

**Sustainable Economic Investment to Rehabilitate the
Architectural Heritage Buildings for The Private Sector
(Evaluation of the Local Experience of the "La Viennoise"
Building in Downtown Cairo)**

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Abstract:

The research deals with the economic importance of urban heritage buildings, and the mechanisms for applying heritage sustainability for urban heritage buildings, through presenting the various definitions of urban heritage buildings and sustainable economic investment, which constitute an obstacle to achieving sustainability for this type of building, which is governed by a set of local and international rules for rehabilitation, and refrains the private sector from participating in development and rehabilitation of architectural heritage buildings projects due to the various organizational and administrative restrictions they carry and what may impede achieving the expected material return from these projects, or achieve the financial feasibility of these projects for the private sector, making these projects a great financial burden on the budget The research presents a local experience to activate the role of the private sector in the sustainable investment of urban heritage buildings in Egypt, and the various available possibilities that have contributed to the success of that experiment and the achievement of that development, by presenting the experience of the participation of the business sector in the renovation and rehabilitation of heritage buildings in the downtown Cairo area, which is considered as one of the contemporary projects for the development of the urban and architectural heritage of the Khedivial Cairo area and the rehabilitation of heritage buildings in Egypt.

Keywords: (Architectural Heritage Buildings - Economic Investment - Sustainability)

Introduction

The development that Egypt experienced in the second decade of the twentieth century is considered one of the brightest periods of comprehensive development, Which included all the different sectors of agriculture, industry, construction, health and economy, Which was accompanied by the implementation of many new development projects and others for development and preservation, including those specialized in raising the efficiency of historical and archaeological sites, It is the so-called sustainable urban development, which necessitates the existence of integrated coordination between the competent authorities to preserve heritage and advance the wheel of comprehensive development without prejudice to the historical areas, which were stipulated by the Habitat III Conference (Keto 2016) United Nations Conference on Housing and Sustainable Urban Development, The future that the historical Arab cities aspire to be clean and hospitable cities that provide a decent life for their residents in a framework of security, justice and equality, while preserving the historical identity and the national and local heritage of the cities, without prejudice to their being contemporary cities.

In the light of this vision, the research presents the importance of sustainable economic integration of heritage and historical sites, which aims to present practical local experiences to raise the efficiency of heritage buildings and re-use them in an appropriate manner that ensures the preservation of their cultural and historical characteristics while achieving an appropriate financial return that enables officials to operate these buildings sustainably and without destroying their distinctive properties.

Research problem:

The need for heritage and historical buildings for a strategic plan to rehabilitate and operate appropriately for their basic function within a balanced framework between operating requirements and maintenance and follow-up costs and integrating national projects with private sector investment projects.

Research objective:

The research aims to clarify the importance of the role of the private sector for sustainable economic investment in heritage buildings.

Research hypothesis:

Achieving sustainable development standards for heritage buildings to achieve optimal economic investment with the participation of the private sector.

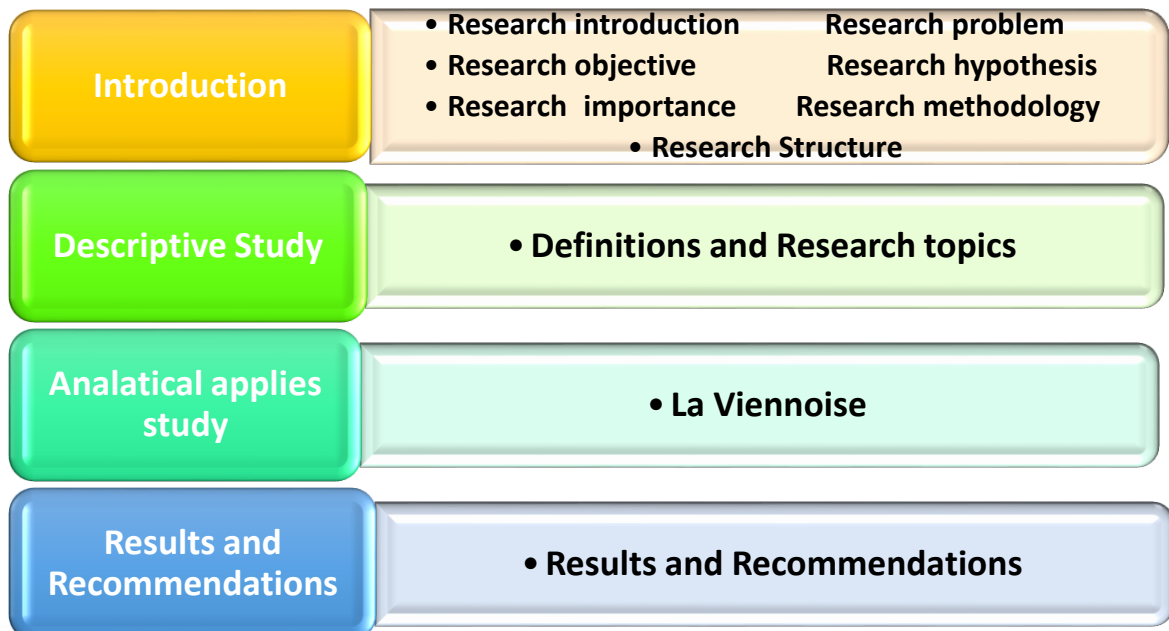
Research importance:

