




# Identification of Factors Affecting the Conversion of the Saadat Factory of Yazd into a Hotel for the Adaptive Reuse of Industrial Heritage

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## Abstract

The present study aimed to identify the factors affecting the conversion of the Saadat Factory of Yazd into a hotel for the adaptive reuse of industrial heritage. This research is developmental–applied in nature. The statistical population consisted of academic experts and architectural engineers in the city of Yazd, including university faculty members in architecture and architectural engineers involved in ongoing construction projects within Yazd Province. Semi-structured interviews were employed to identify the factors influencing the adaptive reuse of industrial heritage in the conversion of the Saadat Factory of Yazd into a hotel. The data obtained from the interviews were analyzed using thematic analysis, one of the most important qualitative data analysis methods. The findings identified physical–architectural, economic, socio-cultural, managerial–legal, and urban–spatial factors as influential in the conversion of the Saadat Factory of Yazd into a hotel for the adaptive reuse of industrial heritage. The physical–architectural factors included structural integrity and reinforcement capability, plan flexibility, span dimensions and ceiling height, spatial quality and natural lighting, and historical and architectural values. Economic factors included restoration and conversion costs, return on investment, tourism demand, and land value and location. Urban–spatial factors included access to transportation networks, proximity to tourist attractions, location within the historic urban fabric, and connectivity to urban service networks. Socio-cultural factors included industrial identity and collective memory, social acceptance of the project, contribution to cultural tourism, and preservation of heritage authenticity. Managerial–legal factors included cultural heritage regulations, land-use conversion requirements, and support from government authorities or investors. Furthermore, following the Analytic Hierarchy Process (AHP) analysis of the criteria, the results indicated that socio-cultural factors ranked first in importance, managerial–legal factors ranked second, economic factors ranked third, physical–architectural factors ranked fourth, and urban–spatial factors ranked fifth.

**Keywords:** Adaptive Reuse, Industrial Heritage, Saadat Factory of Yazd, Hotel.

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## 1. Introduction

Industrial heritage constitutes a significant component of cultural heritage and represents the material evidence of industrialization processes, technological advancement, production systems, and the socio-economic transformations that have shaped modern societies. Former factories, power plants, warehouses, workshops, transportation infrastructures, and industrial complexes embody not only architectural and engineering values but also social memories, cultural identities, and collective experiences

associated with industrial development. Over recent decades, increasing attention has been devoted to preserving industrial heritage assets and integrating them into contemporary urban development strategies through adaptive reuse approaches [1, 2]. Rather than viewing obsolete industrial structures as abandoned assets or redevelopment obstacles, contemporary heritage management perspectives increasingly recognize them as valuable resources capable of contributing to economic revitalization, cultural continuity, urban regeneration, and sustainable development [3, 4].



Adaptive reuse has emerged as one of the most effective strategies for preserving historic and industrial buildings while simultaneously accommodating contemporary functional requirements. The concept refers to the process of assigning new functions to existing buildings in a manner that respects their historical, architectural, cultural, and social values while ensuring their continued utilization and economic viability. This approach provides an alternative to demolition by extending the life cycle of heritage structures and reducing environmental impacts associated with new construction [5, 6]. Adaptive reuse has consequently become a central theme in heritage conservation policies and urban regeneration programs throughout the world.

The growing interest in adaptive reuse is closely linked to global sustainability agendas. Scholars have increasingly emphasized that the conservation and reuse of existing buildings contribute significantly to sustainable development objectives by reducing resource consumption, minimizing construction waste, preserving embodied energy, and promoting circular economy principles [7, 8]. Existing building stocks are now frequently regarded as urban mines containing valuable physical, cultural, and economic resources that can be reactivated through appropriate intervention strategies [6]. Similarly, adaptive reuse initiatives have been recognized as practical mechanisms for achieving the Sustainable Development Goals by balancing environmental protection, cultural conservation, and economic development [4].

Within this context, industrial heritage presents unique opportunities and challenges. Industrial buildings often possess large open spaces, robust structural systems, generous ceiling heights, and distinctive architectural characteristics that make them suitable for new functions. However, these same characteristics may create difficulties related to spatial adaptation, structural rehabilitation, regulatory compliance, and financial feasibility. Consequently, successful adaptive reuse projects require comprehensive assessments of physical, economic, social, cultural, managerial, and environmental dimensions before determining the most appropriate future use [3, 9]. Research has demonstrated that the success of industrial heritage regeneration depends on the careful evaluation of multiple criteria and stakeholder perspectives rather than solely architectural considerations [10, 11].

