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HISTORY OF ADAPTIVE REUSE IN ARCHITECTURE: STUDIES FROM IRAN

Mimarlıkta Uyarlanabilir Yeniden Kullanımın Tarihi: İran'dan Örnekler

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ÖZ

Yapılı mirasın uyarlanabilir şekilde yeniden kullanılması, ekonomik ve çevresel değerlerin korunması ve gelecek nesillere aktarılmasına yönelik en yaygın sürdürülebilir yaklaşımlar arasında yer almaktadır. Aynı zamanda çevresel etkilerin ve karbon ayak izinin azaltılmasına destek olmaktadır. Bu araştırmada, miras yapılara uyarlanabilir yeniden kullanım uygulamalarının tarihsel geçmişi ele alınmış ve İran'ın farklı şehirlerinden seçilen, inşaat tarihleri ve işlevleri farklı dört örnek proje mimari özellikleri ve yeniden kullanım şekilleri ile incelenmiştir.

Sonuç olarak, sunulan tüm uygulamalarda original binanın bütünlüğünü ve mekan duygusunu korumak için koruma, restorasyon ve yeniden kullanım süreçlerinde ortak ilke ve yaklaşımlar dikkate alındığı; aynı zamanda mimari ve estetik değer katmaya ve yaratıcı çözümler bulmaya çalışıldığı değerlendirilmiştir. Sonuçları itibariyle çalışma İran'daki uyarlanabilir yeniden kullanım uygulamalarının keşfedildiği ve mimari mirasın çok yönlü değerlerine dayanan uyarlanabilir yaklaşımlara ilişkin yeni bir bakış açısı getirilmesinde örnek niteliğindedir.

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ABSTRACT

Adaptive reuse of built heritage is among the most common sustainable approaches to preserving economic and environmental values and passing them on to future generations. It also leads to a reduction in environmental effects and carbon footprint. In this research, the historical background of adaptive reuse practices in heritage buildings was discussed and four projects selected from different cities of Iran, with different construction dates and functions, were examined with their architectural features and reuse styles.

In conclusion, in all presented cases shared principles and approaches are taken into account in the conservation, restoration and reuse processes to protect the integrity and sense of place of the original building; At the same time, it was evaluated that efforts were made to add architectural and aesthetic value and to find creative solutions. The outcome serves as a sample for exploring adaptive reuse practices in Iran and bringing a new perspective on adaptive approaches based on the multifaceted values of architectural heritage.

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RESEARCH ARTICLE / ARAŞTIRMA MAKALESİ

1. INTRODUCTION

Adaptive reuse is not a modern phenomenon. An early example of human ingenuity is the recycling of animal pelts for clothing and caves for housing. The built environment of today demonstrates the same inventiveness when we extend structures that are no longer functional or give materials new life through recycling. Known by a variety of names, including redevelopment, renovation, rehabilitation, and reconstruction, projects of reuse historic buildings are the result of common sense and economics. They meet society's daily spatial needs and are both substantial and useful. Reuse is a poetic and artistic design intervention that has become more and more common in cultural monuments. One example is Carlo Scarpa's timeless adaptive reuse of Castelvecchio in Verona, Italy, which is now home to a Romanesque sculpture museum (Wong, 2016).

These days, inherited materials, customs, or products from the past are referred to as cultural assets. These are resources that are protected as public goods by the regulatory frameworks. Their contributions to their nation's vision and increased appeal to cultural tourists will surely help the country as a whole. The advantages that result from the direct, indirect, and even non-use of cultural assets are what give them economic value. The goal of value creation is to maximize the social and economic returns on the investments made in cultural heritage by nations, regions, and local governments. The fact that they can support commerce, jobs, urban and regional renewal, skill development, and citizen engagement in the arts. However, there may be additional value if they are reused for suitable and non-destructive uses (Hassan, 2023).

Working on existing buildings for their renovation and for their future use is an important part of contemporary architecture. Some of the most important reasons are global consciousness on the necessity of sustainable actions and developments, recent economic crises leading to change the economic systems towards more efficient and low-cost constructions and the increasing public request on preserving our built heritage. All of this highlights the importance of what can be called “adaptive reuse.” Although the term is not yet fully familiar for public minds and construction professionals, the term is based on the changing function of buildings as the needs of the economy and society that originally created a new development of the historic environment (Plevoets and Van Cleempoel, 2013).

