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ADAPTIVE REUSE OF ABANDONED BUILDINGS AS A MEANS OF IMPROVING LIVABILITY

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ADAPTIVE REUSE OF ABANDONED BUILDINGS AS A MEANS OF IMPROVING LIVABILITY

Abstract

Due to the rapid growth of cities around the world, many buildings in ancient cities are now deserted, prompting countries to preserve their historical sites that represent their identity. According to researchers, Adaptive reuse, along with the renewal of social life and economic development activities, serve the basic concepts of livability, as well as the community's recognition of adaptive reuse as a reasonable alternative to the demolition and redevelopment of existing facilities. The study assumes that adaptive reuse of abandoned buildings revitalizes the area and preserves its values and identity. In this context, adaptive reuse refers to the process of updating an existing structure for new purposes. To Test this hypothesis, a qualitative and quantitative research is conducted through the literature, an analysis of two international case studies, in addition to analyzing of one local case by conducting field surveys and interviews to illustrate the feasibility of adaptive reuse from the perspective of livability and sustainability of existing urban resources. The result of this study concluded that community participation in decision-making regarding adaptive reuse has strengthened social networks and maintained a unique lifestyle of abandoned old cities.

Keywords

Adaptive Reuse, Livability, Abandoned Heritage Buildings, Community Participation

1. INTRODUCTION

Improving urban livability conditions has been a critical target in city planning and management in the current context of rapid urbanization. Therefore, various approaches for evaluating the livability characteristics of specific urban context have surfaced in recent years one of them is adaptive reuse of historical buildings and because Historic structures have many tangible and intangible values. Therefore, the complexity of the criteria the choice of reuse options is increasing.

According to Yau, 2009, decision-making issues concerning physical cultural heritage should be treated as multi-criteria decision-making issues which allows for the evaluation of both tangible and intangible values and involves communities in this process such as historic building conservation, preservation, and reuse. (Chen.C, Chiu.Y & Tsai.L, 2018)

2. RESEARCH PROBLEM

The old cities in Lebanon have a distinctive architectural and urban character belonging to different eras which together form a cohesive urban fabric that represents the city's identity. However, the urban environment in the old cities suffers from many problems that make the ancient city an unpleasant place, and this leads to the marginalization and deterioration of these areas.

Batroun is one of the ancient cities, its buildings suffer neglect due to their residents relocating to neighboring suburbs, leaving behind vacant, neglected structures.

Due to the lack of studies to assess this situation, the aim of this study is to enhance the quality of historical urban fabric through livability and determine the importance of community participation in decision-making and the economic factor that ensure the continuity of the adaptive reuse projects.

This research based on both qualitative and quantitative methods and divided into three parts. The first one is the theoretical part, conducted by review the literature. The second is an analytical comparative approach for two international similar cases studies. The third part is the practical one, in which the research will use the action methodology in an inductive-field study which take place in Batroun old city, to evaluate the relevance of the economic factor and community participation in decision-making regarding adaptive reuse and its impact on the vitality of the region. This will be accomplished by observation and people engagement via questionnaires.

3. THEORETICAL BACKGROUND

3.1 Livability

Livability is a "group idea" that lacks a specific or widely accepted definition. And because it is a relative concept, its "exact meaning relies on the time, place and purpose of the evaluation, as well as the value system of the assessor," the definition of livability may vary from one culture to another and through time. Depending on the context, livability can be wide or limited, and research, authorities, and organizations across the globe have their own interesting definitions. Livability benefits all local communities, regardless of their values, by making them better environments to live, work and develop. A livable urban environment is one in which the built environment enhances inhabitants' quality of life by meeting their fundamental requirements. (Khorrami. Z, Sadatmoosavi. A, Mirzaee. M, Davarani. M, Khanjani. N & Ye. T, 2020)

Therefore, livability is defined in Webster dictionary as a suitable environment for human life. Livability includes basic human requirements such as food, aesthetic safety, cultural expression, and a sense of belonging to a society or region. Because every location is exclusive, the society's possibilities is an important complete strategy for evaluation. In general, the approach to livability is a difficult and relative idea. It is complicated because multiple aspects are surely significant in the advancement of society and a person's life, and it is relative since the principles and features of a society that are regarded desirable circumstances may be understood and evaluated differently in another civilization or region. (Beiglu. F, Ghafari. S & Taheri. A, 2019)

Table 1: Different types of liveliness and livability from Charles Laundry's viewpoint (Beiglu. F, Ghafari. S & Taheri. A, 2019)

Different types of liveliness and livability Long term self-Reliance	Economic liveliness is evaluated by the variables of level of employment, net income and life standards of the people in the studied area, annual number of tourists, retails performance, land value and properties.
Compatible sustainability Compatibility and self-restoration	Social liveliness is evaluated by variables of level of activities, social interactions and the nature of social communications. A lively and livable city can be, socially, described by low levels of deprivation, strong social cohesion, good relations, dynamism of social inter-layers, collective spirit and civil prejudice, wide range of lifestyles, harmonious relations, urban community or joyfulness.
Liveliness Participation, use and activity level I Interactions, communications, exchanges, transactions and display level	Environmental liveliness and livability involve two aspects: the first one is ecological sustainability, which is validated by the variables such as air and sound pollution, wastewater and wastes disposal, traffic density and green spaces. The second aspect is designs ,which include variables such as readability, sense of place, architectural distinguish, connection and communication of different parts of the city, lighting quality and that to what extent the city is friendly , safe and psychologically approachable.
(Displaying manner of the activities and interactions in the real world)	Cultural Livability and liveliness: this involves survival, respect and appreciating the city and its people, identity, memorials, traditions, social celebrations, production, distribution and consumption of hand-made products and the signs, which show distinguished nature of the city.