The transformation of industrial heritage sites into tourism-related functions has become particularly prevalent in recent years. Tourism-oriented adaptive reuse projects offer opportunities to preserve heritage resources while

generating sustainable economic returns. Former industrial complexes have increasingly been converted into museums, cultural centers, creative hubs, hotels, commercial facilities, and mixed-use developments capable of attracting visitors and stimulating local economies [12, 13]. Such projects not only preserve the physical fabric of industrial heritage but also facilitate the interpretation of industrial history and reinforce place identity through experiential tourism activities.

Among the various adaptive reuse alternatives, hotel development has emerged as a particularly attractive option for many heritage buildings. Heritage hotels provide unique visitor experiences by combining historical authenticity with contemporary hospitality services. The adaptive reuse of historical and industrial buildings as hotels has demonstrated significant potential for generating economic value, supporting tourism development, revitalizing urban areas, and enhancing cultural attractiveness [14, 15]. Boutique hotels established within heritage structures often benefit from distinctive architectural qualities and historical narratives that differentiate them from conventional hospitality facilities. Such characteristics contribute to destination branding and increase visitor interest in cultural tourism experiences [16].

Nevertheless, converting heritage buildings into hotels is a highly complex process requiring careful consideration of numerous factors. Hotel functions impose specific spatial, technical, operational, and regulatory requirements that may conflict with conservation objectives. Issues such as structural capacity, accessibility, building services integration, fire safety, energy efficiency, user comfort, and financial performance must be addressed while preserving the authenticity and heritage significance of the building [17, 18]. Consequently, decision-makers require comprehensive frameworks capable of identifying and prioritizing the factors that influence the feasibility and success of adaptive reuse projects involving hotel conversion.

Previous studies have highlighted the importance of physical and architectural factors in adaptive reuse decision-making. Structural integrity, flexibility of building layouts, dimensions of spaces, availability of natural lighting, and compatibility between existing architectural characteristics and proposed functions significantly influence adaptive reuse outcomes [3, 19]. Research on industrial heritage has demonstrated that the preservation of historical and architectural values must be carefully balanced with contemporary performance requirements [1, 2]. Similarly, investigations into heritage conservation have emphasized

the necessity of safeguarding authenticity and preserving the spirit of place throughout adaptive reuse interventions [18].

Environmental performance considerations have also gained prominence within adaptive reuse research. Energy efficiency improvements, daylight optimization, and sustainable retrofitting strategies have become increasingly important in heritage projects. Studies have shown that adaptive reuse can contribute substantially to energy transition objectives when appropriate intervention strategies are implemented [5, 20]. Furthermore, natural lighting conditions and skylight configurations significantly affect the quality and functionality of adapted heritage spaces, particularly when new hospitality functions are introduced [21, 22]. Advanced technologies and digital assessment methods are also increasingly employed to improve the evaluation and management of heritage buildings undergoing transformation processes [23].

Economic considerations represent another critical dimension of adaptive reuse projects. Restoration costs, conversion expenses, investment returns, tourism demand, land value, and financial feasibility directly influence project viability. Several studies have emphasized the importance of economic valuation techniques and financial feasibility assessments in supporting adaptive reuse decision-making [24, 25]. Industrial heritage projects frequently require substantial capital investment due to conservation requirements and technical complexities. Therefore, identifying economically sustainable reuse options is essential for ensuring long-term project success [10, 19].

Urban and spatial factors also play a significant role in determining adaptive reuse potential. Accessibility, connectivity, proximity to tourist attractions, integration with urban infrastructure, and compatibility with surrounding urban fabric influence both project feasibility and attractiveness. Research concerning urban regeneration has demonstrated that successful adaptive reuse initiatives contribute to broader urban revitalization processes and strengthen relationships between heritage assets and contemporary urban environments [13, 26]. The location of heritage assets within historic districts or tourism corridors often enhances their adaptive reuse potential by increasing visitor accessibility and supporting destination development strategies [12].

In addition to physical and economic considerations, socio-cultural dimensions are increasingly recognized as fundamental determinants of adaptive reuse success. Heritage buildings embody cultural meanings, collective memories, and community identities that extend beyond

their physical characteristics. The preservation of industrial identity, public acceptance of redevelopment projects, community participation, and cultural tourism potential substantially influence adaptive reuse outcomes [27, 28]. Comparative studies conducted in European cities have demonstrated that stakeholder engagement and social acceptance are among the most critical factors affecting the implementation of adaptive reuse projects [28]. Likewise, industrial heritage sites often possess significant intangible values associated with labor history, local traditions, and collective memory, all of which require careful consideration during redevelopment processes [2].