Taking the term of adaptive reuse into account, 'adaptation' refers to "the process of change that suits different conditions" and 'reuse', "the act of using something again" (Reuse | English Meaning - Cambridge Dictionary, n.d., 2023), which involves functional and physical

components. Hassan (2023) defines adaptive reuse as the process of modifying old monumental buildings to make them suitable for new and non-destructive uses so that the structures maintain their historical integrity while meeting the needs of their modern day occupants. It continuously modernizes building structures that are outdated and no longer fulfil their original function to meet modern demands and changes in technology and lifestyle.

As the concept of academic research on methods, characteristics and factors effecting sustainability and authenticity of adaptive reuse practices in Iran had been increased specially since 2020. A considerable part of the studies had been focused on the adaptive reuse of industrial heritage according to a number of successful projects carried out in recent years with an increasing public attention. However, a lack of literature on a collective study involving a general review of a variety of cases in the context of historical background had been discovered.

There have been different approaches in the protection of cultural heritage and historical buildings. One of the ways is to give a new use to the buildings in order to keep them safe and protected in modern times. In this study, adaptive reuse of historic buildings has been evaluated in four cases from Iran with regard to form and function referring to original purpose of the buildings.

2. MATERIAL AND METHOD

Material of the study consist four examples of historic buildings that subject to adaptive reuse. Accordingly, selected cases from Iran are built heritages ranges timelines from the Safavid to the Pahlavi era. In the choosing of every case, the background and the date of construction of the buildings were considered to be reasonably representative of their design period. There were different approaches in adaptive reuse projects according to the historic era and function of the buildings. An overview of the historical background and architectural features are provided and discussed in the reflecting examples.

Geographical diversity of the building enriches the form, material and the siting of its location. In this respect, the represented cases from Safavid, Qajar, early Pahlavi and late Pahlavi are Abbasi Caravanserai reused as a hotel, Manouchehri House restored and reused as a boutique hotel, Argo Factory transformed into an institute of culture and art and Khosravi Factory reused as a campus building of University, respectively (Figure 1).

In this study, an analytical-descriptive approach is taken. First a literature review on the definition and history of adaptive reuse in the field of architecture is evaluated. Historical

1	Abbasi Caravanserai	Isfahan
2	Manouchehri House	Kashan
3	Argo Factory	Tehran
4	Khosravi Factory	Tabriz

Figure 1. Location of case studies in Iran
Şekil 1. *İran'daki örnek çalışma alarının yeri*

research helps to get familiar with the context of the practice of adaptive reuse in heritage sites, while comparative analysis of cases gives a broad overview. Subsequently four cases were chosen among a wide historical and functional range of existing practices in Iran nationwide. Three main factors considered through the assessment process of case studies; construction date and historic era of the original building or complex, original function (type), and geographical location of the heritage sites (Figure 2).

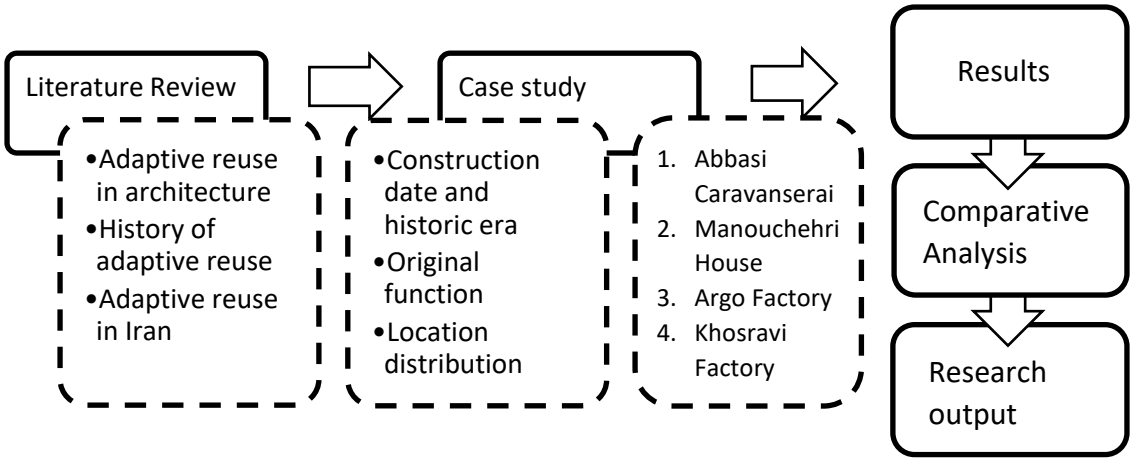


Figure 2. Flow of the study approach.
Şekil 2. *Çalışma yaklaşımının akışı.*

At this stage Abbasi Caravanserai located in Isfahan, capital city of Safavid dynasty, Manouchehri House as a typical traditional Qajari house in Kashan, Argo Factory and Khosravi

Factory, two industrial built heritages from Pahlavi era, one located in the current capital city of Iran, Tehran, refurbished in recent years and other well known as a successful practice located in Tabriz were selected. Next step was to comparative analysis of the collected data and discuss the results.

