools to prevent further decay and recover the existing fabric. In this respect,

Doratlı suggests that, in order to develop a revitalization model that best fits the area's particular needs, the dynamics of the place and indicators of obsolescence must be adequately analyzed. The following table demonstrates the indicators of obsolescence that the author proposes to be identified.

Table 9: Obsolescence Indicators

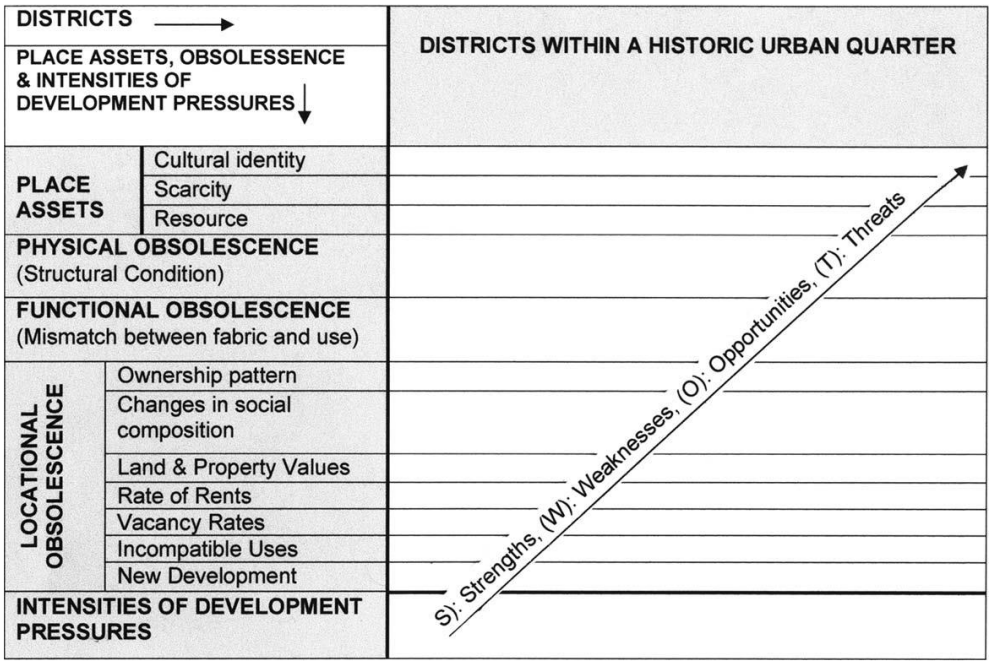
Category	Indicators
Physical	Period of construction
	Structural condition
Functional	Lack of sanitary conditions
	Mismatch between the fabric and the current use
Locational	Ownership pattern
	Changes in social composition
	Rent levels (compared with other districts)
	Vacancy rates (of houses, shops, and other uses)
	Incompatible uses (with the historical character of the territory)
	Land and property values (in comparison with other districts)
	Type and amount of new development

The categories of obsolescence -physical, functional, and locational- are determined by the author.
Source: Adapted from Doratlı (2000)

Another study that identifies obsolescence in historic centers to develop an analytical methodology for successful revitalization strategies is conducted by (Doratli et al., 2004). In addition to the methodology of the previous study, the authors propose to develop a new method of analysis (based on SWOT analysis) to measure the assets of historic quarters. Then, this method is applied to the chosen area, the Walled City of Nicosia in North Cyprus. It is aimed that from the findings of this analysis, an appropriate revitalization strategy that determines what is valuable in a historic urban quarter, what should be protected and maintained, what negative components should be eliminated, and what opportunities this quarter offers; would be generated.

Tiesdell et al. (1996) claimed that the concept of revitalization has three components: *place assets, obsolescence, and intensities of development pressures*. This study integrates these three fields with the essential components of SWOT analysis (strengths, weaknesses, opportunities, and threats); consequently, it creates a SWOT analysis for a revitalization strategy. These three components are explained as follows. Place assets are the *values and qualities that make the areas worthy of being preserved and revitalized*. Obsolescence is the *factors and processes contributing to deterioration and decay.* Lastly, intensities of development pressures are the *factors provoking physical change* (Doratli et al., 2004). Based on the data gathered from this detailed analysis, the authors developed "an innovative matrix that interprets place assets, obsolescence, and intensities of development pressures in a historic urban quarter with regard to strengths, weaknesses, opportunities, and threats" (Doratli et al., 2004, p. 335). The matrix is given below:

Table 10: Combined analysis matrix with SWOT technique



The categories of obsolescence -physical, functional, and locational- are determined by the authors. Source: (Doratlı et al., 2004)

The authors interpreted the data gathered from this table, by classifying 'place assets' as the 'strength' (the capacity of an area, which can be used effectively to achieve the objective of revitalization); 'obsolescence', and 'intensities of development pressures' as 'weakness' (a limitation, fault or defect that would keep it from achieving

revitalization), ‘opportunity’ (a favorable situation in the environment) and ‘threat’ (any unfavorable situation in the environment that is potentially damaging the strategy) (Doratli et al., 2004). As a consequence of applying this method to the Walled City of Nicosia, it is observed that the area suffers from physical, functional, and locational obsolescence.

- *Obsolescence as part of sustainability (Vehbi & Hoşkara, 2009)*

Similar to the studies of Doratlı, (2000); Doratlı et al., (2004); Doratlı, (2005) and Doratlı et al. (2007), this paper proposes a model for revitalization of historic quarters. Like the previous ones, in this study, obsolescence is considered a problem that needs to be fixed with revitalization. However, this work proposes a distinguishing contribution to revitalization discussions, that is, the factor of sustainability. It proposes a model for measuring sustainability in historic districts and achieving sustainable quarters through a proper revitalization strategy. In the sustainable revitalization model, obsolescence is a significant concern because it is accepted that there is a contradiction between the level of obsolescence and sustainability. Therefore, obsolescence should be minimized in order to achieve physically, economically, and socially sustainable urban quarters.

According to Vehbi and Hoşkara (2009), sustainable urban revitalization has three physical, economic, and social components. Physical revitalization of urban areas focuses on using and protecting the resources, protecting and enhancing the natural and built environment, and establishing a pleasant landscape for historic quarters. On the other hand, economic revitalization aims to provide economic stability to the territory, while social revitalization concerns the quality of life and the community’s well-being. In this respect, in Table 11, the spatial indicators of physical, economic, and social dimensions are given.

Table 11: Spatial Sustainability Indicators in Physical, Economic, and Social Aspects

Physical	· The structural condition of buildings · The ratio of built-up areas to open areas (Density of buildings) · Vacancy rate · The proportion of various functions and green spaces · Pollution levels: water, air, noise, visual pollution · Household connection to infrastructure · Floor area per person · Housing tenure types · Accessibility level (Block size interconnected street, cul-de-sacs, sidewalks) · Transportation (Variety of mode of transportation; bicycle, walking, vehicle) · The proportion of car parking spaces to build up area · Pedestrian and bicycle-friendly streets · Public transportation
Economic	· Maintenance cost · Land value · Land and property prices (min./max. Property prices) · Property prices to income level · Rental prices to income level · Housing price to income ratio
Social	· Level of safety · Crime ratio · Sense of well-being · The proportion of the population who find their living environment good · The ratio of recreational, leisure activities to the number of inhabitants · Availability of local services · Accessibility of local services · Number of people using recreation facilities (aware of social and cultural facilities) · Cultural/Racial Diversity · Homeownership rate · Age · Population

The categories of indicators -physical, economic, and social- are determined by the authors.
Source: Adapted from Vehbi & Hoşkara (2009)

The authors preferred to use the scaling technique among five categories used in the assessment and analysis of environmental effects and sustainability: checklists, scaling and weighting techniques, overlays, matrices, and networks (Vehbi & Hoşkara, 2009). The indicators were scaled from 1 to 5 to provide a quantitative aspect and measure the level of sustainability, even with objective and qualitative factors. The following numbers are appointed to particular states for sustainability, which can also be adapted to the further obsolescence questionnaire:

1 - unsustainable in all respects

2 - approaching unsustainable conditions

3 - partially sustainable

4 - sustainable in most aspects

5 - highly sustainable (Vehbi & Hoşkara, 2009, p 728).

2.2.3. Identification of Urban Obsolescence by Mixed Method

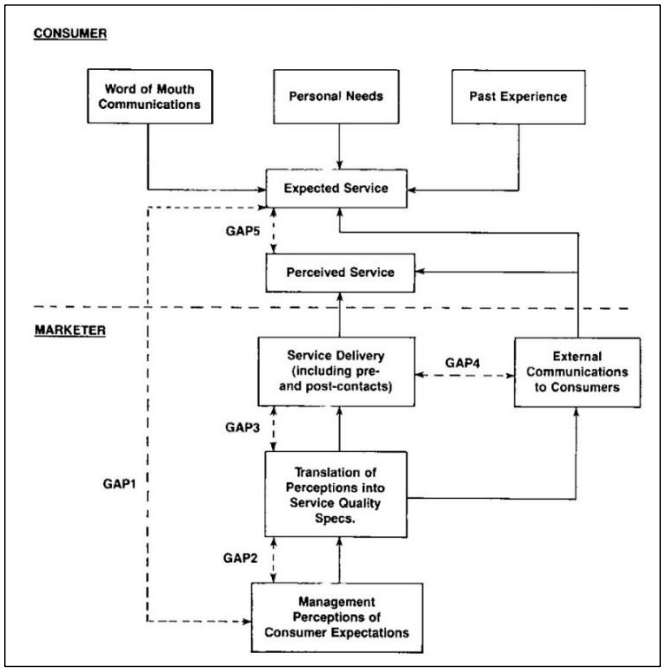
Finally, in this category, examples of studies that identifying urban obsolescence with a mixed method of calculation and observation are examined (Allehaux & Tessier, 2002; Grover & Grover, 2015; Pinder & Wilkinson, 2000, 2001; Thomsen et al., 2015; Thomsen & van der Flier, 2011b; Wilkinson et al., 2014). It was observed that the studies in this method were gathered in three categories. The reason for this sub-categorization is to draw a general framework for the studies under each category. The first category consists of studies that adapt the SERVQUAL technique to the built environment to measure and assess the provided and perceived service urban service delivery. Secondly, a quadrant model of obsolescence is proposed by Thomsen & van der Flier (2011b) for identifying a structure's endogenous and exogenous obsolescence. Lastly, the use of TOBUS software, which is used in building retrofit studies, is examined.

. *SERVQUAL Technique*

A method to identify and measure obsolescence is the SERVQUAL method (which is proposed by Grover & Grover, 2015; Pinder & Wilkinson, 2000, 2001; Wilkinson et al., 2014). SERVQUAL, or the *gap analysis method*, was developed in the marketing field by Parasuraman et al. (1985) to explore the concept of quality gaps in service delivery. This technique is called gap analysis because it identifies and

measures gaps between users' expectations and the quality of the service they perceive. The main problem of these researches is to formulate a method for measuring obsolescence with the views of building occupants. The model adopts the behavioral approach; in other words, it attempts to measure "the relative degree of uselessness or disutility as assessed by the occupants themselves" (Pinder & Wilkinson, 2000, p. 4). The conceptualized version of the technique is given below.

Figure 7: Service Quality Model (developed by Parasuraman, 1985)



Source: Parasuraman, 1985, cited in Pinder & Wilkinson, 2000

> This model suggests that a series of gaps (gaps 1 to 4) exist between the various elements of service provision ... Together gaps 1 to 4 affect the magnitude and direction of another gap located on the user side of the model (gap 5). It is this gap that is of concern to this research.
>
> (Pinder & Wilkinson, 2000, p. 5).

Gap 5 is the service quality gap between users' perception of the building's service performance and their expectations. In the service quality gap, it is the user that determines the quality of the service. Users make a judgment by comparing the service they receive with the service they expect. At the end, the building obsolescence is measured through the service quality gap. The more the users' expectations regarding the building service quality exceed the level of service quality they perceive, the higher would be the level of building obsolescence (Pinder & Wilkinson, 2000).

The first step of a SERVQUAL study is developing a model based on the expectations and perceptions of building users to identify and measure the problems related to building obsolescence in public sector office properties. However, building quality is not a phenomenon that can be easily understood and concretized. To solve the difficulties arising from these uncertainties in defining and measuring building quality, Pinder and Wilkinson propose to divide building quality into factors and sub-factors, as shown in Table 12:

Table 12: Example of building quality sub-factors for office property

Factor	Sub-Factor
Configuration	Floor layout
	Floor-to-ceiling height
Internal specification	Quantity/quality of services
	Quality of finishes
External appearance	Impact of entrance hall, etc.
	Quality of external design
Deterioration	Deterioration of interior
	Deterioration of exterior

Source: Pinder & Wilkinson (2000, p. 4)

The methodology used in the proposed study is the same as the methodology developed by Parasuraman et al. (1985), the stages of which are summarized in Table 13. Each case study is examined qualitatively and quantitatively, and these findings are divided into chapters. Besides, standard social science research techniques are applied in both quantitative and qualitative parts of case studies. A negative score is accepted as a building obsolescence indicator for any factor or sub-factor summarized in Table 13.

Table 13: Proposed Gap Analysis Methodology

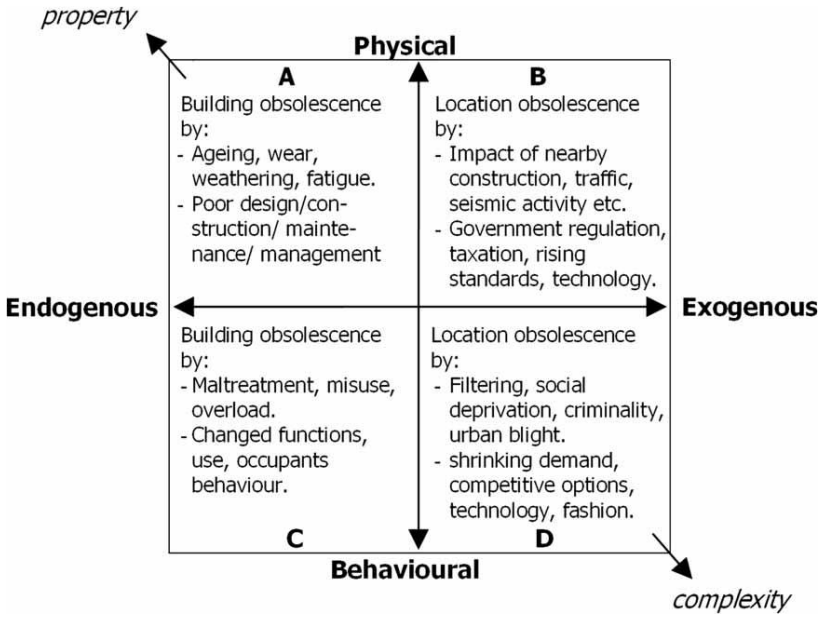
Stage	Description
1	Provide definition of building quality
2	Identify factors of building quality construct using interviews or focus groups
3	Analysis qualitative data and generate sub-factors to represent each building quality factor
4	Collect expectations and perceptions data from building occupants using questionnaires
5	Statistical analysis and scale purification to refine factors and sub-factors
6	Identify residual sub-factors representing each factor
7	Use refined scale to collect expectations and perceptions data from other case studies
8	Repeat stage 5
9	Repeat stage 6
10	Evaluate reliability of scale using data collected in stage 4
11	Assess validity of the building quality scale

Source: Pinder & Wilkinson, 2000, p.6

· *Identifying Endogenous and Exogenous Obsolescence*

Still another conceptual model consisting of physical, behavioral, endogenous, and exogenous factors is formulated to identify and measure the levels of obsolescence by Thomsen et al. (2015) and Thomsen & Flier (2011). The quadrant model for obsolescence is given in Figure 8.

Figure 8: Quadrant model of obsolescence



Source: Thomsen & van der Flier, 2011b, p. 355

On the left side of the diagram, endogenous (or internal) factors are typical for building itself and lead to building obsolescence. On the right side, exogenous (or external) factors are the consequences of external influences, generating locational obsolescence for a structure. Building and locational obsolescence processes can be caused by physical factors (on top of the diagram) and behavioral (on the bottom). In addition to the vertical and horizontal dimensions, there is also a diagonal dimension that refers to the simplicity and complexity of obsolescence. Property-based obsolescence is related to physical and internal factors, and it is usually easier to overcome because of the lower numbers of actors and elements involved in the process. From quadrant A to D, the complexity of actors and elements increases; therefore, it gets harder to prevent and rectify obsolescence. This model demonstrates a concise yet fundamental conceptual framework, which constitutes a layout for further research that intends to analyze, avoid, and cure obsolescence.

· *The TOBUS Software*

This study discusses obsolescence measurement with a software called TOBUS (a decision-making Tool for selecting Office Building Upgrading Solutions). As Flourentzou et al. defined, the TOBUS software was developed for "building diagnosis and decision-making method for retrofit studies" (2002, p.193). In this study, first of all, obsolescence indicators are determined to be used in the software. The authors indicate that the methodology should be based on the criteria of objective analysis in order to be able to assess obsolescence scientifically. "The determining criteria were defined based on the authors' experience of office building design and on buildings owners' expectations, accounting for the particular qualities of service sought in modern buildings" (Allehaux & Tessier, 2002, p. 128). The program uses the following indicators in order to define functional obsolescence in office buildings:

- HVAC (Heating, ventilation, and air conditioning)
- Plumbing
- Fire protection
- High voltage
- Low currents
- Vertical transportation systems
- Building cleaning system

2.3. Concluding Remarks

In this chapter, which discusses the notion of obsolescence in a conceptual framework, the research topic is examined under the titles of definitions, its historical development in the urban planning literature, the approaches in which it is addressed, the categories it is divided into, and the identification methods in related case studies. The purpose of this chapter was to provide the necessary tools to observe the difference between the expert and user perspectives in identifying obsolescence, which is the aim of the study.

First of all, definitions of obsolescence are researched from a broad perspective. It is discovered that, unlike other concepts that describe urban depression, obsolescence refers to a process of degradation rather than demonstrating the ultimate worse

condition for an area and contains relativeness that enables to consider the evaluations of both insiders and outsiders. Secondly, the integration of the concept into architectural and urban planning literature is examined. Additionally, how it is studied in different scales from a single building to territory -in historic city centers particularly- are analyzed.

Thirdly, the approaches in which the concept of obsolescence is evaluated are examined. The significance of the expert-user duality emphasized in the hypothesis is strengthened with the behavioral approach and user perspective. Then, the categories in which obsolescence was described were examined, and five prominent categories (physical, functional, economic, locational, and image) were detailed. This is also the first step to systematize obsolescence studies, as observed from the literature.

After determining the categories within which the concept was examined, the identification methods of obsolescence studies in the literature are discussed. The reason for examining these studies was the lack of generally accepted objective indicators to identify urban obsolescence. Moreover, this study is intended to identify obsolescence on a territorial scale, considering the evaluations of the users as well as the expert. Therefore, studies in the literature are classified according to their approaches to obsolescence (whether they are included behavioral approach or not), scales (single building or territory), and identification methods (calculation or observation). It was decided to use measurement and identification methods of this category. However, no study in a neighborhood scale with user perspective was encountered according to the approach/scale matrix.

For this reason, another categorization is applied to the example studies with respect to their urban obsolescence identification methods. It is observed that these studies use two different methods, which are calculation/scoring and observation. The table below demonstrates the studies with the mentioned two methods and a mixed method (with the combination of these two). The methods of identification of studies -which are analyzed in detail in the previous section- are summarized and simplified in the table below.

Table 14: Obsolescence Identification Methods of the Studies

	Studies	**Methods of Identification**
Studies that identifying obsolescence by **CALCULATION & SCORING**	Akyurek & Ciravoğlu, 2017	Obsolescence Formula $Ai = \alpha 1L + \alpha 2F + \alpha 3P + \alpha 4K + \alpha 5H + \alpha 6O + \varepsilon$
	Bolton, 1922	Calculating the Economic Existence of Buildings
	Boston West End Urban Renewal Project, 1951	Applying an Appraisal Method for Measuring the Quality of Housing
	Jacobs, 1941	Comparison of Obsolescence Level
	Khalid, 1994	Applying Hedonic Price Estimation
	Nutt et al., 1976	Obsolescence Formula (An advanced version of the study by Nutt & Sears (1972) $[M] = f([P], [B])$
	Nutt & Sears, 1972	Obsolescence Formula $[M] = f([P], [B])$
	Reilly, 2013	· Calculating the excess operating and/or maintenance costs · Calculating the excess capacity and/or excess capital costs · Calculating the structural and/or capacity superadequacies or inadequacies
Studies that identifying obsolescence by **MIXED METHOD**	Allehaux & Tessier, 2002	Applying the TOBUS Software
	Grover & Grover, 2015	Gap Analysis with SERVQUAL Technique
	Pinder & Wilkinson, 2000	Gap Analysis with SERVQUAL Technique
	Pinder & Wilkinson, 2001	Gap Analysis with SERVQUAL Technique
	Thomsen et al., 2015	A Quadrant Model of Obsolescence
	Thomsen & van der Flier, 2011b	A Quadrant Model of Obsolescence
	Wilkinson et al., 2014	Gap Analysis with SERVQUAL Technique

Table 14 (continued)

Studies that identifying obsolescence by **OBSERVATION**	Crane, 1943	Observation of Indicators*
	Doratli, 2000	Observation of Indicators*
	Doratli, 2005	Observation of Indicators*
	Doratli et al., 2004	Observation of Indicators*
	Doratli et al., 2007	Observation of Indicators*
	Herrold, 1935	Observation of Indicators*
	Jones, 1967	Observation of Indicators*
	Lichfield, 1988	Observation of Indicators*
	Vehbi & Hoşkara, 2009	Observation of Indicators*

Prepared by the author.
*The indicators of these studies are recollected below.

It is also noticeable that, all the studies based on observation methods are at a territorial scale. In accordance with this classification, the indicators of obsolescence for this thesis are determined to be selected among **the indicators of the studies with observation method** (Crane, 1943; Doratli, 2000, 2005; Doratli et al., 2004, 2007; Herrold, 1935; Jones, 1967; Lichfield, 1988; Vehbi & Hoşkara, 2009). However, some indicators were eliminated (such as building ages, vacancy rates, floor area per person, property ownership rates, land and property rates, rent levels, number of new developments, etc.) based on technical and/or statistical information rather than observation. The indicators must be observable by the users in order to be able to compare their perspectives with the experts, as was intended in the research question of the thesis. These indicators are given as follows.

Observed Urban Obsolescence Indicators in Studies on Territory Scale:

- Structural condition (Crane, 1943; Jones, 1967; Doratli, 2000; Doratli et al., 2004; Vehbi & Hoşkara, 2009)
    1. Broken pavements
    2. Dilapidated railings and balconies
    3. Heating and lighting

4. Lack of sanitary conditions
5. Lack of adequate infrastructure
6. Lacking household connection to infrastructure
7. Hazards from present occupancy
8. Level of maintenance

· Pollution: water, air, noise, visual pollution (Vehbi & Hoşkara, 2009)

· Mismatch between the fabric and the current use (Doratli, 2000)

· Incompatible uses (with the historical character of the territory) (Doratli, 2000)

· The capacity of different functions (Vehbi & Hoşkara, 2009)

· The capacity of open and green spaces (Vehbi & Hoşkara, 2009)

· Level of accessibility (Crane, 1943; Vehbi & Hoşkara, 2009)
  - Traffic circulation and the condition of streets
  - Availability of pedestrian ways
  - Variety of modes of transportation
  - Public transportation
  - Availability of car parking spaces
  - Pedestrian and bicycle-friendly streets

· Social unrest (Herrold, 1935; Crane, 1943; Jones, 1967; Doratli, 2000; Vehbi & Hoşkara, 2009)
  - Changes in social composition
  - Cultural and racial diversity
  - Level of safety
  - Crime ratio
  - Sense of well-being
  - Life satisfaction index
  - Occupation by lower classes

These indicators are selected and eliminated to be used in the case study of this thesis. The selection criteria for indicators are given in the methodology chapter.

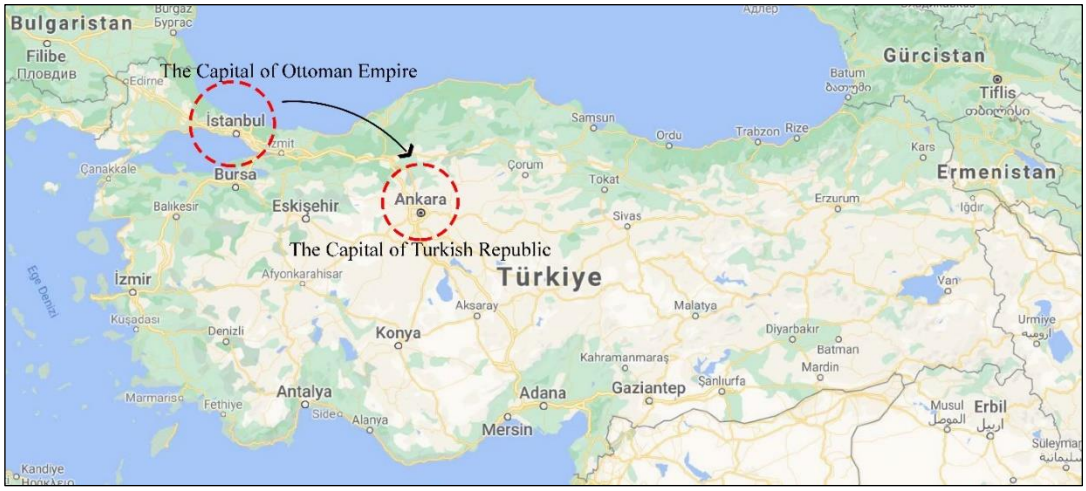
CHAPTER 3

RESEARCH METHOD AND THE CASE STUDY – IDENTIFYING OBSOLESCENCE IN THE HISTORIC CITY CENTER OF ANKARA

3.1. The Case of Ulus

Ankara city has been the capital of Turkey since October 13, 1923. Located in the western parts of Turkey's Central Anatolian Region, the city is also located at an important point on the axis that connects the Asian and European continents. According to Gottmann (1983), since World War I, a number of capital cities have been relocated into more central positions within the boundaries of nation-states. After the establishment of the Republic of Turkey, the capital of the new nation-state was moved to Ankara from the capital of the former empire, Istanbul. One of the major reasons behind this decision is the central location of Ankara within the borders of the new country (Batuman, 2013).