The sustainable development plans must include heritage buildings and support economic investment operations directed at developing these buildings and preserving their historical heritage identity, and the state's plans must be consistent with the efforts of the concerned associations in this regard, as well as encourage scientific research and create investment opportunities to support the efforts of the government sector and the private sector in developing heritage buildings.

Research methodology:

The research followed several approaches of scientific research, First, the descriptive approach: by describing and defining the research topic, supported by relevant documents and agreements, Second, the analytical approach: analysis of the data resulting from the collection of information and observations, the applied study of an actual existing model (case study), to reach the advantages and disadvantages to achieve the goal of the research.

Research structure:



Introduction (Definitions):

Sustainable investment:

It is a form of investment discipline that considers environmental, social, and corporate governance standards, based on certain moral or ethical values to generate a long-term financial return, while creating a positive impact on society, the environment, or the economy at the same time (Abolela & Elberqawi, 2019).

Heritage:

It is the nation's memory, with all its events throughout history, and the extent to which it was affected by political, economic, social, cultural, spatial, and urban conditions and changes. These are cultural values of previous generations (Emam, 2019).

Investment in Urban heritage:

It is the re-employment of financial value at the present time to be reclaimed with a profitable material return for the period of time, through financing urban heritage projects.

Heritage building:

It is a building or facility characterized by a historical, symbolic, artistic, architectural, urban, or social value, and having the following characteristics:

- 1- Community acceptance
- 2- It expresses a physical, moral, or intellectual phenomenon in a specific time period.
- 3- Endurance and continuity (Matlak & Elsayed, 2019).

1-2 General policies for dealing with and preserving heritage and historical areas:

They represent the general axes for preserving heritage buildings and sites of a heritage and historical nature in general. Table (1) shows the general policies for dealing with buildings and archaeological sites.

Table 1: General policies to preserve buildings and heritage areas, Source: (Soliman & AWAD, 2011)

General policies for dealing with buildings and heritage sites	Policies related to the materials and composition of the heritage building	Maintenance	
		Preservation	
		Consolidation	
		Restoration	
		Reconstruction	
		Remodeling	
		Recreate	
		Completion	
		Anastomosis	
		Saving	
		Total & Gradual Replacement	
		Façade Retention	
		Policies relating to the connection of the building to the surrounding area	Rehabilitation
	Adjustment for Re-function		
	Conservation		passive preservation
			positive preservation
	Policies related to the urban area surrounding the heritage building	Clearance	
		Replacement	
		Renewal	
		Upgrading	Alteration
Addition			
	Infill		

1-3 Sustainable Conservation Policies for Historic Buildings

It means the strategies used to achieve preservation of heritage buildings and sustainability at the same time, these policies include:

1. Upgrade

It is the policy of dealing with buildings as an integral part of the present, past and future, and works to develop them and improve the living aspects of the local population in the heritage area. This policy follows three main axes of action:

- a. Upgrading the physical aspect of heritage buildings, preserving them and developing the surrounding environment.
- b. Upgrading the moral aspects of the heritage building by rehabilitating and developing it, raising awareness of its importance, and encouraging belonging.
- c. Improving the economic and social situation of the local population by creating job and investment opportunities and reviving the professions and crafts associated with the building (Elzahrani, 2021).

2. Adaptive Reuse

It is the policy of returning the building to its main function or another function that suits its current capabilities with the aim of re-operating it and continuing the self-financing of the heritage building (Elesawy, 2004). Figure (1) The main objectives of preserving archaeological and heritage buildings.

Environmental aspect	Architectural aspect	Urban aspect	Social aspect	Economical aspect
Infrastructure improvement	Restoration of deteriorated parts	Developing urban environment	Improving the environment for the population	Create job opportunities for the population
Pollution reduction	Structural reinforcement	Landscape	Change negative behaviors	Operating buildings

Figure 1: The main objectives of preserving historical and heritage buildings

Source: Researcher

1-4 The economics of sustainable preservation of heritage buildings

Although the preservation of historical buildings and centers was a constraint on economic development, as it represented a financial burden on the budgets of countries, recent analyzes indicate their complementarity and that good preservation enhances economic development, by investing in the existing historical buildings as a tool to revitalize the economy and a catalyst for the local economy that produces good financial returns, and it creates job opportunities in addition to tourism, in addition to what it provides by creating job opportunities for the residents adjacent to the heritage buildings, and an economic pillar if the building is reused (Lourenço, Branco, & Coelho, 2015).