3.2 Adaptive Reuse of heritage building:

Adaptive restoration is a form of restoration that involves all or part of the exterior being restored, with the interior being converted to a new practical usage (National Heritage Act, 2005). adaptive re-use work includes preservation, alteration, restoration, maintenance, and consolidation (ICOMOS, 2017). It is important to preserve buildings with their inherent character and historical significance. (Ismail. W & Shamsuddin. S, 2007).

The feasibility of adaptive reuse, according to Shipley et al. (2006), must be assessed against three important sets of criteria: functional and use viability, technical and physical viability, and financial and economic viability (Samaranayake.R, Jayawickrama.T, Melagoda.D & Rathnayake.I, 2019)

According to The Burra Charter (art. 1.9; 1.10), Adaptation in the practice of historical preservation, may not have alteration in function but, if necessary, it should have a minimal influence on the cultural value of the location.

The 1985 Convention Concerning the Protection of the European Architectural Heritage (Article 11) stated that access to cultural properties must not affect their historical or architectural characteristics, in relation to the objects themselves or the environment in which they are located.

The 1987 ICOMOS Charter, stipulates that the incorporation of "elements of modern character" into objects can perhaps enrich them if they do not affect the "integrity of its structural harmony." (Heim. J, 2020)

Re-use may also be considered a reasonable choice and a sustainable alternative because it improves urban strengthening and revitalization initiatives. (Ijla. A & Broström. T, 2015). And it demonstrated a good contribution to the creation of a sustainable environment. and create a closer link between previous and future generations has been established (Ibrahim. I & El Tarabishi. F, 2021).

Finally, adaptive reuse is a complicate and difficult process. This is since numerous stakeholders are engaged in decision-making, and each party has a different point of view. (Ijla. A & Broström. T, 2015)

Advantages of adaptive reuse:

There are several advantages to re-using old structures, including:

1. Social advantages: People and cities retain their identity and social links while evolving with the times.
2. Cultural advantages: It preserves art, architecture, and antiquities.
3. Economic advantages: Reusing an existing structure is less expensive than destroying and rebuilding.
4. Environmental advantages: traditional building materials are more environmentally friendly. (Morkos.M, 2020)

3.3 The Values

Any adaptive reuse in relation to any specific area is directly or indirectly related to the values of the place, which are characterized by environmental, aesthetic, economic, human, historical and urban influences along with the legal framework, as well as many other relevant values to the surroundings of that area.

Since the 1964, the concept of heritage and the conservation have changed sharply when Charter of Venice impose that the aim of restoration was “to preserve and reveal the aesthetic and historic value of the monument ... based on respect for original material and authentic documents. (De la Torre. M., 2013). Therefore, any intervention work engaged in restoration as well as preservation of monuments must consider the values of the architectural heritage in different aspect such as aesthetic, environment, social, cultural, historical, economic, emotional values. (Al-Baqawy. G., 2018)

Another approach of the determination of the importance of a heritage resource is the levels of different groups within a society. Which could be on a local or international scale. Then “value” could be referred to “significance” (Australia ICOMOS 2000). Significance is “constructed and shaped by the time, place, and people involved in articulating them” [Mason, 2002] which indicates that significance is the total importance of a site, determined by analyzing the whole values referred to it. This refers to a local scale of value, but the global scale has another set of values to consider monuments or sites as World Heritage and this scale would differ a little bit from what the local community might only perceive. These values distinguish some monuments from others which creates even greater significance. (Ababneh. A., 2016)

4. CASES STUDIES

4.1 Case Study (1): The Sharjah Art Foundation (SAF), Sharjah, United Arab Emirates.

Sharjah is one of the seven emirates of the United Arab Emirates (UAE) and is known as the country's cultural hub. It was dubbed UNESCO's 'Arab Capital of Culture' in 1998 and was awarded the title of UNESCO's 'World Book Capital' for 2019. (Sharjah Art Foundation, 2021)



Fig.1: Heart of Sharjah Urban Fabric, with focus on Al Marijah historic area. (Ibrahim. I & El Tarabishi. F, 2021)

4.1.1 History:

Sharjah's architecture is a blend of the past and the present (Fig. 1). its buildings are over 50 years old. The Marijah area, located in the heart of Sharjah, is the most historically and architecturally significant district. The constructions condition suffered greatly, thus the community demanded to preserve the valuable buildings. therefore, restoration efforts began.

In 1998, Sharjah's authorities chose not only to restore the old buildings but also to reproduce and re-create, as in the case of the Sharjah Art Foundation. (Ibrahim. I & El Tarabishi. F, 2021)

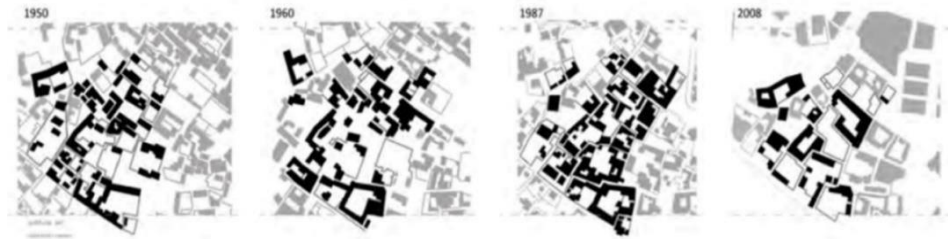


Fig.2: Sharjah Urban Fabric heritage area historic changes.
(Ibrahim. I & El Tarabishi. F, 2021)

4.1.2 Sharjah Art Foundation (SAF)

Sharjah Art Foundation (SAF) is the Middle East's leading producer of cutting-edge art. The foundation consists of a series of old historical buildings and five modern structures. This project took three years to complete in 2013. And aiming to preserve Sharjah's legacy. One of the main events is the Sharjah Biennial, attended by artists from all over the world which required more space, and consequently five new buildings were built with concrete except for the steel structure.