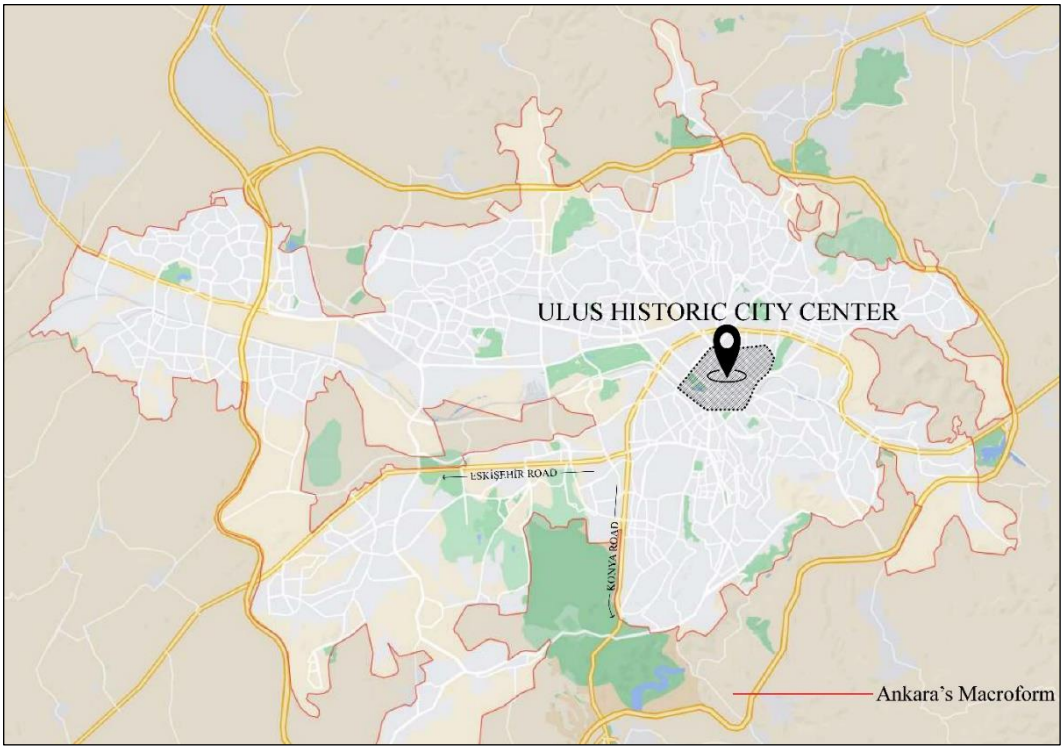
Figure 9: The Location of Istanbul and Ankara



Prepared by the author.
Base Image Source: Google Maps

The city of Ankara developed by sprawling around the historic city center of Ulus within its bowl-shaped geographical borders until the urban growth has reached the geographical thresholds of the city. Afterward, the city gained the macroform demonstrated below by mainly developing towards the western and southwestern axes. Ulus quarter served as the administrative, political, commercial, and cultural center of Ankara in the years following the establishment of the Republic; however, only its commercial function has been maintained until today. In Figure 10, the location of Ulus historic city center and its surroundings in Ankara macroform is demonstrated.

Figure 10: Location of Ulus Historic City Center in the Macroform of Ankara



Prepared by the author.
Base Image Source: Google Maps

The history of Ankara city, which hosted many civilizations such as the Hittites, Phrygians, and Lydians, dates back to the Paleolithic era (60000-10000 BC). However, after numerous wars, fires, and disasters; it survived as a small town until the last days of the Ottoman Empire. With its declaration as the capital city after the establishment of the Republic of Turkey, the development process of today's city of Ankara has begun. The city developed and sprawled around the existing settlement, which is the area known as Ulus historic city center today. Therefore, Ulus historic

city center contains important historical and cultural values from the early Republican period. In addition to these, the artifacts from Hittites, Phrygians, Lydians, Persians, Galatians, Romans, Byzantines, Seljuks, and Ottomans constitute the multi-layered historical structure of the city. In the photograph below, the Ankara Victory Monument and Ulus Square is displayed, which has been exhibited since 1927 as one of the important symbols of Ankara and the Republic.

Figure 11: Panoramic View of Ulus Square and the Victory Monument

Captured by the author in 02.06.2021

As given in the previous cases for historic quarters (Feilden & Jokilehto, 1998; Pickard & De Thyse, 2001; and UNESCO, 2008), Ulus historic city center has lost many of its values and features up to the present due to several challenges such as physical deterioration, demographic expansion from rural areas, occupation of lower classes, lack of maintenance, functional and social segregation from the rest of the city, disinvestment, and ignorance by private and public agencies. This section discusses the history of Ankara and Ulus and the effects of planning studies on the historical texture. The development of the city of Ankara is discussed in four successive planning phases listed in Table 15. The physical and functional changes of the historic city center Ulus within the Ankara macroform are examined within these periods.

3.1.1. The Historical Background of Ulus

The macroform of Ankara was developed by urban planning studies since the establishment of the republic. Starting with the first city plan, the plans prepared/supported by different ideologies in different periods undoubtedly played an essential role in the city's development. Therefore, it would be meaningful to discuss the current situation Ulus from a historical perspective, including political, economic, and social processes starting from the establishment of the Turkish Republic.

It should be emphasized that analyzing the development of a city by only considering city plans would not be an adequate approach. For this reason, the development process of Ulus historic city center is examined under four inclusive planning periods, together with the urban changes it has experienced. This periodization combines the urban plans and interventions with the socio-economic and socio-political phenomena that designate the urbanization dynamics of each period. Additionally, the plans and interventions are examined in detail in the findings chapter of this study, under the section of 'Results of the Document Research' (Chapter 3.3.1). The periods of transformation and the plans/interventions they comprise are given in Table 15:

Table 15: Periods of Transformation for Ulus & Plans and Interventions

Periods	**Plans and Interventions**
1. The Development of Ulus as the City Center of Capital Ankara (1923-1950's)	**i.** Lörcher Plan (1924) **ii.** Jansen Plan (1932)
2. The Changing Socio-Economic Structure of Ulus and the Gradual Withdrawal of Central Facilities (the 1950s–1980s)	**iii.** Yücel – Uybadin Plan (1957)
3. The Attempts for Conserving and Regenerating the Obsolescent Historic Quarter (the 1980s–2000s)	**iv.** Ankara 1990 Master Plan (1982) **v.** Ulus Historic city center Conservation-Reclamation Plan (1990)
4. Intensifying Obsolescence of Ulus due to the Inadequate and Fragmented Interventions (2000's - Today)	**vi.** Declaration of Ankara Historic city center Renewal Area (2005) **vii.** 2023 Capital Ankara Master Plan (2007) **viii.** Ankara Historic city center Renewal Area Conservation Plan (2007) **ix.** Ulus Historic city center 1/5000 Conservation Plan (2014) **x.** Transition Period Projects (2008 – 2014 & 2015 – 2019)

Prepared by the author

1. *The Development of Ulus Quarter as the City Center of Capital Ankara (1923-1950's)*

This period starts with the establishment of the Republic in 1923 after a series of devastating wars and ends in the 1950s. In this period, the main urbanization policy of the city of Ankara was to provide the spatial requirements for the administrative activities of the newly established nation. In other words, it was aimed to create, first, a city where the political, administrative, and financial activities of the Republic of Turkey would be carried out, and second, a built environment for the arrived population to work in these duties.

However, in the 1950s, the desired central business district could not be established in Ulus. Renewal and improvement proposals for the historical buildings were not accomplished. Moreover, the hills and sloped sites of the city were decided as inhabitable in Jansen's plan. This decision has paved the way for illegal construction in Ulus. The current squatter problem of the hills in Altındağ district can be traced back to this decision of the planners. In addition, after the construction of *Bakanlıklar* (a site consists of a group of ministry buildings) and *TBMM* (The Grand National Assembly of Turkey) building, the administrative center of Ankara has shifted to Kızılay. Consequently, these decisions led up to the duality of the old town-new town.

2. *The Changing Socio-Economic Structure of Ulus and the Gradual Withdrawal of Central Facilities (the 1950s–1980s)*

From the beginning of the 1950s, the macroform and population of the city had reached beyond the foreseen limits in Lörcher and Jansen Plans. The city has reached a population of 455.000 in 1955, while the population projection of the Jansen plan for the 1980s was 300.000. There were two factors behind this population increase. First was the expected migration from all over the country, due to being the capital city. The second one was the unexpected massive migration to central cities, especially Ankara, İstanbul, and İzmir, with modernization and mechanization in agriculture. With the investments in the agriculture sector, a massive surplus of labor power appeared in rural parts of the country.

The second factor was the actual reason for the increase in population, which was much higher than foreseen in the plans. This excess labor power headed towards major cities like Ankara, İstanbul and İzmir; none of which had adequate housing stock, urban infrastructure, and job opportunities. Consequently, the squatter problem, which started in the previous period because of the negligence of the decision-makers, was sprawled rapidly and embraced the entire Ulus territory (Batuman, 2013). As the new population started to concentrate in these areas, middle and upper-income classes were rapidly withdrawn from the center. In this period, Ulus became the new center for lower-class industrial workers and transformed according to their commercial and socio-cultural relations. With these concerns for the population increase and land and infrastructure deficiency, a planning contest was organized in 1955. Subsequently, Ankara Master Plan was approved in 1957, which was prepared by Nihat Yücel and Raşit Uybadin.

3. *The Attempts for Conserving and Regenerating the Obsolescent Historic Quarter (the 1980s–2000s)*

The problems created by the abovementioned rural-urban migration and urban population growth did not only affect Ankara. In order to produce solutions to these problems, autonomous Metropolitan Master Planning Bureaus were established under the direction of the Ministry of Reconstruction and Resettlement in 1965 to regulate planning activities in İstanbul, Ankara, and İzmir. In the case of Ankara city, almost sixty percent of the population was located in the unplanned areas of the inner-city due to the high land and rent prices in the planned settlements. Furthermore, the inner city suffered from severe air pollution in the late 1960s, caused by the valley-shaped topography of Ankara city and the fact that the wind corridors were interrupted by high-rise buildings.

To intervene in the particular problems of the historic city center, the Ministry of Culture, the Directorate-General of Antiquities and Museums, and Ankara Municipality had carried out identification and documentation studies in 1979. In Ulus, an area covering approximately 150 hectares was declared the historical site by the abovementioned institutions. With these studies, the first, second, and third-degree historical sites and borders of the historic commercial area have been determined.

Subsequently, Ankara Metropolitan Municipality organized a contest for Ulus Historic city center Conservation Plan in 1986. A project group consists of experts from various professions from Middle East Technical University won the contest, and the Ulus Historic city center Conservation-Reclamation Plan was approved in 1990. Besides being the first specific plan prepared for Ulus historic city center, this plan was one of the rare projects that could be -partially- implemented on a national scale (TMMOB Şehir Plancıları Odası Ankara Şubesi, 2019). The site selection of the plan was made according to the boundaries determined in the abovementioned historical site determination studies. According to the plan's provisions, a framework has been determined in which the existing first and second-degree urban site boundaries and archaeological site boundaries are included. As an alternative to the dominant master planning approach, the plan, which adopts a strategic approach, has been elaborated with approaches such as staging, project packages, financing, and organizational models.

4. *Intensifying Obsolescence of Ulus due to the Inadequate and Fragmented Interventions (2000's - Today)*

On 14.01.2005, under the presidency of Melih Gökçek, Ankara Metropolitan Municipality decided to cancel all the plans in effect in the area, with the Municipal Council Decision No. 210. Also, with the same decision, the municipality declared the area as "Ulus Historical and Cultural Urban Transformation and Development Project Area". The period after 2005 can be considered as the unplanned period for Ulus in practice. Because, although there were two plans prepared and accepted, the operation years have not lasted for a plan to be implemented. The first plan was accepted in 2007 and canceled in 2008. The second one was accepted in 2014 but canceled in 2016. In the years that there was no plan in operation for the historic city center, Transition Period Principles of Conservation and Terms of Use *(Geçiş Dönemi Koruma Esasları Ve Kullanma Şartları Temel İlkeleri)* defined in the Law on the Conservation of Cultural and Natural Property (2863) were being implemented.

In conclusion, since the cancellation of the Ulus Historic city center Conservation-Reclamation Plan (1990), Ulus has been going through a de facto unplanned period. Ankara city and Ulus historic city center contain many historical and cultural values inherited from various different periods. Some of these values, especially from the

early Republican period, still functioning as office buildings, commercial buildings, and bank headquarters in Ulus. In other words, they still have a use value as a part of the city. They also have an economic value because they are still functioning even though they have problems arising from negligence and misuse (Madran et al., 2005). Nevertheless, by the negligence until the 1980s and the consequent deterioration and the destructions after the 2000s; the historic fabric has been seriously damaged, and some values have been irreversibly destroyed (TMMOB Şehir Plancıları Odası Ankara Şubesi, 2019).

3.1.2. Selection of the Study Area

Ulus is the first settlement of early Republican Ankara and the city developed by sprawling around the historic city center. The center was designed as the CBD of Ankara and served as administrative, political, commercial, and cultural facilities in the early years of the Turkish Republic. However, Ulus lost its central administrative, political, and cultural attributes in time. Today, the main function of Ulus is being a commercial center for the middle and lower classes.

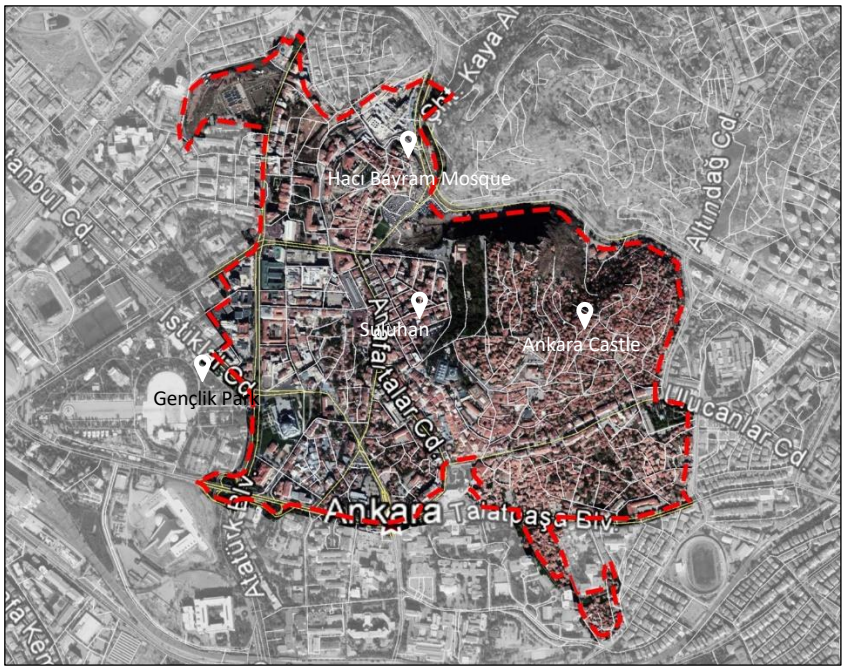
The reason for Ulus historic city center to be chosen as the case area in such a study which examines obsolescence in historic city centers, is that its suitability for the author to conduct fieldwork under the current pandemic conditions as of 2020. Moreover, as mentioned in Chapter 2.1.7, regardless of its geographical location, there are similar driving forces and some common indicators of obsolescence in historic city centers that are reducing citizens' quality of life (Feilden & Jokilehto, 1998; Pickard & De Thyse, 2001; and UNESCO, 2008). The majority of these indicators are observed in the selected case area. Therefore, Ulus historic city center is considered a suitable area for conducting this study.

The case study area, *Ulus Semti*, is located in Altındağ district. In addition to being the historic city center of Ankara, Ulus is a dynamic part of the city, with residential areas and commercial activities serving a large part of the city. Although the area referred to as "*Semt*" does not have administrative boundaries, it used by the citizens in big cities such as Ankara, Istanbul, and Izmir to describe places in their daily lives.

There are several definitive boundaries for the historic city center of Ulus and its surrounding, which are determined as a result of conservation and renewal activities.

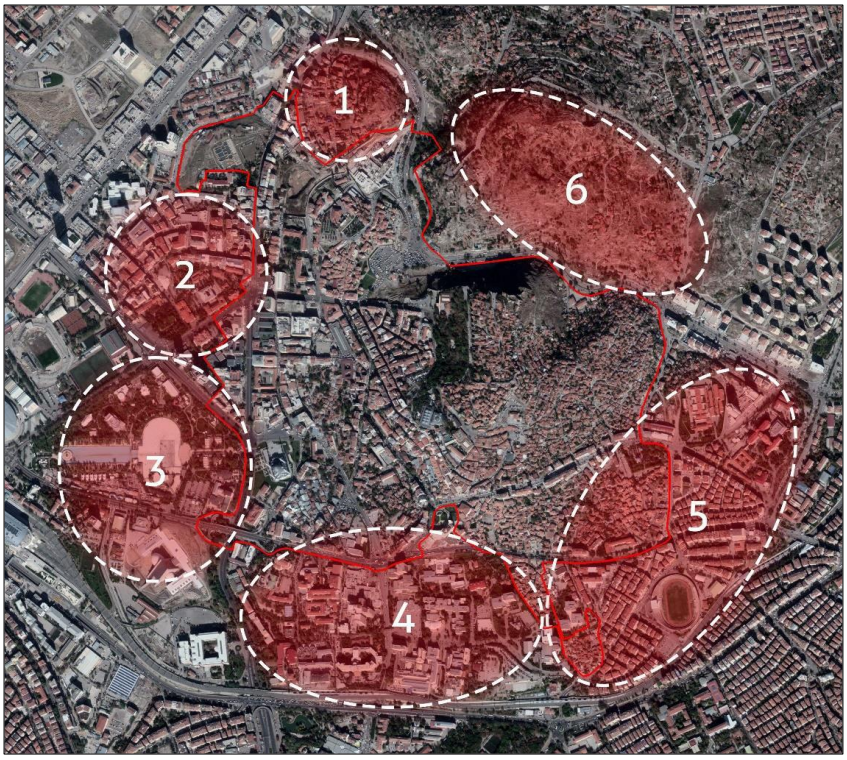
As stated above, one of these definitive boundaries is the boundary of Ulus Historical and Cultural Urban Transformation and Development Project Area (given in Figure 12), which was declared by Ankara Metropolitan Municipality in 2005. However, despite all, there is no such boundary that completely covers the historic city center and all the values it contains. Ankara Chamber of City Planners, TMMOB organized the 'Ulus Conservation-Reclamation Plan Workshop' for the historic city center in 2019. In the strategic document prepared as a proposal at the end of the workshop, it was stated that the conservation plan to be prepared for the historic city center should cover the boundaries in the following map.

Figure 12: Ulus Historical and Cultural Urban Transformation and Development Project Area



The boundary of Ulus Historical and Cultural Urban Transformation and Development Project Area is attached by the author.
Base image source: Google Earth

Figure 13: The proposal for Ulus Conservation Plan Boundaries (prepared by TMMOB Şehir Plancıları Odası Ankara Şubesi)



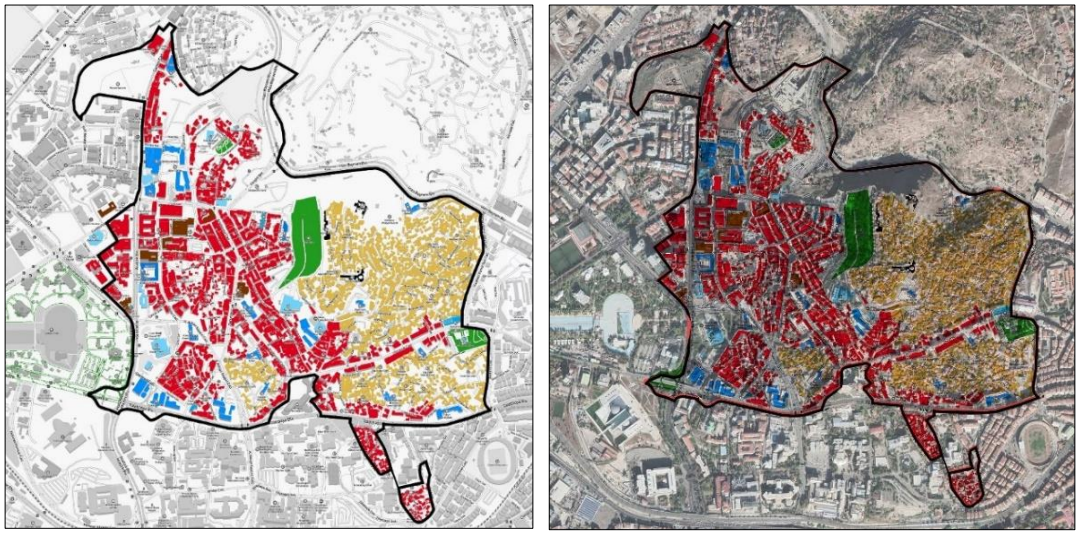
Ulus Historical and Cultural Urban Transformation and Development Project Area
1: İsmet Paşa Neighborhood, 2a: Çankırı Street and its western parts, 2b: The protocol road in Jansen Plan, 3: Gençlik Parkı and Atatürk Cultural Center, 4: Sıhhiye hospital zone, 5: Cebeci Stadium and Ulucanlar Prison Museum, 6: Hıdırlıktepe
Source: (TMMOB Şehir Plancıları Odası Ankara Şubesi, 2019, p. 23)

It should be remarked that the purpose of this thesis is not to prepare comprehensive inputs for a conservation-revitalization plan that includes all the historical and cultural values of the historic city center of Ankara. This study attempts to define obsolescence in Ulus historic city center with observable indicators. Although it was stated that it was not sufficient for a comprehensive conservation plan, the boundaries of 'Ulus Historical and Cultural Urban Transformation and Development Project Area' (demonstrated in Figure 12) were considered to be meaningful and sufficient for this study. There are two behind the selection of this boundary. Firstly, it covers the required amount of area to carry out the field study. The commercial functions, residential areas and historical values in the district are included in this boundary. Secondly, since this is an official boundary, it is observed that there are more available data within the scope of this boundary in the strategic documents prepared by Ankara Metropolitan Municipality and Altındağ Municipality.

After the boundary of the historic city center study area was accepted as the boundary of the 'Ulus Historical and Cultural Urban Transformation and Development Project Area', a land-use map was prepared to see the distribution of the functions in the area. While preparing the land use map, firstly, Google Earth, Google Earth Street View and Yandex Maps databases were used. These databases were visited on 25-26 July 2021. In addition, because of the absence of access to some areas by Google Earth Street View, the field was visited on July 28, 2021. Apart from the field observation and user survey studies for the case study, a separate study was conducted to prepare the land use map.

The base map used in the left one of the maps below was obtained from Yandex Maps. Yandex is preferred (among the three databases given above) as the base of the land use map because this database includes images of parcels and structures, which has the most similarity to the base maps (*halihazır*) used in the city planning field. In the map on the right, the land use map and the satellite image taken from Google Earth were combined in order to provide visual unity with the maps above. After clearly describing the locations of the areas in these two maps, the map on the left was used as a base from this point on for better conceptualization.

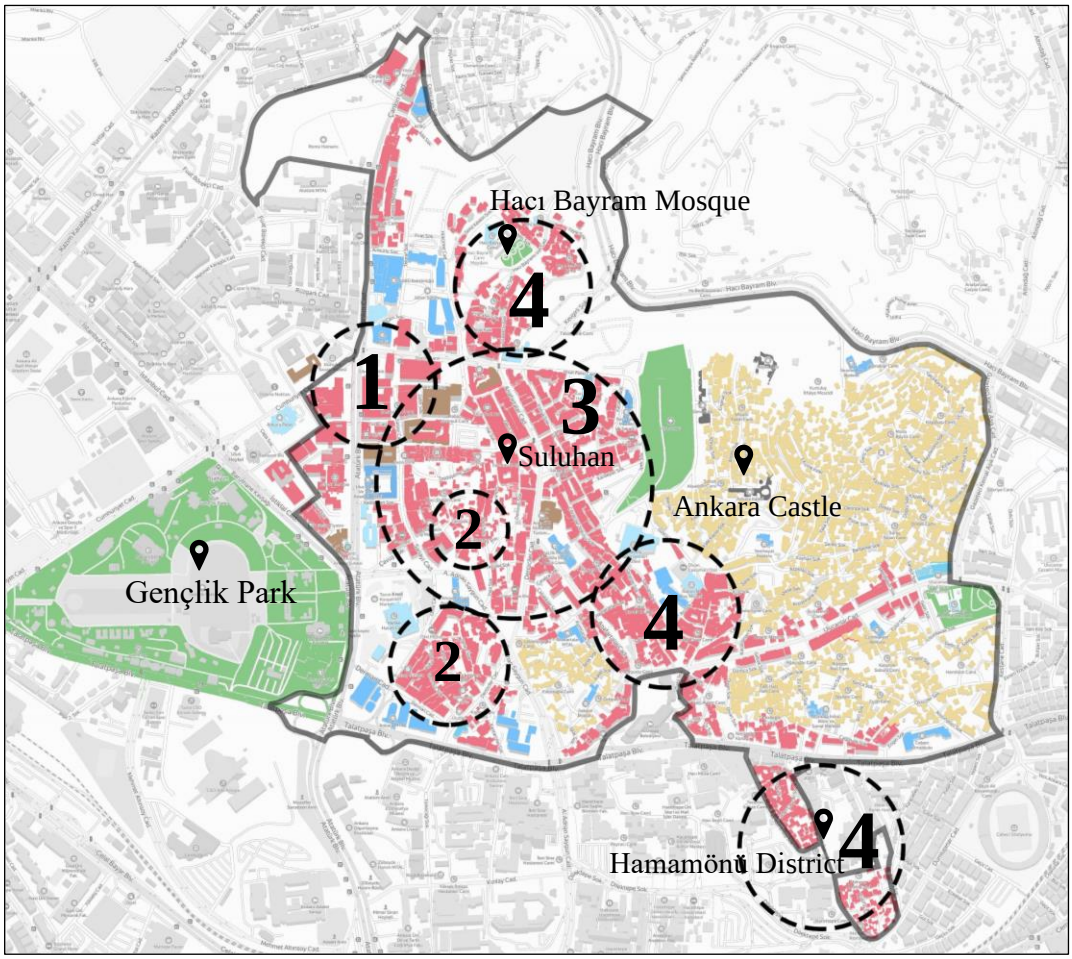
Figure 14 and 15: Land Use Map of Ulus Historic City Center



Land use maps are visualized by the author in Photoshop.
Base image source on the left map: Yandex Maps
Base image source on the right map: Google Earth

It has been discovered with the land use mapping that the most intense uses in the area consist of commercial and residential areas. For this reason, the fieldwork was focused on these two uses in order to represent the historic city center. Another remarkable factor discovered during the land use map studies was that the commercial areas within the given border differ both in terms of spatial texture and functionality. For this reason, commercial regions within the given border were analyzed in order to create a general framework that reflects their characteristics. As a result of this analysis, four different commercial textures emerged. These clusters with different textures are marked approximately in the map below. On the contrary to the commercial fabric types, the entire residential fabric in the area consists of slums. Therefore, there is no specific land-use analysis made for the residential areas.