1-5 Objectives of preserving heritage and archaeological buildings

The urban heritage represents an integral part of the local culture of the peoples, a cultural extension of the continuity of generations and its antiquity, and an artistic value that cannot be ignored or destroyed, however, these legacies may cause an obstacle to preserve and maintain them in good condition, as the restoration and maintenance work costs large sums in exchange for the expected moral return from them, Therefore, peoples and international organizations have sought to find many funding mechanisms and sources of income to carry out the work of preserving these buildings, areas and collectibles, and the preservation of urban heritage aims on three main bases:

First: Achieving the public interest: Preserving cultural and historical properties, as it helps in protecting public money and the public interest, which contributes to improving the quality of life, administrative and operational support, quality of life, and a sense of belonging.

Second: Achieving economic development: Conservation and protection of urban assets such as buildings and heritage sites contribute to promoting economic development and motivating the wheel of growth and progress through a set of commercial factors if they are exploited well and effectively, such as the tourist attraction of the urban heritage.

Third: Sustainable development: The urban heritage plays an important role in achieving sustainable development within the community. By promoting urban development, protecting historical assets, and following the best urban planning methods, sustainable development can be achieved and promoted (Sultan, 2013).

1-6 Funding projects to preserve historical buildings

(Abdelfatah, 2012, p. 12) defines finance as “Applying a set of methods used by individuals or institutions to manage their money, and to precisely manage the difference between their incomes and expenses in addition to the risks related to their investments”.

a. Funding sources

1. Direct financing: It is the direct relationship between the lender, the borrower and the investor without the intervention of any bank or non-bank financial intermediary, An investor who contracted with an entity or the owner of the building would undertake the costs of restoration and maintenance work in return for obtaining a financial revenue from the management of the heritage building for a specified period under contracts subject to the technical requirements specified by specialists in heritage and antiquities, and it includes keeping the building in good condition throughout its operation period.
2. Indirect financing: It is all the indirect financing methods and methods represented in the financial markets, banks and all financial sources that have financial intermediaries. It is for a certain entity or body to obtain financial amounts for the maintenance and restoration of the building in return for a refundable financial revenue to the lender in addition to the investment benefits.
3. Local finance: It is defined as “all available financial resources that can be provided from different sources to finance local development in a manner that achieves the greatest rates of such development over time and maximizes the independence of localities from the central government in achieving the desired local development”.

4. International finance: the establishment of international institutions or bodies such as stock exchanges and international or regional financial bodies such as the International Monetary Fund and the World Bank for Reconstruction and Development, to provide grants or soft loans for the restoration and maintenance of a building with soft interests to support the world heritage and stimulate archaeological and heritage tourism in a region.

b. The economic return of the urban heritage preservation operations

1. The direct economic return on sustainable development: the urban heritage provides the opportunity to diversify and sustain investment resources, the multiplicity of sites also provides opportunities for the investor to choose the site in terms of its degree of importance, where the size of the expected returns varies according to the importance of the area and the impact.

2. Providing job opportunities: investing in heritage and antiquities provides job opportunities for residents and craftsmen in the heritage area to benefit from their experiences and cultural legacies to open new markets for traditional crafts, it also provides a source of income for technicians and specialists in maintenance, restoration and preservation works, and attracts the movement of tourists to good areas, which increases the sources of income for workers in the field of tourism.

3. Attracting local and foreign investments: the different flow of funding leads to creating economic opportunities and providing foreign currencies to carry out these projects. Figure (2) The economic return on sustainable development of heritage preservation projects.



Figure 2: The economic return of sustainable development of heritage preservation projects
Source: Researcher

1-7 Functioning heritage buildings to achieve sustainable financial returns

The levels of Function of heritage buildings are graded economically according to the importance and main objective of the heritage building or area as follows:

1. Functioning the heritage buildings as residential buildings: for what this job contains of damages that may be caused to buildings as a result of misuse and daily use, Some heritage buildings, such as the ones in the downtown area of Cairo, are still used as residential buildings, with an old rent that is considered cheap and does not serve to preserve the value of the building It is hoped that the state will impose leasing laws on heritage buildings that are subject to persons with appropriate rental amounts and returns, part of which is devoted to maintenance, restoration and preservation work in a way that achieves public and private benefit and ensures that these buildings remain as a contemporary heritage witness to a previous artistic historical stage.
2. National Museums: Historic heritage buildings are considered among the most important reference heritage elements because they contain collectibles and live evidence of a historical era or important events which necessitates that specialized government agencies manage and operate it appropriately to achieve a financial return on maintenance costs, such as Abdeen Palace and Muhammad Ali Palace in Manial.
3. Employing buildings as an economic activity to support traditional crafts and produce them commercially: The revival of traditional crafts such as the manufacture of carpets and copper and wood works represents an economic value for the products, especially if they are linked to the heritage area from which these crafts originated, such as the area of Wekalat Al-Ghoury and Al-Nahhasin.
4. Employing buildings as schools for teaching traditional arts and crafts and holding heritage meetings and seminars in them.
5. Traditional markets. Such as the Khayamiya area, below the quarter, the Jewish Quarter, and other popular traditional markets.
6. Heritage tourism for buildings. Such Salah al-Din's Citadel.
7. Developing heritage trails and archaeological areas to support local and international tourism and culture. Like Al Mo'ez Street (Youssef, 2014).