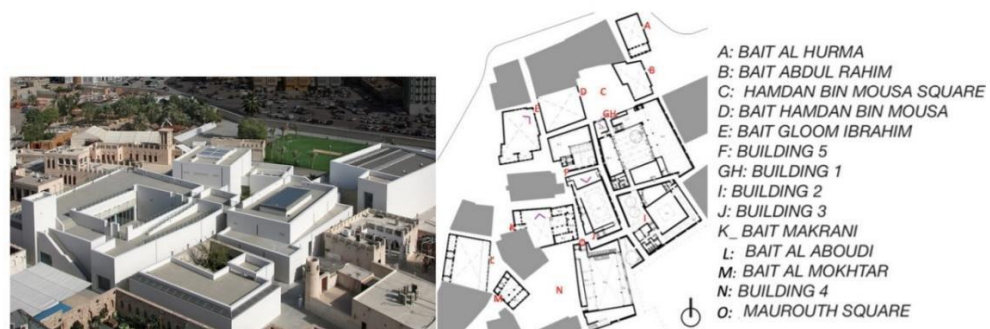


Fig. 3: Sharjah Art Foundation (SAF) ground floor plan and space functions.
(Ibrahim. I & El Tarabishi. F, 2021)

4.1.3 The values:

a- Economic sustainability value

SAF has drawn domestic and international visitors, which has a positive impact on the city's economic growth. In 2019, the SAF project was received the Aga Khan Award for Architecture. This has undoubtedly aided the municipal government's financial predicament. As a result, investors have been keen to participate in adaptive reuse projects which have saved 40% of the urban fabric and rely on local labor.

b- Social sustainability value



Fig. 4: Sharjah Art Biennial, the international hub for artists.
(Ibrahim. I & El Tarabishi. F, 2021)

The adaptive heritage reuse raises the highest social values. Visitors with the environmental factors form a symbiotic interaction. The courtyards allow meetings and social gatherings to take place in a quiet setting.

The natural scenery, cafés, courtyards and greenery provide an intriguing experience to share with friends. Indeed, the many social activities offered have led in a relationship with national and local visitors of all ages, giving them the opportunity to learn about the community's history.



Fig.5: Art exhibitions encouraging local and international visitors to learn about local heritage.

(Ibrahim. I & El Tarabishi. F, 2021)

c- Environmental sustainability value

The environmental value is an important aspect of heritage since it has an impact on the visitors' experience. the SAF planned the new five buildings to be encircled by courtyards which were formerly a common feature in all residences. Visitors may smell a clean air flow because of such outdoor places' natural ventilation. Similarly, the tiny passageways between the new and old buildings are intended to provide shady and coolly places for walkers.

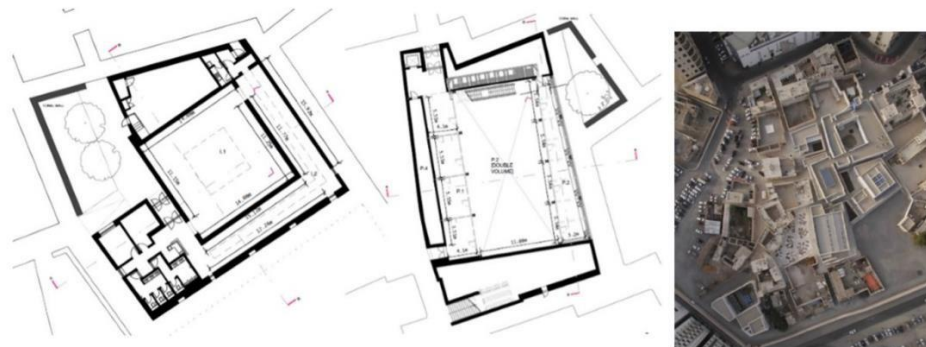


Fig.6: SAF exhibition buildings ground floor plans showing the harmony with the heritage urban fabric.

(Ibrahim. I & El Tarabishi. F, 2021)

There is small greenery due to the UAE's dry-humid climate. Natural lighting has been provided by adjusting windows with blinds to get the ideal levels of sunlight.

The classic compact urban fabric is employed in relatively tight locations to offer pedestrians with shaded aisles. In addition, the uneven shape of streets provides for wind circulation (Fig. 7).

This case study highlights how local community intervention has prompted authorities to preserve old buildings, opening the door widely to repurpose them, attracting investors, and providing a key opportunity to produce a more livable city.



Fig.7: SAF narrow streets and irregular spaces allowing wind circulation. (Ibrahim. I & El Tarabishi. F, 2021)

4.2 Case Study (2): Soğukçeşme ‘Cold Fountain’ Street, Istanbul, Turkey

Sogukcesme Street is made up of old Istanbul houses and located in the Sultanahmet neighborhood, it is an important historical-urban center (Fig.8) where works from Rome, Byzantium, the Ottoman Empire, and the Republic of Turkey are represented in this region.

4.2.1 History:

Ever since the 1980s the district has become more important for tourists and the problem of accommodating them appeared.

This problem was solved when the traditional Turkish houses that made up Sogukcesme Street were converted into accommodation units that recreated the period in the 19th century.

