

The management of heritage buildings in historical urban areas according to cost-benefit methods

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Abstract. The heritage buildings are the most prominent products of the interaction of civilizational, cultural, political, social and economic values throughout history, whose presence is concentrated in the historical urban centres, especially (the city of Baghdad - the old Rusafa centre). The lack of interest in the architectural heritage and the unexamined administrative interventions and decisions, such as preserving what has no economic or social feasibility, have determined the focus of general research with the concept of managing heritage buildings. In light of the emergence of new forms and methods in this field, it provides all information, data, and decision-making capabilities. The preservation is the specific method for dealing with heritage. For the importance of knowledge of the cost-benefit method in decision-making for the management of heritage buildings, the research problem was identified in ((the lack of local studies dealing with the cost-benefits method in making decisions about building management and preservation within historical areas)). The research has adopted the descriptive and analytical approach of previous studies leading to building a theoretical framework of knowledge and extracting indicators for the main items represented by the economic impact, social return and financial impact which were employed in the practical study on selected samples within the historical area (Rasheed Street). The research concluded that the management of heritage buildings according to the cost-benefit method is an integrated and comprehensive process for each of the economic impact, costs, social return and financial effect in a balanced manner for decision-making for conservation and investment to cover the costs of conservation, maintenance and rehabilitation while providing various and innovative sources of financing.

Keywords: heritage buildings management, cost-benefit approach, preservation, heritage.

1. Introduction.

Architectural heritage and the heritage buildings represent in Iraq a testament to its civilization; this heritage is subjected to different aspects of interference and deterioration, which lead to change their state and completely or partly destroy them. From here, our research's importance in dealing with heritage and heritage buildings and managing them as cultural wealth. The general problem of research emerged with many neglected heritage buildings and unexplained preservation and demolition decisions requiring a tool for management, evaluation and decision-making according to methods of analysis that consider the administrative integration inclusiveness of the factors affecting these buildings.

From literature review the research problem defined as "the lack of local studies that deal with the role of the Cost-Benefits method in making decisions for building management preservation within historical areas" and defining the goal of the research to build a theoretical framework for the Management of heritage buildings/preservation through the concept of cost-benefit method, revealing its role in decision-making, and applying to selected projects to identify the method and its policies.

For addressing the research problem and achieves the goal, the research is classified into three main axes:

- 1- The first axis: the concept of heritage and heritage buildings, preservation and management.
- 2- The second axis: the knowledge base on management methods and dealing with heritage buildings and the nature of dealing with them within previous knowledge.
- 3- The third axis: it contains the application and method of analysis for the practical study, and then discussing the results, conclusions and recommendations. Finally, building the theoretical framework for the method of cost-benefit analysis to manage heritage buildings and conservation.



2 The first axis: historical areas, heritage, heritage buildings, preservation and management.

2.1 Historic region:

It was known as a group of buildings defined spatially and divided in a consistent, harmonious and compatible manner aesthetically and historically and with distinctive architectural features, as it was known as a grouping of open spaces, facilities and buildings linked to each other with what can be perceived in terms of historical, architectural, aesthetic and archaeological features, where they were established with hereditary planning and these legacies remained as an expressive outcome of time and place in different styles and modes with good technical and engineering foundations [1], as it has been known as areas with distinct historical features, architecturally, aesthetically and culturally, as they represent a group that cannot be divided of buildings, squares and facilities whose parts are balanced depending on the nature of the organization and coordination of their components. The uses and activities within them represent an essential part of the urban [2].

2.2 Heritage:

The World Heritage Convention defines heritage as "monuments, and a group of buildings and sites." A wide range of heritage patterns emerged from this, including urban centres, archaeological sites, industrial heritage, cultural landscapes, buildings, and heritage roads [3]. The heritage was classified into two categories [4]:

- Physical heritage: It includes elements such as buildings of architectural and historical importance.
- Intangible heritage includes customs, arts, ceremonies, traditional and folk knowledge, literature, language, etc. Several types of heritage can be summarized as follows [5]:

A-Urban heritage: It is represented by a group of buildings and facilities and the results of the complex relationships between the blocks and voids, i.e. the environment that has continued and proved its originality, value and stability against the continuous changes.

B-Architectural heritage: It is represented by buildings that are often found in old cities and centres. It is an important part of the nations' cultural heritage and includes buildings, surroundings, and historical cities.

C-Archaeological heritage: The concept of archaeological heritage includes all physical presence behind it human intervention and creativity, including areas that are associated with all features of human activity, abandoned facilities, and all remains that were on the ground and underwater, and it represents a non-renewable heritage, which makes it necessary to control the use of the land and preserve it [6]. The land must be controlled and developed to reduce the destruction of the archaeological heritage.