Figure 16: Four Different Patterns of Commercial Areas



Developed and visualized by the author by analyzing the land use map.
Base Image Source: Yandex Maps

Type 1: Commercial Bazaars

The first type of texture covers the bazaars located in the very center of Ulus. There are four big bazaars in this area, namely Ulus Bazaar, Anafartalar Bazaar, Ulus City Bazaar, and Yüzüncü Yıl Bazaar.

Type 2: Highly Deteriorated Buildings

Commercial activities in this type of texture are located in old and deteriorated buildings. The section in the south of Suluhan shown on the map and the İtfaiye Square, which is the area covered by the other circle number two, are the areas that are composed of this texture.

Figure 17 and 18: Examples from Second Type of Patterns

Pala Street


Yenice Street

Image sources: Google Earth Street View, Obtained in 25.07.2021

Type 3: Apartment-Type Commercial Buildings

This texture is the second most common commercial fabric in Ulus, with the bazaars and office buildings on different scales. These buildings, designed to serve the residential function, have been converted into commercial areas in time. An example of this texture is given in the photograph below. Although this type of construction is not as large as shown in the first area, it is intertwined with business buildings located along the streets.

Figure 19: Example from the Third Type of Pattern

Kocalar Street
Captured by the author in 02.06.2021

Type 4: Restored Old Texture

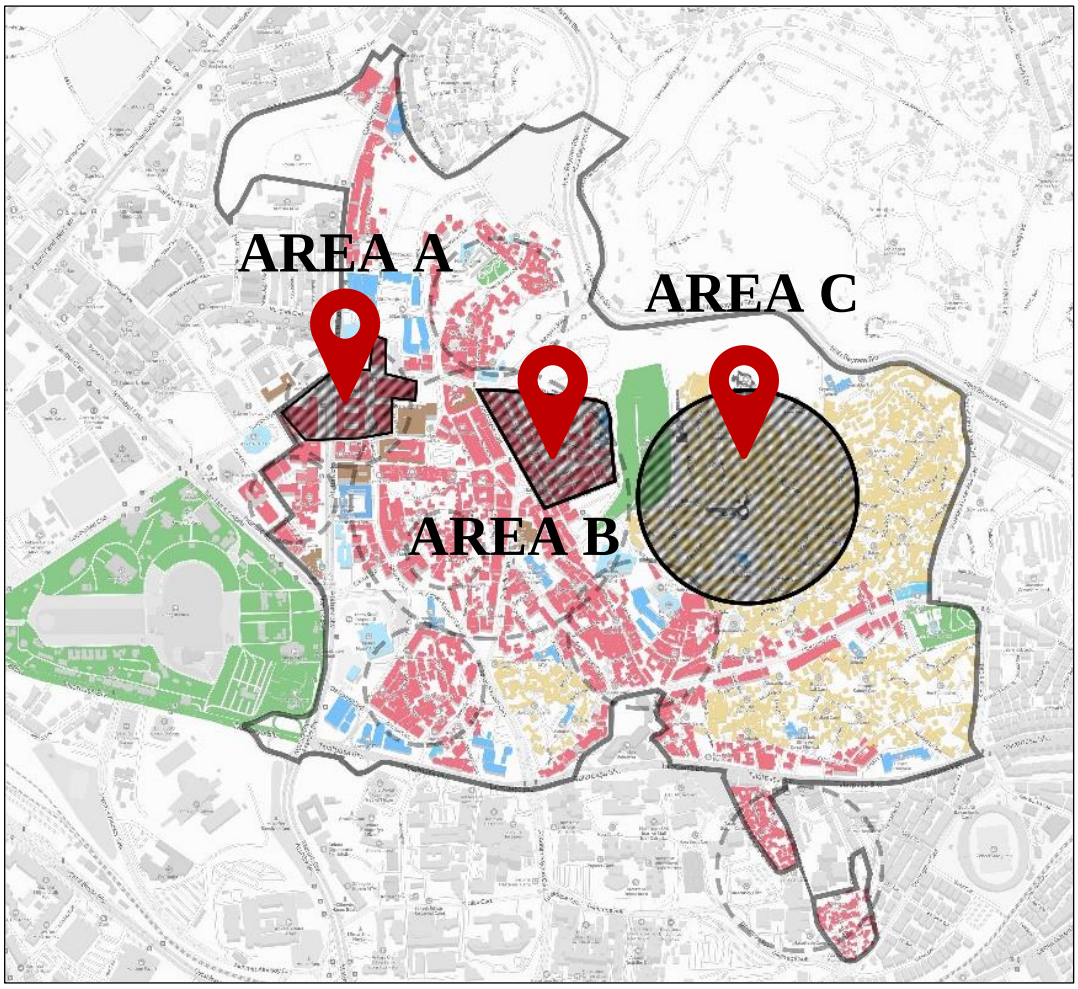
This texture can be seen around the Hacı Bayram mosque, in the Hamamönü District, and the touristic/commercial areas on the outskirts of Ankara Castle. The buildings in these areas are the restored/rebuilt old Ankara houses. In addition to touristic and commercial activities, the headquarters of various associations are located in these areas.

Figure 20: Example from the Fourth Type of Pattern

Güvercin Street
Captured by the author in 02.06.2021

As a result of the field research, it was decided to select study areas that would adequately represent the commercial and residential characteristics of the territory. The commercial areas were selected from the first and third types of fabric. The reason for this is that these are the areas where the commercial function of Ulus is most intensely located. In these areas, there are commercial functions that will appeal to all segments of the city and have been serving the residents of Ankara for years, although the profile has changed over the years. The places selected as study areas are shown on the map below.

Figure 21: Selected Study Areas



Developed and visualized by the author by analyzing the land use map.

Base Image Source: Yandex Maps

Area A and B are selected because they include the general characteristics of Ulus among the other commercial areas. Additionally, area C is selected to represent the residential characteristics.

Figure 22: Study Area A

Drawn by the author.
Source: Google Earth Street View, obtained in 25.07.2021

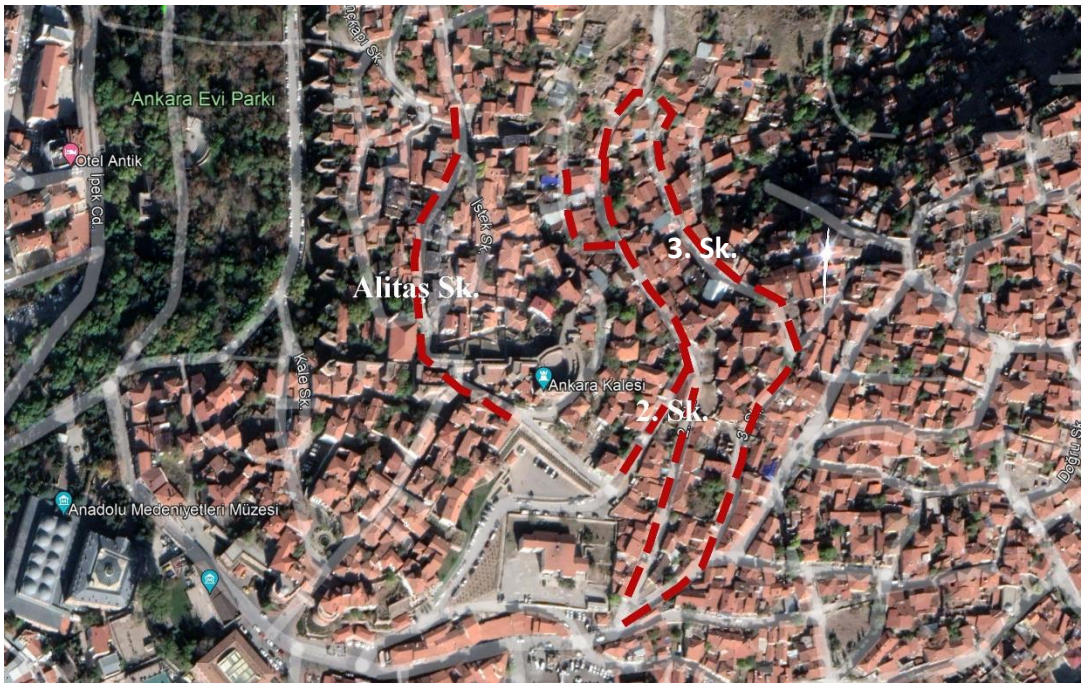
Study Area A is located in Hacıbayram Neighborhood of Altındağ District. In Area A, the bazaars are located mentioned in the first fabric. The area consists of Ulus Bazaar, Anafartalar Bazaar, Ulus City Bazaar and Yüzüncü Yıl Bazaar.

Figure 23: Study Area B

Drawn by the author.
Source: Google Earth Street View, obtained in 25.07.2021

Study Area B is located in Kale Neighborhood of Altındağ District. Commercially busy streets such as Konya Street, Işıklar Street, Alataş Street, Cantacılar Street are located here.

Figure 24: Study Area C



Drawn by the author.
Source: Google Earth Street View, obtained in 25.07.2021

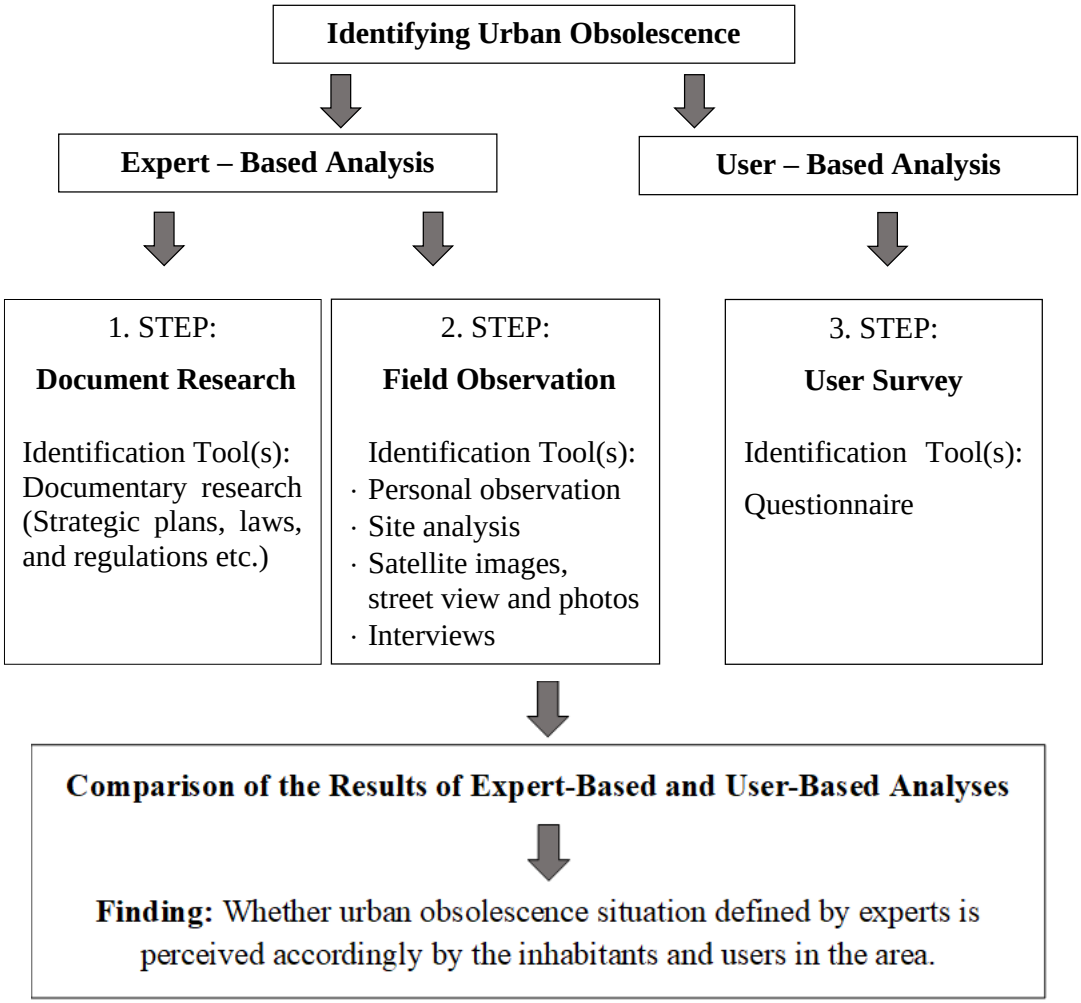
Study Area C is located in Kale Neighborhood of Altındağ District. There are slum-type residential areas here. However, a specific boundary has not been determined for the study to be conducted in residential areas. This is because there is a security problem in the area. The Castle and the surrounding areas and the shops nearby are lively and secure areas due to visitors, however, it is dangerous to move into the inner parts of these neighborhoods. For this reason, it was decided to start from the closest point to the Castle and continue until reaching the intended number of surveys. Consequently, the field study was carried out on Alitaş Street, 2. Street and 3. Street.

3.2. Research Method

3.2.1. A Proposed Model for Identification of Obsolescence in Historic City Centers

As previously mentioned, this thesis aims to identify urban obsolescence in historic city centers adequately with an approach that combines the perceptions of experts and users. According to this criterion, a 3-step model, which is explained in detail below, is proposed to be implemented in the historic city center of Ulus.

Figure 25: The Proposed Model for Identifying Urban Obsolescence in Historic City Centers



Conceptualized by the author

In this model, both expert-based and user-based analyzes were used to identify obsolescence in the historic city center of Ulus, as indicated in the figure. Expert-

based analysis, which is the first step of the study, was made with data obtained from document research and field observation. In this step, documents were reviewed in order to see the approaches of the prepared strategic plans and intervention decisions on this issue. It is believed that conducting documentary research before field observations would be helpful to strengthen the historical and current knowledge about the area. Since such an integrated method has not been encountered in the literature, this situation is seen as one of the unique contributions of this model and this thesis.

The second step of the expert-based analysis is field observation. The reason for this step to be included in the expert side is the outsider perspective of the coordinator of this study – even though she is not an expert on this subject– and the appliance of city planner knowledge during the analysis. It should also be emphasized that since an urban planner conducted this study, the perspective of professional groups such as architects, conservationists, civil engineers, archaeologists, which must be included in a comprehensive conservation plan, was not included in this thesis due to the limited scope of the study. In this aspect, reviewing the documents strengthens the expert-based approach because these plans were formulated by groups of experts from various professions due to comprehensive and detailed studies.

In the third step of the model, the same indicators were asked to the field users to compare them with the data obtained by the combined expert-based analysis. In this way, expert-based and user-based data are obtained independently of each other during the collection phase in order to be able to provide the reality of the results.

3.2.1.1. Selection of the Indicators

The methodology of this thesis is formulated from the synthesis of methods of the obsolescence studies encountered in the literature review. There are two prominent methods observed which are identifying urban obsolescence by calculation & scoring and identifying urban obsolescence by observation. Additionally, a third method detected identifies urban obsolescence by a mixed method with the combination of these two previous methods. These studies were examined in detail in Chapter 2.2 and compiled in Chapter 2.3 as ‘urban obsolescence indicators in qualitative methods’ and ‘urban obsolescence indicators in quantitative methods’.

The indicators of this thesis are selected from 'urban obsolescence indicators in quantitative methods'. These indicators were analyzed in the area, based on the observations of the researchers in the studies (Crane, 1943; Doratli, 2000, 2005; Doratli et al., 2004, 2007; Herrold, 1935; Jones, 1967; Lichfield, 1988; Vehbi & Hoşkara, 2009; Wilkinson et al., 2014). All of these mentioned studies are on a territory scale, and they use quantitative data based on observation. In this method, detailed information about the structures is not included. Instead, more comprehensive data are collected, which includes the majority of the structures in the area. As supported by the studies in the literature, it was preferred to use the observation-based method in a neighborhood-scale study. For this reason, it was determined as the first criterion that the selected indicators could be obtained by the observation of the researcher.

The second criterion was the selection of indicators that could be evaluated by both parties since it was assumed that experts and users might have different opinions when identifying obsolescence. These indicators were selected provided that users can identify without any kind of instrument that experts are using. For this reason, from the indicators used in obsolescence identification given in chapter 2.3, only the ones that can be observed by users are selected. In line with these criteria, this study used the indicators listed below to identify obsolescence in the historic city center of Ulus.

1. Structural condition (interior and exterior)
2. Pollution (water, air, noise, visual)
3. Open and green spaces
4. Mismatch between the fabric and the current use
5. Incompatible uses with the historical character of the territory (refers to the uses in/around the historic center which are harmful for historic values)
6. Level of accessibility
7. Traffic and Parking Problem
8. Sense of safety
9. Cultural and ethnic diversity

Then, these selected criteria were classified according to the urban obsolescence categories reviewed in chapter 2.1.7. Among these categories, *physical obsolescence*

defines the decline in material conditions of the built environment over time, affected by internal factors like quality of material used, the function of the building, or the effectiveness of maintenance services; also, external factors like weather, earth movement, traffic vibration. The fabric needs further repair and improvement than its regular maintenance services when it becomes physically obsolescent (Lichfield, 1988).

The contemporary needs and expectations of society change faster than the estimated lifetime of built fabric. The fabric suffers from *functional obsolescence* when it is still physically convenient but cannot meet the function it was designed for anymore. Both internal and external factors can cause functional obsolescence. For example, an office building without modern communication facilities or access to the Internet will not attract any users in an active business area (Lichfield, 1988). Alternatively, external factors like insufficient parking space or narrow streets and traffic congestion can result in a building or an area becoming functionally obsolescent. Therefore, historic quarters' street patterns that cannot bear the contemporary traffic causes functional obsolescence for such areas (Tiesdell et al., 1996).

Locational obsolescence refers to the external factors that cause a building to decrease in value due to its specific location. These may be various factors such as infrastructural insufficiencies, negative environmental impacts, and transportation difficulties. (Pinder & Wilkinson, 2000). Alternatively, as defined by Tiesdell et al., it is the consequence of "the fixity of a particular location relative to changes in the wider pattern of accessibility and labor costs" (1996, p.25). In other words, when the location of a building is determined, some factors like the accessibility to interrelated other uses, proximity to market, and transport infrastructure are considered. However, the area becomes locationally obsolescent if the conditions to which it depends on abandon the area.

Image obsolescence is an outcome of people's perception of a building or an area. Rather than an area's physical or functional capabilities, it is determined by users' value judgments. For example, inner-city centers are labeled by almost all citizens as places suffering from overcrowding, noise, and air pollution. This is a negative image and makes the area obsolescent by its image. Nevertheless, perceptions can be manipulated or simply can change over time. For instance, in the postwar period, older

buildings were demolished and replaced with new ones with the 'image of modernity'. However, older buildings became desirable in the following period due to their historical and traditional values. Nonetheless, even though the perceptions can change and do not originate from physical or functional variables, they still have an important role in people's decision-making process (Tiesdell et al., 1996).

Table 16: (Observed) Urban Obsolescence Indicators of the Study

Obsolescence Category	Indicators
Physical Obsolescence	· Structural condition (interior and exterior) · Pollution: water, air, noise, visual pollution · Capacity of open and green spaces
Functional Obsolescence	· Mismatch between the fabric and the current use
Locational Obsolescence	· Incompatible uses with the historical character of the territory · Level of accessibility · Traffic and Parking Problem
Image Obsolescence	· Sense of safety · Cultural and ethnic diversity

Prepared by the author

3.2.1.2. Document Research

One of the factors needed to be considered while discussing expert-based obsolescence in the historic city center of Ankara is the relevant approaches of the strategic documents prepared on this subject. It is expected that these studies have done the expert-based analysis in detail, and therefore they have revealed the problem accurately. It is known that obsolescence was not a subject of discussion at the time these plans were made. For this reason, no terminology is sought in the plans. Instead, these plans and interventions were examined from two perspectives, their approach to obsolescence and the results they produced in this regard.

The reviewed documents are listed as follows:

i. Lörcher Plan (1924)
ii. Jansen Plan (1932)
iii. Yücel – Uybadin Plan (1957)

iv. Ankara 1990 Master Plan (1982)
v. Ulus Historical City Center Conservation-Reclamation Plan (1990)
vi. Declaration of Ankara Historic City Center Renewal Area (2005)
vii. 2023 Capital Ankara Master Plan (2007)
viii. Ankara Historical City Center Renewal Area Conservation Plan (2007)
ix. Ulus Historical City Center 1/5000 Conservation Plan (2014)
x. Transition Period Projects (2008 – 2014 & 2015 – 2019)

It should be noted that as a concept, obsolescence is not included in these plans. However, all the problems identified in these plans that they mentioned while defining the urban depression in Ulus were evaluated as an input for this part of the thesis. After these plans are examined in this respect, each plan is given according to the following obsolescence indicator table of the thesis:

Table 17: (Observed) Urban Obsolescence Indicators of the Study

Obsolescence Category	**Indicators**
Physical Obsolescence	· Structural condition (interior and exterior) · Pollution: water, air, noise, visual pollution · Capacity of open and green spaces
Functional Obsolescence	· Mismatch between the fabric and the current use
Locational Obsolescence	· Incompatible uses with the historical character of the territory · Level of accessibility · Traffic and Parking Problem
Image Obsolescence	· Sense of safety · Cultural and ethnic diversity

Prepared by the author

Lastly, all the plans and obsolescence indicators are evaluated jointly in order to be able to observe the frequency of each indicator in the strategic documents.

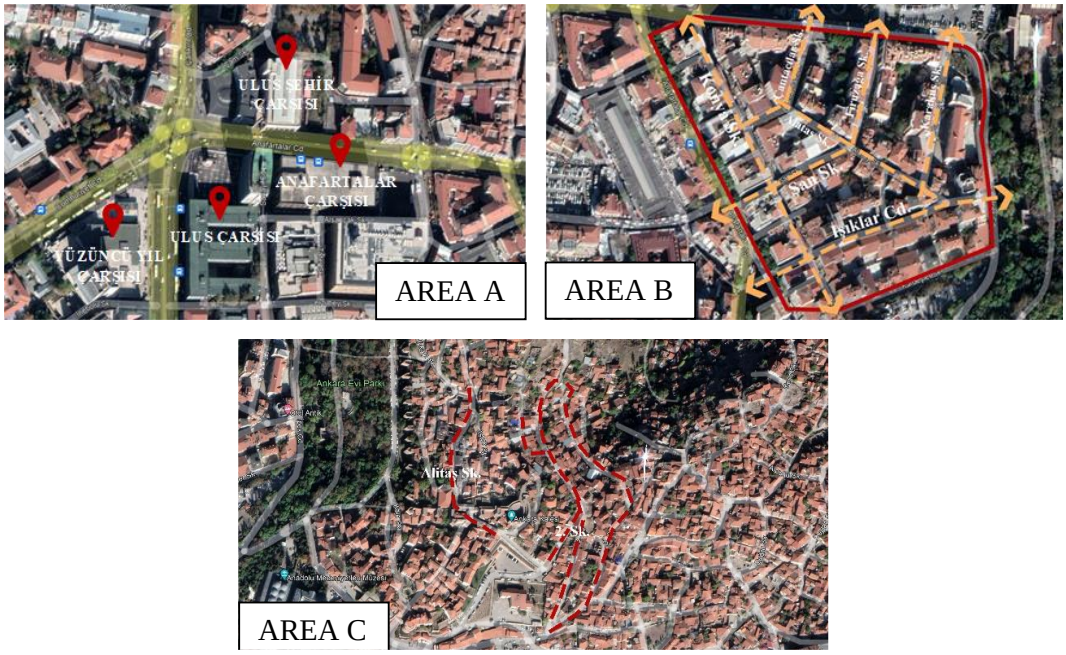
3.2.1.3. Field Observation

In order to observe and detect the indicators mentioned above, two field trips were made on 02.06.2021 and 05.06.2021. During the field trip on June 02, a general

observation was made within the boundaries of Ulus historical city center. As a result of this observation, the commercial area typologies described in chapter 3.1.2 were discovered. Then, after the fields to be studied were determined, urban obsolescence indicators were observed within the given areas in the field study, which took place on June 5th.

Accordingly, there are field observations made in the offices in Area A (Ulus, Anafartalar, Ulus Şehir, and Yüzüncü Yıl Bazaars) with their surroundings, in the streets within the marked building block in Area B (Işıklar Street, Konya Street, Alataş Street, Çantacılar Street, Şan Street, Firuzağa Street, Karakuş Street) and in the streets that are marked in Area C (2. Street, 3. Street, and Alitaş Street). Personal observation, site analysis, satellite images and street view, photographs taken during the field trip, interviews, and document research were used as identification tools in these areas. The following part gives the methods and tools used to identify physical, functional, locational, and image obsolescence in the selected areas.

Figure 26, 27, and 28: Study Areas A, B, and C



Drawn by the author.
Base Image Source: Google Earth

a) The methods and tools used for observing physical obsolescence indicators

Table 18: Indicators, Tools, and Methods for Physical Obsolescence

Indicators	Tools and Methods
Structural Condition (interior and exterior)	Field observation Interviews
Pollution	Field observation
The capacity of open and green spaces	Field observation Satellite Image (Google Earth, Yandex Maps)

Prepared by the author.

The exterior structural condition of the study area is inferred from broken pavements, peeled, and cracked walls, dilapidated railings, façades, and balconies, lack of adequate infrastructure (wastewater, running water, electricity) etc., while interior structural condition is inferred from lack of sanitary conditions, lacking household connection to infrastructure (heating, electric, running water, wastewater etc.), hazards from present occupancy, broken pavements, peeled and cracked walls. These indicators were made with the observation method in commercial areas, but the houses were not entered in the residential areas, and the owners/tenants were asked about the interior structure of their houses. These observed indicators were photographed by the author.

b) The methods and tools used for observing functional obsolescence indicators

Table 19: Indicators, Tools and Methods for Functional Obsolescence

Indicators	Tools and Methods
Mismatch between the fabric and the current use (structural and territorial)	Field observation

Prepared by the author.