1-8 Reuse methodologies for historical buildings

Adaptive Reuse for heritage and historical buildings:

The adaptive reuse process can be defined as a set of physical processes that employ a new type of use for an old building or site other than the one for which it was designed for the purpose of extending its functional life by adapting and adapting its performance to contemporary functional needs. The process of adopting a new and specific type of use for a historical building includes a set of criteria and principles that must be considered and that efficiently contribute to determining the best type of use for such buildings, which necessitates not negatively affecting the architectural and heritage value of the facility and works to ensure the sustainability and continuity of its performance and functional life for the longest period Possible parallel to its physical age. Through the exploration and analysis of a number of experiments, a methodology can be derived based on defining a set of criteria and requirements necessary for the process of proposing the optimal use of the historical building. It is necessary to adopt standards that positively affect the efficiency and appropriateness of the new type of use for the historical building and its various values, which can later be employed in the protection and preservation of heritage buildings and the built environment (prosoco, 2021). Table (2) Factors affecting the selection of the heritage building for sustainable investment.

Table 2: Factors affecting the selection of the heritage building for sustainable investment, Source: (Youssef, 2014)

Technical factors related to the building	Building Structural safety	The age of the building
		Efficiency of the structural system to withstand new use
		The possibility of strengthening and treating damaged parts and tests
		The nature of the changes required
	Infrastructure	The ability to connect the building's infrastructure networks
		Accessibility
	Architectural capabilities of the building	Historical and heritage backgrounds for the building
		Heritage values and details
		Availability of services
		Securing the building and safety of users

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		The type and nature of the technology used	
		Protecting the identity and original function of the building	
		The nature of the users, the suitability of the spaces and the working period of the building	
Administrative and organizational factors	Ownership of the building and owners of management rights		
	Regulatory requirements	Related international requirements	
		Local requirements, building codes, permits and contracts	
		Technical support from the competent authorities	
		development requirements in the region	
Technical and financial factors	Project execution	Contractors Efficiency	
		Availability of trained labor and craftsmen	
		Full documentation of the building as it stands	
		Full details of all modifications required for operation	
	The entity responsible for the project	government organizations	
		international organizations	
		private sector	
	Funding sources	direct financing	
		In-direct financing	
		local finance	
		International Finance	
	Contract duration	extended government	
		private (usufruct)	
	Periodic maintenance	During the period of operation of the building	
		upon handing over the building	
	Expected return on investment	Financial returns	Long-term returns
			Short term returns
		Social returns	
	Cultural returns		
	Expected risks and weaknesses	Feasibility studies for the external environment and the diversity of sources of income for the project	
Cultural and social factors	Local people	Possibility to operate with residents	
	Local heritage and surrounding environment	Link to heritage activities	
		The intangible value of the building in the area in which it is located	
		Functional integration with neighboring buildings	

1-9 Factors affecting the selection process for the new use of the heritage building

Making the wrong choice for the type of proposed use of the heritage building will damage its architectural and cultural value, historic buildings can be invested in reviving and extending their life by performing a new function. The process of employing adaptive use presents a valuable opportunity to adopt such functions, especially in the absence of material resources for the maintenance of these buildings, government institutions (and private sector companies) can purchase a group of heritage buildings by transferring financial resources allocated for the construction of new buildings within the concerned areas, The factors affecting the choice of rehabilitating a heritage building for a new job can be mentioned as:

1. Spatial factors: related to the location of the building within the urban fabric of the city, access roads, and services appropriate to the new function of the building.
2. Technical factors: These are related to the technical condition of the structural parts of the building and the possibility of reusing it or not according to the proposed use, which may not be commensurate with the nature of the original construction of the heritage building or expose the building or users to risks.
3. Economic factors: The heritage buildings are part of the city and an important visual landmark, which increases the building's material value compared to the expected material return on the investment of the building.
4. Cultural and social factors.
5. Infrastructure of the building, location, and surrounding services such as parking lots and transportation stations.
6. Political factors: the problem is the set of rules and laws regulating the work of reusing ancient buildings, which are subject, for example, in Egypt to Law No. 144 for the Regulation of Buildings.