D-Cultural and natural heritage: It is a physical and human resource that narrates historical development and has an important role in modern life, intellectually and emotionally [7].

2.3 Heritage Buildings:

They are buildings that together constitute the architectural heritage and have historical values and features acquired due to their architectural and aesthetic distinction, their long life or their association with important events over time. These events may be religious, economic, social, and political. Velden defines them in his book (Conservation of historic buildings) as those buildings that give us a sense of admiration and a sense of the past and the period to which those buildings belong. They also make us need to know more about the people who inhabited them and their culture, and they contain aesthetic, historical, archaeological architectural, economic, social and political values [8], heritage and historical buildings are catalysts for their many intangible and material values based on several criteria, related to the difference in the value of the building, its integration with the surroundings and its suitability for the urban context [9].

Heritage buildings in general and especially in Iraq were constructed within a compact fabric from which shops and markets were formed, with the presence of courtyards, alleys, and traditional spaces that the blocks open to, however, for different reasons, it led some heritage buildings to remain separate [10].

2.4 Preservation:

Camillo Boito proposed a balanced concept of preservation as a historical document that must be returned to its original situation without addition or deletion with the establishment of many principles of restoration, but after the middle of the twentieth century, the concept of preservation was directed towards a gradual shift from the special attention to monumental and single structures heritage and historical buildings to the buildings' fabric, where preservation theories began to form a global intellectual trend at the beginning of the sixties of the twentieth century as a reaction to each of the trends of modernity and contemporary, as an attempt to contain the volume of negative change resulting from the rapid development to meet the requirements of modernity and the speed of change and the cultural restructuring of societies. This process led to the loss of much of its civilizational character. Thus, the preservation concept began to take the form of flexible, adaptive processes that help societies understand and realize their historical and heritage environment and thus manage and control the transformations and changes that occur [11].

2.4.1. First - Principles of applying the policy of preserving heritage domains: For implementing the policy of preservation in heritage domains, several basic principles must be taken into consideration that takes into account the nature of the special environment for this domain or heritage origin, taking into account the continuous change and development to reach the best results that serve the goals set behind the conservation operations, and the most important of these principles [12], [13] :

- a-Selection: is the achievement of priority choices in conservation operations that have value and limitations, including economic, historical and technical values, with the possibility of application, maintenance and feasibility.
- b-Achieving a balance between preservation and its extensions.
- c-Economic Viability: It is represented by bypassing the preservation project itself with a benefit and concentrating the possibility of change in uses to suit the requirements and needs.
- d-Investment priorities: by taking investment considerations.
- e-Community participation: It is represented by the participation of the population, stakeholders, and pioneers of the conservation domain or facility to increase the effectiveness of the conservation policy and a solution to the financing aspects.

2.4.2. Second - The economic role of the preservation process: The heritage buildings constitute one of the important wealth for countries, as the archaeological and heritage buildings cannot be separated from the economic movement, and the operations of providing funding sources for conservation operations are continuing and witnessing challenges, the most prominent of which is the increase and seriousness of the damage factors for buildings and heritage facilities and a large number of buildings and heritage domains that need to be preserved and the high costs of preservation and maintenance [14].

2.5 Management:

It is an activity with a set of controls and laws that works to control the specialized and diverse environment in the diversity of life fields to achieve the desired goals by harnessing all available capabilities with the best, most appropriate and latest means, through the functions of planning, organizing, leading, supervising, directing, communications, coordination, follow-up, monitoring, decision-making and development to achieve specific and desired goals in the ever-changing environment [15]. Taylor*1 defined it as the correct knowledge of what individuals are intended to do while making sure to do so by the best methods and the lowest costs, as shown in Figure (1).

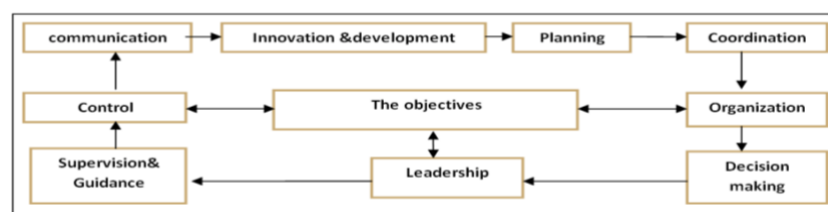


Figure 1. Basic management functions. (Source: [15])