In order to detect the structural and territorial mismatch between the fabric and the current use, specific attention was paid to structures with different functions than their intended designs. For example, it is known from the examined documents that the apartment blocks type commercial buildings in Area B were once used as residences. Today, however, there is purely commercial activity in these areas. On the other hand,

in order to detect territorial mismatch, traffic capacity and status were examined. In addition, it was checked whether the necessary facilities such as health, education, and recreational facilities in the residential areas. These observed indicators were photographed by the researcher.

c) The methods and tools used for observing locational obsolescence indicators

Table 20: Indicators, Tools and Methods for Locational Obsolescence

Indicators	Tools and Methods
Incompatible uses with the historical character of the territory	Field observation
Level of accessibility	Field observation
Traffic and Parking Problem	Field observation

Prepared by the author.

In order to detect incompatible uses with the historical character of the territory, the structures and functions in/around the areas where the remains of historical texture are found were examined. These observed indicators were photographed by the researcher. On the other hand, the level of accessibility and traffic and parking problems were examined through the traffic situation on the streets and the situation of car parking areas. In addition, during the field study carried out as a pedestrian, it was observed whether the pedestrian circulation was interrupted. These observed indicators were photographed by the researcher.

d) The methods and tools used for observing image obsolescence indicators

Table 21: Indicators, Tools, and Methods for Image Obsolescence

Indicators	Tools and Methods
Social Unrest	· Field Observation · Personal Knowledge · Interviews

Prepared by the author.

The indicator of social rest was observed with the level of safety and the cultural and ethnic diversity in the area.

3.2.1.4. User Survey

The data obtained from the questionnaire is used in the user-based analysis section, which is the third step of the model. The obsolescence indicators used in the other two steps were brought to the questionnaire format in this step and applied to the users.

Table 22: Urban Obsolescence Indicators in the User Survey

Obsolescence Category	Indicators (Questions)
Physical Obsolescence	· Structural condition of the territory and buildings · Pollution · Capacity of open and green spaces
Functional Obsolescence	· Mismatch between the fabric and the current use
Locational Obsolescence	· Incompatible uses with the historical character of the territory · Level of accessibility · Traffic and Parking Problem
Image Obsolescence	· Sense of safety · Cultural and ethnic diversity

Prepared by the author.

There are nine close-ended questions with a 5-point Likert scale and one open-ended question included in the questionnaire form. The questions are categorized into types of obsolescence for the analysis in the final chapter. Three questions cover physical obsolescence, one question covers functional obsolescence, three questions cover locational obsolescence, and two questions cover image obsolescence. The only inclusion criterion is determined for the participants to be 18 years and older. A total of 100 questionnaires were conducted in Area A, Area B, and Area C. Fifty of them were distributed to Area C, which is a residential area, and the other 50 to Area A and Area B (as 25 each), which are commercial areas. The reason for considering this difference is that the possibility of different dynamics and views that may arise in areas with two different trade patterns is emphasized. Survey participants were selected by random sampling method.

Participants were asked to evaluate the indicators with 1- Very Good 2- Good 3- Average 4-Poor and 5-Very Poor options. The scale goes from positive to negative in

this way because the criterion being measured is a negative situation, not a positive one. It was thought that this type of evaluation would be more meaningful when measuring the level of obsolescence. While evaluating the survey results, weighted average scores were taken to simplify the results. Since the value of 3 is the neutral point in the scaling, every value above three is considered ‘obsolescent’ according to the indicators they represent. Respectively, every value below three is considered as ‘not obsolescent’, in accordance with the indicators they represent.

The survey was conducted on 14-15 June, 28 June, and 30 June 2021. The spatial distributions of the surveys conducted in Areas A, B, and C are given in the figures below.

Figure 29: Spatial Distribution of the User Surveys in Area A

Drawn by the author.
Base Image Source: Google Earth

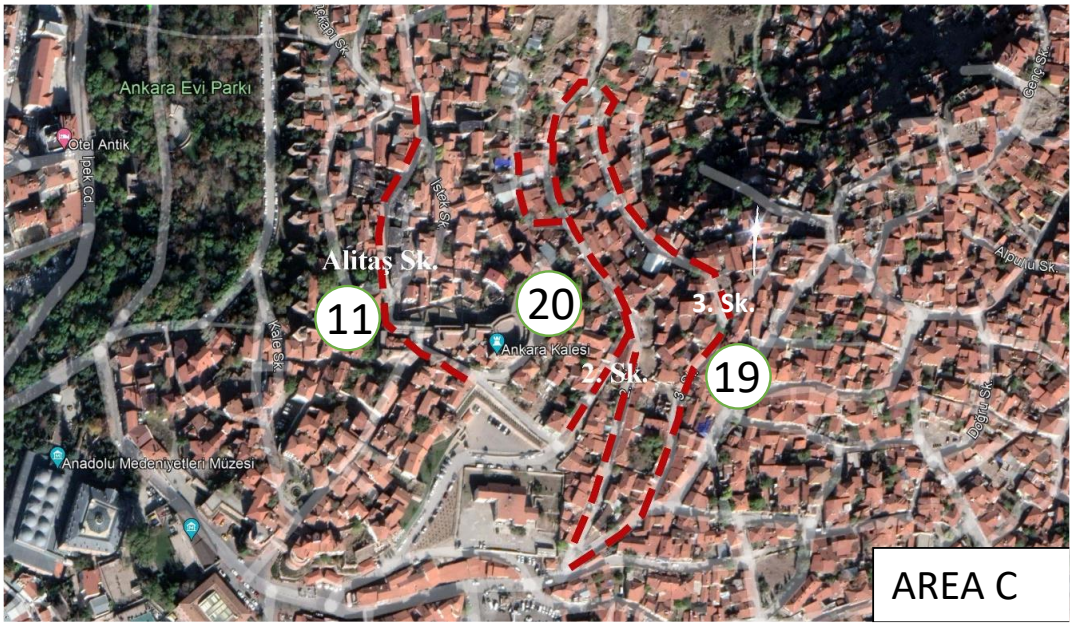
A total of 25 surveys were conducted in Area A, including 6 Ulus Bazaar, 7 Anafartalar Bazaar, 6 Ulus City Bazaar, and 6 Yüzüncü Yıl Bazaar.

Figure 30: Spatial Distribution of the User Surveys in Area B

Drawn by the author.
Base Image Source: Google Earth

A total of 25 surveys were conducted in Area B, nine on Konya Street, five on Işıklar Street, two on Alataş Street, six on Çantacılar Street, and three on Şan Street.

Figure 31: Spatial Distribution of the User Surveys in Area C



Drawn by the author.
Base Image Source: Google Earth

A total of 50 surveys were conducted in Area C, 11 on Alitaş Street, 20 on 2nd Street, and 19 on 3rd Street.

The surveys in areas A and B were conducted with the employees by going to the office buildings and shops. In the residential areas, businesses such as grocery stores and greengrocers were visited, and information about the study was given. It is known that neighborhood relations and street culture are strong in slums. Such a method has been preferred because it is thought that such businesses are beneficial both to gain the interest/trust of the locals and reach them. Through these business owners, the people of the neighborhood were met, and the study was carried out.

The general characteristic of slums is that many relatives live in the same place, their neighborly relations are very developed, and street culture has a great place in their daily lives. At this point, it was easier to reach 50 participants in this area than in the commercial areas. Since the residential areas within the boundaries of the study area could not be evaluated in a balanced manner due to security concerns, the surveys were conducted with a maximum of two people from the same family.

A total of 57 women and 43 men participated in the survey. The ages of the participants vary between 18-75 years. The survey was conducted with 41 participants between the ages of 18-30, 17 participants between the ages of 30-40, 16 participants between the ages of 40-50, 14 participants between the ages of 50-60, and 12 participants between the ages of 60-75. While the majority of the participants in the 18-30 age group are those working in commercial areas, all of the participants aged 60 and over are living in residential areas.

While 7 of the participants were unschooled, 28 were at elementary school level, 16 were at secondary school level, 38 were at high school level, and 11 were at the university level. All of the participants educated at the university level are the participants of the surveys conducted in the commercial areas.

In order to have an idea about the life and daily life experience of the participants in the field, it was asked how long they had lived/worked in the field. Eighty-five of the participants have been living/working in Ulus for ten years or more. It is thought that this ratio will contribute positively to the reliability of user evaluation.

Table 23: General Information About the Participants

Gender	Female			Male	
	57			43	
Age	18-30	30-40	40-50	50-60	60-75
	41	19	18	16	6
Educational Status	Unschooled	Elementary School	Secondary School	High School	University
	7	28	16	38	11

The Amount of Time Spent in Residential/ Commercial Functions	0-10	10-20	20-30	30-40	40-50	50+
	15	19	21	18	12	15

Prepared by the author.

3.3. Findings of the Case Study

In this section, the findings of the model based on expert-based and user-based analysis are provided. These findings are given under the physical, functional, locational, and image categories and together with the indicators described in the methodology at each stage of the three steps of the model. These indicators are structural condition (interior and exterior), pollution, capacity of open and green spaces, mismatch between the fabric and the current use, incompatible uses with the historical character of the territory, level of accessibility, traffic and parking problem, sense of safety and cultural and ethnic diversity. The following section shares the results of document research, field observation, and user survey with these indicators.

3.3.1. Results of the Document Research

In this step, the relationship between plans and interventions that were effective in developing Ulus historical city center and the phenomenon of obsolescence in Ulus is examined. Since obsolescence was not a matter of discussion during the production processes of these plans, it was not expected to encounter a related terminology. Instead, the decisions of the plans that overlap with the situation defined as obsolescence in Ulus by this study and the effects that are thought to lead to obsolescence were examined. At the end of this section, the indicators of present urban problems (that will lead to obsolescence of Ulus) and the consequences of the plans that caused further obsolescence are presented under the categories of physical, functional, locational, and image obsolescence.

The plans examined in this context are as follows:

1. Lörcher Plan (1924) & Jansen Plan (1932)
2. Yücel – Uybadin Plan (1957)
3. Ankara 1990 Master Plan (1982)
4. Ulus Historical City Center Conservation-Reclamation Plan (1990)
5. The ‘unplanned period’ in Ulus Historic City Center
   - Declaration of Ankara Historical City Center Renewal Area (2005)
   - 2023 Capital Ankara Master Plan (2007)
   - Ankara Historical City Center Renewal Area Conservation Plan (2007)

- Ulus Historical City Center 1/5000 Conservation Plan (2014)
- Transition Period Projects (2008 – 2014 & 2015 – 2019)

Interventions after the Ulus Historical City Center Conservation-Reclamation Plan were examined under the 'unplanned period' title in Ulus Historic City Center. This is because, after the Declaration of Ankara Historical City Center Renewal Area, which was declared in 2005, no plans in the area remained in effect long enough to be implemented. Transition Period Projects were implemented in most of the period.

1. Lörcher (1924) and Jansen Plans (1932)

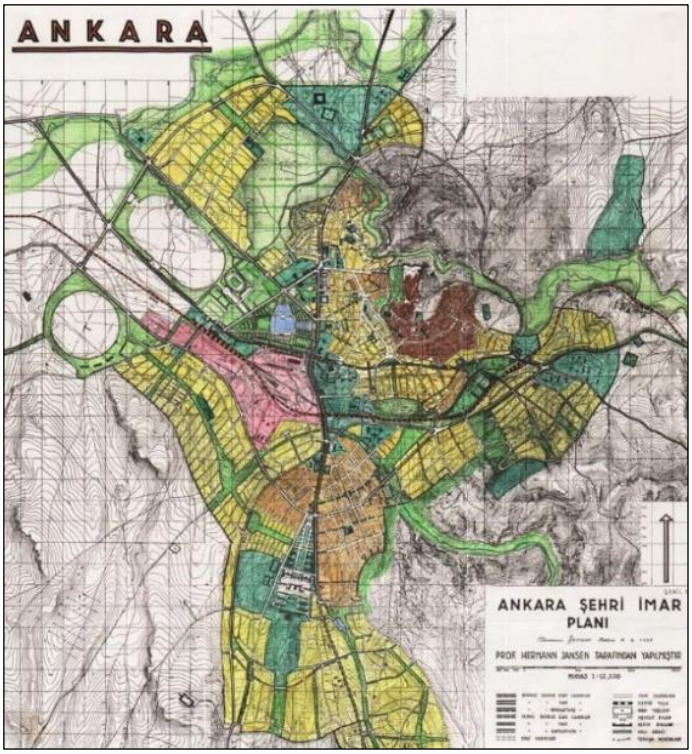
In 1924, German city planner Carl Christoph Lörcher developed the first city plan of Ankara, which according to Cengizkan (2004), was the foundation of the Jansen Plan and the other following urban interventions. In this plan, the duality of Old Ankara – New town and the major planning sub-regions such as *Sıhhiye, Kızılay, Bakanlıklar* (region of ministries) were determined. Lörcher's plan has framed the city's physical development until the implementation of the Jansen Plan in 1932, which was produced by the German architect Hermann Jansen. The significant attributes of these plans to the formation of Ankara's historic city center and the critical urban developments are summarized in the following. The main points in these pioneering plans were determined as follows:

- Designing a city that will be able to meet the demands of the arriving population of republican elites, state officials, and labor power
- Providing residence for the new population
- Creating a spatial nation-state identity and designing a new center
- Preserving the old fabric (despite insufficient infrastructure and already decaying conditions of the existing built fabric) and building a new town next to it.

Figure 32: Lörcher Plan

Source: Goethe Institut

Figure 33: Jansen Plan



Source: Personal Archive of Çağatay Keskinok

In this context, new residential areas were proposed around the old texture and in the city's southern parts. The common aim of both plans was, on the one hand, to provide residence and living space to the increasing population; on the other, to create both a desired nation-state identity through spatial planning and a city that appeals to the lifestyle of the republican elites. In Lörcher and Jansen plans, space is considered an ideological tool to provide political and social transformation. According to Bayraktar (2013), by creating a controlled and ordered city image, it is assumed that social life will evolve in a way that is compatible with this image and identity. The early republican boulevards, public spaces, squares, monuments, and institutional structures of the state are the products of this ideology.

Additionally, it is observed that in both plans, the 'old' historical settlement has detached from the 'new' proposed one. This decision intended to develop the old city as the center, and the new city built to the south as the residents. However, these parts, which are separated from each other by such a physical threshold as the railway, will begin to experience functional differences over time. Additionally, the decision to preserve the historical fabric in Jansen plan partially abandoned the area to its fate. As an undesirable and unpredictable result of this decision, the historical texture has been changed by renewal, functional change, increasing density, and using without any repair or maintenance (Tunçer, 2000).

To sum up, in the 1950s, the desired central business district could not be established in Ulus. Renewal and improvement proposals for the historical buildings were not accomplished. Moreover, the hills and sloped sites of the city were decided as inhabitable in Jansen's plan. This decision has paved the way for illegal construction in Ulus. The current squatter problem of the hills in Altındağ district can be traced back to this decision of the planners (Günay, 2006). In addition, after the construction of *Bakanlıklar* (a site consists of a group of ministry buildings) and *TBMM* (The Grand National Assembly of Turkey) building, the administrative center of Ankara has shifted to Kızılay. Consequently, these decisions led up to the duality of the old town-new town. The approaches and consequences of Lörcher and Jansen Plans for urban obsolescence in Ulus are demonstrated in the table below.

Table 24: The Approaches and Consequences of Lörcher and Jansen Plans for Urban Obsolescence in Ulus

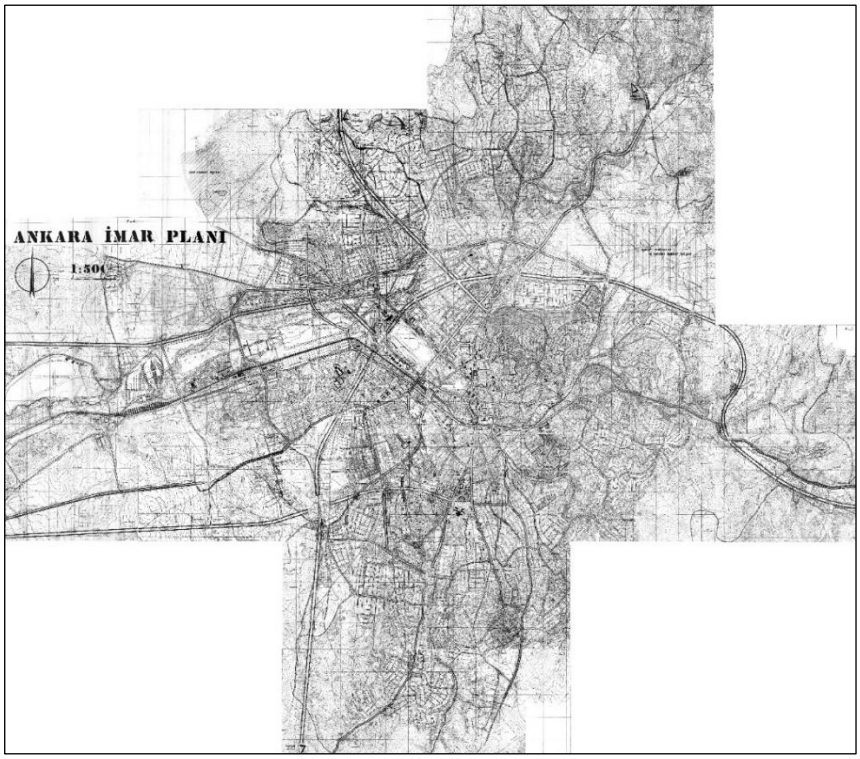
	Indicators	Approach and Consequences of the Plan(s) for Obsolescence
Physical Obsolescence	1. Structural condition (interior and exterior)	· The decision to preserve the old texture without any intervention has caused the buildings to be used and transformed without appropriate renovation and improvement facilities.
	2. Pollution: water, air, noise, visual pollution	· Not referred to in terms of obsolescence in Ulus.
	3. Capacity of open and green spaces	· Not referred to in terms of obsolescence in Ulus.
Functional Obs.	4. Mismatch between the fabric and the current use	· Not referred to in terms of obsolescence in Ulus.
Locational Obsolescence	5. Incompatible uses with the historical character of the territory	· On the hills of Altındağ, which the Jansen Plan excluded due to being unsuitable for settlement, illegal construction and squatting processes began. · The design of Ulus as a city center and Kızılay as living space have paved the way for the unsuccessful development of Ulus as a CBD and developing of Kızılay as an alternative city center. This situation has led to the gradual withdrawal of cultural, touristic, bureaucratic, and financial functions from Ulus over the years. · The withdrawn functions have been replaced by all kinds of commercial activities, which caused the inconvenient transformation of historic texture into required uses for commercial functions.
	6. Level of accessibility	· Not referred to in terms of obsolescence in Ulus.
	7. Traffic and parking problem	· Not referred to in terms of obsolescence in Ulus.
Image Obs.	8. Sense of safety	· Not referred to in terms of obsolescence in Ulus.
	9. Cultural and ethnic diversity	· Not referred to in terms of obsolescence in Ulus.

Prepared by the author.

2. Yücel – Uybadin Plan (1957)

With the concerns for the population increase and land and infrastructure deficiency, a planning contest was organized in 1955. Subsequently, Ankara Master Plan was approved in 1957, which was prepared by Nihat Yücel and Raşit Uybadin. According to the plan, the historical texture in and around the castle consists of old and neglected buildings. Since these areas have a central location, the land is precious; however, the profit gained due to the disqualified environment appears to be significantly low. If these areas are not rehabilitated soon, they will be occupied by scrap dealers, repair shops, and warehouses. This situation will lead to irreversible decay in the future, and these areas will become unmanageable for municipal services.

Figure 34: Yücel – Uybadin Plan



Source: Personal Archive of Çağatay Keskinok

In this population increase period, Ankara Castle and the surrounding started to be occupied by squatter houses. The low-income newcomers especially preferred to settle in Ulus for its lower land and rent prices. With these changes, Ulus has gradually lost its modern appearance. The previous dilemma of New Ankara and Old Ankara was replaced by a dilemma based on income distribution (Bayraktar, 2013).

The plan's approach for the historical core was to maintain Ulus as the only city center, even though several central activities -and most importantly the middle and upper classes'- were shifting to the Kızılay region. In the light of these developments, Ulus started to lose its bureaucratic and political characteristics in this period. Although its financial attributes remain, Ulus lost its cultural characteristics as Kızılay was frequently preferred for cultural and leisure activities. On the contrary, Ulus has gained commercial importance for the lower-income groups with the relocation of middle- and high-income group users to Kızılay.

The most significant consequence of this period was the implementation of the District Height Regulation (Bölge Kat Nizamı). In the 1960s, the population of Ankara has reached 650.000, while Yücel – Uybadin plan has foreseen a population of 750.000 for the 2000s. However, instead of designing a new for, the District Height Regulation adopted the two-dimensional design of the Yücel - Uybadin plan and increased the floor height and population density accordingly by combining small parcels and allowing height levels that were not suitable for the historical fabric. As a result, the old fabric has been enclaved by 6 – 8-story blocks built along the street. This ignorance resulted in further deterioration in the territory, and eventually, Ulus became a blighted area because of the reasons such as changes in use, decrease in environmental quality, social transformation, and natural wear (Tunçer, 2000). The approaches and consequences of Yücel – Uybadin Plan for urban obsolescence in Ulus are demonstrated in the table below.

Table 25: The Approaches and Consequences of Yücel – Uybadin Plan for Urban Obsolescence in Ulus

	Indicators	**Approach and Consequences of the Plan(s) for Obsolescence**
Physical Obsolescence	1. Structural condition (interior and exterior)	· The historical texture in and around the castle consists of old and neglected buildings.
	2. Pollution: water, air, noise, visual pollution	· The increasing air pollution after the implementation of the District Height Regulation.
	3. Capacity of open and green spaces	· Not referred in terms of obsolescence in Ulus.

Table 25 (continued)

Functional Obs.	4. Mismatch between the fabric and the current use	· The increasing commercial activities that the historic fabric cannot bear.
Locational Obsolescence	5. Incompatible uses with the historical character of the territory	· If the historical texture is not rehabilitated soon, they will be occupied by scrap dealers, repair shops, and warehouses. · The increasing building heights that were not suitable for the historical fabric.
	6. Level of accessibility	· Not referred to in terms of obsolescence in Ulus.
	7. Traffic and parking problem	· The road network of Ankara is quite inadequate. Atatürk Boulevard bears most of the burden of Ankara traffic. · All transportation lines intersect at Ulus Square and cause traffic congestion. · Anafartalar - Saman Pazarı - Cebeci Road is experiencing traffic congestion due to being narrow and unable to be widened.
Image Obs.	8. Sense of safety	· Not referred to in terms of obsolescence in Ulus.
	9. Cultural and ethnic diversity	· Not referred to in terms of obsolescence in Ulus.

Prepared by the author.

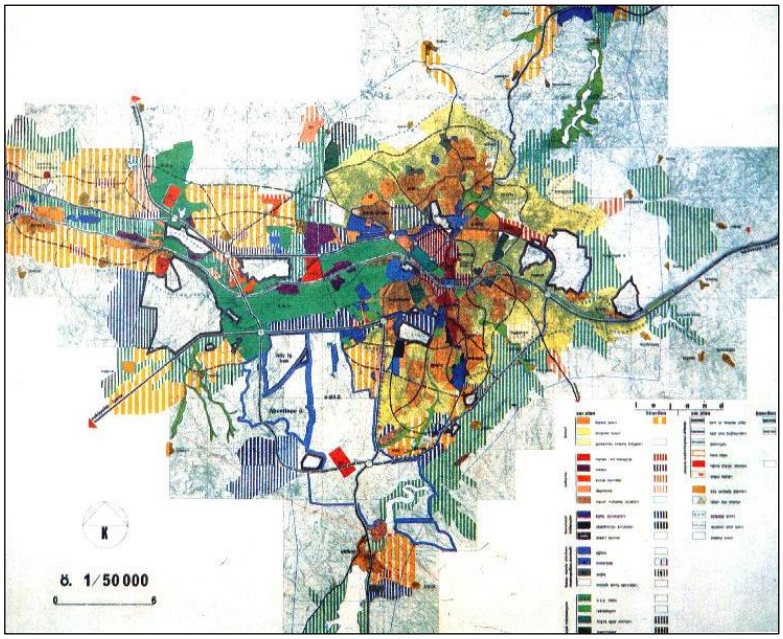
3. Ankara 1990 Master Plan (1982)

The problems created by the abovementioned rural-urban migration and urban population growth did not only affect Ankara. In order to produce solutions to these problems, autonomous Metropolitan Master Planning Bureaus were established under the direction of the Ministry of Reconstruction and Resettlement in 1965 to regulate planning activities in İstanbul, Ankara, and İzmir. In the case of Ankara city, almost sixty percent of the population was located in the unplanned areas of the inner-city due to the high land and rent prices in the planned settlements. Furthermore, the inner

city suffered from severe air pollution in the late 1960s, caused by the valley-shaped topography of Ankara city and the fact that the wind corridors were interrupted by high-rise buildings. These problems have increased the need for a new master plan (Altaban & Güvenç, 1990).

Subsequently, Ankara Metropolitan Master Planning Bureau prepared Ankara 1990 Master Plan, which was implemented in 1982. The primary purpose of this plan is to control the development of Ankara city, whose urban density has reached such dimensions that the infrastructure and housing supply of the city were not able to bear it anymore. For this reason, the development of the periphery has an essential place in this plan rather than the center (Çalışkan, 2009).

Figure 35: Ankara 1990 Master Plan



Source: (Tunçer, 2006)

The only significant decision of this plan regarding the historic city center was proposing the development of the Central Business Districts (CBD) towards the section called Kazıkiçi Gardens (Kazıkiçi Bostanları, located in the northwest of Ulus), in order to control and reduce the pressures and to protect the historic fabric. However, since the Yücel-Uybadin Plan and the District Height Regulation were still in effect, any development regarding conservation could not be discussed until the late 1980s (Tunçer, 2000). The approaches and consequences of Ankara 1990 Master Plan for urban obsolescence in Ulus are demonstrated in the table below.