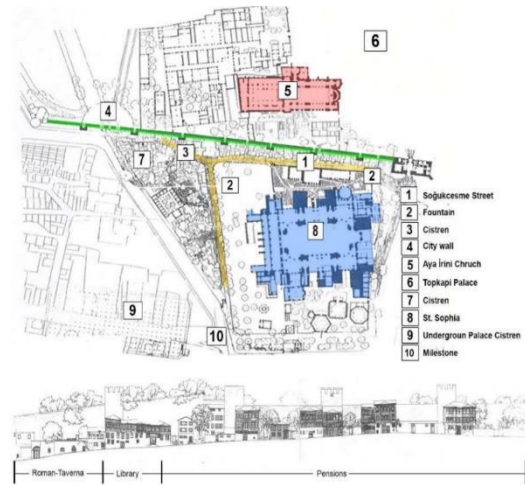


Fig.8: General Layout of Sultanahmet - St. Sophia Mosque Rehabilitation Area and “Soğukcesme Street,” Based on N. Eldem et al (1980), (Yenice. T & Altınoluk. Ü, 2019)

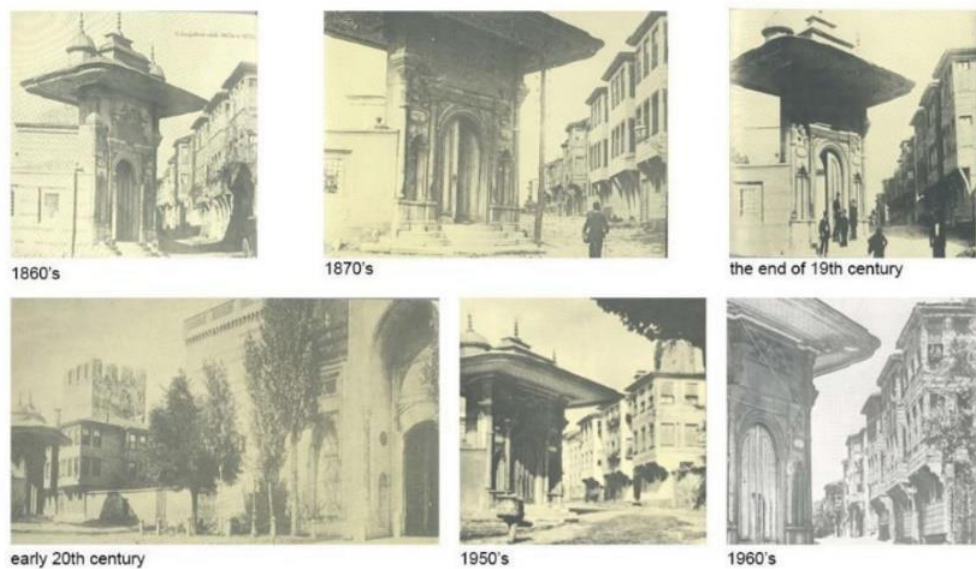


Fig.9: Soğukcesme Street in historical process Based on N. Eldem et al (1980), (Yenice. T & Altınoluk. Ü, 2019)

4.2.2 **Sogukcesme Street's buildings:**

The houses are 300 years old and were used by those who worked in the monumental buildings in the area.

After several failed attempts to renovate the Street, the concerned authorities agreed to destroy it, and create a park. However, the local community's intervention and refusal to demolish these buildings compelled the municipality to agree to provide new functions for the old buildings; the restoration of the houses began in 1984 and was gradually opened beginning in 1986 as a street with a cultural and tourist character.

Figure 10 shows examples of Sogukcesme Street re-use in greater detail.



Fig.10: Sogukcesme Street before the restoration (1980's) and after the restoration (1990's) (Yenice. T & Altınoluk. Ü, 2019)

Building Types		New Functions
Biggest house on street	—————>	İstanbul Library
Other houses	—————>	Pension chain
Water cistern	—————>	Roman Taverna
Other palace walls	—————>	Protected as same
Guest hamam	—————>	Hamam (as a part of the pension found there, protected as same)

Fig.11: shows the building types and the transformation to new functions (Yenice. T & Altınoluk. Ü, 2019)

Chain of pensions: On the street, there are nine homes with at least five and no more than 10 rooms, which are operated as a chain of pensions with a total capacity of 120 beds.

Istanbul Library: The street's largest home has been converted into a library that has books, documents, etchings, and paintings "exclusively related to Istanbul." This situation has added a significant cultural component to the street.

Sarnic Restaurant: is a Roman cistern that has been cleaned, restored, and made functioning as a restaurant. The other Roman cistern is still in use today as a water cistern.