3. The Second Axis: Management methods and dealing with heritage buildings:

3.1. Heritage Management Systems:

The UNESCO World Heritage Management Handbook for the year 2016 identified nine basic characteristics of heritage management systems and classified them into three groups: Elements, processes and outcomes, as can be seen in Figure (2): [3]

9 components	3 categories
Legal framework, institutional framework, resources	3 components
Planning, implementation, follow-up	3 operations
Results, outputs, improvements to the management system	3 results

Figure 2. Characteristics of heritage management systems (general framework). (Source: [3])

Where the general framework for heritage management systems proposed above can operate within a national, regional, or local scope or a single property or facility, and this framework aims to assist those involved in heritage management and preservation within two main methods [3]:

- Methods of evaluating heritage management systems that aim to protect heritage values, including global heritage values.
- How to view all issues related to heritage in broad frameworks and promote studies and integrated heritage management methods.

The heritage management system is a general framework that often consists of three elements: A legal framework that defines the reasons for its existence, institutions that work to embody needs and make decisions, and resources (human, intellectual and physical) work to make the systems workable.

3.2. Methods of heritage management to preserve it:

The necessity of having a basis for heritage management to preserve it regardless of the different management systems used in countries, whether formal, informal or well-documented. In recent decades, two main methods have emerged in the analysis and management of heritage: Traditional analysis and value-based analysis. The second represents the most common and appropriate method for preserving and managing heritage for its ability to adapt. The two methods are convergent and shared, where most of the administrative systems contain their elements. The basic techniques and methods of analysis closely related to Management are Cost-effectiveness analysis, Cost-benefit analysis, economic impact analysis, financial impact analysis and social return on investment analysis (SROI). They were combined in one comprehensive concept, the cost-benefit analysis specific to the research.

3.3. Cost-benefit analysis method

Cost is generally defined as "a measure of sacrificing resources to obtain a benefit." The modern definition of cost is the amount of resources sacrifice without the condition of obtaining a benefit. In contrast, when matched with revenues, the expended cost is called expenses to obtain a benefit, but if revenues do not match it, it is called a loss, as the loss is also a cost of not achieving a benefit" [16].

3.3.1. concept of cost-benefit analysis. Cost-benefit analysis is defined as an important tool used in the prior evaluation of policies and their options systematically to survey and evaluate the advantages and disadvantages of the measure or decision from the perspective of society as a whole. This tool supports that the decisions taken are as objective as possible, as it provides an overview of the effects, risks and uncertainties of the measure, the costs and benefits of it. The analysis can also be applied to all types of measures in all areas [17] it was defined by the INTRAC organization as a tool designed to compare the costs and benefits of a project or program. It is often used to define and study the implementation of large projects or choose between different options. It is usually applied before the start of a project. It can also be used for monitoring and evaluation, as it is a tool to study investment, focusing on social and environmental benefits. It is also defined as the process of using theory, data, and models to examine policies, trade-offs, and activities to evaluate related goals and alternative solutions to assist decision-

makers in choosing the most appropriate alternative[18]. The cost-benefit analysis provides insight and a knowledge base for all implications and future changes of the policies under study, even if all costs and benefits cannot be quantified and precisely defined[19].

*3.3.2. Methods and tools of the cost-benefit analysis method:*The cost-benefit analysis method has several techniques, the most common of which are [18]:

- 1- Engineering estimation: It is the traditional method for developing cost analysis. This technique works according to a bottom-up approach that calculates the cost and benefits with the least detail level.
- 2- Parametric modelling: A top-down cost estimation method that uses statistical relationships that depend on the entered historical data. The estimate is achieved based on experience using the results obtained from previous products and an estimated cost estimate. Estimates are produced using mathematical relationships between the cost factor (the independent variable) and program cost (the dependent variable) based on many previous programs.
- 3- Measurement estimation: By creating an estimate, any activity's cost is measured with the alternative's lost benefit.
- 4- The Delphi method is a systematic and interactive prediction method that relies on a committee of experts (Wikipedia Encyclopaedia).It is known as the process of identifying alternatives and discussing them in absentia in a meeting of non-existent members together. It is one of the most important collective methods of strategic decision-making.

3.3.3. Steps of the cost-benefit analysis process: There is no single and specific model for the cost-benefit analysis process, where each policy has its scenario and approach. However, most of the cost-benefit analysis processes are similar to their steps, which in turn are constantly developing to make the process comprehensive and regular, which is reflected in its results in an emphasized way [19], where [20] outlined the steps of the project evaluation and indicated the organization of standard cost-benefit analysis in seven steps as [20]: The description of context, the definition of objectives, definition of a project, technical feasibility, environmental sustainability, economic analysis, risk assessment and financial analysis of project costs and revenues, including residual value, affordability, profitable financing sources and financial sustainability. As for PAHO (the PAN American Health Organization /Smart Hospitals Toolkit) [21], it has defined the steps of cost-benefit analysis by identifying options, determining costs and benefits, determining the distribution of impact, determining costs and benefits in the physical aspect, calculating current values, conducting an analysis of evaluating the study results, determining the most appropriate option, and using the results.