Managerial and legal factors constitute another essential category of influences on adaptive reuse projects. Heritage regulations, conservation guidelines, planning policies, permitting procedures, institutional support, and investment incentives significantly affect project implementation and outcomes. Researchers have emphasized that successful heritage management requires effective governance structures and coordinated decision-making among public authorities, private investors, heritage organizations, and local communities [9, 29]. Decision-support methodologies and multicriteria evaluation frameworks have increasingly been proposed to facilitate complex adaptive reuse decisions involving multiple stakeholders and conflicting objectives [30, 31]. Moreover, contemporary adaptive reuse projects frequently rely on multi-criteria decision-making approaches to identify and prioritize influential factors and evaluate alternative development scenarios [10, 11].

Despite the growing body of international research on adaptive reuse and industrial heritage conservation, limited studies have specifically examined the factors influencing the conversion of industrial heritage sites into hotels within the Iranian context. Existing Iranian studies have investigated adaptive reuse potential, heritage values, boutique hotel development, and industrial heritage conservation; however, comprehensive frameworks integrating physical–architectural, economic, urban–spatial, socio-cultural, and managerial–legal dimensions remain relatively scarce [1, 2, 14, 19]. Furthermore, the Saadat Factory of Yazd represents a significant industrial heritage asset whose adaptive reuse potential has not been systematically examined through a multi-criteria and stakeholder-oriented perspective.

Given the historical significance of the Saadat Factory, its location within the cultural landscape of Yazd, and the increasing demand for heritage-based tourism experiences, identifying the factors that influence its successful

conversion into a hotel can contribute to both heritage conservation and sustainable urban development. Such an investigation can provide valuable insights for policymakers, conservation professionals, investors, architects, and urban planners seeking to develop effective adaptive reuse strategies for industrial heritage sites.

Therefore, the aim of this study was to identify and prioritize the factors affecting the conversion of the Saadat Factory of Yazd into a hotel for the adaptive reuse of industrial heritage.

## 2. Methodology

This study was conducted with the aim of identifying the factors influencing the conversion of the Saadat Factory of Yazd into a hotel as an adaptive reuse strategy for industrial heritage. The research adopted a developmental–applied design. It was developmental in nature because it sought to identify and develop a comprehensive framework of factors affecting the adaptive reuse of an industrial heritage site, and applied because the findings can contribute to overcoming practical barriers associated with the reuse and revitalization of industrial heritage buildings. The study was situated within the field of architectural engineering and was carried out in Yazd Province, Iran, between March and June 2025. The target population consisted of academic experts and practicing architectural engineers in the city of Yazd. Participants included university faculty members specializing in architecture as well as professional architects actively involved in ongoing construction and architectural projects throughout Yazd Province. A purposive sampling strategy was employed to select participants who possessed extensive knowledge and experience related to architectural conservation, adaptive reuse, heritage preservation, urban development, and hotel design. Data collection continued until theoretical saturation was achieved, meaning that no substantially new concepts or themes emerged from subsequent interviews.

Data were collected through semi-structured interviews, a widely recognized qualitative data collection technique that facilitates the exploration of participants' experiences, perceptions, and expert opinions in considerable depth. Semi-structured interviews provide a balance between structure and flexibility, allowing researchers to address predetermined research questions while simultaneously exploring emerging issues and insights raised by participants during the interview process. An interview guide was developed based on an extensive review of the literature

concerning industrial heritage, adaptive reuse, architectural conservation, heritage tourism, and urban regeneration. The interview questions were reviewed and refined through consultation with experts in architecture and heritage studies to ensure their relevance and comprehensiveness. During the interviews, participants were encouraged to elaborate on the physical, architectural, economic, social, cultural, managerial, legal, urban, and spatial dimensions that could influence the successful transformation of the Saadat Factory into a hotel. Additional probing questions were used whenever necessary to clarify responses and obtain richer descriptions. All interviews were conducted in a professional and supportive environment to facilitate open communication and ensure the collection of detailed and meaningful information. The interviews were audio-recorded with participants' consent and subsequently transcribed verbatim to prepare the data for analysis.

The credibility of the qualitative data was enhanced through a systematic validation process implemented throughout all stages of the research. During the topic selection phase, the research problem was carefully formulated based on theoretical foundations and previous studies. During the design phase, interview questions and procedures were developed according to the study objectives and refined through expert consultation. Particular attention was devoted to creating an appropriate interview setting that encouraged participants to express their views openly and honestly. Following data collection, all interviews were transcribed accurately and converted into coherent textual documents for analysis. Throughout the analytical phase, rigorous qualitative procedures were applied to ensure that interpretations remained grounded in the participants' statements. Finally, the credibility of the findings was reinforced through continuous verification and transparent reporting of the research process, enabling the results to be presented in a scientifically sound and trustworthy manner.