3. FINDINGS

3.1. Adaptive Reuse of Historic Buildings: An Overview

Adapting existing buildings to serve new functions is not an entirely new phenomenon. Transforming ancient monuments and give them new functions, or reusing materials from an older building to construct others was common during Renaissance. The French Revolution in the 18th century resulted in the confiscation and sale of religious buildings, after which they were polemically adapted for industrial and military purposes. There was no specific notion of 'heritage preservation' in these generally 'pragmatic' interventions. Functional as well as financial considerations were the driving forces behind them.

More scholarly research and discussions of theories on adaptive reuse were started just in the 19th century as a way to preserve built heritage and monumental buildings. However, the debate soon descended into a rift between two opposing views. John Ruskin (1819–1900), who may have been a pupil of William Morris (1834–96) in England, led the "Conservation Movement" in contrast to the other orthodoxy, which can be characterized as the "Restoration Movement" led by Eugene Emmanuel Viollet-le-Duc (1814–1879) in France.

Until the 19th century, the concept of cultural heritage was limited to ancient and medieval buildings, but as a result of the damage caused by the two world wars, recognition and interest in the potentials and values of other historical buildings and sites also grew. The discussion led an assumption that conservationists were responsible for industrial buildings, traditional architecture and even entire historic cities. The increased number of buildings potentially requiring “conservation” in this new and expanded context was enormous. The idea of conservation eventually had to be re-examined, and this was represented in the 1964 Venice Charter (ICOMOS, 1964), which emphasizes the value of "adaptive reuse" as a "conservation" practice stating that ‘the conservation of monuments is always facilitated by making use of them for some socially useful purpose’ (Plevoets and Van Cleempoel, 2013). This charter is still being implemented in evaluating UNESCO (United Nations Educational, Scientific and Cultural Organization) projects to preserve monuments and historic buildings inscribed on the World Heritage List.

The Venice Charter, in Articles (5 and 6) on conservation, identifies the reuse of monuments for socially useful purposes as one of the ways of preserving them. Innovations necessary to change the function must not go beyond the layout or finish of the building, and the surrounding location and the relationship between mass and colour must be preserved. Articles (2 and 10) also emphasize the need for the use of science and technology in conservation and restoration activities, provided that these methods are proven effective, tested and guaranteed by peer review.

The Australian ICOMOS (International Council on Monuments and Sites) Burra Charter (1979) (Burra Charter & Practice Notes | Australia ICOMOS, 2013) encouraged an assessment of heritage property importance based on a values-based approach. Values change over time as a function of the social variables themselves and are consistent with changes in environmental, cultural, spiritual, and other consumer values. It defines three types of actions to preserve architectural heritage: conservation, restoration and reconstruction.

In the 1960s and 1970s, adaptive reuse began to become popular in the dominant architectural language. The decline of heavy industry in the early and mid-20th century left a legacy of abandoned and underused vacant properties around the world. Buildings of the Industrial Revolution were particularly suitable for adaptive reuse due to their large open spaces and the need for environmental remediation. Due to growing environmental concerns, rising costs of fuels and building materials, and the difficulties associated with securing them, historic preservation and adaptive uses are becoming a viable alternative to new construction and demolition for urban renewal (Hassan, 2023). This was bound to show up in their publications as well as in the theory of conservation and restoration. A special issue of Architectural Review titled "New Uses for Old Buildings" was released in May 1972 and was devoted to the reuse of buildings. At two international symposiums in 1977, "Old to New" and "Old and New Architecture: The Relationship of Design," in Glasgow and Washington, this was also made evident. Both conferences paved the way for the formation of a new, independent discipline and resulted in books being published in the years that followed (Plevoets and Van Cleempoel, 2013).

The global energy crisis of the early 21st century brought about a shortage of resources and evidence of the effects of climate change on cultural heritage. At the same time, the development of green principles and sustainability and the establishment of classification systems necessitated a shift in conservation principles and practices, as well as the

implementation of technologies to meet the demands of this era and to alleviate the current and future pressure. The inclusion of heritage preservation in comprehensive sustainable development plans was further reinforced in 2002 with the Budapest Declaration, which referred explicitly to the effective and sustainable protection of world heritage properties. In 2019, the emergence of the coronavirus pandemic, the rise in office vacancies in many urban centres, and the spread of quarantine measures, work, and remote communication have all contributed to a shift in office space into habitable residential units, particularly in major cities, reinforcing the need to rethink the usage of heritage and adapt it to the times (Hassan, 2023).