3.4. Building a theoretical framework for the method of cost-benefit analysis:

Previous studies that dealt with heritage economics by focusing on cost-benefit analysis addressed the main issues related to financing urban heritage and represented the most important challenges facing the financing of conservation and protection projects for buildings and heritage areas. These issues are The forms of financing, the definition of urban heritage financing, the limited funding of governments, the most prominent alternatives, and the benefits of investing in the urban heritage, which is classified into direct and indirect, indicating the unnecessary costs of financing. The importance of heritage conservation on economic and sustainable development is achieving the public good and improving life quality. It also recommended the necessity of dealing with the growing requirements of financing, addressing its various issues, finding innovative solutions, and finding suitable alternatives for financing while finding common ground between the public and private sectors and community participation. The importance of heritage lies in the benefits or values it generates, which are usually divided into the values of "use" and "non-use." Existentialism and legacy and the positive external or public good resulting from the heritage, also clarified the non-market evaluation and classified its techniques into declared preference techniques and prescribed preference techniques. To costs, which are implicit or explicit, it clarifies the role that cost-benefit analysis plays in preserving the historical heritage and decision-making, and emphasized the need to include non-use values for net benefits, which are represented by the values of choice, legacy and existence.

3.4.1. The economic impact. The analysis of the economic return of the urban heritage, which is agreed upon by studies, research and various experiences, is the positive return of conservation projects. The economic return perspective adds dimensions, benefits and other elements to the recognized benefits system, highlighting the need to consider the real value and feasibility of intervention operations and preservation of heritage buildings through the social, economic and financial evaluation. Inturn, heritage sites and buildings' economic value is divided into values related to use, Values not related to sustainable use and investment. Freedman defines the strategies of merging economic considerations with the environmental, social, and administrative considerations, which seek to achieve a positive environmental, social and economic impact while reducing the expected risks [22].

3.4.2. Social return: It means the total positive and negative changes resulting from a policy, program or project, and it can be limited to all the changes taking place on stakeholders or related to those targeted by the policy, and it could be directly or indirectly, intentionally or unintentionally. As before the concept of social return on investment (SROI), it represents a broad approach to assessing the impact of a policy, program or project and gives the physical value to the social value, which helps in sound strategic planning and thus facilitates the decision-making process. The social return importance is highlighted in that it helps to account for social change by measuring and representing social and environmental results and representing them with a physical value, which allows calculating the cost-benefit ratio, decision-making, ease of comparison, enhancing the culture of impact measurement, prior study and transparency in front of stakeholders, showing positive and negative results, increasing opportunities to gain financing and building skills.

3.4.3. Financial Impact (Funding): Heritage buildings constitute an economic and financial value by being only heritage, where they are considered economic vessels for cities, as heritage and historical buildings and areas are the national wealth for investment and economic exploitation, and this depends on the extent of their capabilities to benefit from their historical value in a manner that provides a financial return that covers building maintenance and preservation, which is an actual measure of success (the extent of coverage of the costs of preservation from the sources of financing). Given the limitations of the resources and the available capabilities to finance the programs and operations of preservation, the importance of cost-benefit analysis is emphasized, especially (financial return) in understanding and interpreting the feasibility and validity of decisions related to heritage investment operations and their financing returns, as the financing operations acquire a new positive vision (government budgets often bear them), which drives stalled conservation projects due to financing reasons. From this, the theoretical framework for the method of cost-benefit analysis for managing heritage buildings - preservation - was built, as shown in Table No. (1).

4. The third axis: Implementation of the practical study with a discussion of results, conclusions and recommendations

The analysis and measurement process included a set of stages, starting with the general description of the selected sample (the heritage building), depending on the field visit and its most recent survey. Then analyzing each sample according to the specific items extracted from the theoretical framework (Economic impact, social return, financial effect, costs), as can be seen in Tables (1, 2, and 3), then measuring the validation values of all indicators. The analysis and measurement process also includes special forms, especially the description form in which the items were coded, and it contains a detailed explanation of each variable within the indicators and the measurement form that includes a verification test and non-verification of all possible values specified by the research and is filled out by the researcher based on the specialized description form based on the field survey and the descriptive analysis, and it includes the measurement mechanism for all the research items through two values, (0) indicating non-verification, and (1) referring to verification and a proportional extraction form that includes measuring the ratios of verification of each item according to its indicators within the sample and calculates the frequency percentage that equals to $100 * X_i / \sum X_i$