The interview data were analyzed using thematic analysis, one of the most widely employed methods for qualitative data analysis. Specifically, the six-phase framework proposed by Braun and Clarke (2006) was adopted to identify and interpret the major themes emerging from the interview data. In the first phase, the researcher became thoroughly familiar with the data through repeated reading of the interview transcripts. In the second phase, initial codes were generated systematically across the dataset. During the third phase, related codes were grouped together to form preliminary themes. The fourth phase involved reviewing and refining the candidate themes to

ensure coherence and consistency within and across themes. In the fifth phase, the themes were clearly defined, interpreted, and assigned appropriate labels. Finally, in the sixth phase, a comprehensive analytical report was prepared, providing a coherent and detailed interpretation of the findings.

To evaluate the reliability of the coding process, inter-coder agreement was employed. In addition to the primary coding conducted by the researcher, a portion of the interview transcripts was independently coded by an expert who was not informed of the original coding scheme. Furthermore, a test–retest reliability procedure was performed by selecting three interviews from the dataset and recoding them by the researcher after a two-week interval.

The resulting agreement coefficients were 0.88, 0.82, and 0.89, indicating a high level of coding consistency and reliability. Following the identification of the thematic structure, the relative importance of the extracted factors and criteria was assessed using the Analytic Hierarchy Process (AHP). Pairwise comparisons and prioritization procedures were conducted using Expert Choice software, enabling the determination and ranking of the factors influencing the adaptive reuse of the Saadat Factory of Yazd as a hotel.

### 3. Findings and Results

The demographic characteristics of the interview participants are presented in Tables 1 and 2.

**Table 1.** Gender Distribution of Interview Participants

Participant Group	Gender	Frequency	Percentage (%)
University Faculty Members	Male	7	35
University Faculty Members	Female	5	25
Architectural Engineers	Male	5	25
Architectural Engineers	Female	3	15
Total		20	100

**Table 2.** Age Distribution of Interview Participants

Participant Group	Age Category	Frequency	Percentage (%)
University Faculty Members	Under 30 years	3	15
University Faculty Members	30–40 years	4	20
University Faculty Members	Over 40 years	5	25
Architectural Engineers	Under 30 years	1	5
Architectural Engineers	30–40 years	4	20
Architectural Engineers	Over 40 years	3	15
Total		20	100

Subsequently, the thematic analysis conducted to identify the factors affecting the conversion of the Saadat Factory of Yazd into a hotel for the adaptive reuse of industrial heritage is presented in Table 3. Based on the initial codes extracted

from expert interviews, sub-themes were identified, and subsequently, the main themes were derived from these sub-themes.

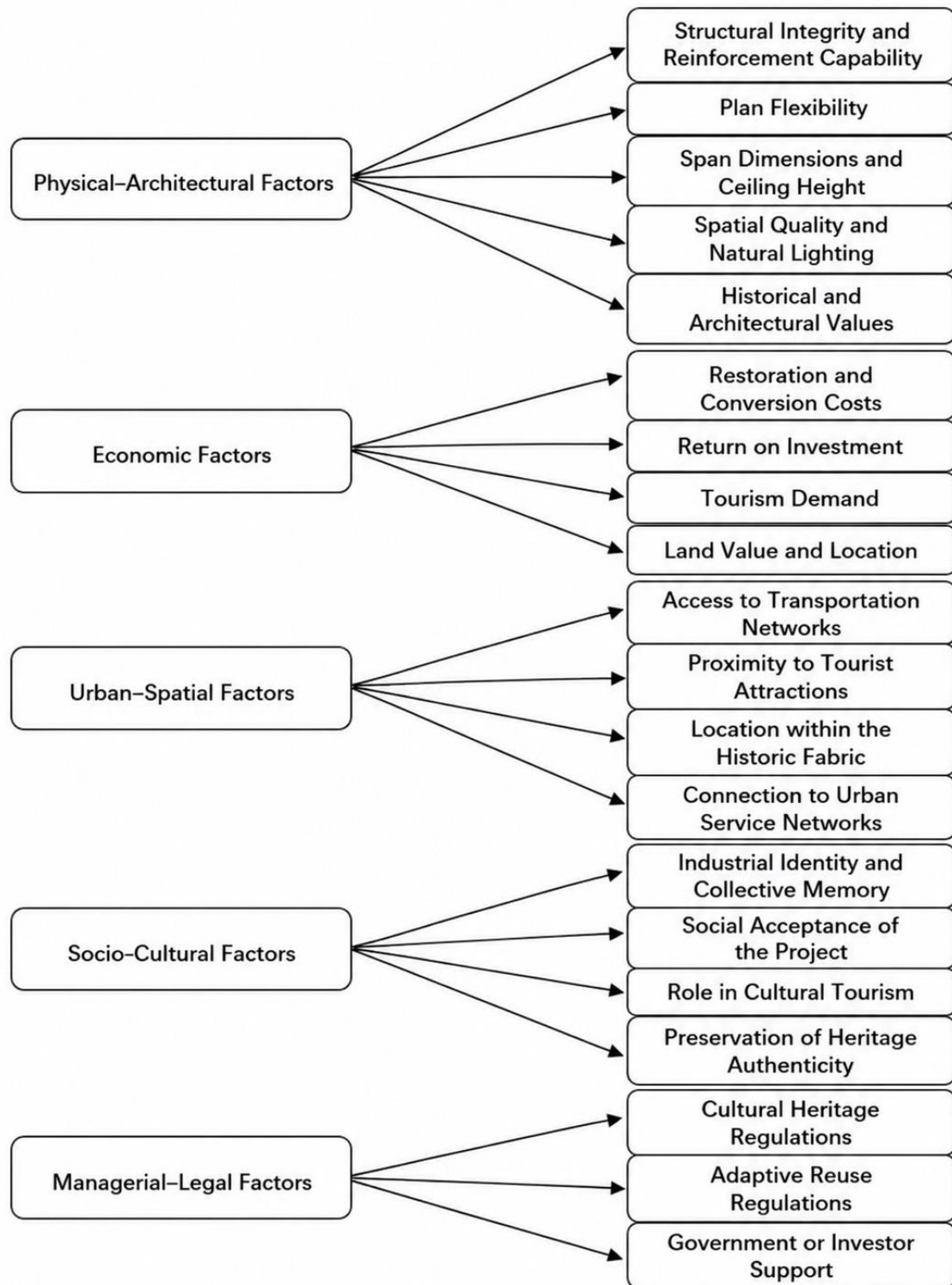
**Table 3.** Thematic Analysis of Factors Affecting the Conversion of the Saadat Factory of Yazd into a Hotel for the Adaptive Reuse of Industrial Heritage