3.2. Adaptive Reuse Practices of Built Heritage from Iran

3.2.1. Abbasi Caravanserai

The building of Abbasi caravanserai which had been renovated and transformed into Abbasi Hotel in the 1950s by French archaeologist and historians Andre Godard and Maxime Siroux who were the director of the Iranian Archaeological Service for many years, was built 300 years ago in the capital of the Safavid kingdom, Isfahan. This building was one part of a complex built at the time of Safavid King Soltan Hossein who has attributed this magnificent complex of building to his mother.

Clients of the project included the insurance company and the Isfahan cultural heritage organization. The primary effort was to maintain the overall form, and the team was dedicated to two goals, according to an interview with Mahdi Ebrahimian (2017) (“About,” n.d., 2022), who oversaw the restoration and reconstruction of this caravanserai: Preserving original forms in the exterior facade and renovating and remodelling the chambers into sufficient hotel rooms. The process of remodelling the hotel initiated in the summer of 1958 and finished at the end of 1966. In re-use of this caravanserai, first the courtyard has changed into a garden including a landscape design of green area but the original stream flowing through this courtyard, which is called "Farshadi stream" was remained regarding to its role in establishment of the sense of place. Both verandas at the two sides of the courtyard aligned to two-story chambers were kept as well (Figure 3).

The complex of mother of Shah Sultan Hussein which is the site that the caravanserai was located in it included three main buildings: the school, the bazaar and the caravanserai with a stable building attached to it. The bazaar was a closed arched building extent on the north edge of the complex connecting other buildings in the complex. In 1972, the owner company took actions to expand the hotel. According to collocation of neighbouring historically valuable built

heritages, new construction could be placed only on the eastern borders of the site. Resulting to purchasing 11,500 square meters of land at this side, the new buildings for the hotel were constructed. Eighty rooms, a hall, and restaurant with hotel standard facilities were built at the time (Figure 4). Around one hundred and fifty professionals including artists, architects and engineers took part in the process of building this part. A change in the style of arches on the exterior walls appeared to transform from Safavid arches to Seljuk style (Figure 5).

All 150 rooms of hotel restored from original chambers of caravanserai in two floors built around the main courtyard consisted of three areas in each (small porch “Iwan”, study room and sleeping area). The interior spaces of the rooms are descripted as whitewashed with blue vaulting lines, and the exteriors facing the courtyard are tiled in geometrical patterns. A covered hallway in the middle of complex separating the caravanserai building from the school probably functioned as an acoustic barrier between the school as a semi-residential space and Caravanserai as a public foundation. The same four–Iwan layouts as in the school is also used for caravanserai. The main axis of courtyards is emphasized by a pool amplifying from east to west; the same stream of water runs through the yard of the school, taking after the same tripartite flat as the rooms of the school (Figure 6).

Figure 3. Drawing of central courtyard of Abbasi Carvansarai known as "Carvansarai of the Mather of Shah " by Pascal Coste, 1840, Isfahan, Iran (Abbasian, 2019)

Şekil 3. *Pascal Coste tarafından "Şah'ın Annesinin Kervansarayı" olarak bilinen Abbasi Kervansarayı'nın orta avlusunun çizimi, 1840, İsfahan, İran (Abbasian, 2019)*

a b

Figure 4. Restored pool and façade and remodelled landscape of the central courtyard (Abbasian, 2019) (a); added ornaments and furnishing of interior spaces, entrance lobby (b) (Author)

Şekil 4. *Restore edilmiş havuz ve cephe ile orta avlunun yeniden düzenlenmiş peyzajı (Abbasian, 2019) (a); iç mekanların ilave süsleri ve tefrişatı, giriş lobisi (b) (Yazar)*