Table 1: The possible values within the first term of the search (economic return) with the coding

The main variables		The secondary variables		The possible values		The code	
The economic return	The impact or economic value of the heritage building influencing the conservation management decision (X)	Usage related values (x1)	Direct values (x1-1)	The use of the heritage building (X1-1)1	Cultural	(X1-1)1A	
					Commercial	(X1-1)1B	
					Residential	(X1-1)1C	
				The activities and events (X1-1)2	Social	(X1-1)2A	
					SOA	(X1-1)2B	
				Jobs created for revitalization and heritage revival.		(X1-1)3	
				The value of the historical site of the heritage building.		(X1-1)4	
			Reviving the local cultural and traditional crafts.		(X1-1)5		
			Preserving the heritage of urban character.		(X1-1)6		
			Activation, revitalization, and commercial and tourism development.		(X1-1)7		
			indirect values (x1-1)	The age of the heritage building		(X1-2)1	
				The aesthetic value of the heritage building		(X1-2)2	
				The historic values of the heritage building and its historical surroundings		(X1-2)3	
				Building ownership (X1-2)4	Public (government properties)	(X1-2)4A	
		Private - (for a historical, political, or artistic figure etc.)			(X1-2)4B		
		The building is in harmony with the surroundings and context		(X1-2)5			
		Community image and collective memory		(X1-2)6			
		Usage related values (x2)		Presence value (X2-1)	Rich in heritage elements and details		1(X2-1)
					The uniqueness and architectural distinction of the heritage building		2(X2-1)
				Option value (x2-2)	The character of the heritage building. (X2-1)3	Distinct heritage linked to a date or event	3A(X2-1)
			Highly distinguished heritage (accusative)			3B(X2-1)	
		Preservation of future use		1(X2-2)			
		The flexibility, adaptability and change of the heritage building		2(X2-2)			
		The value of the legacy (X2-3)	Preserving for a legacy for future generations and cultural communication, and confirming the local identity and heritage personality		1(X2-3)		
		Sustainable investment (X3)	Integration of economic, employment, financial and social considerations		(X3-1)		
			The participation of stakeholders related to heritage properties while adhering to sustainability guidelines		(X3-2)		
		Costs (X4)	Express costs (X4-1)	Maintenance costs (X4-1)1	Maintenance of the structural system	1A(X4-1)	
					Specialized service work	1B(X4-1)	
					Architectural details and items	1C(X4-1)	
					Long term maintenance programs	1D(X4-1)	
					Routine maintenance	1E(X4-1)	
					Preventive maintenance	1F(X4-1)	
			Costs of restoration and rehabilitation		2(X4-1)		
			Costs of technical and administrative services		3(X4-1)		
			Compensation in cases of deportation or expropriation		4(X4-1)		
			The age of the heritage building		5(X4-1)		
Many years of neglect			6(X4-1)				
Impl icit costs (X4-2)	The costs of operating and managing the heritage building		1(X4-2)				
	Unexpected risk costs		2(X4-2)				
	Expected risk costs.		3(X4-2)				

Table 2: The possible values and coding within the second term of the search (social return)

Main variables		Secondary variables	The possible values	The coding	
The social returns	Total social changes resulting and expected from the decisions of the heritage building management to preserve it (Y)	The scope of influence, which includes (stakeholders, beneficiaries, targets, and users of the heritage building) (Y1)	The number of users, beneficiaries, interested people and stakeholders within multiple categories	(Y1-1)	
			Local influence	(Y1-2)	
			International influence	(Y1-3)	
		Effect Duration of Resolution or Policy (Y2)	Occupancy and use periods		(Y2-1)
			Social impact extending to future generations		(Y2-2)
		The intended changes within the social dimension of the administrative decision	Social interaction		(Y3-1)
			Social empowerment and community participation		(Y3-2)
			Social, humanitarian and cultural activities and events		(Y3-3)
			Reviving the local heritage, customs and traditions of the community		(Y3-4)
			Use of public services		(Y3-6)

		of the heritage building (Y3)		
		Unintended changes to the administrative decision of the heritage building(Y4)	Percentage of community participation and revival of interest in local heritage	(Y4-1)
			Affinity, social communication, cultural and heritage gatherings, seminars, and exhibitions	(Y4-2)
			Attraction and vitality	(Y4-3)
			Safety	(Y4-4)