Initial Codes	Sub-Theme	Main Theme
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Material deterioration assessment, structural load-bearing capacity, non-invasive strengthening techniques, compatibility of building services with the structural body, reversibility of structural interventions	Structural Integrity and Reinforcement Capability	Physical–Architectural Factors
Spatial divisibility, open-plan layout, responsiveness to new functions, minimum intervention in spatial organization, flexibility in functional rearrangement	Plan Flexibility	Physical–Architectural Factors
Human-scale considerations in high-volume spaces, modular adaptation of spans, daylight and ventilation penetration, infrastructure interference with existing height, potential of intermediary spaces	Span Dimensions and Ceiling Height	Physical–Architectural Factors
Industrial windows and spatial perception, skylights and interior illumination, quality of incoming light, undesirable glare or darkness, effect of lighting on material and texture readability	Spatial Quality and Natural Lighting	Physical–Architectural Factors
Protection of physical authenticity, readability of historical layers, harmony with surrounding context, preservation of the spirit of place, appreciation of traditional and industrial construction techniques	Historical and Architectural Values	Physical–Architectural Factors
Stabilization and reinforcement costs, building services adaptation costs, unforeseen heritage intervention expenses, resource optimization through minimal intervention, restoration incentives and subsidies	Restoration and Conversion Costs	Economic Factors
Investment payback period, project profitability rate, economic attractiveness of heritage assets, revenue generation from accommodation use, financial risks and market fluctuations, balance between initial cost and long-term benefits	Return on Investment	Economic Factors
Attractiveness of target markets, unique competitive advantage, diversification of tourism products, capacity for interaction with local context, place-branding effects, demand sensitivity to land-use conversion	Tourism Demand	Economic Factors
Added value of location, development potential, land opportunity costs, influence of heritage value on land value, heritage-zone regulations, land revaluation potential	Land Value and Location	Economic Factors
Accessibility to public transportation, air and rail transportation access, access to major road networks, parking facilities, pedestrian and cycling accessibility, traffic congestion impacts	Access to Transportation Networks	Urban–Spatial Factors
Connectivity with tourism corridors, diversity of surrounding attractions, complementary land uses, walkability and visual connectivity, clustering effects of attractions, temporal and physical distance from major destinations	Proximity to Tourist Attractions	Urban–Spatial Factors
Scale compatibility, integration with the physical fabric and wayfinding systems, compatibility of identity and meaning, land-use change impacts on urban fabric, continuity or disruption of urban landscape, regeneration potential	Location within the Historic Fabric	Urban–Spatial Factors
Sustainable provision of water and electricity, wastewater collection and disposal systems, communication and internet networks, urban maintenance and waste management services, emergency services accessibility, linkage with transportation services	Connection to Urban Service Networks	Urban–Spatial Factors
Industrial symbolism and memorial value, historical storytelling and place narratives, connection with local lived experiences, preserving authenticity against commercialization, intangible heritage and associated skills, social acceptance and symbolic ownership	Industrial Identity and Collective Memory	Socio-Cultural Factors
Perceived benefits and disadvantages of the project, local community participation in decision-making, influence on neighborhood identity and sense of belonging, concerns regarding physical and environmental changes, evaluation of economic impacts on local communities, role of local leaders and mediators	Social Acceptance of the Project	Socio-Cultural Factors
Unique cultural-industrial attraction, heritage-based tourism experiences, connection with other cultural attractions in Yazd, event-making potential and cultural programming, targeted cultural marketing and promotion, influence on Yazd's tourism image	Role in Cultural Tourism	Socio-Cultural Factors
Adherence to authentic architectural elements, representation of industrial history, intelligent integration of old and new functions, use of compatible materials and techniques, preservation of the spirit of place, pre-intervention documentation and research	Preservation of Heritage Authenticity	Socio-Cultural Factors
Heritage registration and conservation requirements, intervention restrictions, permit acquisition procedures, compliance with conservation regulations, balance between preservation and new use, legal supervision and consequences of violations	Cultural Heritage Regulations	Managerial–Legal Factors
Legal feasibility of land-use conversion, compatibility of new functions with heritage values, functional and spatial limitations arising from regulations, preservation requirements for significant architectural elements, consistency with urban master plans, approval and review procedures	Adaptive Reuse Regulations	Managerial–Legal Factors
Heritage-supportive regulations and incentives, role of government institutions in financing, attraction of private investors, regulations concerning public heritage assets, investment risk assessment, support from industrial and heritage organizations	Government or Investor Support	Managerial–Legal Factors