Cold Fountain 'Sogukcesme' Street

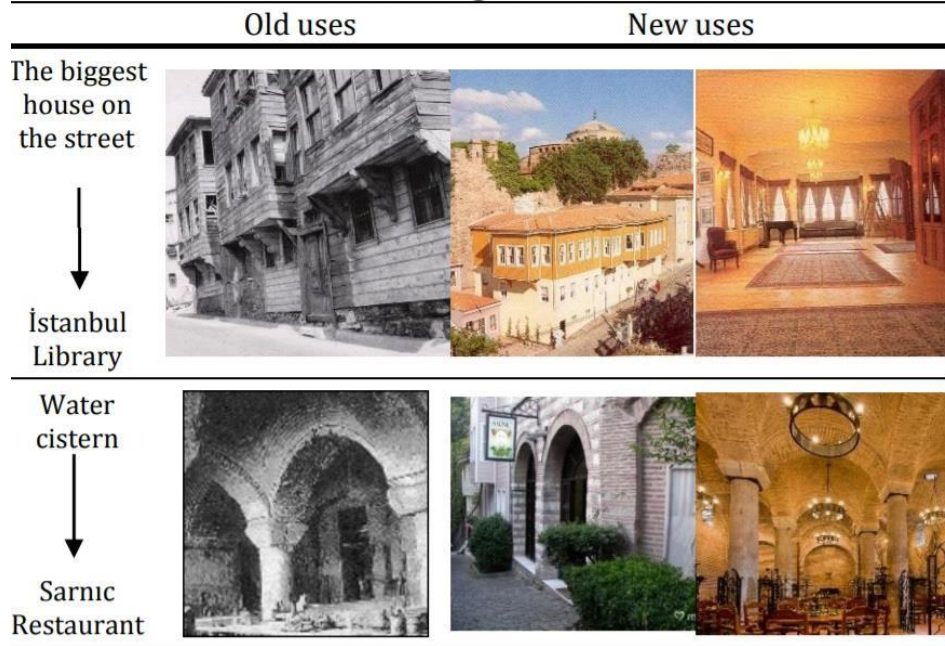


Fig.12: showing the biggest house on the street transformation to Istanbul library and water cistern to restaurant (Yenice. T & Altinoluk. Ü, 2019)

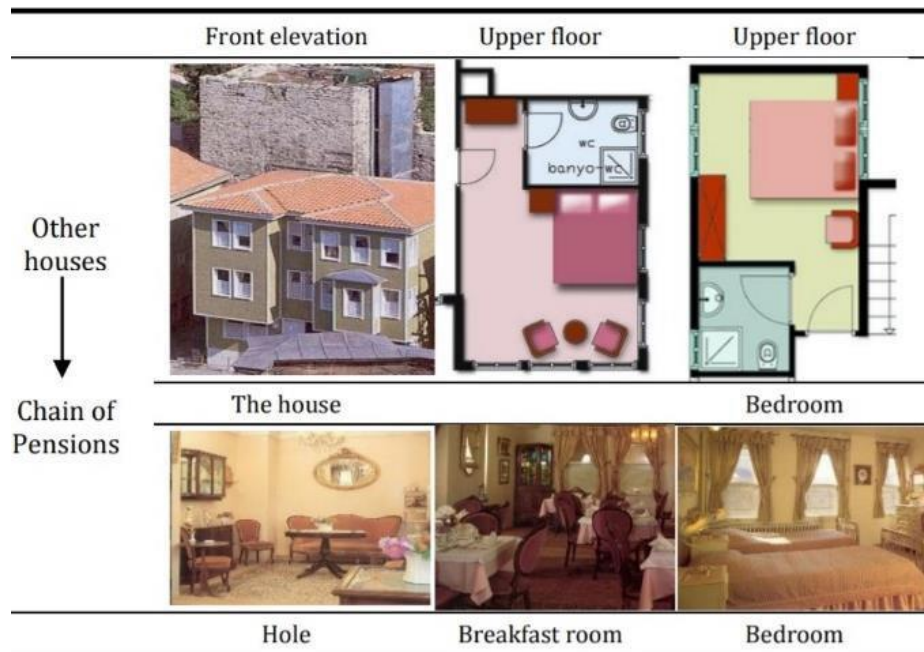


Fig.13: showing the houses on the street transformation to Chain of Pensions (Yenice. T & Altinoluk. Ü, 2019)

4.2.3 The values:

a- Economic sustainability value

All new functions provide income, which helps move the economy and secure enough money for future maintenance. It encouraged tourists to come to the area, not to visit the big monuments, but to live a unique experience dating back to ages past, by staying in one of these houses.

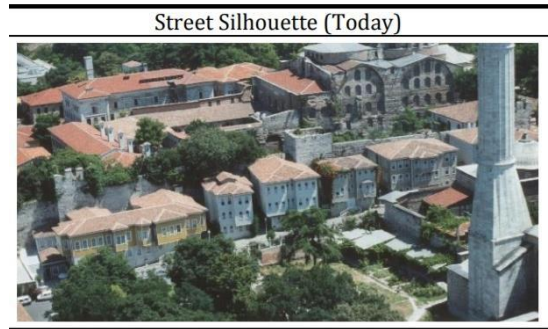


Fig.14: showing the street today (Yenice. T & Altinoluk. Ü, 2019)

b- Social sustainability value

This street is an intriguing example of a community that is creating a historic image in Istanbul's ancient neighborhood. This endeavor includes establishing a connection between modernism and tradition. In this context, the region has a distinct approach to the restoration and adaptive reuse of a whole historic site, employing authentic materials and techniques to recreate the past.

All of the guest reports were pleasant, satisfied, and appreciated a nice, calm stay in a bustling city. The accessible library has provided guests with the opportunity to get information about the history of the heritage site and learn more about Istanbul's history. It was essential for guests to communicate with the legacy traditional touch at the café. This street experience is not target for visitors of various nations, but it has also piqued the interest of residents in experiencing a unique experience of their ancient's traditional built environment and the local social life, customs, and habits that the street represents.

c- Environmental sustainability value

Besides preserving the urban heritage, no cars passed this exclusive street in Istanbul. While Gulhane Park has a 1200-meter square car park that is utilized by Sogukcesme Street, it was only connected to the street by the end of 1989.

The intervention of the local community to prevent the demolition of the old buildings and efforts made to try to reuse them were instrumental in attracting a large number of people to the neighborhood which was used as a tourist and cultural destination as a result of the economic, social and cultural activities that have been developed.

5. APPLIED CASE STUDY ON LOCAL CONTEXT, BATROUN, LEBANON.

5.1 Batroun Old City

Batroun is a coastal city in northern Lebanon and one of the oldest cities in the world. located 65 kilometers (38 miles) north of Beirut. It contains a dynamic urban fabric shaped by a diverse cultural, architectural, and historical community.