7. Possibility of merging a contiguous group of heritage buildings into one project.



Figure 3: The Baron Empain Palace building in Heliopolis is one of the models for converting heritage buildings into a tourist attraction

There are many experiences inside and outside Egypt such as converting the building of Salah El-Din Citadel to a tourist attraction and multiple museums and re-operating the Baron Empain Palace in Heliopolis into a museum and tourist attraction (Figure (3)). As well as Wekalat Al-Ghouri (Figure (4)), La passage building in Alexandria (Figure (5)), Salah El-Din Castle (Figure (6)), and other successful experiences at the level of the direct governmental role in the re-use and maintenance of these buildings (Haikal, 2021).



Figure 4: La Passage Building in Alexandria at 52 Fouad Street in Raml Station (a reused heritage building).



Figure 5: Wekala Al-Ghouri building has been renovated and transformed into a multi-use cultural and tourist investment

Granting the private sector, a specific right of usufruct through a fair agreement includes a condition for the construction and rehabilitation of the building by the user under the supervision of the government authority and for a specific use, In return for the financial use of the building for the agreed period, conditional on handing over the building to the government entity upon its completion. In case that additional spaces are needed for an appropriate purpose and the new use of a particular heritage building, it is possible by including a building adjacent to it (or more) to achieve the required results, especially when these neighboring buildings do not have a high architectural value. It is also possible to integrate a group of adjacent traditional buildings or part of a heritage fabric for the purpose of providing the spaces required for the new use program, such as converting a group of residential buildings to hotels or buildings for cultural and historical activities (Yassin, 2011).



Figure 6: Salah El-Din Citadel, which has been converted into a mixed-use tourist and cultural area by the Ministry of Tourism

1-10 Financing sustainable development projects for historical areas and rehabilitation of ancient buildings

The economics of investing in urban heritage and various financing methods for projects

Heritage buildings and archaeological sites represent a high economic value if they are systematically and well managed to ensure the provision of material costs for maintenance and restoration operations, and to achieve good economic returns that cover that cost and contribute to preserving the value of those buildings. To clarify this equation, the economies are divided into two parts: financing and returns:

Types of financing

The financial flows necessary for the rehabilitation and maintenance costs of heritage buildings control the work of a financing system that includes:

1. Public financing: by allocating specific amounts of state budgets to these projects and working on managing these projects directly and collecting direct and indirect returns.
2. Private investment: It is the investment based on the private sector of all kinds, which is carried out by an investor or a group of local or foreign investors to rehabilitate buildings and collect direct returns from those operations.
3. Mixed financing: it is the participation between the public sectors of the state and the various private investment sectors with different shares of the values of the work of rehabilitating and operating these projects.
4. Popular participation
5. International institutions and organizations
6. International grants and loans
7. Partnership in capital and community contributions
8. Business Loans
9. Public sector borrowing
10. Money market and stock exchange
11. Free market economics: where projects are generally subject to supply and demand mechanisms, which represent the state's capabilities in tourism marketing for heritage areas and the intangible heritage value of heritage buildings
12. Control of heritage buildings through the administration of the state and national institutions: Governments impose laws regulating rehabilitation processes subject to the supervision of the relevant ministries, which is considered a temporary solution if the free market is unable to contain this type of economic activities, or governments desire to control tourist markets (Samir, 2008).

Part Two: Applied Study LA VIENNOISE Building in the downtown area of Khedival Cairo.

2-1 General description of the site and historical background

Khedive Ismail bin Ibrahim bin Muhammad Ali (he took over the rule of Egypt as successor to his brother Saeed from 1863 until his removal from power in 1879), was interested in artistic aspects and the arts due to his European historical backgrounds (where he studied in France), He asked Emperor Napoleon III that the Austrian engineer (Hausmann) plan and design the Cairo area in the French style, similar to the city of Paris. He devoted all the funding and resources to this project to bring Khedive Cairo out with that appearance. Figure (7) Map of Khedival Cairo, and that area includes the Qasr al-Nil Bridge up to Ataba Square (the former Khedive Opera), Among the most prominent historical buildings of that era are the Banque Misr Building, the Sednawi Company, the Tering Building, the Trieste Building, the Groppi Building, the Yacoubian Building, the Bahler Building and the la viennoise Building (The official website of Cairo Governorate, the electronic portal, 2022).