Based on Table 3, the thematic analysis identified five major categories of factors influencing the conversion of the Saadat Factory of Yazd into a hotel for the adaptive reuse of industrial heritage. These categories included physical–architectural factors, economic factors, urban–spatial

factors, socio-cultural factors, and managerial–legal factors. Together, these dimensions form a comprehensive multi-criteria framework for evaluating the feasibility and effectiveness of adaptive reuse projects involving industrial heritage sites.



**Figure 1.** Multi-Criteria Framework for the Adaptive Reuse of Industrial Heritage Based on Factors Affecting the Conversion of the Saadat Factory of Yazd into a Hotel

To prioritize the identified criteria from the perspective of experts, the Analytic Hierarchy Process (AHP) technique was employed. The results are presented in Table 4.

**Table 4.** Prioritization of Criteria Based on the Analytic Hierarchy Process (AHP)

Influencing Factors	Code	Non-Normalized Weight	Normalized Weight
Physical–Architectural Factors	W1	0.466	0.173
Economic Factors	W2	0.515	0.191
Urban–Spatial Factors	W3	0.435	0.161
Socio-Cultural Factors	W4	0.727	0.271
Managerial–Legal Factors	W5	0.549	0.204

As shown in Table 4, the final normalized weights of the factors influencing the conversion of the Saadat Factory of Yazd into a hotel for the adaptive reuse of industrial heritage were 0.173 for physical–architectural factors, 0.191 for economic factors, 0.161 for urban–spatial factors, 0.271 for socio-cultural factors, and 0.204 for managerial–legal factors. These findings indicate that socio-cultural factors ranked first in importance, followed by managerial–legal factors in second place, economic factors in third place, physical–architectural factors in fourth place, and urban–spatial factors in fifth place. The results suggest that the social acceptance of the project, preservation of collective memory and industrial identity, heritage authenticity, and cultural tourism considerations play the most critical roles in the successful adaptive reuse of the Saadat Factory of Yazd as a hotel.

#### 4. Discussion and Conclusion

The present study aimed to identify and prioritize the factors affecting the conversion of the Saadat Factory of Yazd into a hotel for the adaptive reuse of industrial heritage. The findings revealed that the influential factors can be categorized into five principal dimensions, namely physical–architectural, economic, urban–spatial, socio-cultural, and managerial–legal factors. Furthermore, the results of the Analytic Hierarchy Process (AHP) indicated that socio-cultural factors received the highest priority, followed by managerial–legal factors, economic factors, physical–architectural factors, and urban–spatial factors, respectively. These findings demonstrate that while the physical condition and economic feasibility of industrial heritage buildings remain important considerations, the social meanings, cultural values, governance structures, and regulatory frameworks surrounding such assets play a more decisive role in determining the success of adaptive reuse projects.

One of the most significant findings of the study was the identification of socio-cultural factors as the highest-priority category affecting the conversion of the Saadat Factory into a hotel. This result suggests that adaptive reuse projects

involving industrial heritage should not be evaluated solely from technical or economic perspectives. Instead, the preservation of industrial identity, collective memory, social acceptance, cultural tourism potential, and heritage authenticity should be regarded as fundamental determinants of project success. This finding is consistent with studies emphasizing that heritage buildings derive much of their significance from their symbolic, social, and cultural meanings rather than merely their physical attributes. Research has shown that adaptive reuse projects achieve greater sustainability when they preserve community identity and maintain the historical narratives associated with heritage sites [27, 28]. Similarly, investigations into industrial heritage reuse have highlighted the importance of preserving intangible heritage values, including memories of labor, industrial traditions, and community experiences [1, 2]. The prominence of socio-cultural factors in the present study may be attributed to the unique historical significance of the Saadat Factory within Yazd’s urban identity, where heritage resources are closely connected to local cultural values and tourism development.