Fig.15: location of Batroun within Lebanon (Google,2021)

5.2 History:

It was founded by the Phoenicians, king of Tyre (Ethbaal),



Fig.16: photos of the Phoenician wall and Roman ruins (Google, 2021)

The city was under Roman sovereignty and eventually became the patriarchate of Antioch once the region was Christianized. The name was Arabized to Batroun during the Islamic takeover of the region. In 551 an earthquake ravaged Batroun, causing mudslides and rupturing the promontory.

5.3 The Citadel Location- in the Heart of Batroun



Fig.17: shows location of the site in Batroun (Google Map, 2021)

Batroun Castle is in the heart of Batroun. It was destroyed by the earthquake, allowing a new urban fabric to develop on its ruins. With time, this urban fabric began to crumble until all the historical buildings became deserted. There is a road network linking the site to the adjacent neighborhoods from different directions as shown in the figure below.



Fig.18: shows the entrance to the site (Author, 2016)

Recently, these abandoned buildings have been restored and reused with new functions, at the initiative of the local community and NGOs.

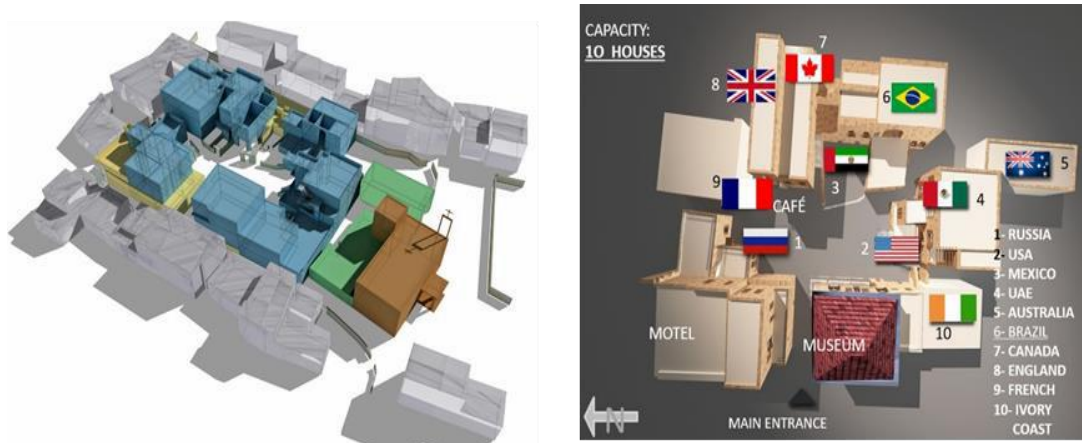


Fig.19: shows the location of intervention (Author, 2016)

The target was to create a HUB for the Lebanese Diaspora in their homeland to support a cohesive, dynamic, and well-connected community. It will be a reference point for any information, translation services and research on the concerned Diaspora.

It is a unique place that combines the activities of a museum, a motel, a cafe and several houses for the diaspora of Lebanese origin around the world; allowing them to share experiences, hold events and lectures, and maintain a connection between each other, their homeland, and their country of residency.



Fig.20: shows the proposal of intervention (Author, 2016)



Fig.21: shows the site before intervention (Author, 2015)



Fig.22: shows the site after of intervention (Author, 2016)

After the completion of this project, the country went through severe economic and financial distress, which had a negative impact on the solvency of the investors in the project, who became unable to afford the necessary maintenance costs. the solution was to shift to a sector that provide enough financial return to continue, therefore, the ground floors of these buildings were converted into restaurants serving dishes from different cultures.

This transformation had positive repercussions on the project and on the region, making it a destination for tourists and visitors from different regions in order to enjoy

international traditional cuisine while feeling the sense of the local place, forming a unique story worth experiencing.

The success of the new intervention reflected on the whole area, making it bustling with visitors, creating job opportunities for residents, raising property prices, and prompting neighboring property owners to renovate their abandoned buildings.

5.4 Analysis of the questionnaires:

This study was conducted between 22nd and 29th of December 2021, in Batroun, North Lebanon. This survey includes 135 randomly selected participants. The purpose was to collect views regarding the adaptive reuse of existing abandoned historic buildings in Batroun old city. Therefore, the following questions were posed to the interviewees:



Fig.23: Pie charts showing the percentages of site visit purpose by participants and how frequently they visit it (Author, 2021).

1. Nearly half of the participants are leisure visitors,
2. And 45% of visitors come to the site daily.



Fig.24: Pie charts showing the percentages of what attracts the participants to visit the site and if it is safe to visit it by night (Author, 2021).

3. As for what attracted the participants to the area the most was the city itself, followed by the historical district and then restaurants in third place, and finally walking along the narrow roads and archaeological sites.

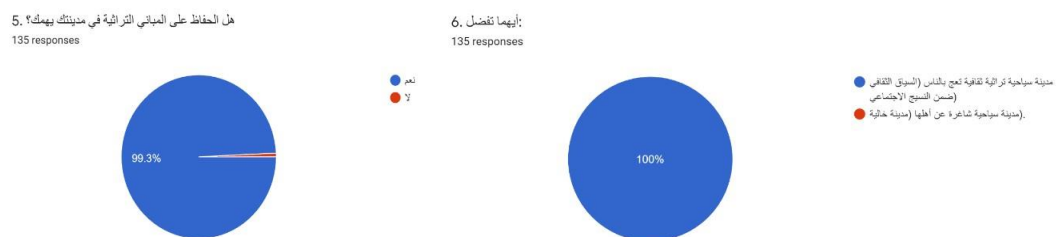


Fig.25: Pie charts showing the percentages of participants' interest in preserving heritage buildings in their city and their preference for an empty or vibrant heritage city center. (Author, 2021).