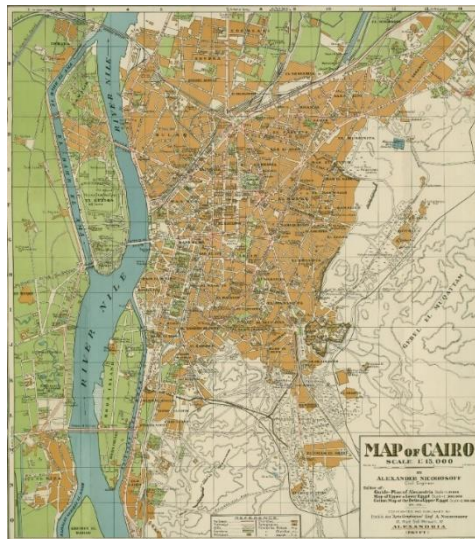


Figure 7: An administrative map of the Qasr al-Nil area and Khedival Cairo showing the urban planning of the downtown area and the main squares in 1933

2-2 La Viennoise Building historical background



Figure 8: Map of the general location of the la viennoise building in Cairo
Source: Google earth

The basic design of the building is for residential use. The building is located at the intersection of 7 Champollion Street and 11 Mahmoud Bassiouni Street. Figure (8) Building layout.

It represents the architecture of the Italian Renaissance "La viennoise" was built in 1896 by an English engineer, and is a three-storey building, with basement and roof, with a total area of 1160 square meters, the original building consisted of a ground and first floor, and two floors were added to it in the first decade of the last century.



Figure 9: The la viennoise building as it appears in 1948 before the development

Source: (Ismailia Urban Development Company, 10)

The original ownership of the building belongs to here Sabbagh Bek. The building was purchased in 1940 by Abdullah Mirshak, an Egyptian-Lebanese businessman, who was later nationalized by the government, Then, in 1981, the five Merhak daughters repurchased the building they were managing as the la viennoise Hotel ever since. Figure (9) The la viennoise building before development apparently in 1948.

La viennoise building currently houses the headquarters of Tharwa Investment Company, emphasizing the value of reviving downtown Cairo as a thriving business hub Architects: Alchemy, Architects, Ebony & Ivory, the owner company plans to operate the third floor of the building as a tourist investment hotel by presenting the idea to a number of operators of hotel services to maximize the financial benefit of the building.

2-3 International and local conventions regulating the rehabilitation project for the building

Annex D of the 1998 UNESCO Guidelines for the Management of World Cultural Heritage Sites states that “site preservation: Safeguarding cultural heritage is now recognized as falling within the general realm of environmental and cultural development, and strategies for sustainable management of change that respect cultural heritage require the integration of site conservation sites with contemporary economic and social goals including tourism, The aim of preserving the site is to extend the life of the cultural heritage, and if it is possible to clarify the artistic and historical messages present in it without losing originality and meaning" (Feilden & Jokilehto, 1998).

The building is included in the laws regulating Law No. 117 of 1983 and amended by Law No. 3 of 2010, Law No. 61 of 2010, Law No. 91 of 2018, and the approval of the Prime Minister for the year 2016 regarding the development of the downtown Cairo area and the rehabilitation of the buildings in the area while preserving the distinctive character of the original building.

2-4 Building rehabilitation steps

Ismailia Real Estate Investment Company acquired the building in 2009 and began renovation work in 2016 to present it as the first rehabilitated historic mixed-use building in Cairo, the building was awarded the "Tarsheed for Commercial Renovation" award, Figures (10) and Figures (11) of the building before and after development.



Figure 11: La viennoise building before development in 2015



Figure 10: The building after the opening of the development work

The renovation work took about 24 months, from April 2016 to May 2018, when one of the investment companies from the business sector (Tharwa Capital Company) suggested, the Ismailia Company has its desire to invest in one of the buildings in downtown Cairo to be the main headquarters of the company, serving easy access and communication with customers and various bodies, and the executing company proposed the building.

Project work steps

1. The Ismailia Company conducted an economic study for the marketing operations of the building and the possibility of reusing the building for investment purposes, It maintains the structure and shape of the existing building and contributes to the renovation of the building in the same style, which contributes to preserving the urban heritage in the area and helps to carry out periodic maintenance of the building in an economic way that provides an economic return for the owner company.

2. The executing company negotiated with the owner of the property and was able to purchase the building, and after taking the various ministerial approvals, the company submitted an integrated technical study for the restoration and renovation of the building in cooperation with a specialized team of foreign experts, which included the architectural, construction, electrical and mechanical works necessary to re-operate the building as an administrative building.

3. Plans were made for renovation and supplementary works in coordination with the Ministry of Antiquities and Urban Coordination. The architectural works included the realignment of the facades. Figure (12) is one of the proposals for the external design of the facades, Interior finishes, iron works, carpentry, aluminum, marble and stone cladding for interior walls, gypsum works and decorations. Mechanical works also included the installation of environmentally friendly air conditioners.



Figure 12: One of the facade proposals submitted by the investing company for the building

4. Under the supervision of experts from the National Organization for Urban Coordination and follow-up to the development work in the building, the development and inauguration work of the project was completed, Figures (13), (14), (15), (16), different figures of the renovation and development works for the interior spaces and facades of the building.