The high ranking of industrial identity and collective memory further supports the argument that adaptive reuse should be understood as a process of cultural continuity rather than merely a physical transformation. Industrial heritage sites often function as repositories of collective memory and social experience. Preserving these dimensions contributes to the authenticity and attractiveness of heritage-based tourism destinations. Previous studies have similarly demonstrated that the retention of cultural meanings and heritage narratives enhances visitors’ experiences and strengthens destination branding [12, 16]. The findings therefore suggest that successful hotel conversion projects should incorporate interpretive strategies capable of communicating the industrial history of the site while simultaneously meeting contemporary hospitality requirements.

The second most influential category identified in this study was managerial–legal factors. This finding indicates that even when physical, economic, and social conditions are

favorable, adaptive reuse projects may face significant obstacles if appropriate legal frameworks, regulatory support mechanisms, and institutional arrangements are absent. Heritage conservation regulations, adaptive reuse policies, and governmental or investor support emerged as critical considerations. This result aligns with previous studies emphasizing the role of governance systems in determining adaptive reuse outcomes [9, 29]. Heritage projects frequently involve multiple stakeholders with diverse objectives, making regulatory clarity and institutional coordination essential for project implementation. Similarly, research on adaptive reuse decision-making has shown that supportive legal frameworks facilitate investment, reduce uncertainty, and encourage private-sector participation in heritage conservation initiatives [25, 27].

The importance assigned to managerial–legal factors may also reflect the complexity of converting industrial heritage buildings into hospitality facilities. Such projects often require balancing conservation requirements with contemporary operational needs, including safety standards, accessibility provisions, and building services upgrades. Therefore, legal feasibility and regulatory flexibility become essential determinants of project viability. Studies investigating adaptive reuse in different contexts have similarly identified regulatory restrictions and approval procedures as significant challenges affecting project implementation [28, 32]. The present findings reinforce the necessity of establishing integrated policy frameworks capable of simultaneously supporting heritage conservation and adaptive development objectives.

Economic factors ranked third among the identified categories, highlighting the importance of financial feasibility in adaptive reuse projects. Restoration and conversion costs, return on investment, tourism demand, and land value were identified as key economic considerations. These findings correspond closely with previous research demonstrating that adaptive reuse decisions are strongly influenced by economic performance expectations [24, 25]. Heritage conservation projects often require substantial investment due to the technical complexities associated with preserving historic structures. Consequently, stakeholders must carefully evaluate the balance between conservation expenditures and long-term economic benefits.

The importance of tourism demand as an economic factor reflects the growing role of heritage tourism in supporting adaptive reuse initiatives. The transformation of industrial heritage sites into hotels can create unique tourism products

that differentiate destinations from conventional hospitality offerings. Similar findings have been reported in studies examining the reuse of industrial facilities and heritage buildings for tourism-related purposes [12, 14]. Furthermore, research focusing on hotel conversion projects has shown that heritage authenticity often enhances market attractiveness and contributes positively to economic performance [15, 16]. Therefore, the economic sustainability of adaptive reuse projects depends not only on financial calculations but also on the ability to capitalize on the distinctive cultural and historical characteristics of heritage assets.

Physical–architectural factors occupied the fourth rank in the prioritization process. Although these factors did not emerge as the most influential category, they remain fundamental prerequisites for successful adaptive reuse. Structural integrity, plan flexibility, spatial quality, natural lighting, and historical–architectural values were identified as critical sub-factors. These findings are consistent with studies highlighting the importance of evaluating building conditions and architectural characteristics prior to adaptive reuse interventions [3, 19]. Industrial buildings often possess large open spaces and robust structural systems that facilitate functional adaptation; however, their suitability for hotel conversion depends on the extent to which existing spatial configurations can accommodate contemporary hospitality requirements.

The identification of natural lighting and spatial quality as important considerations aligns with previous research demonstrating the influence of daylight performance on user comfort, energy efficiency, and heritage building functionality [21, 22]. Similarly, studies concerning sustainable heritage interventions have emphasized the need to integrate environmental performance improvements without compromising heritage values [5, 20]. The findings therefore suggest that adaptive reuse strategies should pursue a balanced approach that simultaneously addresses structural preservation, environmental performance, and user experience.