4. The safety index is high due to restaurants and the movement of people in the neighborhood at night.
5. 99.3% of the respondents expressed an interest in preserving the heritage buildings in their city
6. And all of them preferred a cultural heritage tourist city teeming with people (the cultural context within the social fabric) over a vacant tourist city for its residents (an empty city).



Fig.26: Pie charts showing the percentages of participants' preference: demolishing or adaptive reuse, and to the extent to which heritage buildings retain the culture and civilization of the local community. (Author, 2021).

7. In general, interviewees believed, that it would be better to restore and re-adapt heritage buildings rather than replace them. Heritage provides local communities with a compelling motivation to care for their environment and live more sustainably.
8. Most participants agreed that the historic town is an important aspect of the town's identity and therefore, asked for its conservation.
9. Respondents rarely saw less value for adaptive reuse, and more often touched on an enhanced value in many aspects of sustainability. And see that heritage structures are exemplars of economic benefits and argue that their adaptation should not be limited to commercial purposes only, but should be adapted for housing and work, and this falls within the cultural benefits, in addition to the environmental advantages, that allow to reuse of ecofriendly materials.

As a result, historical structures contribute to the city's economic, cultural, social, and environmental value.

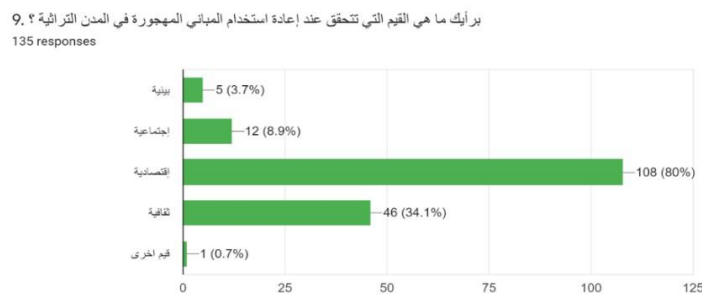


Fig.27: showing the percentages of the values achieved by adaptive reuse (Author, 2021).

10. Interviewees mentioned several barriers to adaptive reuse and the economic component is the most important factor while some believe that adaptive reuse may also impede the possibilities for growing urban density, which falls under the category of social barrier. In addition to laws, regulations, and administrative barriers that greatly limited intervention, all pose an obstacle to adaptive reuse.

10. إن إعتدنا إعادة توظيف المباني المهجورة، ما هي العوائق التي يمكن أن نواجهها خلال هذه العملية؟
135 responses

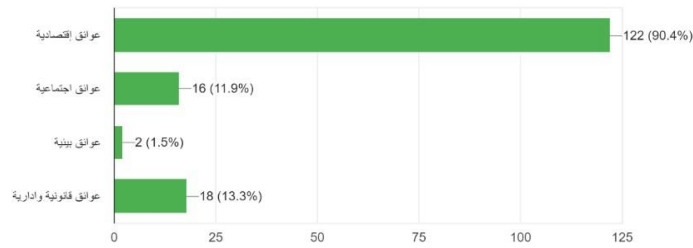


Fig.28: showing the percentages of obstacles to adaptive reuse (Author, 2021).

Others argue that the lack of parking spaces for restaurants and office buildings may be an impediment.

11. Respondents mentioned several aspects to consider when making a decision. They stated that community participation in the decision-making process reflects the public's needs and acceptance of new functions. As well as economic factors and financing methods for ongoing maintenance costs.

11. اتخاذ القرار بإعادة توظيف المباني يجب أن يراعي:
135 responses

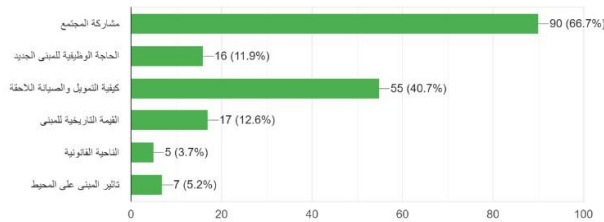


Fig.29: showing percentages of issues to consider in decision-making process for adaptive reuse (Author, 2021).

In addition to cultural relevance and knowing if the adaptation strategy will meet the requirements of sustainability.

While a small percentage said that legal aspects or environmental impacts should be considered before making a decision to adapt.

12. The majority of interviewers indicate that they prefer the site after adaptive reuse, but some structures must be preserved as they are without intervention or adaptation.

12. في البترون، ايهما تفضل الموقع قبل كما كان او بعد عملية إعادة التوظيف؟
134 responses

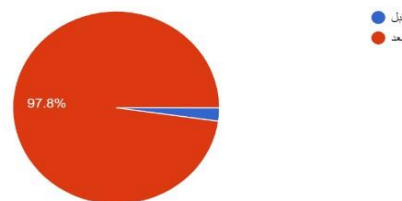


Fig.30: Pie chart showing the percentages of people's preference for the site before or after the restoration (Author, 2021).

13. Most of respondents agreed that adaptive reuse offers several advantages, and contribute to economic, social, environmental, and cultural sustainability, by prolonging the life of historic structures and giving them additional heritage culture value. Moreover, it has the potential to enhance the culture image of the ancient city as a mixed-use metropolis, not only via activities, but also through its social texture.