Table (3) The possible values and coding within the third term of the research (financial impact)

Main variables		Secondary variables		The possible values		The coding
The financial impact	The financial impact and the extent of covering the costs of preservation from the sources of financing influencing the administrative decisions of the heritage building. (Z)	Finance (Z1)	Types (Z1-1)	- Direct and indirect financing. - International and local financing. - Physical and moral financing.	Public financing of administrative decisions for heritage buildings preservation.	1(Z1-1)
					Private financing of heritage conservation projects and policies.	2(Z1-1)
					Partnership in financing between public and private.	3(Z1-1)
			Alternatives (Z1-2)	- Loans. - Grants. - Incentives. - Partnership.	Funding from international institutions.	1(Z1-2)
					Funding from non-governmental organizations.	2(Z1-2)
					Tax incentives.	3(Z1-2)
		Economic activity (Z2)	Supply and demand (Z2-1)	Investment and operation to cover maintenance and heritage preservation costs.	Grants and loans.	4(Z1-2)
						(Z2-1)1
			Governments and institutional solutions (Z2-2)	Direct government acquisition and intervention (incentives).	Direct intervention in the management and decisions of heritage buildings to be preserved by local governments with acquisition and financing.	1(Z2-2)
					Loans and facilities from the concerned and related authorities.	2(Z2-2)
		Government tax exemptions and grants.	3(Z2-2)			

4.1. Selection of the study area and the selected samples:

The indicators of heritage buildings management are applied according to the method of cost and benefits extracted from the theoretical side of the research according to the main and secondary items on a group of selected samples of heritage buildings in historical sights to reach a working mechanism for managing heritage buildings - preservation in historical areas. Al-Rasheed Street was chosen as the most important and prominent historical region for its richness in heritage buildings, and this is not only due to the number of historical and heritage monuments in it, but also due to its ancient past, as (3) samples were selected according to a set of considerations, the most important of which are:

- Heritage buildings of historical importance dating back 200 years.
- Influencing buildings with all architectural, academic and professional associated aspects.
- Buildings of historical, archaeological, economic and social values that influence memory.
- They represent the local urban heritage's main components, which are targeted by preservation and investment attempts.

4.2. The suggested samples for the field study:

4.2.1 Abdul Rahman Al-Naqib House-The Pioneers Museum (currently the Theater Forum) (A).

Description of the sample: Abd al-Rahman al-Naqib's house was built in 1909 AD, representing one of the old Baghdad heritage houses of the original Baghdadi style. It constitutes a huge building that overlooks from the north side a blocked alley with a façade interspersed with small windows overlooking the garden. In contrast, the southern side consists of two floors, whereas the other side overlooks the river with two floors. The northern side includes construction facilities, while the western side overlooks the Tigris River and is preceded by Tarma. Figures 3. It also contains a basement, a metaphor that ends and a doorway to the river (Ministry of Culture - Department of Antiquities and Heritage). Currently, the house is the Iraqi theatre forum, where the architectural diversity has given the theatre director more than an opportunity to invest the data of the place, whether in the use of rooms,

their doors and windows, or in the employment of the stairs and floors, and the aesthetic and intellectual levels it gives to the show, because the architecture of this house in itself is a philosophy, give its terms and conditions to nourish the creative aesthetic imagination that creates the show.

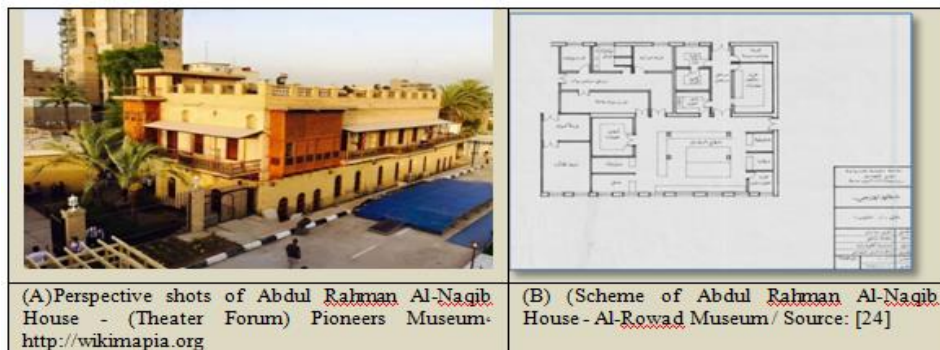


Figure 3. Abdul Rahman Al-Naqib House, the Pioneers Museum - (Theater Forum). [24]