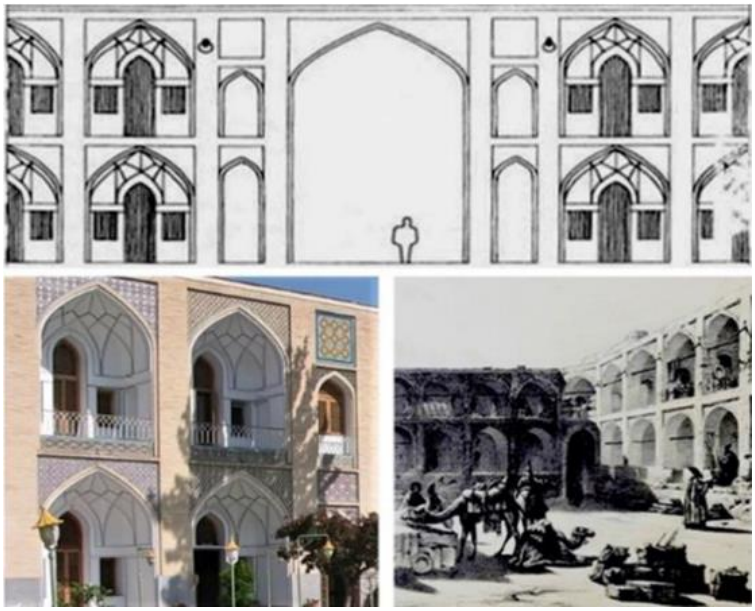


Figure 5. Original Safavid arches (right bottom) and remodelled Seljuk arches (Abbasian, 2019)

Şekil 5. *Orijinal Safevi kemerleri (sağ altta) ve yeniden düzenlenmiş Selçuklu kemerleri (Abbasian, 2019)*

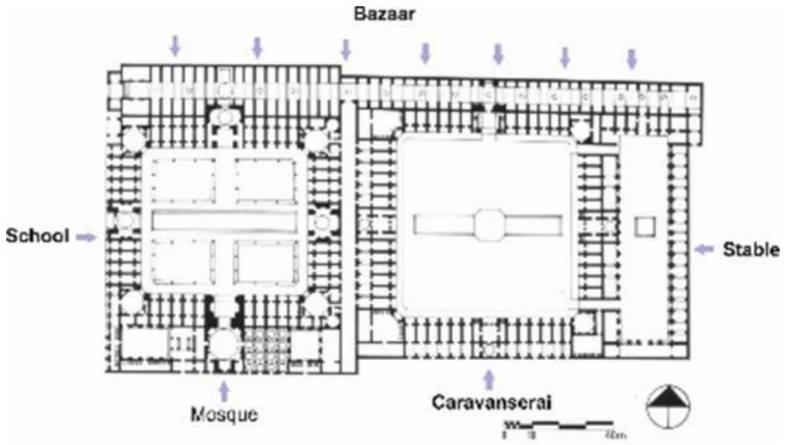


Figure 6. The original plans of the complex (Abbasian, 2019)
Şekil 6. *Külliyenin orijinal planları (Abbasian, 2019)*

3.2.2. Manouchehri House

Kashan, where Manouchehri House located is one of the oldest cities in Iran with a great history located in the centre of the country, with an almost hot and dry climate. Despite the fact that the city had been experienced great developments in the Safavid era, most of what we have now in the historical centre of Kashan belongs to Qajar era due to an earthquake happened in the 1778 AD. The building of Manouchehri house coincides in this time. The location of the house with a close distance to Bazaar, is in the Jewish neighbourhood of the historical city.

The original building sections of the house referred to Safavid dynasty, approximately 240 years ago, however it had been reconstructed in Qajar era. In 2007, when an artist purchased the house as part of a government sale and gave it her name, the general conditions of the building was quiet unstable. At the time it was not included on the national heritage list and could be demolished, but the new owner initially preserved and reused and turned it into a textile workshop in order to revive the endangered local weaving tradition. As a result of economics of keeping the workshops active and growing need of accommodation, the owner started the process of rearranging the house as a boutique hotel. Protecting values and authenticity of the house created adding values to environment in the region both visually and culturally, presenting the encounter of the Persian culture and traditional lifestyle with the adaptive reuse project.

The adaptive reuse of Manuchehri House and the creation of adjacent passageways took place between years 2008 and 2010 by an experienced team of traditional craftsmen, university professors and consulting engineers and opened as a boutique hotel (Figure 7 and 8).

The space arrangement in Manouchehri boutique hotel following the historical style of vernacular houses of central Iran includes a central courtyard and the placement of eight main rooms around with their own specific interior furniture and ornaments (Figure 9). Textile workshops were set up in some parts of the house. Tourists can take a closer look at the work of skilled craftsmen and purchase authentic samples of Kashan textiles. In addition, the house's former cistern was converted into a cinema and the lobby into an art gallery. Other facilities at this boutique hotel include craft shops and a restaurant. The house's former guest rooms now serve as a dining room (Figure 10). This house is not listed on the National Heritage List of Iran and therefore it was not mandatory to take into account the principles of Iran's adaptive reuse guidelines. As a result, this gave the owner the opportunity to introduce various features into the home (Eshrati et al., 2017).