Table 26: The Approaches and Consequences of Ankara 1990 Master Plan for Urban Obsolescence in Ulus

	Indicators	Approach and Consequences of the Plan(s) for Obsolescence
Physical Obsolescence	1. Structural condition	· Not referred to in terms of obsolescence in Ulus.
	2. Pollution	· Intense air pollution
	3. Capacity of open and green spaces	· Not referred to in terms of obsolescence in Ulus.
Functional Obs.	4. Mismatch between the fabric and the current use	· Not referred to in terms of obsolescence in Ulus.
Locational Obsolescence	5. Incompatible uses with the historical character of the territory	· Controlling and reducing the pressures on the historic fabric · Emphasize on decentralization and periphery development caused the withdrawal of investments and middle/upper classes from Ulus. As a consequence, Ulus became the commercial center of lower classes, and the buildings were started to be converted into stores and warehouses.
	6. Level of accessibility	· Not referred to in terms of obsolescence in Ulus.
	7. Traffic and parking problem	· Relieving the traffic congestion in the city center by (urban decentralization and) providing adequate transport facilities (fundamentally based on public transportation) from center to peripheries.
Image Obs.	8. Sense of safety	· Not referred to in terms of obsolescence in Ulus.
	9. Cultural and ethnic diversity	· Not referred to in terms of obsolescence in Ulus.

Prepared by the author.

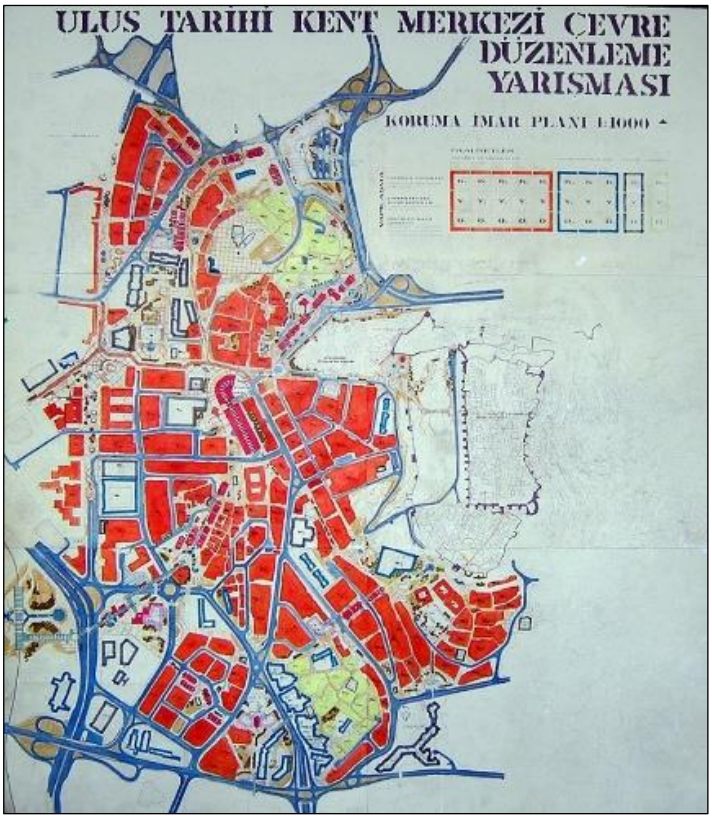
4. Ulus Historical City Center Conservation-Reclamation Plan (1990)

To intervene in the particular problems of the historic city center, the Ministry of Culture, the Directorate-General of Antiquities and Museums, and Ankara Municipality had carried out identification and documentation studies in 1979. In

Ulus, an area covering approximately 150 hectares was declared the historical site by the abovementioned institutions. With these studies, the first, second, and third-degree historical sites and borders of the historic commercial area have been determined. All the development plans have been abolished in the area and the Building Requirements for Transition Period *(Geçiş Dönemi Yapılaşma Koşulları)* have established until the preparation and implementation of a conservation plan for Ulus historic city center. Furthermore, the responsibility to prepare conservation plans has been assigned to the municipalities (Tunçer, 2000).

Subsequently, Ankara Metropolitan Municipality organized a contest for Ulus Historical City Center Conservation Plan in 1986. A project group consists of experts from various professions from Middle East Technical University won the contest, and the Ulus Historic city center Conservation-Reclamation Plan was approved in 1990. Moreover, Altındağ District Municipality organized the Improvement and Restoring Project of Ankara Castle contest in 1987 with the cooperation of the Ministry of Culture and Tourism. These contests created an opportunity to intervene in the historic city center with a holistic conservation approach. It should be emphasized that these studies and contests on the historic center were the first attempts to evaluate urban depression, particularly in Ulus.

Figure 36: Ulus Historical City Center Conservation-Reclamation Plan



Source: Personal Archive of Ömer Kıral

Besides being the first specific plan prepared for Ulus historic city center, this plan was one of the rare projects that could be -partially- implemented on a national scale (TMMOB Şehir Plancıları Odası Ankara Şubesi, 2019). The site selection of the plan was made according to the boundaries determined in the abovementioned historical site determination studies. According to the plan's provisions, a framework has been determined in which the existing first and second-degree urban site boundaries and archaeological site boundaries are included. As an alternative to the dominant master planning approach, the plan, which adopts a strategic approach, has been elaborated with approaches such as staging, project packages, financing, and organizational models.

Ulus Historical City Center Conservation-Reclamation Plan was the outcome of a comprehensive study that considers different problems and requirements of such a multi-layered area. Moreover, it emphasized the participation of all the related groups in the historic center. In this respect, it differs from the classical development planning approach by producing multi-stage project packages and alternatives directed to the

possible challenges during the process of implementation. In brief, this plan was more than a spatial intervention instrument; it was an attempt to plan the whole process (Erkal et al., 2005).

The primary focus of the plan was the problem of densification and congestion. It was predicted that pressures on the historical center could be diminished by moving central activities to a new CBD along the north-west axis *(Kazıkiçi Bostanları)*. Following this principal decision on the macro-level, some conservation strategies were proposed considering the characteristics and requirements of the heritage values.

This territory, covering approximately 113 hectares area, was a challenging city section with the values inherited from different historical periods and civilizations, the adjacent dense commercial center, and squatter areas. Therefore, a planning approach for this kind of territory had to be multidimensional. Firstly, considering all these challenges, three kinds of zones were defined according to intervention types and priorities: *Conservation Program Area*, *Conservation Weighted Reclamation Program Area*, and *Renewal Weighted Reclamation Program Area*. The principles of the interventions were detailed under the categories of Land Ownership, Building Conditions, Functioning, Transportation/Circulation/Parking, Infrastructure, Landscaping/Urban Furniture, Project Design/Implementation (*Ulus Historic city center Conservation-Reclamation Plan Provisions*, 1989).

In light of these principles, all the research, analysis, evaluation, plan, and project works have been done in less than two years. However, the legal progress during approval and implementation processes has not been in the same direction with planning activities. After numerous negotiations that lasted for years, only certain parts of the plan were implemented fragmentarily until the 2000s. Finally, the plan was canceled by Ankara Metropolitan Municipality in 2005. The required holistic approach to handle the problems of the historic city center has not been implemented, and most of the areas that needed urgent intervention have continued to transform uncontrollably until today. According to Cengizkan (2006), Ankara Metropolitan Municipality was able to implement ‘urban transformation’ initiatives because of the steady disregard for Ulus in the history of planning and policymaking in Ankara. The approaches and consequences of Ulus Historical City Center Conservation-Reclamation Plan for urban obsolescence in Ulus are demonstrated in the table below.

Table 27: The Approaches and Consequences of Ulus Historical City Center Conservation-Reclamation Plan for Urban Obsolescence in Ulus

	Indicators	**Approach and Consequences of the Plan(s) for Obsolescence**
Physical Obsolescence	1. Structural condition (interior and exterior)	· Technical infrastructures such as water, sewerage, electricity, and communication need to be improved. · There are deteriorated historical buildings still in function without any conservation or renewal.
	2. Pollution: water, air, noise, visual pollution	· Not referred to in terms of obsolescence in Ulus.
	3. Capacity of open and green spaces	· Not referred to in terms of obsolescence in Ulus.
Functional Obs.	4. Mismatch between the fabric and the current use	· It has been proposed to widen the commercial facades of the buildings instead of increasing their floor area ratio in the commercial clusters. By this, the suitability of the buildings for commercial activities would be provided.
Locational Obsolescence	5. Incompatible uses with the historical character of the territory	· There are historical structures that have been transformed in such a way that it is not possible to carry out any preservation or conservation activities. They are usually occupied by low-quality motels or production and storage activities which are incompatible with the historical texture and cultural values of Ulus (Bademli, 1992). In the plan, renewal of these buildings and removal of these kinds of functions were proposed. · It is suggested that the architectural and functional features of the new buildings should be compatible with the existing built environment.

Table 27 (continued)

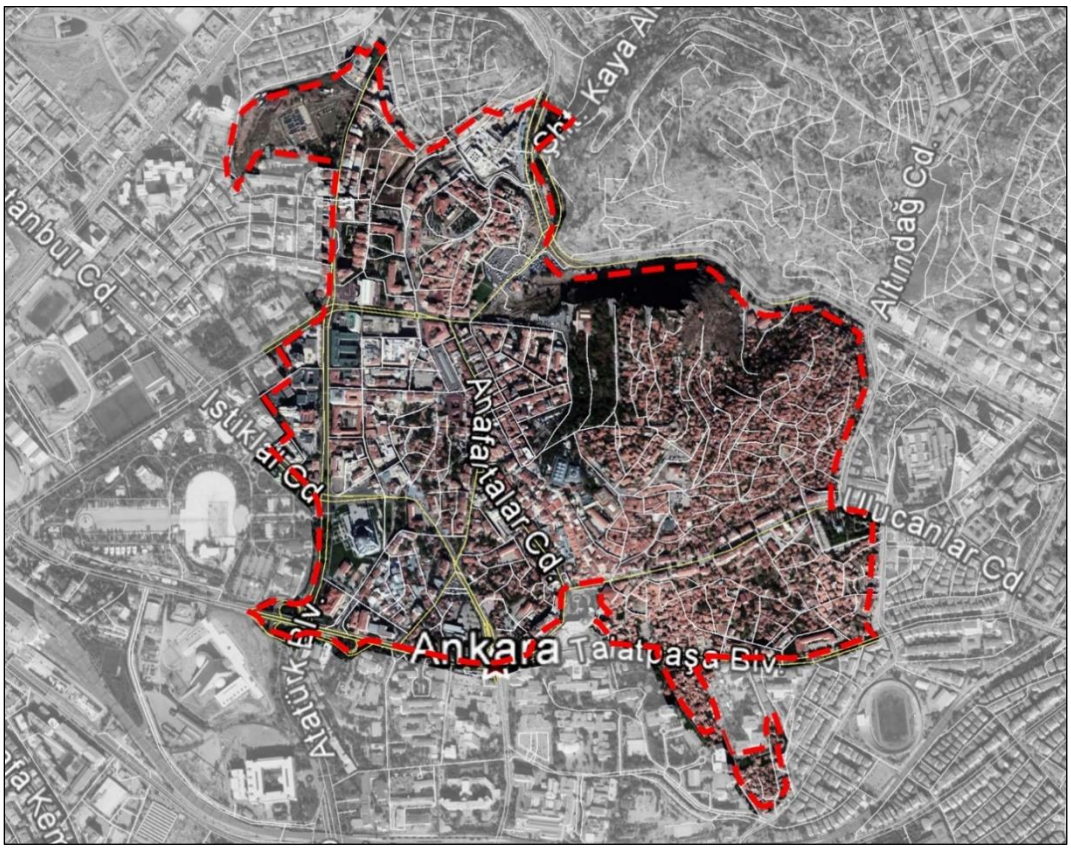
Locational Obsolescence	· Level of accessibility	· Providing better pedestrian circulation within the territory.
	· Traffic and Parking Problem	· Traffic calming has been proposed for the historic city center in order to relieve the pedestrian circulation, excluding the main vehicular traffic arteries. · Not allowing arteries and car parks open to direct vehicle traffic in conservation areas. · Creating pedestrian-priority transportation channels that will allow for service or controlled vehicle traffic when necessary.
Image Obsolescence	· Sense of safety	· Not referred to in terms of obsolescence in Ulus.
	· Cultural and ethnic diversity	· Not referred to in terms of obsolescence in Ulus.

Prepared by the author.

5. The 'unplanned period' in Ulus Historic City Center

On 14.01.2005, under the presidency of Melih Gökçek, Ankara Metropolitan Municipality decided to cancel all the plans in effect in the area, with the Municipal Council Decision No. 210. Also, with the same decision, the municipality declared the area as "Ulus Historical and Cultural Urban Transformation and Development Project Area". In the figure below, the boundaries of the renewal area are given.

Figure 37: Ulus Historical and Cultural Urban Transformation and Development Project Area



The boundary of Ulus Historical and Cultural Urban Transformation and Development Project Area is attached by the author.
Base Image Source: Google Earth

The following period after 2005 can be considered as the unplanned period for Ulus in practice. Because, although there were two plans prepared and accepted, the operation years have not lasted for a city plan to be implemented. The first plan was accepted in 2007 and canceled in 2008. The second one was accepted in 2014 but canceled in 2016. In the years that there was no plan in operation for the historic city center, Transition Period Principles of Conservation and Terms of Use *(Geçiş Dönemi Koruma Esasları Ve Kullanma Şartları Temel İlkeleri)* defined in the Law on the Conservation of Cultural and Natural Property (2863) were being implemented.

In 2007, the 2023 Ankara Metropolitan Master Plan was accepted by Ankara Metropolitan Municipality Council with Decision No. 525. This plan divided the whole macroform into planning zones, and Ulus Historic city center was evaluated in the Central Planning Zone. For Ulus, it was decided to carry out operations in line

with the conservation plans determined by the particular laws for the site. The plan proposes creating a particular site management plan that effectively evaluates the cultural and touristic potentials and develops particular forms of interventions against deterioration in the region. In addition, the plan report states that the Kazıkiçi Central Business District Project, which has been continuing for many years, should be implemented without further delay, and should be developed integrated with the city macroform. The responsibility of preparing the central area plan was left to the municipality. In the same year, Ankara Historic city center Renewal Area Conservation Plan was accepted by Ankara Metropolitan Municipality, which was canceled two years later by a lawsuit filed by Ankara Chamber of City Planners Ankara Chamber of Landscape Architects. Since the cancellation of the Ulus Historic city center Conservation-Reclamation Plan (1990), Ulus has been going through a *de facto* unplanned period.

In the same year, with the approval of the 2023 Capital Ankara Master Plan, Ankara Metropolitan Municipality made a contract with Hassa Architecture Engineering Construction Ind. Trade. Co. Ltd. for preparing the renewal projects and conservation development plans. *Ankara Historical City Center Renewal Area Conservation Master and Implementation Plans* were prepared and approved on 2007. However, there were some severe problems in these plans regarding the city planning rules and regulations. The focus of these plans was mainly on renewal activities and ignored the conservation principles. Moreover, it is observed that only Seljuk, Ottoman, and Early Republic Periods were regarded in the plan, and several values from the early periods of Ankara city were ignored in the context of conservation.

Immediately after the approval of plans, the Ankara Chamber of City Planners and Ankara Chamber of Landscape Architects were filed several lawsuits. As a result, the 10th Administrative Court of Ankara decided to cancel the plans in 2008. After the cancelation, Transition Period Principles of Conservation and Terms of Use are officially accepted for the area until the Ulus Historic city center 1/5000 Conservation Plan was accepted in 2014. This period has witnessed some fragmented interventions incompatible with conservation principles.

Prepared by Makbule İlçan & UTTA Planning and Project Design Business Partnership, Ulus Historic city center 1/5000 Conservation Plan was approved by

Ankara Metropolitan Municipal Council in 2014. According to the Chamber of City Planners Report, the mentioned plan has some conflicting decisions with the existing urban fabric, which would damage or completely destroy the historical qualities of the area. Substantially, for this reason, the Chamber of City Planners had filed a lawsuit against the plan. In response, Ankara 7th administrative court has given a suspension of execution for the plan in 10.03.2015 and canceled the plan in 2016 since it conflicted with the principles of city planning, conservation planning, and public interest (TMMOB Şehir Plancıları Odası Ankara Şubesi, 2019).

After the decision of suspension of execution for the plan in 2015, Ankara Regional Council for the Conservation of Cultural and Natural Property has accepted the "Ankara Province, Altındağ District, Ulus, Samanpazarı, Kale, Kayabaşı Historical Sites Transition Period Principles of Conservation and Terms of Use" in 27.07.2015 with the decision No. 1483 and extended the period for one year with the decision No. 3349, dated 12.07 2018. Since the cancellation of the latest plan in 2016, numerous illegitimate interventions have been made in and around Ulus, under the pretext of the *Transition Period Principles of Conservation and Terms of Use*. It has been used far beyond its scope of authority, and as a result, the interventions made especially after 2005 have caused irreversible damages to the historic city center (TMMOB Şehir Plancıları Odası Ankara Şubesi, 2019).

In conclusion, Ankara city and Ulus historic city center contain many historical and cultural values inherited from various different periods. Some of these values, especially from the early Republican period, still functioning as office buildings, commercial buildings, and bank headquarters in Ulus. In other words, they still have a use value as a part of the city. They also have an economic value because they are still functioning even though they have problems arising from negligence and misuse (Madran et al., 2005). Nevertheless, by the negligence until the 1980s and the consequent deterioration and the destructions after the 2000s; the historic fabric has been seriously damaged, and some values have been irreversibly destroyed (TMMOB Şehir Plancıları Odası Ankara Şubesi, 2019).

To summarize the effects of analyzed documents in terms of obsolescence in Ulus, physical obsolescence has emerged as the old historical fabric continues to be used without renewal or maintenance and repair works. In addition, illegally constructed

slums have become almost ruins today due to the materials used and the inadequate maintenance and repair services. The factor that started the functional obsolescence in the area was the shift of the center to Kızılay, and the vacant places becoming a commercial center for the lower income group as the middle-upper segment of the population left the area. These areas were converted from residential areas to commercial uses without the necessary adaptation studies.

The most important reason for Ulus to be suffering from locational obsolescence is that the plans suggest Ulus as a CBD while suggesting Kızılay as a living center equipped with cultural and recreational activities. In time, Kızılay gradually developed as an alternative center by pulling the CBD functions of Ulus, and then became the new center of the city. Ulus has become locationally obsolescent as CBD functions have left the field. Moreover, the existence of illegal buildings and slums has affected rent and property prices and contributed to the locational unattractiveness of Ulus. The fact that it has become a commercial center that appeals to low-income people with the increase in slums has caused Ulus to experience image obsolescence in the eyes of Ankara residents.

In the table below, the documents are compiled with respect to each indicator that they mentioned. Accordingly, it appears that the most frequently mentioned indicators are structural condition, incompatible uses with the historical character of the territory, and traffic and parking problems. These are followed by the pollution, mismatch between the fabric and the current use, and level of accessibility indicators mentioned in average frequency. Capacity of open and green spaces, sense of safety, and cultural and ethnic diversity indicators were not mentioned in these plans in terms of obsolescence in Ulus.

Table 28: Urban Obsolescence in the Strategic Documents for Ulus Historic City Center

	Indicators	Plans
Physical Obsolescence	1. Structural condition (interior and exterior)	· Jansen and Lörcher Plans · Yücel-Uybadin Plan · Ulus Historical City Center Conservation-Reclamation Plan
	2. Pollution: water, air, noise, visual pollution	· Yücel-Uybadin Plan · Ankara 1990 Master Plan
	3. Capacity of open and green spaces	· Not referred to in terms of obsolescence in Ulus.
Functional Obsolescence	4. Mismatch between the fabric and the current use	· Yücel-Uybadin Plan · Ulus Historical City Center Conservation-Reclamation Plan
Locational Obsolescence	5. Incompatible uses with the historical character of the territory	· Jansen and Lörcher Plans · Yücel-Uybadin Plan · Ankara 1990 Master Plan · Ulus Historical City Center Conservation-Reclamation Plan
	6. Level of accessibility	· Ulus Historical City Center Conservation-Reclamation Plan
	7. Traffic and Parking Problem	· Yücel-Uybadin Plan · Ankara 1990 Master Plan · Ulus Historical City Center Conservation-Reclamation Plan
Image Obsolescence	8. Sense of safety	· Not referred to in terms of obsolescence in Ulus.
	9. Cultural and ethnic diversity	· Not referred to in terms of obsolescence in Ulus.

Prepared by the author.

3.3.2. Results of the Field Observation

The results of field observation in the Study Areas A, B, and C are given in this section with the categories of physical, functional, locational, and image obsolescence, and with the indicators of structural condition of the territory and buildings, pollution, capacity of green and open spaces, mismatch between the fabric and the current use, incompatible uses with the historical character of the territory, level of accessibility, traffic, and parking problems, sense of safety, cultural and ethnic diversity.

i. Physical Obsolescence

Physical obsolescence refers to the internal and external structural factors that cause a decrease in value for every component of the built environment. In this section, physical obsolescence is identified by the following indicators in the Ulus quarter:

- Structural condition of the territory and buildings
- Pollution
- Capacity of green and open spaces

Structural condition of the territory and buildings

In all of the three areas surveyed and observed, the interior and exterior conditions of buildings were subjected to a certain level of deterioration. However, the level of deterioration is differentiating in terms of internal and external qualities in each area. In Area A, the shops are mostly located in commercial complexes, which were observed to have the least deterioration among the defined three study areas. Nevertheless, there are functional deficiencies and material wear in the complexes.

On the other hand, in Areas B and C, the physical condition of structures depicts a much more dire picture. As can be observed from the pictures below, the paint of the façades has been peeled off, some structures do not have an entrance door to the building, windows are broken, and the material is ruined. The interior materials of the buildings are also highly damaged. The walls are cracked and peeled off, and the pavements are broken. Some buildings have an unpleasant smell that reveals a possible sewage leak, which reflects the infrastructural condition of the structures.

Figure 38, 39, 40, and 41: Interior and Exterior Structural Condition of the Buildings in Area B

Captured by the author in Konya Street, in the study area B.

Figure 42 and 43: Exterior structural condition of the buildings in Area C

Captured by the author in 2. Street in the study area C.

Pollution

- Environmental pollution: Area A and B are relatively good at street cleaning, but household waste and leftovers from demolished houses are often found on the streets in area C.

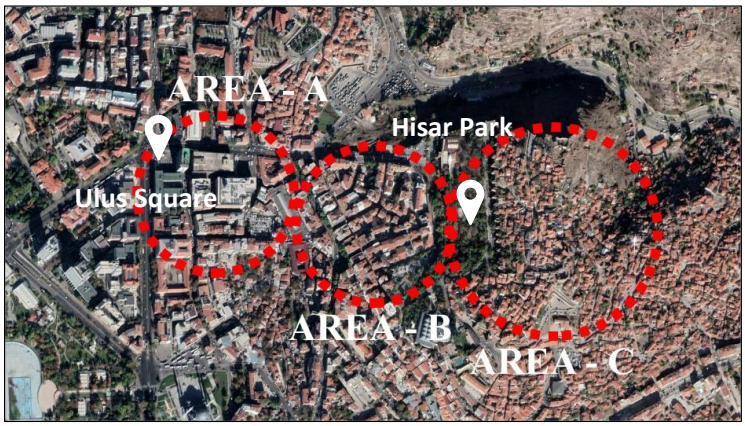
- Air and noise pollution: Due to being the central location of the public transportation network and its commercial identity, Ulus has heavy motor vehicle traffic during the day. In addition, it is known that the use of coal for heating purposes is common in the winter months, especially in the slums in Area C.

- Visual pollution: Unlike certain air or water pollution indicators, visual pollution is more of a flexible concept that can be evaluated subjectively. In this study, the visual pollution component of Ulus is emphasized with aesthetic and psychological concerns. Visual pollution is the combined effect of clutter, disorder, and redundancy of various objects in the landscape, such as outdoor advertisements (Chmielewski et al., 2016).

The Ratio of Green and Open Spaces

Hisar Park is the only green area that the public can use for areas A, B, and C and their surroundings, while Ulus Square is the only defined open area of the quarter. Moreover, it has been observed in Area B that there are a few open areas obtained by the demolition of the buildings, are used as parking lots. In a densely populated quarter like Ulus, the ratio of open and green areas is meager.

Figure 44: Ulus Square and Hisar Park in the study areas and surroundings (on the left)
Figure 45: Open areas used for car parking (on the right)



Drawn by the author (on the left)
Base Image Source: Google Earth (on the left)
Source: Captured by the author in area B (on the right)

ii. Functional Obsolescence

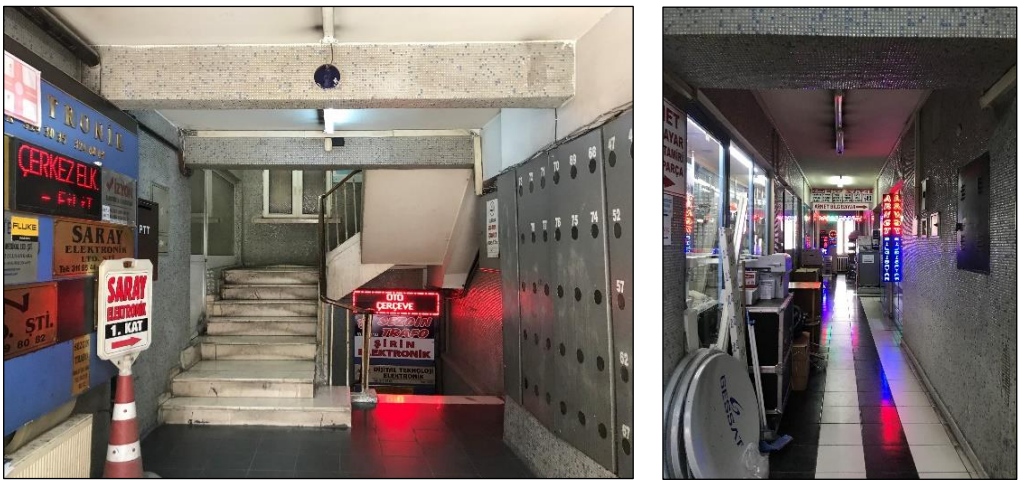
The contemporary needs and expectations of society change faster than the estimated lifetime of built fabric. The fabric becomes functionally obsolescent when it is still physically convenient but cannot meet the function it was designed for anymore. Both internal and external factors can cause functional obsolescence. In this section, functional obsolescence is identified by the following indicators in the Ulus quarter:

- Mismatch between the fabric and the current use

Mismatch between the fabric and the current use

Functional obsolescence is mainly defined by the mismatch between structures' design and their current purpose of use (Buitelaar et al., 2021; Lichfield, 1988; Nutt et al., 1976; Thomsen & van der Flier, 2011b; Tiesdell et al., 1996). This type of obsolescence is observed primarily in Area B. The area comprises mostly commercial activities, even though the buildings were designed as apartment buildings with shops on the ground floors and houses on the upper floors. However, all of the houses were detached and converted into commercial shops. Consequently, the total density of buildings and the quarter has increased much more than the historic fabric can bear. Figure 46 and 47 show the entrance and first floor of the building that was converted from residential to commercial function (Konya Street, Door Number: 13).