4.2.2. Al-Qishla: Description of the sample. Al-Qishla means the military barracks in the Turkish language. It is located in the old city centre of Baghdad in the side of Al-Rusafa, in the Saray district opposite to the Saray Mosque, next to the library market, and it dates back to 1851 AD and now belongs to the Ministry of Culture of Iraq. The building has been occupied and used functionally since its inception until now. However, its functions varied according to the succession of events. Al-Qishla occupies a rectangular area extending on the Tigris River's eastern bank, a huge building adjacent to the Saray building. The main axis in the entrance ends with the clock tower to focus on attraction for the lines of vision, framing the clock tower's scene through the main entrance. The Municipality of Baghdad tried to set up a plan to rehabilitate and develop this building in tourism and folklore. It did not see the light until 2013 when the Grand Courts complex was rehabilitated and prepared to be a cultural complex, and Al-Qishla gardens joined it to be a free platform for all, as shown in Figure 4.

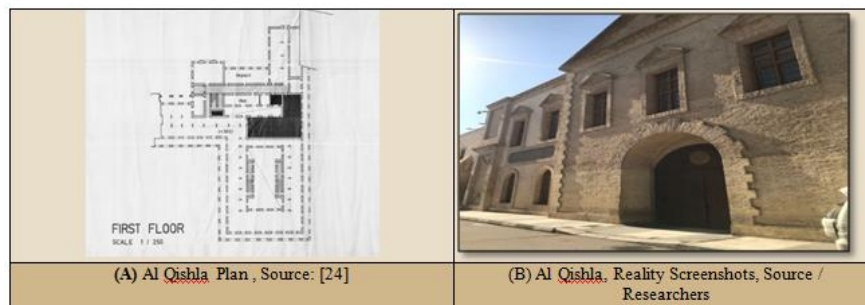


Figure 4: Al Qishla

4.2.3. Khan Al-Khafafin (C). Description of the sample: It is a khan that dates back to the beginning of the twentieth century and is privately owned by (Mr Kamil Jawad), (Musafir Khanna), an Ottoman designation meaning the hotel. It is a khan attached to the Al-Khafafin Mosque as travellers used to spend their days in it. The khan was a spacious building contains a spacious room that includes several rooms and stores called the khans. Baghdad has been distinguished by its wide khans that have taken up sites for trade, and the khan has now become a storehouse for fabrics. It consists of a corridor leading to the khan owned by the khan. The corridor, in turn, consists of a group of shops topped by a group of rooms opened on a corridor that has a roof with a gabled roof and overlooks a twisted iron fence, and the metaphor ends in the square of the khan, which is overlooked by the vaults on four sides. The northern side includes five of the vases with pointed arches. At the end of each iwan, there is a door to a room dominated by a semi-cylindrical vault; the khan is octagonal, the corners of which are occupied by vases with pointed arches. The southern side has been demolished and replaced by shops, and the first floor corresponds to the ground floor, as shown in Figure 5.

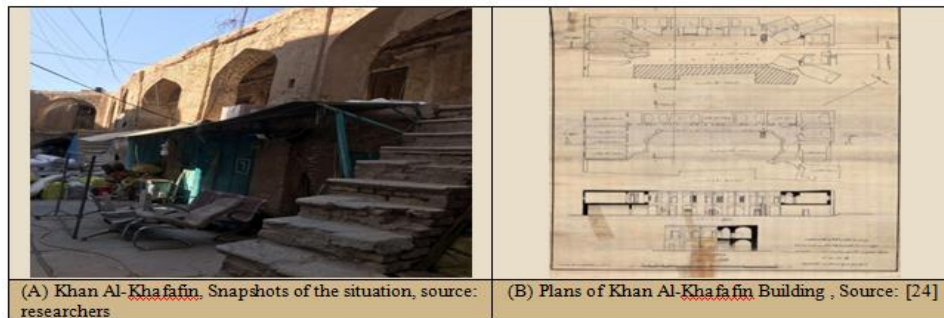


Figure 5:Khan Al-Khafafin

4.3. Results of the analysis of the research samples:

The results of the analysis of the three samples selected according to the main items of the research, represented by the economic and financial impact and social return, revealed the existence of discrepancies in the results and the verification rates of what each building owns or achieves of values and secondary indicators associated with the main items. The rates of achievement of the three components within one sample revealed a variation in the impact, as the sample (A) (Theater Forum Building, Abd Al-Rahman Al-Naqib House) achieved an increase in the rate of achieving the economic impact and social return (86%, 80%) due to the values and indicators that the sample possesses, with a decrease in the rate of achieving the financial impact (16%) due to its return to ownership, exploitation and management, and thus its economic activity and sources of financing are limited.