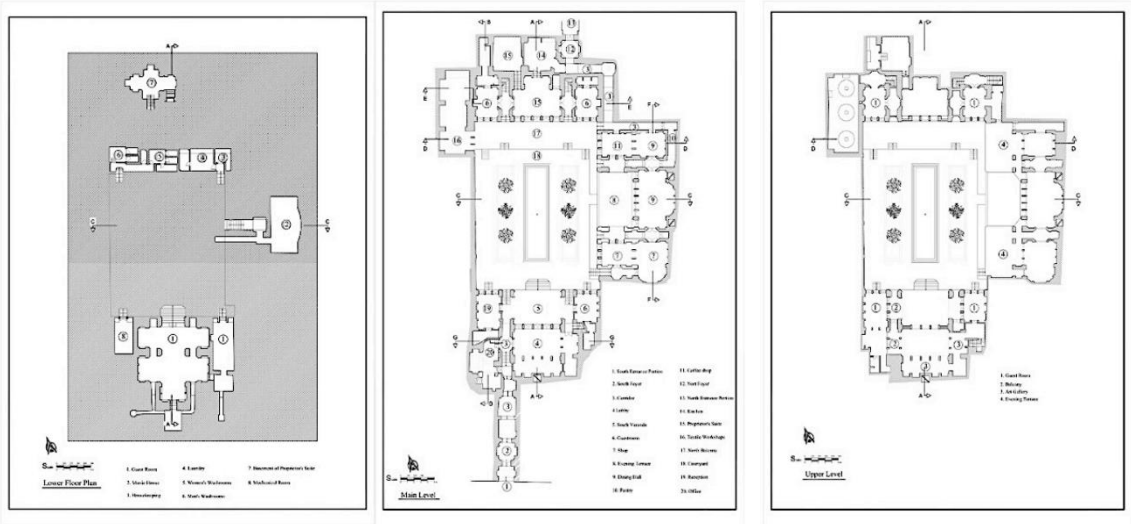


Figure 7. Manouchehri House's basement, first floor and second floor plan (Eshrati et al., 2017)
Şekil 7. *Manouchehri Evi'nin bodrum katı, birinci katı ve ikinci katplanı (Eshrati vd., 2017)*

a b

Figure 8. Manouchehri House before (a) and after restoration (b) (Eshrati et al., 2017)
Şekil 8. *Manouchehri Evi restorasyon öncesi (a) ve sonrası (b) (Eshrati vd., 2017)*

Figure 9. Residential room in Manouchehri House (Eshrati et al., 2017)
Şekil 9. *Manouchehri Evi'ndeki konut odası (Eshrati vd., 2017)*

a b

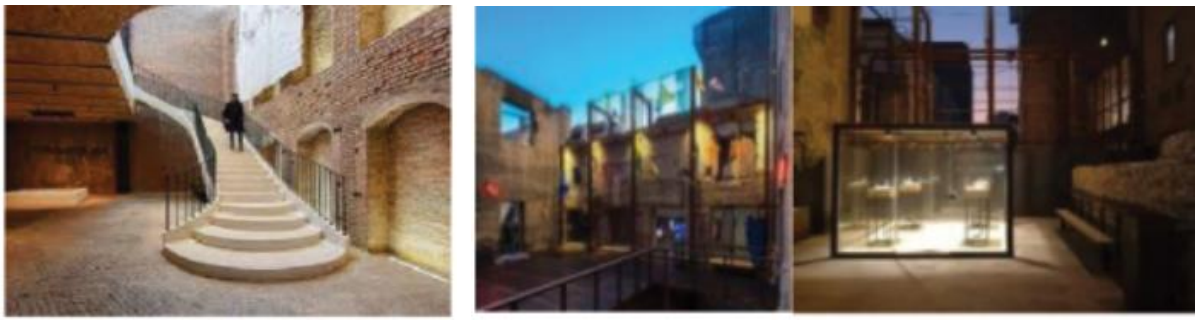
Figure 10. Old cistern of the house reused as a movie theatre (a) and dining space (b) (Eshrati et al., 2017)
Şekil 10. *Evin sinema salonu olarak kullanılan eski sarnıcı (a) ve yemek alanı (b) (Eshrati vd., 2017)*

3.2.3. Argo Factory

Factories and industrial buildings in general were a new type of buildings that appearing in the cities and countryside after industrial revolution and modernization acts in different parts of the world. Same reasons resulted in growing number of new industrial buildings in Iran, which raised a great opportunity for architects to build a heritage of industrialization age in Iran. Until the mid-1960s, Argo Factory, one of the hundreds industrial sites of the time, was a functioning brewery in the heart of Tehran. The Argo Factory, an exception to its industrial heritage, is located in the old town. Due to the resulting environmental pollution, the factory ceased operations and its building was covered with old gardens until the end of the 20th century.