The significance attributed to historical and architectural values further confirms that physical interventions should respect the authenticity of heritage assets. This finding is supported by studies emphasizing the role of heritage significance assessments in guiding adaptive reuse decisions [18]. Likewise, investigations into industrial heritage conservation have argued that preserving original architectural characteristics contributes to both cultural sustainability and tourism attractiveness [1, 2].

Consequently, adaptive reuse interventions should prioritize minimum intervention principles and preserve the distinctive architectural features that define industrial heritage sites.

Urban–spatial factors received the lowest priority among the five categories; nevertheless, they remain important components of adaptive reuse feasibility. Access to transportation networks, proximity to tourist attractions, integration within the historic urban fabric, and connectivity to urban service networks were identified as relevant considerations. The relatively lower ranking of these factors does not imply insignificance but rather suggests that experts perceived them as secondary to socio-cultural, managerial, economic, and architectural dimensions. This finding may be explained by the existing strategic location of the Saadat Factory within Yazd, where many urban accessibility and tourism-related advantages are already present.

The identified urban–spatial factors correspond with previous studies emphasizing the relationship between adaptive reuse and urban regeneration processes [13, 26]. Adaptive reuse projects are often most successful when they contribute to broader urban development objectives and establish meaningful connections with surrounding cultural and tourism assets. Research concerning heritage tourism destinations has similarly demonstrated that accessibility and spatial integration significantly influence visitor experiences and economic performance [12]. Therefore, while urban–spatial factors may not represent the primary drivers of adaptive reuse decisions, they remain important supporting conditions for long-term project success.

The overall findings of this study reinforce the multidimensional nature of adaptive reuse decision-making. Contemporary heritage conservation increasingly requires the integration of cultural, social, economic, environmental, technical, and governance perspectives. This multidimensional understanding is reflected in several recent decision-support frameworks and multicriteria evaluation models developed for heritage management and adaptive reuse planning [11, 30]. Similarly, sustainability-oriented studies have emphasized the importance of balancing environmental, social, and economic objectives when determining appropriate intervention strategies for heritage assets [4, 31]. The prioritization results obtained in the present study provide empirical support for these perspectives by demonstrating that adaptive reuse success depends upon the interaction of multiple factors rather than any single criterion.

Furthermore, the findings align with broader sustainability discussions concerning circular economy principles, embodied energy conservation, and the regeneration of existing building stocks [6-8]. The adaptive reuse of the Saadat Factory represents an opportunity to preserve valuable industrial heritage while simultaneously supporting tourism development, economic revitalization, and sustainable urban growth. By identifying and prioritizing the factors influencing this process, the present study contributes to a more comprehensive understanding of adaptive reuse decision-making within the context of industrial heritage conservation.

This study was subject to several limitations. First, the research relied on expert opinions collected from university faculty members and architectural professionals in Yazd, which may limit the generalizability of the findings to other geographical and cultural contexts. Second, the study focused exclusively on a single industrial heritage site, namely the Saadat Factory of Yazd, and therefore the identified priorities may reflect site-specific characteristics. Third, although the Analytic Hierarchy Process provided a systematic mechanism for prioritization, the resulting weights remained dependent on expert judgments. Finally, the study concentrated primarily on identifying influential factors and did not evaluate alternative adaptive reuse scenarios or measure the actual performance outcomes of implemented projects.

Future studies should examine additional industrial heritage sites in different regions to compare the relative importance of adaptive reuse factors across diverse contexts. Comparative investigations involving multiple industrial heritage typologies could contribute to the development of more comprehensive decision-making frameworks. Researchers may also employ mixed-method approaches combining qualitative assessments with quantitative performance indicators related to tourism, economic viability, environmental sustainability, and social impacts. Furthermore, future research could investigate stakeholder perceptions, visitor experiences, and community attitudes toward industrial heritage hotel projects after implementation. Longitudinal studies examining the long-term effects of adaptive reuse projects on urban regeneration and local development would also provide valuable insights.

Policymakers should establish supportive regulatory frameworks that facilitate adaptive reuse while ensuring the protection of heritage values. Heritage authorities and urban planners should prioritize community participation and social acceptance throughout the planning and

implementation process. Investors and developers should recognize the importance of preserving industrial identity and authenticity as strategic assets capable of enhancing tourism attractiveness and economic performance. Architects and conservation professionals should adopt minimum-intervention approaches that balance preservation requirements with contemporary hospitality needs. Finally, integrated planning strategies should be developed to strengthen the connections between industrial heritage sites, tourism networks, cultural attractions, and urban development initiatives, thereby maximizing the long-term sustainability and success of adaptive reuse projects.

### Authors' Contributions

Authors equally contributed to this article.

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### Declaration of Interest

The authors report no conflict of interest.

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All procedures performed in this study were under the ethical standards.

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