Figure 46 and 47: A Commercial Building in Konya Street that Converted from a Residence



Captured by the author in Konya Street in Area B

Ankara's planning history mentioned that Ulus was designed as Ankara's commercial, cultural, financial, and bureaucratic center. However, the quarter, which lost all its features except for the commercial function, reached a density far above its capacity. Tiesdell et al. (1996) indicated that narrow and un-walkable streets without enough parking spaces constitute essential problems for commercial areas. Therefore, this incapability leads to functional obsolescence in the Ulus quarter, where the historical street texture (originally designed to serve residential uses) remained without renewal or improvement.

Figure 48: Konya Street in Area B

Captured by the author in Area B

Figure 49: Yakut Street in Area A

Captured by the author in Area A

iii. Locational Obsolescence

Locational obsolescence is observed on different scales. On a building scale, external factors such as infrastructural insufficiencies, negative environmental impacts, and transportation difficulties cause a building to decrease in value due to its specific location (Pinder & Wilkinson, 2000). On a neighborhood or quarter scale, locational obsolescence is observed with indicators such as the location and relations of the area in the macroform of the city, geographical location, accessibility, and its overall image perceived by the outsiders (Lichfield, 1988).

Another case that results in locational obsolescence is the migration of the central business district. When the CBD function is withdrawn from an area, all remaining functions associated with the CBD become locationally obsolete (Tiesdell et al., 1996). Therefore, in this section, locational obsolescence will be identified by the following indicators in the Ulus quarter:

- Incompatible uses with the historic character of the territory
- Level of Accessibility
- Traffic and Parking Problem

Incompatible uses with the historic character of the territory

One of the most important problems encountered in Ulus is the insufficient maintenance and repair of the buildings. However, in addition to ensuring the sustainability of the built environment in Ulus, adequate protection and restoration of the historical heritage must be provided. The negligence and exploitation of the historic buildings caused unrecoverable damages to the historic fabric (which is frequently encountered in Area B). Some of these buildings, whose historical value can be easily perceived from some traces that have survived to the present day, were occupied by small and medium scale shops, ateliers, and storages. Even some of those that could not even be used as shops were used as workshops and warehouses.

Figure 50, 51, and 52: Historical Buildings Used as Shops, Ateliers, and Storages

Captured by the author in Area B (Figure 50 and 51)

Captured by the author in Area A

Figure 53: The Ruins of Roman Street without any Protection or Isolation

Captured by the author in Area A.

Level of Accessibility

Ulus is the secondary transfer point of Ankara's public transportation system after Kızılay. Numerous buses and *dolmus* lines which form the urban public transportation network intersect in the Ulus quarter. In addition, Ulus experiences an extensive visit of private cars and taxis in the daytime, caused by both the commercial identity of the quarter and by being a junction point on the transportation network that connects high-population districts such as Keçiören and Altındağ to central business districts such as Kızılay and Kavaklıdere (TMMOB Şehir Plancıları Odası Ankara Şubesi, 2019).

However, the transportation facilities are not homogeneously distributed to all spatial components of Ulus historic city center. Unlike Areas A and B, which are very close to public transportation stops, Area C has problems in accessing transportation services. The interviews with the residents and the personal observations reveal that the transportation facilities of Ulus do not contain the squatter neighborhoods. The residents of the neighborhood stated that there is no public transportation route to their location; the ones who can afford, prefer taxis as private transportation. It was also stated that there is very little private car ownership in the neighborhood. Moreover, they stated that essential services such as fire department or ambulance usually delayed, and sometimes, they cannot arrive at the place in need due to the unavailability of narrow roads and streets.

Traffic and Parking Problem

Areas A and B are the most frequently visited territories of Ulus during the day due to their commercial character. In the area where the number of public transport services is relatively high, it is observed that the traffic capacity is still insufficient compared to the number of visitors. Especially at the peak hours of the day and on weekends, both human and vehicle traffic increase in Ulus and its surroundings. This situation creates a severe transportation problem in Ulus, which is one of the most important regions of Ankara as the historical city center. Both private vehicles and public transportation vehicles are the primary sources of traffic problems. According to Ankara Chamber of City Planners, although the feature of being a transfer point increases the accessibility of Ulus and makes a significant contribution to the commercial life, the traffic and parking problem has become one of the biggest threats

that the historical fabric suffers (TMMOB Şehir Plancıları Odası Ankara Şubesi, 2019)

iv. Image Obsolescence

This type of obsolescence is an outcome of people's perception of a building or an area. Rather than an area's physical or functional capabilities, it is determined by users' value judgments. For example, inner-city centers are labeled by almost all citizens as places suffering from overcrowding, noise, and air pollution. This is a negative image and makes the area obsolescent by its image (Tiesdell et al., 1996). In addition, being referred to as an area with poverty and crime also causes image obsolescence. In this section, locational obsolescence will be identified by the following indicators in the Ulus quarter:

- Sense of Safety
- Cultural and Ethnic Diversity

Sense of safety

The main reasons behind the increasing crime levels in cities are the intensifying unemployment problem and challenging living conditions. Therefore, the existence of squatter neighborhoods increases the crime rates in a district, which are identified with social disorganization, lack of urban services, and employment opportunities. The residents of squatter areas with insufficient income and education to maintain their lives became involved with immoral and informal economic activities such as robbery, arson, selling and using drugs, and prostitution.

In this context, it has been inferred from the interviews conducted in study areas A, B, and C that various persistent criminal activities are situated in the Ulus quarter. According to the participants from Areas A and B, after the demolition of the brothel in Bentderesi in 2011, prostitution spread to the streets and hotels in the quarter.

Figure 54: Hotels in Area A and B

Image Source: Yandex Maps

In addition, according to the interviews conducted in Area C, illegal drug use and trade are performed on the streets; although the security forces are aware of the situation, interventions to prevent illegal drug trade remain insufficient.

Due to the abovementioned factors, both the commercial sector employees in Areas A and B and the residents in Area C do not feel safe in Ulus. In particular, users in Areas A and B, which appear to be commercial zones completely free from residential use, are hesitant to stay in the area after business hours. Residents in Area C, on the other hand, are afraid of the frequent violence on the streets as a result of drug and alcohol use. Another crime encountered in Area C is intense robbery and arson activities. As demonstrated in Figure 55, the houses that were temporarily or permanently evacuated were burned by the residents of the same neighborhoods to collect and sell the remaining scrap.

Figure 55: Burned Squatter House in Kale Neighborhood

Captured by the author in Area C.

Cultural and Ethnic Diversity

It is observed in the literature review that there is a number of studies that identify obsolescence in neighborhoods with cultural and ethnic diversity (Abramson, 2016; Adams & Burdell, 1936; Herrold, 1935; Jones, 1967; Keith, 1954). In Ulus, especially in Area C, this problem is observed among various ethnic groups who formed closed communities in conflict with other communities.

3.3.3. Results of the User Survey

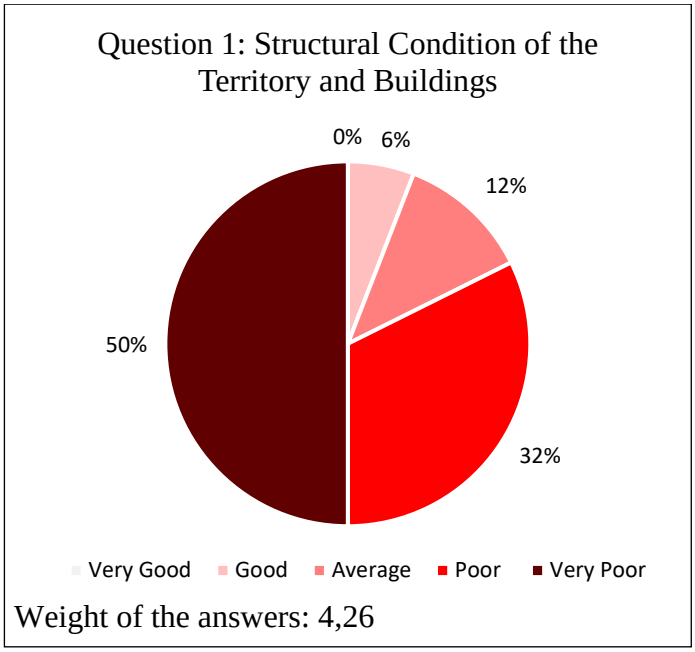
i. Questions for Analyzing Physical Obsolescence

In order to identify the physical obsolescence perception of the users, three questions were asked in this category. The first question was about the structural condition of the territory and buildings, the second was about pollution, and the third was about the capacity of open and green spaces serving the selected areas and their surroundings.

In the first question, most participants' consensus was that the buildings experienced a natural wear process due to their age, but they stated that the internal and external physical conditions were weakened because the required maintenance and repair were not carried out. They believe that the physical conditions of the buildings can improve if adequate maintenance and repair works are carried out. On the other hand, in Area C, it has been determined that only the property-owner residents who can afford

maintenance costs for their buildings were carrying out repair and improvement in different levels. The rest of the buildings are continuing to deteriorate without any intervention. Moreover, illegal use of infrastructure is a prevalent problem in the squatter neighborhoods in Area C. In terms of infrastructure, on the other hand, the most problematic area has been identified as Area C. The residents of Area C frequently experience several problems due to the illegal use of infrastructure by most of the households. However, the users living in Area C and 71% of the users of Areas A and B evaluated this question as below-average (poor and very poor).

Figure 56: Results of Question 1



Prepared by the author.

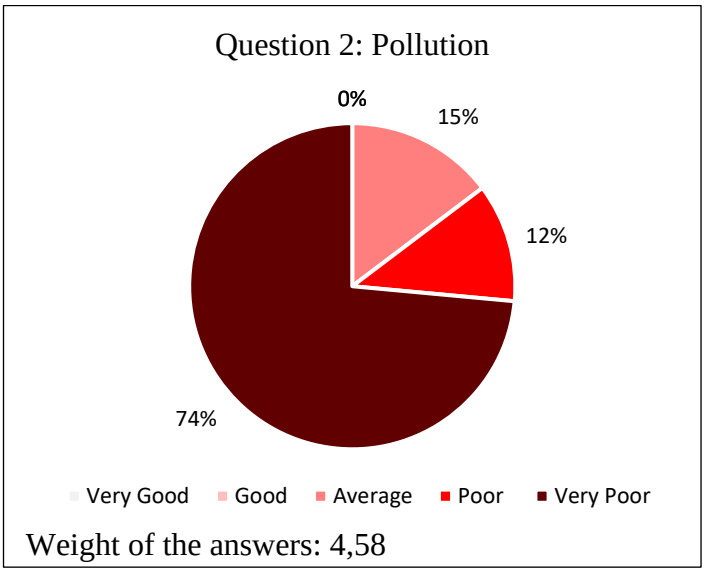
The second and third questions are intended to analyze the obsolescence perception of the users about their physical environment with the indicators of pollution and the capacity of open and green spaces. In terms of the existence of green and open areas, the majority of the users gave the score of poor and very poor for Ulus territory. As stated in the previous section, the only defined open space for the quarters is Ulus Square, and for the green areas, there are Gençlik and Hisar Parks. The existence of these parks is evaluated as concentrated and sufficient.

The pollution level in the area has a similar rating with open and green spaces. %74 of the participants think that their environment is polluted in many ways. In addition to the pollution on the streets due to the negligence of the users and the lack of

sufficient trash cans, Ulus also suffers from air, noise, and visual pollution. Especially in Area C, the residents indicated that most households use coal and nylon fuels for heating purposes in the winter. Due to the geographical characteristics of Ankara city and the former planning decisions that closed the city's air corridors, Ankara city center is suffering from severe air pollution.

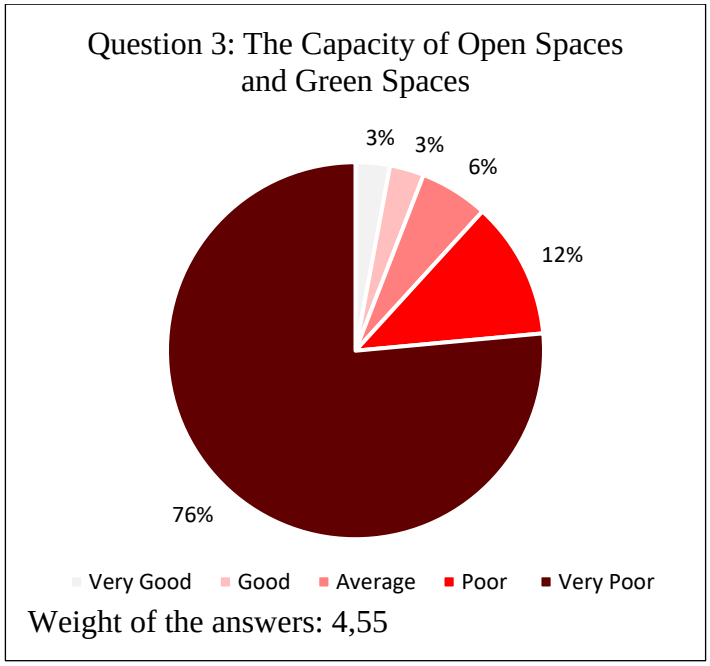
Moreover, the intensive motor vehicle traffic is another reason behind Ulus's air pollution. The intensive traffic of both vehicles and pedestrians also has adverse effects in terms of noise pollution. In Ulus, where commercial functions are not limited to indoors, there is intense noise pollution which negatively affects the daily users of Ulus. In addition, the unaesthetic appearance of the streets, the neglected exteriors and façades of the buildings, and the illuminated, colorful billboards extending along the streets to the upper floors of the houses have been reported as the main reason behind the existing visual pollution in the area.

Figure 57: Results of Question 2



Prepared by the author.

Figure 58: Results of Question 3

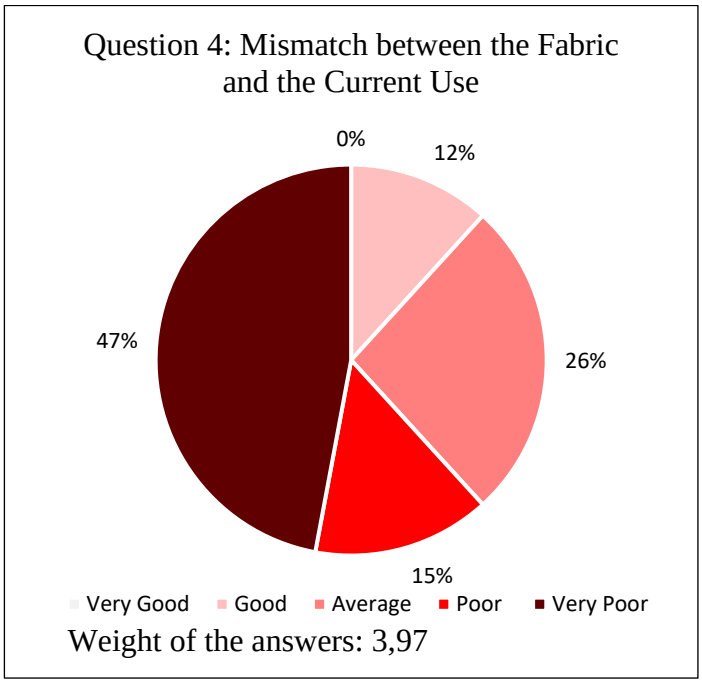


Prepared by the author.

ii. Questions for Analyzing Functional Obsolescence

One question is asked to identify the functional obsolescence in participants' perception, which intends to analyze the mismatch between fabric and the current use.

Figure 59: Results of Question 4



Prepared by the author.

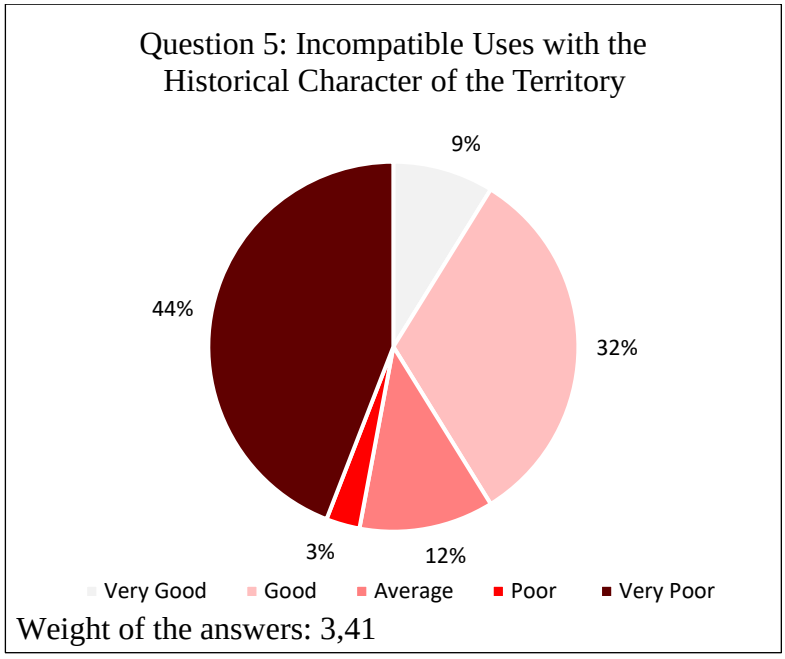
In the interviews held with the shopkeepers in Area A's office buildings (işhanları), the participants stated a lack of improvement activities in buildings to adapt them to technological developments. They consider this situation as "a threat to the commercial identity of Ulus quarter compared to the stores in shopping malls and the contemporary 'shopping streets' with the latest technology and equipment". In Area B, this situation is more apparent in the shops that have been converted from apartments to workplaces. Suffering from too small shops and insufficient storage space, the shopkeepers also stated that they could not realize the transformation they desired in their shops due to spatial and legal constraints. Moreover, in the interviews held in Area C, they stated that they could not provide internet connection due to the lack of infrastructure in their neighborhoods, which constitutes a significant problem, especially during this pandemic period, for children who cannot participate in online courses and for their families.

iii. Questions for Analyzing Locational Obsolescence

In the category of locational obsolescence, there are three questions asked to the participants in order to observe how they perceive the situation of Ulus in terms of its determined location spatial relationships in and within the city. In question 5, the compatibility level of the functions with the historical fabric was responded with a value that is closer to the average. However, some of the participants who answered this question on average or above stated that they positively judged this issue after the recent restoration and revitalization activities in such areas as Hamamönü, Hacıbayram, and Ankara Castle with its surroundings.

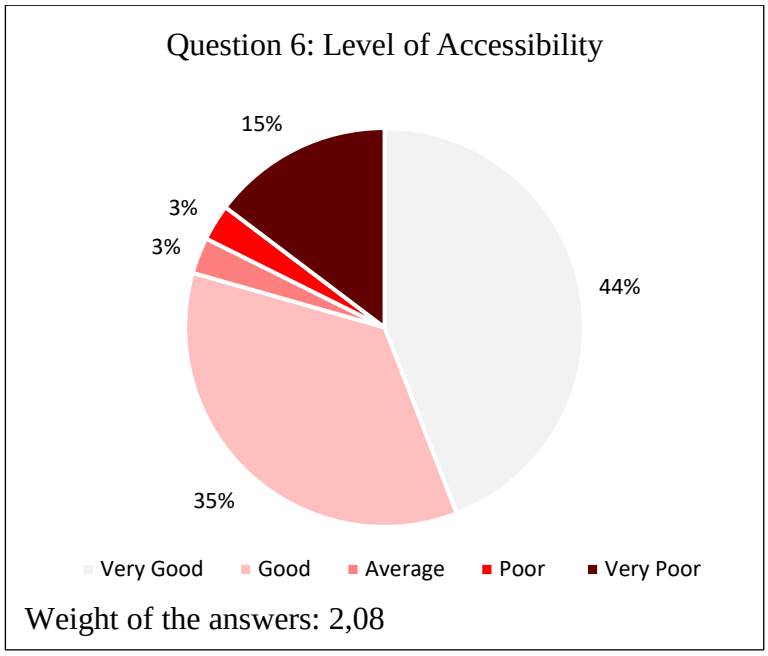
Questions 6 and 7 focus on the level of accessibility of Ulus in terms of public-private transportation to the quarter. In Question 6, 82% of the participants evaluated the accessibility level of Ulus at average and above. The participants stated that they prefer walking or using public transportation to provide access to the quarter due to its central location. In addition, since Ulus is a transfer point of all public transportation routes in the city, they can travel from almost any location of the city without any transfer.

Figure 60: Results of Question 5



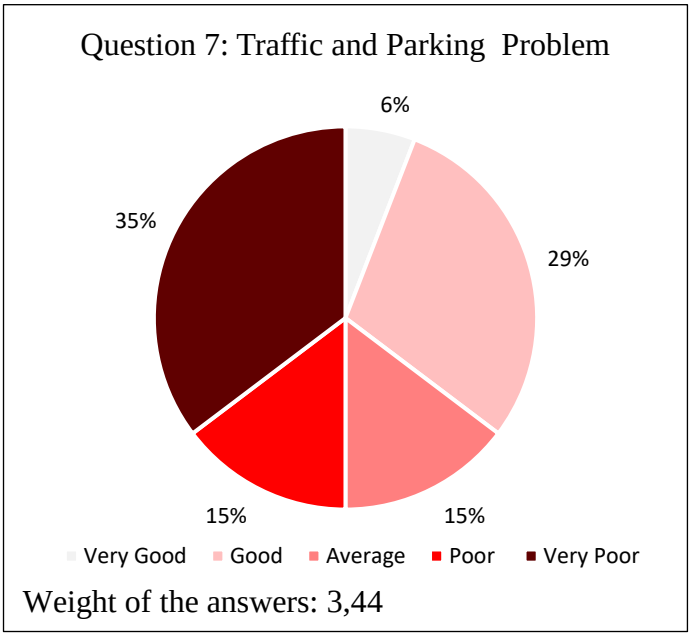
Prepared by the author.

Figure 61: Results of Question 6



Prepared by the author.

Figure 62: Results of Question 7



Prepared by the author.

However, in the following question (Question 7), even the users who have private vehicles stated that they do not prefer to provide private transportation to Ulus due to traffic congestion and parking problems. While all participants stated a traffic problem in the commercial parts of the quarter, the participants who evaluated the 7. question on the scale of average and above included that the parking problem has decreased relatively thanks to the recently opened private parking lots.

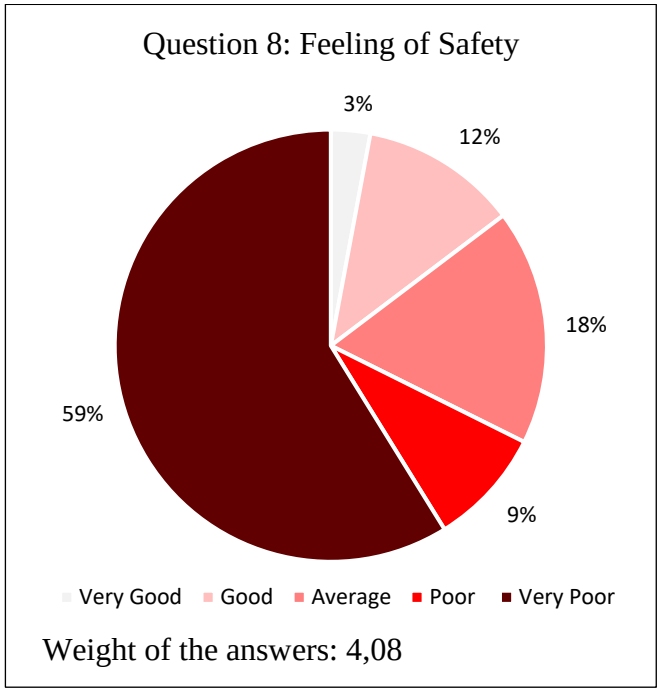
iv. Questions for Analyzing Image Obsolescence

For the first question in the image obsolescence category, which aims to observe how the sense of security is perceived, 68% of the participants responded with poor and very poor evaluations. Moreover, half of the users who rated the security of Ulus as average and higher stated that they feel safe because they have been working/living in Ulus for a long time. However, they believe that an outsider, especially a woman, cannot feel safe in Ulus during any time of the day. In the open-ended question at the end of the survey, the security issue was the most revisited topic among all the indicators. The survey participants from Area C stated that they no longer felt safe in the neighborhood because they were witnessing street fights, drug and alcohol use, drug sales, and robbery every day. They also included that it is not a convenient

environment for raising their children, and most of the former residents left the neighborhood for the mentioned safety concerns. Another highly emphasized issue regarding safety was the problem of prostitution which spread to the hotels in the quarter after the demolition of the brothel in Bentderesi in 2011. Especially in Area B, the majority of the participants evaluated this problem as the most disturbing issue in the quarter.

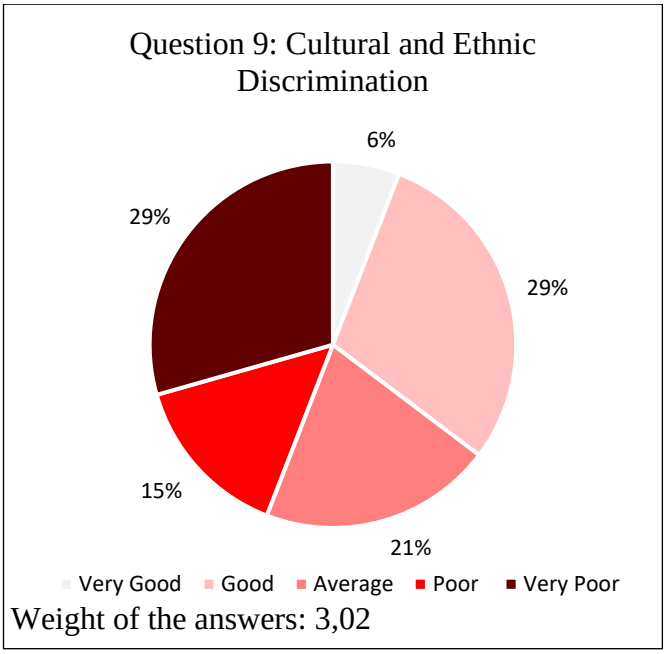
The case of security is also highly related to the existence of slums in the survey. However, at this point, it is observed that the evaluations stem from two different concerns. The first one is the evaluation of users who work in Ulus and live outside the territory. According to them, the existence of slums adversely affects the quarter because many criminal activities (such as drug use, theft, prostitution) originate from the squatter areas that are located very close to the commercial center. However, the residents of the squatter neighborhoods emphasized that they have negative evaluations about the existence and conditions of slums in the context of lower living standards that they are subjected to and inadequate access to urban services. On the other hand, mostly, they are satisfied with their lifestyle, family ties, and community culture.