According to the earlier confiscation of the complex, demolition of the factory was expected, but after some years left as a desolate site, the factory was purchased by the Peyman Foundation, a private curation organization in 2016. Despite some structural reinforcements and internal transformations, the foundation succeeded to host its first art exhibition and installation in February 2017, before formal renovations began. This new experience demonstrated a shift towards culturally informed activism to preserve industrial heritage (Figure 11 and 12).

This project reached to a considerable success both in attracting the public attention and designers and artists' promotion despite of limited political, cultural and legal framework. Following the creative methods and innovative approaches taken, significantly change in the future reuse of buildings highly expected (Lotfi and Sholeh, 2022).



a b

Figure 11. Interior installation (a) and exterior installation (b) in Argo Factory (Lotfi and Sholeh, 2022)

Şekil 11. *Argo Fabrikasında iç kurulum (a) ve dış kurulum (b) (Lotfi ve Sholeh, 2022)*

Figure 12. Argo Factory before and after restoration (Asadi and Abedini, 2023)

Şekil 12. *Argo Fabrikası restorasyon öncesi ve sonrası (Asadi ve Abedini, 2023)*

3.2.4. Khosravi Factory

The Khosravi Leather Factory, founded in 1931 is known as one of the first leather manufacturers in Tabriz after the Mihan Leather Factory and the Iranian Leather Factory. During World War II, the factory not only produced leather and shoes, but also military boots and riding shoes. The architectural and structural elements of the large Khosravi Leather Factory complex like towers and chimneys has been made it one of the important landmarks of the city of Tabriz. Until 1968, the factory had its own routine; however, it closed between 1969 and 1970 due to fact that shareholders losing money. As a result, in 1979, by the order of legal authorities, operation of the site was transferred to the Industrial Support Organization. Since 1987, Khosravi Leather Company has been a member of the national industrial group and under supervision of the National Industries of Iran.

The governors ordered the factory to be used as a cultural centre in 1988. Since 1994 Sahand Polytechnic University had been designated as the new owner of the Khosravi Leather Factory site. Later in 1999, the faculty of arts separated from the main university complex and transformed into The University of Arts of Tabriz. Restoration of the campus complex began in 1997, with old buildings renovated and converted into an amphitheatre, office building, gymnasium, cafeteria and library. Turbines and generators remaining in the tannery workshops are used in the industrial museum.

Four building blocks in a line and four independent blocks with smaller sizes form the main building of the factory. The major material found in these one or two story buildings are brick used in vaulted arches, belts and beams and timber wood in trusses. Combination of local Qajari ornaments of Tabriz and European industrial style applied on the façade of two story main blocks. The horizontal coils and vertical columns are reminiscent of the late Qajar period. Brick chimneys and the complex's rectangular cubic tower are important key elements of the building (Figure 13 and 14) (Kheirabadi, 2019).

One of the notable points in the methodology of reusing the industrial heritage site of Khosravi Leather Factory is that integrity and affiliation had been considered in the additional buildings and added sections for the campus of university with the existing ones; so that the new project carries the sense of place and values of original parts (Figure 15), while harmonizing with the original characteristics of the complex (Gharaati et al., 2023).

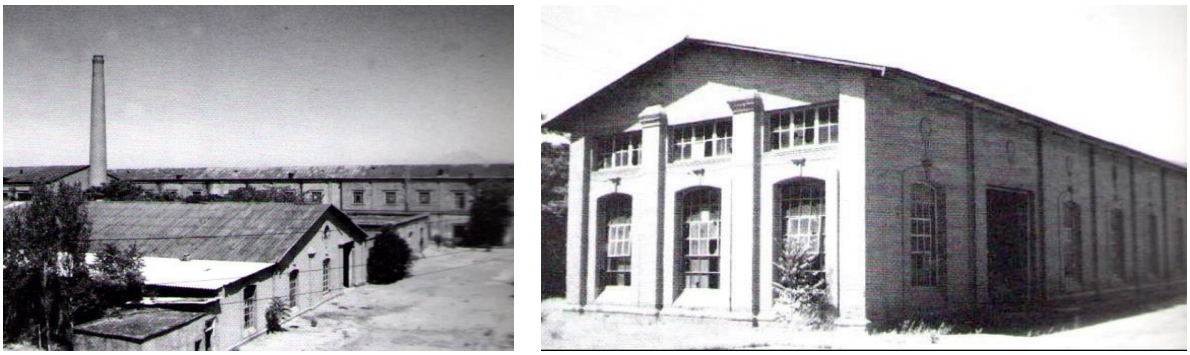


Figure 13. General view of the Khosravi leather complex before conservation (Kheirabadi, 2019)