Figure 13: Main stair before development



Figure 14: Main star after development



Figure 15: Interior design of rooms before development



Figure 16: Interior design of rooms after development



Figure 17: External facade development work



Figure 18: A visit to the representative of the National Organization for Urban Coordination to supervise and follow up the work

5. The building was handed over to the leasing company for operation, The Prime Minister inaugurated the building and praised the distinguished experience of the business sector in the project, Figures (19), (20), (21), (22), the company also made pledges to continue the process of rehabilitating many heritage buildings in the downtown Cairo area through international companies and various loans to invest these buildings in the area, such as the Radio Cinema building, El Shorbagy Building and other projects with 22 proposed buildings during the coming period.



Figure 19: The development of the indoor corridors of the building



Figure 20: Main stair after development



Figure 21: Interior finishing of the building



Figure 22: The main entrance to the building after the completion of the development

2-5 Project analytical study:

The research concludes by presenting the previous experience of rehabilitating heritage buildings (and similar projects), for a set of technical and financial obstacles facing development and rehabilitation projects for heritage buildings, namely:

a. Technical Obstacles

1. Searching for a heritage property that provides financial investment opportunities, through investment companies.
2. The heritage building poses a technical challenge to the specialists, as the specialists find it difficult to identify the architectural and construction technical problems present in the building, which requires a careful, specialized survey and uplifting of all details and components of the building, to determine the methodology for dealing with the internal and external spaces of the building carefully.
3. Most of the heritage buildings need to be re-equipped with modern equipment and technical installations (electrical and mechanical), which are additional loads on the structure of the building and need to re-equip the infrastructure and walls and strengthen the structural system for that.

4. The heritage buildings do not contain accurate plans that show the technical condition of the building, which may be an obstacle when studying the feasibility of developing the building.
5. The need for skilled technicians and local and international experiences to develop the building in a way that suits its technical condition and ensures the preservation of its identity and its good use for the purposes of sustainable investment.
6. The developer must preserve the architectural character of the building and use the internal spaces in a manner that considers that.
7. The re-use of the building constitutes a major technical obstacle related to the location of the building, as a large proportion of these buildings are located within populated and densely populated areas, which prevents the provision of parking areas for users.
8. Maintenance works for the building in the operational phase require providing an appropriate financial return that allows preserving the heritage building in a good technical condition.

b. Financial obstacles

1. Economic feasibility study for operating the building and evaluating the volume of expenses compared to revenues.
2. The heritage building development companies purchase the building from its original owner, at their expense, and the renovation of the building is also done at the companies' expense, this puts these companies under financial pressure until the project is completed and operated, and this requires managing the necessary financial flows according to the schedule, which may currently be impossible to manage through financial institutions without placing restrictions that impede those investments.
3. The high cost of rehabilitation and restoration operations, through the operations of technical equipment for the infrastructure and mechanical and internal refinishing in an appropriate technical manner.
4. Sudden technical problems may appear during the restoration work that need to be treated, which increases the material cost of the restoration work by a greater percentage than expected, and this may lead to the difficulty of operating the building with financial efficiency commensurate with the cost of the project.
5. The legal status of the building and the cooperation of the original owner.

3- Results

Through the research, the researcher found the following:

- a. The urban heritage has a high economic value and contributes to achieving the concept of sustainable development, which guarantees it continuous financial resources and the preservation of the environmental, economic, and social dimensions and the achievement of community participation, which are all dimensions of sustainable development.
- b. There are multiple parties involved in financing the preservation and re-use of urban heritage, such as government funding, the private sector, NGOs, and international donor institutions.
- c. There are various investment programs that can be set up in urban heritage areas, with the participation of the private sector, which must be encouraged and stimulated to participate in these activities.
- d. The participation of the business sector is one of the distinguished initiatives that considered the use of modern technologies to rehabilitate heritage buildings while preserving the heritage value of the buildings, achieving an economic return from promising experiences that should be encouraged and increased incentives for the private sector to participate in this experiment, which reflects the concept of sustainable economic investment for architectural heritage buildings.

4- Recommendation

To provide and activate the necessary funding to preserve the urban heritage and establish sustainable and successful investment programs, the researcher recommends the following:

- a. The necessity of popular participation in financing projects to preserve and develop urban heritage through civil society associations.
- b. The state should plan and visualize the activities to be repurposed for the heritage buildings, and then present them to investors according to a plan developed in order to attract investments and maximize the benefit from the rehabilitation of the heritage building.
- c. Investment programs must be provided to attract investors to establish tourism activities next to the urban heritage centers while preserving the special nature of the heritage areas.
- d. Inviting international institutions to allocate funding support programs for preserving and upgrading the urban heritage.

e. The official and community authorities should conduct marketing and awareness-raising tours of the urban heritage areas and their importance, and that the government allocates a part of the general budget for marketing, and for financing some conservation projects, developing, and upgrading the urban heritage.

f. Establishing governmental and private investment companies specialized only in investing urban heritage areas in accordance with clear laws and rules that guarantee the preservation of the nature of heritage areas and ensure compatibility between making a profit and preserving and developing the urban heritage.

g. Establishing a civil organization to preserve the urban heritage, and its resources will be through members' fees, donations, some activities, exhibitions and tourist trips, and its revenues will be allocated to preserving and developing urban heritage areas.

h. The researcher recommends companies working in the field of developing heritage buildings to cooperate, as far as possible, with researchers and those interested in this field from academics and specialists, to come up with the largest possible number of technical proposals that contribute to raising the efficiency of business.