As for the sample (B) (Al-Qishleh buildings), an increase in the results of achieving its three main components was observed with an association value (85%), which qualifies it for the priority of management, preservation and activation, while the samples (E and C) achieved collective values of (66%, 75%) distributed in close proportions, with a rise in rates of economic and social impact, which requires proper management, preservation and revitalization.

Concerning the sample (C) (Khan Al-Khafafin), it was noticed a decrease in the rates of its achievement of the values and possible indicators of the main items, which earned it an association value of (18%), which indicates that it is not feasible to manage and maintain it and is not encouraging for investments and is not attractive to capital or achieving any social benefit, as shown in Figures (6-9).

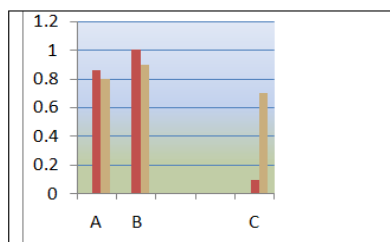


Figure.6 ratios of achieving the two main components (economic impact, social return) within the heritage buildings selected for practical study Source : researchers

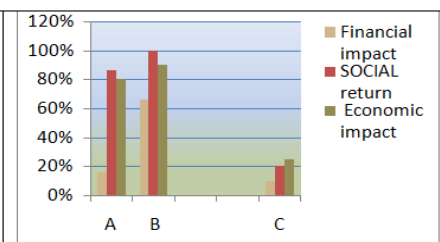
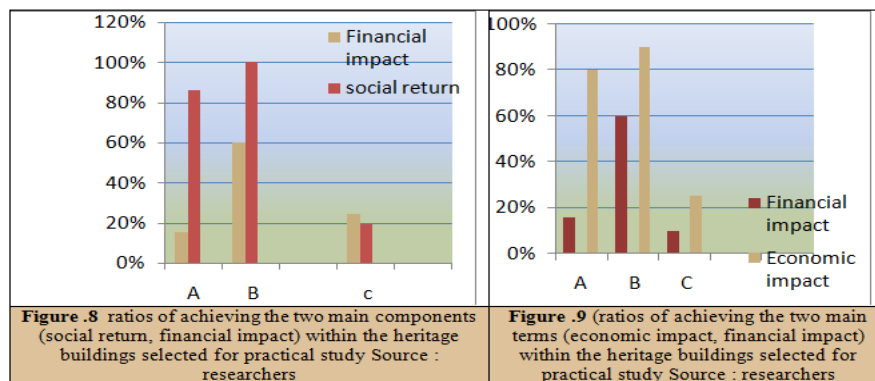


Figure 7. A chart showing the ratios of verification of the main vocabulary of the search within the selected samples Source : researchers.



The results of the analysis and study of the collective value of the main terms concerning the initial costs of each sample (net value) represented by the process of subtracting costs from the benefits, where preservation and activation management is feasible if the net value is greater than (1), and thus it was noticed that the process of managing and preserving samples was feasible for two of them in varying proportions. As for the sample (c) (Khan Al-Khafafin), it achieved a net value of (-82) and thus the process of managing and preserving it is not feasible. $\text{Benefits} - \text{costs} = \text{net value}$.

4.4. Conclusion.

The research concluded the necessity of involving heritage buildings in the urban development processes and plans of cities as catalysts, with an emphasis on the city identity, its built cultural legacy, and the restructuring of the city's image, as central and reference signs linked to the collective memory of the population. The research also pointed the importance of adopting an integrated, comprehensive and sustainable approach in managing and dealing with heritage buildings while bypassing the problems of traditional urban development policies, and adopting sustainable investment to achieve administrative, environmental, social and financial sustainability considerations to reduce risks.

From the results of the analysis related to the economic impact of the elected heritage buildings, which prove the research hypothesis, which was previously identified and emphasized the impact of the economic aspects on the process of managing heritage buildings (preservation) as they are benefits and features that encourage and emphasize the importance of preserving, rehabilitating and developing them to attract capital and investments. The economic aspects drive most of the living facilities, especially the growing activities and the rise in the land's historical values, which requires more justifications for the conservation operations in these areas. From what the research has concluded and confirmed is the great influence of social aspects on the process of managing the preservation of heritage buildings because of the benefits they constitute due to the social interaction, empowerment, promotion and improvement of society, revival and cultural, tourism and developmental activation, as they form incentives and foci for activation in historical areas as social centres by re-employing and using them for social activities and events such as exhibitions, forums and theatres that enhance and empower the local community, in addition to the awareness they provide of the importance of local heritage, expressing it and transmission for subsequent generations.

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