Şekil 13. *Hüsrevi deri kompleksinin koruma öncesi genel görünümü (Kheirabadi, 2019)*

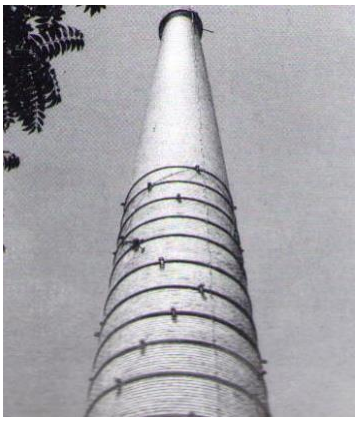


Figure 14. Cooling tower of the complex (Kheirabadi, 2019)

Şekil 14. *Kompleksin soğutma kulesi (Kheirabadi, 2019)*

Figure 15. General view of the complex after conservation (Kheirabadi, 2019)

Şekil 15. *Kompleksin koruma sonrası genel görünümü (Kheirabadi, 2019)*

4. RESULTS AND CONCLUSION

Adaptive reuse in architecture as an emerging issue from conservation and restoration of built heritages shaped its principles based on economic, environmental and social environments in different periods of history. However, since the 19th century, there have been a number of scientific and academic charters and publications for the adaptive reuse of historic buildings. In Iran, just like most part of the world, architectural culture is under the influence of general conditions of the world agenda and improving technologies. As a result, new types of conservation and transformations of historical buildings emerged starting by public projects with the government as client, later continued with a variety of public and private cases applied on sites in different sizes and ages. By appearing the nostalgic culture and social attention, the number of reuse projects saw an appreciable increase in recent years.

This study examined the practical application of adaptive reuse principles in four case sites in Iran. In the examined cases, considerable functional differences raised from various social and cultural circumstances which are distinguishable between typologies of the intended built heritage of each era. For example, as a result of considerable number of caravanserais built around business centres on the Silk Road in the Safavid era, most of those buildings and complexes now are capable of great potential to be reused as hotels according to their location in historical landmarks and tourist attractions. Another instance are industrial heritage sites which were located on the edge of the cities in their time, now with great expansions experienced in most of the urban areas, these sites are no longer outlying locations but a great opportunity to turn into cultural or educational centres due to their facilities and wide open spaces (Table 1).

Table 1. Features of built heritage subjected to adaptive reused built in Iran.
Tablo 1. *İran'ın uyarlanabilir yeniden kullanıma konu miras yapılarının özellikleri*

No	Project Name	Location	Time		Era	Function	
			Construction	Reuse		Original	Current
1	Abbasi Caravanserai	Isfahan	17th century	1950s	Safavid	Caravanserai	Hotel
2	Manouchehri House	Kashan	18th century	2008	Qajar	Residential	Boutique hotel
3	Argo factory	Tehran	1889	2016	Pahlavi	Beer factory	Institute of culture and art
4	Khosravi factory	Tabriz	1931	1975	Pahlavi	Leather factory	University

Analysis conducted on the case studies shows that prior stages like feasibility analysis and programming play such important roles in an adaptive reuse project that opens the door to a variety of innovative methods and approaches, while preserving the valuable heritages of the society. Also considering the location of heritage site in the city during the decision making phase for the new function can lead the project towards economic successes. Moreover, the typology of the original building is another factor which can help the designer to achieve efficiency and least changes in form and style of the complexes. The other influencing factor is the date of first construction of the case; as if it carries a great historical value or the general condition of building is in high risk circumstances, there will be limits in the appropriate use options.

On the other hand, all presented cases have considered shared principles and approaches in conservation, restoration and reuse processes to protect the original building's integrity and sense of place; at the same time trying to add some architectural and aesthetic value and find creative solutions. The outcome serves as a sample for discovering adaptive reuse practices in Iran and providing an overview on selected and evaluated built heritage.

This study has some limitations which need to be addressed in future researches. Lack of direct access to the study sites was due to geographical limitations. Wide distribution of cases brought up limitations in evaluating the cases on site, although an updated survey and field study could help to gather valuable data for further analysing the functionality and socio-economic success of the projects.

It is deeply believed that analysing more cases from other parts of the country would help to build a better understanding on the history of architectural adaptive reuse and its current beholden approaches in Iran.

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