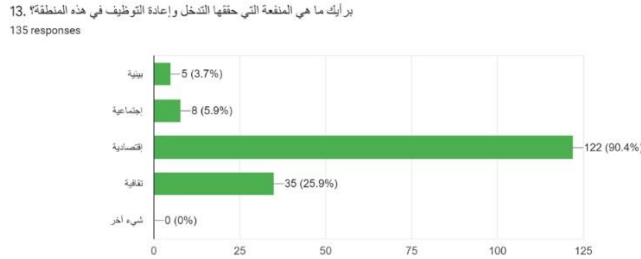


Fig.31: showing percentages of benefits achieved by adaptive reuse (Author, 2021).

14. The majority of Respondents stated that adaptive reuse of historic buildings motivates investors to invest in these buildings and conserve the cultural heritage.

هل برأيك هذا المشروع يشجع المستثمرين على استثمار مشاريعهم بأحد المباني التي أعيد توظيفها؟ 14.
134 responses

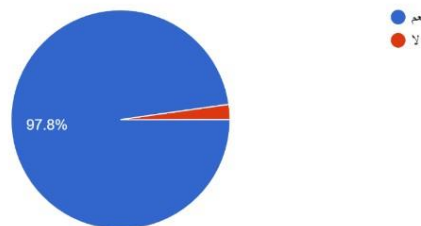


Fig.32: showing percentages of people's opinions if the project encourages investors to invest in one of these buildings (Author, 2021).

15. The majority of respondents agreed that adaptation is a process that promotes the concept of building conservation and preservation, which conforms with sustainability criteria and stated that there can be no sustainability without incorporating the ancient city to be a living city via its communal, cultural, and economic activities, as well as being ecologically friendly.

التنمية المستدامة هي التنمية التي تفي باحتياجات الحاضر، من دون الإضرار بقدرة أجيال المستقبل على الوفاء باحتياجاتها الخاصة. هي 15.
تنمية اقتصادية واجتماعية متوازنة ومتناغمة، تُعنى بتحسين نوعية الحياة، مع...إدخال المباني التراثية في لبنان نموذجاً لمبادئ التنمية المستدامة؟
135 responses

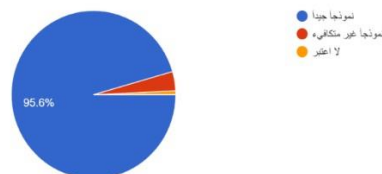


Fig.33: showing percentages of people's opinions if the use of heritage building in Lebanon is an example of sustainable development principle. (Author, 2021).

5.5 The Values:

a- Economic sustainability value

The main objective of the project is to have a unique tourist landmark and HUB for the Lebanese diaspora in order to attract the attention of visitors and residents. Economically, local materials are used along with traditional Lebanese designs and motifs. This contribution boosts the local market economy and jobs opportunities, and attracts tourists

who share cultural heritage with others, promoting the city's economic development. It also generates income from restaurants and accommodation.

b- Social sustainability value

Heritage provides local communities with a compelling motivation to care for their environment and live more sustainably. Maintains cultural identity, which strengthens social cohesion.

Involve the community in decision-making on adaptive reuse, raise their sense of responsibility to preserve their heritage buildings, connect future generations to their ancestral places, and encourage investment for local and foreign residents. And push the surrounding environment to enhance its facilities.

c- Environmental sustainability value

To greatly influence the visitor experience, all buildings open onto a central courtyard decorated with trees.

The well, a traditional method of obtaining water, has also been preserved, and guests can view it in the courtyard.

The cafes share the same courtyard without partitions. Large glass arches allow natural light to penetrate into the interior space.

As a result, the benefits of adaptive reuse in terms of sustainability tend to outweigh the benefits of destruction and new development. In terms of urban renewal, adaptive reuse appears to have been a catalyst, spurring investments that improve livability in the area. Therefore, demand analysis, community participation in the selection of new functions, common spaces and the method of financing are all essential to the success or failure of the project.

6. DEDUCTION OF THREE CASES STUDIES:

Each case study had its unique locational, regulatory, and physical features, which affected the final comparison. Despite this, the study was able to uncover the following benefits of adaptive reuse is:

- An effective method of maintaining historic buildings.
- More cost-effective than demolishing and reconstructing.
- A way to attract tourism and raise community's awareness for their heritage site.
- Involving community in decision-making process is critical to ensure success of the project, while the cultural context should be protected within the social fabric.
- The method of financing is necessary for the project's continuity.
- Establish sustainable conservation by integrating the ancient city to be a living city via its community, economic and cultural activities, and ecofriendly.
- Adaptive reuse buildings may include space changes or addition to accommodate the new function without compromising the original qualities of the buildings.
- The sustainable conservation of heritage building should address the strengthening of the young generation's relationship with their cultural heritage. (Othman. A & Elsaay. H, 2018)

7. CONCLUSION:

Adaptive reuse is without a doubt one of the most effective techniques for promoting modern urbanism and opposing urban development. Old buildings contribute significantly to the authenticity and identity of the urban fabric, and their preservation fosters the values of history, continuity, identity, and smart growth, all of which are essential for long-term economic development, not only for the core but also for the community and the whole region as well. It adds values to the city by chronicling generations' links to their historical foundations.

Offering a new function for a historical building has a very good influence on social vitality, so participation the local community in decision-making has the greatest impact on the project's success. This study demonstrates how the repurposing of abandoned buildings represents a huge potential for developing more livable cities through inner-city areas regeneration.

In the selected cases studies, the designs implement a strategy that balances the demands of reuse and preservation of historic buildings with goals of improving the quality of life within the city. Therefore, the solutions were to revitalize and enhance the living circumstances. As a result, the research demonstrates relationships between adaptive reuse actions and desired goals of city livability.

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