5- References

1. (10, August 2022). Retrieved from Ismailia Urban Development Company: <https://al-ismaelia.com/>

2. (2021, November 11). Retrieved from prosoco: <https://prosoco.com/what-is-adaptive-reuse/>

3. (2022, June 13). Retrieved from USAID official website: <https://www.usaid.gov/ar/egypt/economic-growth-and-tourism>

4. (2022, June 10). Retrieved from The official website of Cairo Governorate, the electronic portal: <http://www.cairo.gov.eg/ar/Bank%20of%20Ideas/Pages/ma3lem-7desa-1.aspx?ID=5>

5. (2022, July 16). Retrieved from Sigma Real Estate Investment Group: <http://sigmaproperties.net/Intro.html>

6. Abdelfatah, S. E. (2012). *Managing the financing of projects for the rehabilitation of historical areas - a case study of Historic Cairo, Master thesis*. Cairo: Helwan University.
7. Abolela, M. S., & Elberqawi, W. B. (2019). Methodologies for the preservation of urban and architectural heritage in the Arab countries. *The First International Conference On Sustainability: Environmental Efficiency For Human Well Being (EBQL)* (pp. 127-144). Ierek.
8. Conference, U. G. (2003). *Convention for the Protection of the Intangible Cultural Heritage*. Paris: UNESCO.
9. Development, T. S. (2010). *The basics and standards of urban coordination of buildings and heritage areas of outstanding value* (1st ed.). Cairo: The Supreme Council for Planning and Urban Development.
10. Elhayagy, Y. H. (2013). *Managing heritage tourist attractions (the old city of Sana'a as a model), Master thesis*. Al Riyadh, Saudi Arabia: King Saud university.
11. Elhayagy, Y. H. (2016). The role of international and regional organizations in the protection, management, and promotion of cultural heritage. *Adumatu Journal*.
12. Elzahrani, A. b. (2021). Urban Heritage Management. *Saudi Society for Archaeological Studies*.
13. Emam, M. E. (2019). A comparative view of the investments of urban heritage towns. *Engineering journal Minya university*.
14. Feilden, B. M., & Jokilehto, J. (1998). *Management Guidelines for World Cultural Heritage Sites* (Second ed.). Rome: OGRARO.
15. Haikal, E. M. (2021, May). The social and economic effects of the Corona pandemic on cultural tourism in Egypt "A socio-anthropological study in the village of Tunis in Fayoum Governorate". *Journal of Human and Literary Studies*, 24(2), 1-57. doi:10.21608/shak.2021.193073
16. Hewison, R. (1987). *The Heritage Industry: Britain in a Climate of Decline*. London: Methuen Publishing Ltd.

- 17.Lourenço, p. b., Branco, J. M., & Coelho, A. C. (2015). *Sustainability and cultural heritage buildings*. Guimar: University of Minho.
- 18.Matlak, G. B., & Elsayed, M. M. (2019). Investing in cultural heritage: case study the city of Samarra.
- 19.Samir, H. m. (2008). *The Economics of Preserving Heritage Sites: Towards an Approach to Economic Evaluation of Conservation and Rehabilitation Programs, Ph.D.* Cairo: Cairo University.
- 20.Soliman, M., & AWAD, A. (2011). Methodology of dealing with areas of historical value (case study of Khedivial Cairo). *Journal of Azhar University Eng.*, 6, pp. 1640-1658.
- 21.Sultan, M. S. (2013). Urban Heritage Financing Issues: The Strategic Framework for Heritage Promotion, Conservation and Protection. *The Third National Architectural Heritage Forum*. Medina.
- 22.Yassin, A. E. (2011). Reuse of Historic Buildings Romanticism or urban Visibility. *Journal of Urban research*, 8(1), 1-14.
- 23.Youssef, M. M. (2014). Investment programs in architectural heritage and means of funding on the basis of the Arab and international experiences. *Journal of Urban research*, 12(1), 13-28. doi:10.21608/JUR.2014.93036
24. El-Darier, Loka. The Influence of Technological Development on the Sustainability of Architectural Heritage (Documentation and Preservation) – Case Study: Citadel of Qaitbay. *International Journal of Multidisciplinary Studies in Architecture and Cultural Heritage*, Vol. 1. No,1, 2018 pp. 28-58.