Figure 63: Results of Question 8



Prepared by the author.

Figure 64: Results of Question 9



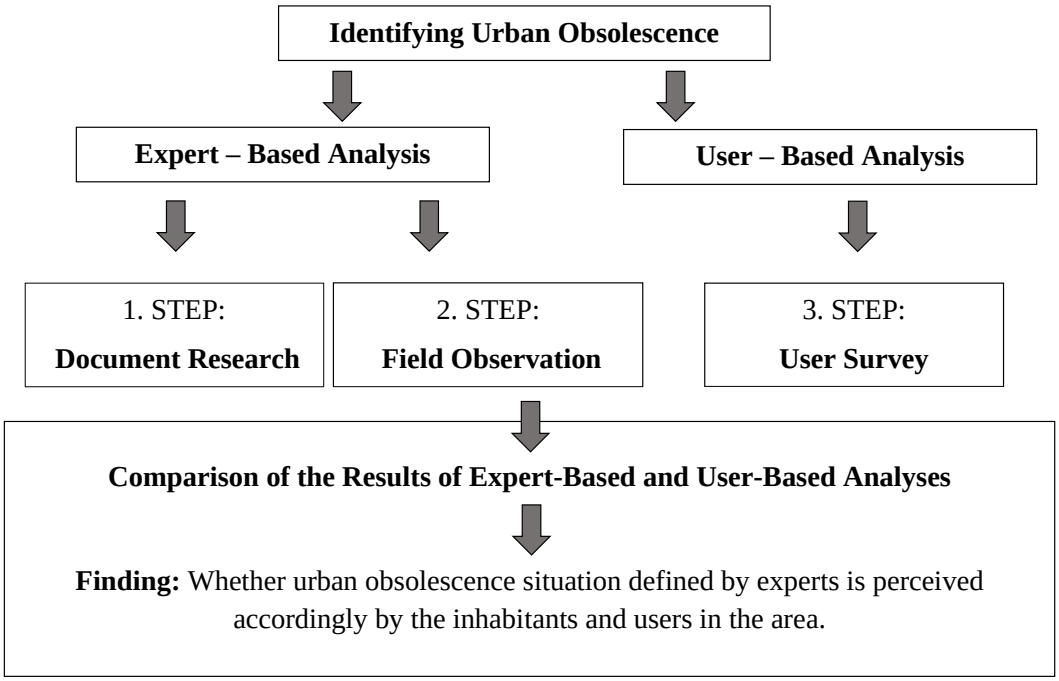
Prepared by the author.

The second question in the image obsolescence category is about the district's cultural and ethnic discrimination phenomenon. It has been inferred from the interviews that there are various social groups such as Turkish, Kurdish, Afghan, Syrian, and Gypsy, especially in Area C. Moreover, it is possible to encounter some ethnic clusters composed of a few workplaces in areas A and B. These groups are closed social formations and internally regulate their social, economic, and spatial relations. It has been observed that this variety sometimes results in frequent conflicts between different social groups, recorded especially in the last ten years.

3.4. Concluding Remarks

As mentioned before, this case study aims to identify urban obsolescence in the historic city center of Ankara, Ulus, with a model that combines expert-based observations and user-based evaluations. In this three-step model, the results obtained from document research and field observation, which constitute the expert-based part, were compared with the survey results, which constitute the user-based part of the case study.

Figure 65: Three-Step Model of the Study for Identifying Urban Obsolescence in Ulus



Conceptualized by the author

In order to make this comparison more practical and consistent, the same categories (physical, functional, locational, and image obsolescence) and indicators (structural condition, pollution, capacity of open and green spaces, mismatch between the fabric and the current use, incompatible uses with the historical character of the territory, level of accessibility, traffic, and parking problem, sense of safety, cultural and ethnic diversity) were evaluated in all three steps.

· *Document Research Results*

As emphasized before, obsolescence was not a matter of discussion when these plans were prepared and implied. For this reason, instead of seeking obsolescence terminology, these plans were examined in terms of their approaches to obsolescence and the results they contributed to the obsolescence of Ulus historic city center. Accordingly, the findings obtained as the result of the document research step were evaluated as follows;

– **The most frequently mentioned indicators:** Structural condition, Incompatible uses with the historical character of the territory and Traffic and parking problem,

- **Averagely mentioned indicators:** Pollution, Mismatch between the fabric and the current use, and Level of accessibility,
- **Unmentioned indicators:** Capacity of open and green spaces, Sense of safety and Cultural and ethnic diversity.

· *Field Observation Results*

In the field observation step, indicators were observed by the researcher and evaluated from the perspective of a city planner. Accordingly, the obsolescence indicators observed in the study areas are graded at primary and secondary levels. The primary level indicators are the intensified problems observed in every part of Ulus historic city center. Secondary level indicators still constitute a threat to the historic city center. However, compared to the indicators observed at the primary level, they may vary in different sections within the borders of Ulus. These indicators are grouped as follows:

Indicators of obsolescence observed **at the primary level:**

- Structural condition
- Capacity of open and green spaces
- Mismatch between the fabric and the current use
- Incompatible uses with the historical character of the territory
- Traffic and parking problem
- Feeling of safety

Indicators of obsolescence observed **at the secondary level:**

- Pollution
- Level of accessibility
- Cultural and ethnic diversity

· *User Survey Results*

As mentioned earlier in the methodology of the user survey, the survey results are evaluated by weighing the average scores of answers. Since the value of 3 is the neutral point in the scaling, every value above three is considered ‘obsolescent’

according to the indicators they represent. Respectively, every value below three is considered as ‘not obsolescent’, in accordance with the indicators they represent. In this context, Ulus is not considered obsolete in terms of the level of accessibility. The weighting score of this question is calculated at 2,08. On the other hand, the remaining indicators are evaluated as obsolescent by the users.

Table 29: Weighting of the User Survey Results

Obsolescence Categories	**Questions**	**The weighting of the Results**
Physical Obsolescence	1. Interior and exterior structural condition	4,26
	2. Pollution	4,58
	3. Open spaces and green spaces	4,55
Functional Obsolescence	4. Mismatch between the fabric and the current use	3,97
Locational Obsolescence	5. The level of compatibility of the uses with the historical character of the territory	3,41
	6. Accessibility	2,08
	7. Traffic and parking problem	3,44
Image Obsolescence	8. Feeling of safety	4,08
	9. Cultural and ethnic discrimination	3,02

Prepared by the author.

In the following section, case study results are compared, evaluated, and discussed within the frame of their similarities and differences.

CHAPTER 4

DISCUSSION AND CONCLUSION

As mentioned before, the hypothesis of this study is that the top-down and expert-based practices of the Turkish urban planning system might exclude the possible differences between observations of an expert and evaluations of the users. It is assumed in this thesis that considering behaviors, preferences, and evaluations of users together with the observations and findings of an expert can provide remarkable contributions to the urban planning processes. In this thesis, this hypothesis is tested with an obsolescence situation in the historic city center of Ankara. It is believed that this kind of integrated approach would contribute positively to successful conservation and revitalization practices. Based on this assumption, this study's three-step obsolescence identification method was designed, which proposes a synthesis of expert-based and user-based approaches. This study expected to find some remarkable differences between the expert and user perspectives within the given indicators' framework.

The obsolescence indicators were subjected to a three-based identification method, consists of documentary research, field observation, and user survey. Documentary research and field observation steps compose the expert-based analysis of the model, while user survey is the analyzing tool of the user-based analysis. In other words, the survey provides the data for crosschecking the documented and observed obsolescence situation in Ulus. In this respect, this chapter discusses each obsolescence indicator by comparing the result of the three-step identification method.

4.1. Comparison and Evaluation of the Results

After obtaining the results from the obsolescence identification model in Ulus, they are compared in order to evaluate the compatibility of the expert-based observations

and user-based evaluations. The obsolescence identification model of this study is composed of three steps: document research, field observation, and user survey. The first two steps are formulated with an expert-based approach, while the third one is based on a user-based approach. The results obtained in the document research and field observation steps are grouped as shown in the table below. The findings obtained from the document research are grouped as most frequently mentioned, averagely mentioned, and unmentioned according to the frequency of mentioning in the documents. At the end of the field observation, the indicators were classified as primary and secondary levels according to the intensity and extensiveness of the problem. Additionally, users' evaluations are objectified by calculating the weight of their answers to each question (designed according to a 5-point Likert scale), and the results above 3 represent the perceived obsolescence for each indicator. Accordingly, the following table is formulated to evaluate and discuss the three-step model.

Table 30: The Results of the Three-Step Urban Obsolescence Identification Model in Ulus

	Indicators	**Document Research**	**Field Observation**	**User Survey**
Physical Obsolescence	1. Structural condition (interior and exterior)	Most frequently mentioned	Primary Level	4,26
	2. Pollution: water, air, noise, visual pollution	Averagely mentioned	Secondary Level	4,58
	3. Capacity of open and green spaces	Unmentioned	Primary Level	4,55
Functional Obs.	4. Mismatch between the fabric and the current use	Averagely mentioned	Primary Level	3,97
Locational Obsolescence	5. Incompatible uses with the historical character of the territory	Most frequently mentioned	Primary Level	3,41

Table 30 (continued)

Locational Obsolescence	6. Incompatible uses with the historical character of the territory	Averagely mentioned	Secondary Level	2,08
	7. Traffic and parking problem	Most frequently mentioned	Primary Level	3,44
Image Obsolescence	8. Sense of safety	Unmentioned	Primary Level	4,08
	9. Cultural and ethnic diversity	Unmentioned	Secondary Level	3,02

Prepared by the author.

After analyzing the results jointly, three types of interaction are detected among them. In the first one, remarkable differences are identified between expert-based observations and user-based evaluations. In the latter, expert-based observations and user-based evaluations overlap. In the third, the results obtained from field observation overlap with user evaluations, yet these indicators are not mentioned in strategic documents. Accordingly, the indicators are grouped as follows. The results of the case study are discussed under these three categories below.

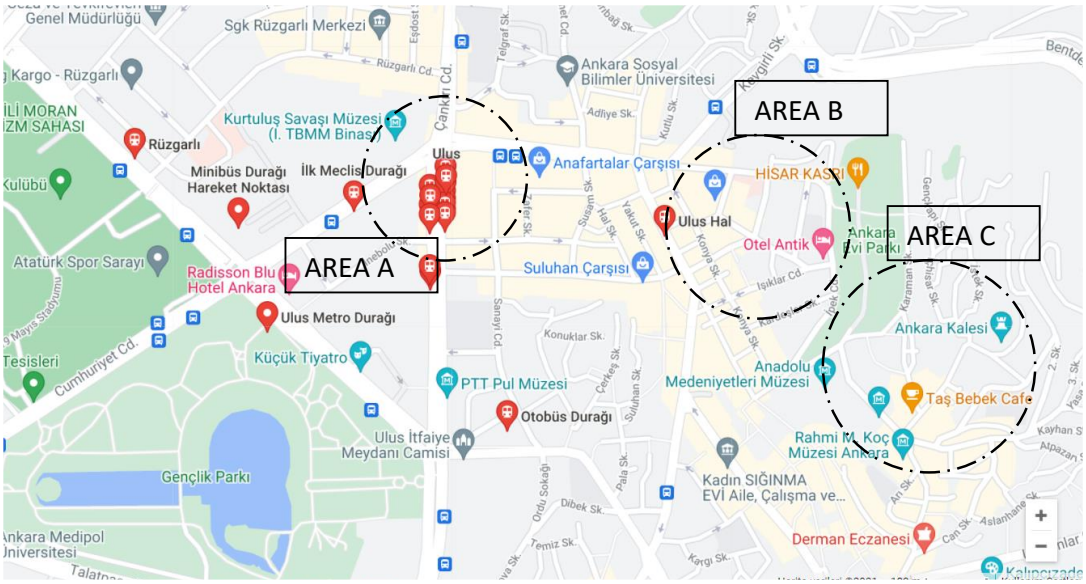
1. Incompatibility of expert-based analyses and user-based evaluations:
    - Level of accessibility
2. Compatibility of document research, field observation, and user survey:
    - Structural condition (interior and exterior)
    - Pollution: water, air, noise, visual pollution
    - Mismatch between the fabric and the current use
    - Incompatible uses with the historical character of the territory
    - Traffic and parking problem
3. Compatibility of field observation and user survey:
    - Capacity of open and green spaces
    - Sense of safety
    - Cultural and ethnic diversity

· *Incompatibility of Expert-Based Analyses and User-Based Evaluations*

The expert-based observations and user-based perceptions appear to be remarkably unmatched for the indicator of *level of accessibility*. The weighting of the answers for the accessibility question (Question 6) is calculated at 2,08, which refers to the 'not obsolescent' situation accordingly with its indicator. Therefore, it is possible to say that the users do not perceive the level of accessibility as one of the locational obsolescence indicators in the historic city center.

Ulus is the secondary transfer point of Ankara's public transportation system after Kızılay. Numerous buses and *dolmuş* lines which form the urban public transportation network intersect in the Ulus quarter. In addition, Ulus experiences an extensive visit of private cars and taxis in the daytime, caused by both the commercial identity of the quarter and by being a junction point on the transportation network that connects high-population districts such as Keçiören and Altındağ to central business districts such as Kızılay and Kavaklıdere (TMMOB Şehir Plancıları Odası Ankara Şubesi, 2019).

Figure 66: The Distribution of Bus Stops in the Center of Ulus



Prepared by the author
Image Source: Google (under the section of "bus stops in Ulus, Ankara"), obtained in 06.09.2021

However, the transportation facilities are not homogeneously distributed to all spatial components of Ulus historic city center. Unlike Areas A and B, which are very close to public transportation stops, Area C has problems in accessing transportation services. The map above shows that the EGO bus stops in Ulus territory are

agglomerated in the very center of the historic quarter. The interviews with the residents and the personal observations reveal that the transportation facilities of Ulus do not contain the squatter neighborhoods. The residents living in Kale Neighborhood in Area C stated that they mostly reach the center of Ulus by walking. They find the center accessible by virtue of being within walking distance. However, they also stated that essential services such as fire department or ambulance usually delayed, and sometimes, they cannot arrive at the place in need due to the unavailability of narrow roads and streets.

It can be inferred that, while the level of accessibility "to" Ulus historic city center is high, the level of accessibility "within" Ulus historic city center does not seem accordingly. It was observed by the researcher during the fieldwork that the pedestrian circulation was quite insufficient. As demonstrated in the pictures below, the parked cars occupy the sidewalks, which are already not wide enough. Moreover, sidewalks are interrupted by some other obstacles, such as shop warehouse entrances or shop supplies.

Figure 67 and 68: The Interrupted Pedestrian Circulation

Captured by the author in Area B.

According to the majority of the respondents, even though Ulus has great touristic potential, commercial uses outweigh any other function in the territory. The narrow streets and the difficulty of walking as pedestrians drive people who want to enjoy and spend quality time shopping away from Ulus. As an alternative, for instance, easing or preventing vehicle traffic in the first step, especially in areas with touristic and cultural features, will allow people to shop peacefully by looking at the store

windows or simply to enjoy their walks. This can both stimulate the commercial activities and the touristic potential in the quarter. There are a lot of historical, cultural, and touristic places within walking distance in Ulus, such as Ankara Castle, museums, Temple of Augustus. However, people do not prefer to visit Ulus due to being located in a highly sloped terrain and inadequate pedestrian circulation. For this reason, designing a holistic pedestrian circulation that will cover historical and cultural values in Ulus will be an effective method to revive the commercial and touristic values of the area.

- *Compatibility of Document Research, Field Observation, and User Survey*

By the implementation of the three-step obsolescence model, the indicators of *structural condition, pollution, the mismatch between the fabric and the current use, incompatible uses with the historical character of the territory, and traffic and parking problem* are appeared to be coinciding both in the expert-based observations and user-based perceptions.

The interior and exterior *structural condition of the buildings* is a long-discussed issue that has been debated since the 1930s in Jansen Plan. Therefore, this is one of the most common indicators encountered in document research. This situation, which has been pointed out by experts for many years and seen as a problem by users, is one of the most intense problems - obsolescence indicators - in Ulus. However, by field observation and interviews with users, it has been determined that these buildings are still operational, except for the completely unusable ones. It has been determined that the main reason why these structures are structurally obsolescent is mainly due to neglect and insufficient maintenance and repair. The common response of most of the users in the commercial and residential areas was that they wanted the buildings to continue to function by maintenance and improvement.

In the document research on *pollution* indicator, it was determined that Ankara had a major air pollution problem, especially in the 1980s. This problem, which reached a critical level due to the burning of coal for heating in winter, became one of the important issues that the 1990 Ankara Master Plan emphasized. It was ascertained from the interviews with the locals that the air pollution problem, which decreased with the creation of green axes in the macroform of the city and the use of natural gas,

still continues in the winter months in Area C. Due to the lack of natural gas infrastructure and high fuel prices, wood, coal, and sometimes plastic wastes are used as fuel in these neighborhoods during the winter months. Moreover, leftovers from demolished and/or burned buildings are frequently encountered along with urban wastes seen on the streets in Area C.

The indicator of *mismatch between the fabric and the current use* was observed in commercial functions in Ulus, especially Area B. Study Area B comprises mostly commercial activities, even though the buildings were designed as apartment buildings with shops on the ground floors and houses on the upper floors. However, all of the houses were detached and converted into commercial shops. Consequently, the total density of buildings and the quarter has increased much more than the historic fabric can bear. It has also been observed that this situation is highly problematic for users, especially in commercial areas. In addition, *incompatible uses with the historical character of the territory,* which threatens the continuity/integrity of the historical texture, have been encountered quite frequently in Ulus.

There is major *traffic and car parking problem* in Ulus. Especially in the central parts, there is severe traffic congestion and the absence of car parking spaces. However, this situation also is not valid for every part of the territory. In Area C, in which the squatter neighborhoods are located, it is observed that the roads are very narrow and irregular for car traffic. Nevertheless, the inhabitants do not consider a traffic and car parking problem in their neighborhoods because most residents do not own a car. Therefore, the narrowness and unavailability of the roads do not constitute a locational problem for them.

- *Compatibility of Field Observation and User Survey*

By the implementation of the three-step obsolescence model, the indicators of *capacity of open and green spaces, sense of safety, and cultural and ethnic diversity* are appeared to be coinciding both in field observations and user evaluations. Yet, these indicators are not mentioned in strategic documents.

The capacity of open and green spaces indicator was not encountered in the strategic plans specific to Ulus. On the other hand, especially green areas have been considered holistically with the Ankara macroform. It has been clearly seen in the studies

conducted in field observation and a user survey that there is a dense construction in the historical city center. There are no open and green areas where people can perform activities such as resting or socializing. Additionally, Ulus Square, which is located in Area A, has lost its feature of being an accessible place because it is surrounded in two sides by two main traffic arteries. Furthermore, Hisar Park, located on the skirts of Ankara Castle, is the only green area within the boundaries of the study areas and is not sufficient for users and visitors of Ulus.

Sense of safety is a very problematic issue for the residents, workers, and daily visitors of Ulus. The factors such as the fact that Ulus is the commercial center of lower classes, that the area is frequently on the agenda with incidents of violence and theft, and that illegal activities such as prostitution and drug use/sale are common, make the indicator of sense of safety problematic for all segments living and visiting Ulus. Sense of safety and the following indicator, cultural and ethnic discrimination, was not expected to be found in strategic documents, as they were not part of a city plan.

In addition, even though they did not remarkably unmatch with the observations from the expert side, there is a worth mentioning indicator in the image obsolescence category. The weighted result of the 10^{th} question in the survey, which evaluates the *cultural and ethnic discrimination* in the territory, is calculated as 3,02, which is above the average value and accepted as an indicator of obsolescence. However, as the participants noted, this situation did not constitute a severe problem until approximately the last ten years. They stated that there were different ethnic groups before in the area in a more coherent environment until the massive migrations from countries such as Syria and Afghanistan. Therefore, it is possible to say that while most of the obsolescence indicators are deeply rooted problems in Ulus, the obsolescence created by cultural and ethnic diversity is a relatively contemporary phenomenon.

4.2. Conclusion

Time makes certain structures obsolete for some enterprises,
and they become available to others
(Jane Jacobs, 1961, p. 189)

It should be once again emphasized that there are some reasons behind the preference of the obsolescence concept to evaluate the historic city center of Ankara. First of all, the obsolescence concept defines a process of degradation rather than demonstrating a picture of an area's ultimate worse condition. Every component that worsens or tends to worsen in a particular area experiences this situation in different forms and patterns. Therefore, although the area is in overall decline, every worsening element of must be evaluated separately. Moreover, classifying the areas according to their obsolescence levels can facilitate the maintenance of these areas that have not become obsolete yet and have not lost their functionality, with reasonable and cost-efficient interventions.

Secondly, the obsolescence concept has the potential to change people's perspectives on historic city centers. A territory might be intimidating for outsiders, partially or entirely, while it is a functional and appealing place to live for the insiders. A comprehensive and relative approach makes it possible to produce mediating solutions for insider users and outsider citizens instead of total destruction. These solutions also increase the chance of decision-makers and local authorities intervening in historic city centers, rather than sticking to two totalitarian approaches, either destruction, and redevelopment or leaving historic centers to their fate.

After the interviews with the locals, it was noticed that the people living in Kale Neighborhood do not want to leave their living spaces. They embrace their way of life, but their low (and worsening) life standards need to be raised. Since a major part of the squatters do not have title deed documents, they cannot perform the maintenance and repair they want to their houses. Although they want to live in these areas, the ones that have the opportunity move, migrate to the residences on the outskirts of the city. However, they state that they do not want this, do not like this lifestyle where no one knows each other, and do not have a social life. They state that they were forced to leave their homes and move to these sites due to the disinvestment, ignorance, and insecurity in their neighborhoods. It should be remarked that this study

appealed especially to the people who live in the squatter neighborhoods of Ulus. They stated that they are not a part of the decision-making process and are unaware of the interventions for their living spaces. For this reason, they were willing to participate in the study.

It is inferred with this study that; the perception of obsolescence can be changeable. As Nutt et al. indicated, the perception of obsolescence is relative according to a particular situation or condition and varies respectively to the viewpoint or interest of the observer (1976). It appears that "obsolescence is … a function of human decision rather than a consequence of 'natural' forces" (Pinder & Wilkinson, 2000).

Therefore, such a model would make more effective inferences, considering that the perception of obsolescence may vary between decision-makers and users. It is thought that this model would be strengthened by detailed and comprehensive analytical and technical studies (which are beyond the scope of this thesis) and make significant contributions to future studies.

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APPENDICES

A. APPROVAL OF THE METU HUMAN SUBJECTS ETHICS COMMITTEE

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23 Haziran 2021

Konu : Değerlendirme Sonucu

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi : İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Ahmet Burak Büyükcivelek

Danışmanlığını yürüttüğünüz Mervenur Hatiçoğlu'nun "Urban Obsolescence: An Evaluation of Observed and Perceived Criteria in the Context of Ulus Historical City Centre in Ankara" başlıklı araştırmanız İnsan Araştırmaları Etik Kurulu tarafından uygun görülmüş ve **282-ODTU-2021** protokol numarası ile onaylanmıştır.

Saygılarımızla bilgilerinize sunarız.

Dr.Öğretim Üyesi Ali Emre TURGUT
İAEK Başkan Vekili

B. TURKISH SUMMARY / TÜRKÇE ÖZET

Kentsel gerileme (urban decline), kentsel çöküntüleşme (urban blight) ve kentsel küçülme (urban shrinkage) gibi pek çok kavram, özellikle İkinci Dünya Savaşı ve sonrasında yaşanan krizlerin kentlerde yol açtığı sorunları tanımlamak ve tartışmak üzere kentsel planlama literatürüne giriş yapmışlardır. Savaş sonrası sürecin tarihi kent merkezleri ve eski yerleşimler üzerindeki etkisi yıkıcı olmuştur. Kentler nüfus kaybı ve ekonomik durgunluk süreçleri ile sarsılmış, sosyoekonomik yapının değişmesiyle birlikte her yönden fiziksel bozulma ve yıpranmaya maruz kalmışlardır. Bu durumdan farklı olarak, Ankara kenti ve Ulus tarihi kent merkezi örneğinde yaşanan kentsel bunalım süreci, modern kapitalist kentlerdeki kentsel gerileme (urban decline) sürecinden oldukça farklı bir sosyoekonomik örüntüde gerçekleşmiştir. Bu nedenle bu çalışmada, Ulus'ta gözlemlenen kentsel sorunlar incelenirken 'kentsel eskime' kavramının kullanılmasının daha uygun olacağına karar verilmiştir.

Günümüzde şehircilik alanında ve özellikle kentsel dönüşüm faaliyetlerinde analizlerin ve hatta akademik çalışmaların çoğu yukarıdan aşağıya bir yaklaşımla yürütülmektedirler. Bu durumun kentsel müdahalelerde ve planlarda istenilen başarıya ulaşılamamasının nedenlerinden biri olduğu düşünülmektedir. Bu doğrultuda, tarihi kent merkezlerinde yapılacak olan canlandırma çalışmalarının başarıya ulaşabilmesi için bunun önemli bir faktör olduğu varsayılmaktadır. Bu kaygılar ışığında, bu tez, tarihi kent merkezlerindeki eskime (obsolescence) durumunun, uzman ve kullanıcı algılarını birleştiren bir yaklaşımla nasıl tanımlanabileceğini belirleyen bir çalışma yapmayı amaçlamaktadır. Bu araştırmanın alanda yapılacak diğer müdahaleler için bir ön çalışma niteliği taşıması hedeflenmektedir.

Tezin araştırma sorusunun ve alt soruların formüle edilmesinden önceki temel düşünce, Ulus'taki kentsel eskime sorununun toplumun her kesimi için gözlemlenebilir ve algılanabilir göstergelerle tanımlanıp tanımlanamayacağıydı. Bu bağlamda aşağıdaki araştırma sorusu ve alt sorular formüle edilmiştir:

- Araştırma Sorusu: Tarihi kent merkezlerindeki eskime durumu, uzmanların gözlemleri ve kullanıcıların algıları ile örtüşecek şekilde nasıl tanımlanabilir?
- Alt Soru 1: Eskime nedir?
- Alt Soru 2: Eskime terimi kentsel planlama literatürüne nasıl entegre edilmiştir?
- Alt Soru 3: Eskime terimi tarihi kent merkezlerine nasıl entegre edilmiştir?
- Alt Soru 4: Tarihi kent merkezlerinde eskime kavramı nasıl tanımlanabilir?

Yazın taramasının tartışıldığı bölümde, bu alt soruları eskime kavramına yönelik bir kavramsal çerçeve oluşturacak şekilde cevapladıktan sonra, araştırma sorusuna yönelik bir model önerisi, saha çalışması ve çalışmanın yöntemi bölümlerinde anlatılmaktadır. Bu tezde, eskimekte olan tarihi mahalleler için genel bir eskime modeli formüle edilmesi amaçlanmaktadır. Daha sonra model, eskime sürecini ve düzeyini belirlemek için Ulus'ta uygulanmıştır. Bu sayede bölgede yapılacak yeniden canlandırma projeleri için bir ön çalışma yapılması amaçlanmaktadır.

Kentsel Eskimenin Tanımı

Eskime kavramı, genellikle bir ürünün işlevselliğinin hala devam etmesine ve henüz tam olarak bozulmamış olmasına rağmen daha yeni ve daha gelişmiş bir ürünle değiştirilmek üzere gözden çıkarılması anlamına gelmektedir (Iselin ve Lemer, 1993). Eskime kavramının ayırt edici iki özelliği vardır. Öncelikle bir ürünün ulaştığı/ulaşacağı bir 'son hal' yerine, ürünün bu noktaya gelirken yaşadığı süreci belirtmektedir. İkinci olarak eskime göreceli bir kavramdır ve farklı aktörlerin davranışlarına/algılarına/tercihlerine göre değişik şekillerde algılanabilmektedir. Bir başka deyişle, bir ürünün ömrünü erken sona erdiren, kullanışlılığın azalması ve modasının geçmesi sürecidir. Doğrudan fiziksel deformasyonla ilgili olmak zorunda değildir; bundan ziyade, teknolojik gelişmeler sonucu ve tüketici beklentilerindeki değişikliklerden kaynaklanmaktadır. Lichfield (1988) tarafından tanımladığı gibi, kullanıcıların talepleri ile yapılı çevrenin arzı arasındaki uyumsuzluktur. Yapılı çevrenin öğeleri genellikle uzun seneler boyunca var olmak üzere inşa edilirler. Bu noktada Grover ve Grover (2015) eskimeyi, yapılı çevrenin değişmezliği sebebiyle toplumun hızla ve öngörülemez şekilde değişen ihtiyaç ve arzuları karşısında gereken dönüşümü sağlayamaması sonucu oluşan değer kaybı olarak tanımlar.

Eskime kavramının kentsel planlama literatürüne girişi ilk olarak 1900'lerde ABD'de gerçekleşmiştir. Bu tarihlerde New York kentindeki emlak şirketleri, en yeni ve en gelişmiş binaları üretebilmek için yapılı çevre üretimine büyük miktarda yatırım yapmaya başlamışlardır. Bunun sonucunda inşaat sektöründeki ani gelişmeler, yeni yapılan binaların bile kısa sürede değer kaybederek eskimesine neden olmuştur. Bütün bu gelişmelerin ışığında, yirminci yüzyılın başlarında büyük Amerikan şehirlerinde kontrol edilemez bir yıkım ve yeniden inşa süreci başlamıştır. Bu durum sermaye sahipleri ve yatırımcılar için öngörülemeyen piyasa hareketlerine ve finansal dengesizliğe yol açmıştır (Abramson, 2016). Ardından 1930'larda yaşanan Büyük Buhranın yıkıcı etkilerinin görülmeye başlamasıyla mimari eskime paradigması kentsel alana da yayılmıştır. Eskime kavramı, yirminci yüzyılın ortalarından sonra kentsel yenileme faaliyetlerinin önemli bir bileşeni olmuş ve kitlesel yıkımları meşrulaştırma mekanizması haline gelmiştir. Yine de eskime kavramı çoğunlukla mimari ve finansal alanlarda tartışılmıştır. Eskime kavramının kentsel ölçekte ele alındığı çalışmalar sınırlıdır.

Kentsel eskime üzerine yapılan yazın taramasında görüldüğü üzere, bu kavram araştırmacılar tarafından en çok fiziksel, ekonomik ve politik bakış açıları ile incelenmiştir. Fiziksel ve ekonomik yaklaşımlar, eskime kavramını tanım, sınıflandırma, tespit etme ve ölçme çerçevesinde tartışmakta ve büyük ölçüde somut göstergelere dayanmaktadır. Politik yaklaşım ise kavramı göreceli olarak dönemin sosyo-ekonomik ve siyasal dinamikleriyle değerlendirmektedir. Politik bakış açısıyla yapılan çalışmalar, eskimenin kapitalist üretim ilişkileri içindeki konumuna odaklanmakta ve çoğunlukla Joseph Schumpeter'in 'yaratıcı yıkım' (1942) kavramına atıfta bulunmaktadır.

Kentsel Eskimenin Sınıflandırılması

Yazın taramasında en sık rastlanan kentsel eskime sınıfları aşağıdaki gibidir:

- Fiziksel (Physical) Eskime
- İşlevsel (Functional) Eskime
- Ekonomik (Economic) Eskime
- Konumsal (Locational) Eskime
- İmgesel (Image) Eskime

Fiziksel eskime, kullanılan malzemenin kalitesi, binanın işlevi veya bakım hizmetlerinin etkinliği gibi içsel faktörler nedeniyle, zamanla yapılı çevrenin materyal koşullarındaki değer kaybını tanımlar. Fiziksel eskime ayrıca hava durumu, yer hareketi, trafik titreşimi gibi dış faktörlerden de etkilenmektedir. Kentsel yapılı çevre fiziksel olarak eskidiğinde, düzenli bakım hizmetlerine ek olarak onarım ve iyileştirmeye ihtiyaç duyar (Lichfield, 1988). *İşlevsel eskime,* esnek olmayan yapılı çevrenin yeni teknolojik gelişmelerden yararlanmaya uygun olacak şekilde dönüşmeye elverişli olmaması sonucu meydana gelir. Bir yapının fiziksel durumunun hala yeterli olmasına ve yapının tasarım amacına uygun hizmet vermeye devam edebiliyor olmasına rağmen, yeni gelişmelere ayak uyduramaması nedeniyle yaşadığı kullanım değeri kaybıdır. Bu değer kaybı, takip eden bir değişim değeri kaybının da öncüsüdür.

Ekonomik eskime, bir yapının değişim değerini azaltan tüm dış faktörleri kapsar. Ekonomik eskime, bir binanın kira gelirini ve değişim değerini düşürür, ancak kullanım değerini azaltmayabilir. Kuramsal ve ampirik eskime çalışmaların çoğu, gayrimenkul ve finans sektörlerinde ekonomik eskimeyi analiz ve tespit etmeye, önlemeye yönelik çalışmalardır. *Konumsal eskime*, bir binanın bulunduğu konum nedeniyle değerinin düşmesine neden olan dış etkenleri ifade eder. Bunlar altyapı yetersizlikleri, olumsuz çevresel etkiler, ulaşım güçlükleri gibi çeşitli faktörler olabilir (Pinder ve Wilkinson, 2000). Son olarak *imgesel eskime*, bir alanın fiziksel veya işlevsel kapasitesinden ziyade, kullanıcıların değer yargıları tarafından belirlenir.

Kentsel Eskimenin Tespiti

Kentlerde yeterli ve başarılı dönüşüm politikaları ve uygulamaları üretebilmek için kentsel sorunların doğru bir şekilde belirlenmesi esastır. Yazın taramasında, kentsel eskime çalışmalarının çoğunun, sadece araştırmacıların genel gözlem ve analizlerini içeren, uzman tabanlı ve yukarıdan aşağıya tanımlama yöntemlerine dayandığı görülmüştür. Ne var ki, kentlerin eskimeye maruz kalan kısımları çoğunlukla, toplumun alt ekonomik sınıflarından gelen "imtiyazsız" insanlar tarafından kullanılmakta ve deneyimlenmektedir (Lichfield, 1988). Ancak kentsel planlama alanında çoğulculuk, savunuculuk planlaması, katılımcı planlama gibi kavramlarla eleştirilen bu yukarıdan aşağıya yaklaşım; günümüzde Healey'in (2003) belirttiği gibi,

"aşağıdan yukarıya" bir dirençle karşılaşmaktadır. Bu tür alanlarda kentsel dönüşüm uygulamalarının başarılı olamamasının önemli nedenlerinden biri, kullanıcı ve uzmanların algıları arasındaki uyumsuzluk olarak görülmektedir.

Yazın taraması sırasında eskime tanımlama çalışmalarının ölçeklerine ve yaklaşımlarına göre önemli farklılıklar gösterdiği tespit edilmiştir. Bu değişkenlere göre bir ölçek/yaklaşım matrisi oluşturulmuştur. Bunun sonucunda, 'tek bina ölçeğinde eskimeyi uzman bakış açısıyla belirleyen çalışmalar', 'bölge ölçeğinde eskimeyi uzman bakış açısıyla belirleyen çalışmalar', 'tek bina ölçeğinde eskimeyi uzman ve kullanıcı bakış açısıyla belirleyen çalışmalar' ve 'bölge ölçeğinde eskimeyi uzman ve kullanıcı bakış açısıyla tespit eden çalışmalar' olarak dört kategori elde edilmiştir. Bu matriste kullanıcı 'bölge ölçeğinde eskimeyi uzman ve kullanıcı bakış açısıyla tespit eden çalışmalar' alanında hiç çalışmaya rastlanmamıştır. Bu çalışmayla, tarihi bir bölge ölçeğinde uzman tabanlı ve kullanıcı tabanlı yaklaşımı bir araya getirerek bu alana katkı sağlanması hedeflenmektedir.

Vaka Alanı

Ankara kentinin bugünkü makroformu, Cumhuriyetin kuruluşundan bu yana yapılan kentsel planlama çalışmalarıyla geliştirilmiştir. Cumhuriyetin başkenti için ilk şehir planının üretilmesiyle başlayan, farklı dönemlerde farklı ideolojiler tarafından hazırlanan/desteklenen planlar kentin gelişmesinde kuşkusuz önemli bir rol oynamıştır. Bu nedenle, tarihi kent merkezi Ulus'un bozulan mevcut durumunu, Türkiye Cumhuriyeti'nin kuruluşundan başlayarak siyasi, ekonomik ve sosyal süreçleri içeren tarihsel bir perspektiften tartışmak anlamlı olacaktır. Bir şehrin gelişimini sadece şehir planlarını dikkate alarak analiz etmenin yeterli bir yaklaşım olmayacağı vurgulanmalıdır. Bu nedenle Ulus tarihi kent merkezinin gelişim süreci, yaşadığı kentsel değişimlerle birlikte dört kapsayıcı planlama dönemi altında incelenmiştir. Bu dönemselleştirme, kentsel planlar ve müdahaleleri, her dönemin kentleşme dinamiklerini belirleyen sosyo-ekonomik ve sosyo-politik olgularla birleştirir. Bahsedilen dönemler aşağıdaki gibidir:

1. Ulus'un başkent Ankara'nın kent merkezi olarak gelişimi (1923-1950'ler)
2. Ulus'un değişen sosyo-ekonomik yapısı ve merkezi işlevin kademeli olarak geri çekilmesi (1950'ler – 1980'ler)

3. Eskimekte olan tarihi kent merkezini koruma ve yeniden canlandırma girişimleri (1980'ler – 2000'ler)
4. Yetersiz ve parçacıl müdahaleler nedeniyle Ulus'ta derinleşen kentsel eskime durumu (2000'ler- Günümüz)

14.01.2005 tarihinde Melih Gökçek başkanlığındaki Ankara Büyükşehir Belediyesi, 210 Sayılı Belediye Meclisi Kararı ile bölgede yürürlükte olan tüm planların iptaline karar vermiştir. Ulus Tarihi ve Kültürel Kentsel Dönüşüm ve Gelişim Proje Alanı ilanını takiben 2005 sonrası dönem, uygulamada Ulus tarihi kent merkezi için 'plansız' dönem olarak değerlendirilebilir. Çünkü bu süreçte hazırlanan ve kabul edilen iki adet kent planı olmasına rağmen, planların uygulamada kalma süreleri bir kent planın uygulanabilmesi için gereken zaman zarfı boyunca uygulamada kalamamışlardır. Hazırlanan ilk plan 2007 yılında kabul edilmiş ve 2008 yılında iptal edilmiştir. İkincisi ise 2014 yılında kabul edilmiş ancak 2016 yılında iptal edilmiştir. Tarihi kent merkezi için yürürlükte bir planın olmadığı yıllarda Kültür ve Tabiat Varlıklarını Koruma Kanunu'nda (2863) tanımlanan Geçiş Dönemi Koruma Esasları ve Kullanım Şartları Temel İlkeleri uygulamaya konulmuştur.

Ankara kenti ve Ulus tarihi kent merkezi, çeşitli dönemlerden miras kalan birçok tarihi ve kültürel değeri bünyesinde barındırmaktadır. Bu değerlerin bir kısmı özellikle erken Cumhuriyet döneminden miras kalmış olmakta; Ulus'ta halen ofis binaları, ticari binalar ve banka genel müdürlükleri olarak işlev görmektedir. Başka bir deyişle, şehrin bir parçası olarak hala bir kullanım değerine sahiptirler. İhmal ve yanlış kullanımdan kaynaklanan sorunları olmakla birlikte hala işlevsel oldukları için ekonomik bir değere de sahiptirler (Madran vd., 2005). Bununla birlikte, 1980'li yıllara kadar süren ihmalkarlık ve 2000'li yıllardan sonra yaşanan tahribatlarla tarihi doku ciddi şekilde zarar görmüş ve bazı değerler geri dönülemez şekilde tahrip edilmiştir (TMMOB Şehir Plancıları Odası Ankara Şubesi, 2019).

Çalışma Alanının Seçimi

'Ulus Tarihi ve Kültürel Kentsel Dönüşüm ve Gelişim Proje Alanı' sınırları bu çalışma için anlamlı ve yeterli görülmüştür. Bu sınırın seçilmesinin arkasında iki tane neden bulunmaktadır. İlk olarak bu sınırlar, saha çalışmasının yapılması için gerekli olan 'tarihi kent merkezi' alanını kapsamaktadır. Bölgedeki ticari işlevler, yerleşim

alanları ve tarihi değerler bu sınıra dahildir. İkinci olarak, bu resmi bir sınır olduğu için Ankara Büyükşehir Belediyesi ve Altındağ Belediyesi tarafından hazırlanan stratejik belgelerde bu sınır kapsamında daha fazla verinin bulunacağı öngörülmektedir. Arazi kullanım haritaları ile bölgede en yoğun kullanımların ticari ve konut alanlarından oluştuğu tespit edilmiştir. Bu nedenle, tarihi kent merkezini temsil etmek amacıyla saha çalışmasında bu iki kullanım üzerinde durulmuştur.

Vaka Çalışması ve Çalışmanın Metodu

Bu tez, uzmanların ve kullanıcıların algılarını birleştiren bir yaklaşımla tarihi kent merkezlerindeki eskime durumunun nasıl tanımlanabileceğini belirleyen bir çalışma yapmayı amaçlamaktadır. Bu kritere göre Ulus tarihi kent merkezinde uygulanması için 3 aşamalı bir model önerilmiştir. Bu modelde, Ulus'un tarihi kent merkezindeki eskimeyi tespit etmek için hem uzman temelli hem de kullanıcı temelli analizler kullanılmıştır. Çalışmanın birinci adımı olan doküman araştırması ve ikinci adımı olan saha gözlemi ile, modelin uzman temelli analiz kısmı iken, üçüncü adım olan anket uygulaması kullanıcı temelli analiz bölümünü oluşturmaktadır.

1. Adımın Uygulanması ile Elde Edilen Bulgular

Modelin ilk adımı olan doküman araştırmasında Lörcher Planı, Jansen Planı, Yücel – Uybadin Planı, Ankara 1990 Nazım Planı, Ulus Tarihi Kent Merkezi Koruma Islah-İmar Planı, Ankara Tarihi Kent Merkezi Yenileme Alanı Kararı, 2023 Başkent Ankara Nazım Planı, Ankara Tarihi Kent Merkezi Yenileme Alanı Koruma Planı, Ulus Tarihi Kent Merkezi 1/5000 Koruma Planı ve Geçiş Dönemi Projeleri (2008 – 2014 & 2015 – 2019) incelenmiştir.

Belirtmek gerekir ki, bu planlar hazırlanırken ve uygulanırken, kentsel eskime kavramsal olarak tartışılmaya başlamamıştı. Bu nedenle bu belgelerde kentsel eskime terminolojisi aramak yerine, bu planların eskimeye yaklaşımları ve Ulus tarihi kent merkezinin eskimesine yol açan sonuçları açısından incelenmiştir. Buna göre doküman araştırması adımı sonucunda elde edilen bulgular şu şekilde değerlendirilmiştir;

- En sık değinilen göstergeler: Yapısal durum, Alanın tarihi karakterine uygun olmayan kullanımlar, Trafik ve park sorunu,

- Ortalama sıklıkta değinilen göstergeler: Kirlilik, Mevcut doku ve alandaki fonksiyonel kullanımlar arasındaki uyumsuzluk, Erişilebilirlik Düzeyi,
- Değinilmeyen göstergeler: Açık ve yeşil alan kapasitesi, Güvenlik hissi, Kültürel ve etnik çeşitlilik.

2. Adımın Uygulanması ile Elde Edilen Bulgular

Uzman temelli analizin ikinci adımı saha gözlemidir. Bu adımın uzman tarafında yer almasının nedeni, bu çalışmanın koordinatörünün -bu konuda uzman olmasa da- analiz sırasında dışarıdan bakış açısı ve şehir plancısı bilgisinin uygulanmasıdır. Ayrıca vurgulanmalıdır ki bu çalışmanın bir şehir plancısı tarafından yürütülmesi ve çalışmanın kapsamının sınırlı olmasından dolayı, detaylı bir koruma planında yer alması gereken mimarlar, koruma plancıları, inşaat mühendisleri, arkeologlar gibi meslek gruplarının bakış açısına bu tezde yer verilmemiştir. Bu yönüyle belgelerin gözden geçirilmesi uzman temelli yaklaşımı güçlendirmektedir. Çünkü bu planlar çeşitli mesleklerden uzman gruplar tarafından kapsamlı ve detaylı çalışmalar sonucunda oluşturulmuştur.

Yukarıda belirtilen göstergeleri gözlemlemek ve tespit etmek için 02.06.2021 ve 05.06.2021 tarihlerinde iki saha gezisi yapılmıştır. Saha gözlemi adımında, göstergeler araştırmacı tarafından gözlemlenmiş ve bir şehir plancısı gözüyle değerlendirilmiştir. Buna göre eskime göstergeleri ilk ve orta seviyeli olarak derecelendirilmiştir. Birincil seviyedeki göstergeler, Ulus tarihi kent merkezinin her yerinde gözlemlenen kemikleşmiş sorunlardır. İkincil seviye göstergeler birincil seviyede göstergelerle karşılaştırıldığında Ulus sınırları içinde farklı kesimlerde değişiklik gösterebilmektedirler. Bu göstergeler şu şekilde gruplandırılmıştır:

Birincil seviyede gözlenen eskime göstergeleri:

- Yapısal durum
- Açık ve yeşil alan kapasitesi
- Mevcut doku ve alandaki fonksiyonel kullanımlar arasındaki uyumsuzluk
- Alanın tarihi karakteriyle bağdaşmayan kullanımlar
- Trafik ve park sorunu
- Güvenlik hissi

İkinci seviyede gözlenen eskime göstergeleri:

- Kirlilik
- Erişilebilirlik düzeyi
- Kültürel ve etnik çeşitlilik

3. Adımın Uygulanması ile Elde Edilen Bulgular

Modelin üçüncü adımında, aynı göstergeler uzman temelli analizden elde edilen bulgularla karşılaştırabilmek için, 9 kapalı uçlu ve 1 açık uçlu sorudan oluşan 5'li Likert ölçeğinde bir anket ile sahadaki kullanıcılara sorulmuştur. Fiziksel eskimeyi kapsayan üç soru, işlevsel eskimeyi kapsayan bir soru, konumsal eskimeyi kapsayan üç soru ve imgesel eskimesini kapsayan iki soru bulunmaktadır. Katılımcılar seçilirken uygulanan tek dahil kriter 18 yaş ve üzeri olmaları olarak belirlenmiştir. Çalışma alanlarında toplam 100 anket yapılmış ve 50'si yerleşim alanlarına, 50'si ise ticari alanlara dağıtılmıştır. Anket katılımcıları rastgele örnekleme yöntemiyle seçilmiştir. Kullanıcı anketi 14-15 Haziran, 28 Haziran ve 30 Haziran 2021 tarihlerinde gerçekleştirilmiştir.

Katılımcılardan göstergeleri 1-Çok İyi 2-İyi 3-Orta 4-Kötü ve 5-Çok Kötü seçenekleriyle değerlendirmeleri istenmiştir. Ölçeğin bu şekilde olumludan olumsuza gitmesinin nedeni, değerlendirilmek istenen ölçütün olumlu değil olumsuz bir durumu temsil ediyor olmasıdır. Eskime düzeyi ölçülürken bu tür bir değerlendirmenin daha anlamlı olacağı düşünülmüştür. Anket sonuçları değerlendirilirken sonuçları sadeleştirmek için ağırlıklı ortalama puanlar alınmıştır. 3 değeri ölçeklendirmede nötr nokta olduğu için 3'ün üzerindeki her değer temsil ettiği göstergelere göre 'eskimiş' olarak kabul edilir. Aynı şekilde, 3'ün altındaki her değer, temsil ettikleri göstergelere göre 'eskimiş değil' olarak kabul edilir. Bu bağlamda erişilebilirlik düzeyi açısından *kullanıcılar* Ulus'*ta eskime olmadığı yönünde bir değerlendirmede bulunmuşlardır.* Öte yandan, kalan göstergeler kullanıcılar tarafından eskimiş olarak değerlendirilmektedir.

Tartışma ve Sonuç

Uzman temelli ve kullanıcı temelli analizlerin bulguları birlikte değerlendirildikten sonra, aralarında üç tür etkileşim tespit edilmiştir. İlkinde, uzman temelli gözlemler

ile kullanıcı temelli değerlendirmeler arasında dikkate değer farklılıklar tespit edilmiştir. İkincisinde, uzman temelli gözlemler ve kullanıcı temelli değerlendirmeler örtüşmektedir. Üçüncüsünde, saha gözlemlerinden elde edilen sonuçlar, kullanıcı değerlendirmeleriyle örtüşmektedir, ancak bu göstergelerden stratejik belgelerde bahsedilmemektedir. Buna göre göstergeler aşağıdaki gibi gruplandırılmıştır. Vaka çalışmasının sonuçları aşağıda bu üç kategori altında tartışılmaktadır.

1. Uzman bazlı analizler ile kullanıcı bazlı değerlendirmelerin uyumsuzluğu:

- Erişilebilirlik düzeyi

2. Belge araştırması, saha gözlemi ve kullanıcı anketinin uyumluluğu:

- Yapısal durum
- Kirlilik
- Mevcut doku ve alandaki fonksiyonel kullanımlar arasındaki uyumsuzluk
- Alanın tarihi karakteriyle bağdaşmayan kullanımlar
- Trafik ve park sorunu

3. Saha gözlemi ve kullanıcı anketinin uyumluluğu:

- Açık ve yeşil alan kapasitesi
- Güvenlik hissi
- Kültürel ve etnik çeşitlilik

Sonuç

Ankara'nın tarihi kent merkezini değerlendirmek için eskime kavramının tercih edilmesinin arkasında çeşitli nedenler olduğunu bir kez daha vurgulamak gerekir. Her şeyden önce, eskime kavramı, bir bölgenin en kötü durumunun bir resmini göstermekten ziyade, bir bozulma sürecini tanımlar. Belirli bir alanda kötüleşen veya kötüleşme eğiliminde olan her bileşen, bu durumu farklı biçim ve örüntülerde yaşar. Bu nedenle, alan genel olarak eskimekte olsa da her eskime göstergesi ayrı ayrı değerlendirilmelidir. Ayrıca alanların eskime seviyelerine göre sınıflandırılması, henüz eskime görülmeyen ve işlevselliğini kaybetmemiş alanların makul ve etkili müdahalelerle bakımını kolaylaştırabilir ve eskimenin giderilmesi/önlenmesini sağlamaya yardımcı olabilir.

İkinci olarak, eskime kavramı, insanların tarihi kent merkezlerine bakış açısını değiştirme potansiyeline sahiptir. Bir bölge, dışarıdakiler için kısmen veya tamamen korkutucu olabilirken, içeridekilere göre yaşamak için işlevsel ve çekici bir yer olabilir. Kapsamlı ve göreceli bir yaklaşımla, topyekûn yıkım yerine içerdeki kullanıcılar ve dışarıdaki vatandaşlar için aracı olacak çözümler üretmek mümkündür. Bu çözümler aynı zamanda karar alıcı kurumların tamamen yıkma ve yeniden inşa etme şeklindeki dönüşüm modellerini tercih etmesi ya da tarihi merkezlerini kendi kaderlerine terk etmesi yerine, bu alanlara müdahale edebilme şansını da arttırmaktadır.

Sonuç olarak, eskime algısının karar vericiler ve kullanıcılar arasında değişebileceği düşünüldüğünde böyle bir model daha etkili çıkarımlarda bulunabilecektir. Bu modelin detaylı ve kapsamlı analitik ve teknik çalışmalarla (bu tezin kapsamı dışında kalan) güçlendirileceği ve gelecek çalışmalara önemli katkılar sağlayacağı düşünülmektedir.

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