

Adaptive Reuse Main Strategies for Heritage Building to Boutique Hotel-A Case Study of Sahib Mahal at Badin District

Geeta Khatri¹ and Ajay Kumar Khatri²

¹ Department of Architecture, Mehran UET, Jamshoro, Sindh, Pakistan

² Department of Medicine, Liaquat University of Medical and Health Sciences, Jamshoro

Abstract: Adaptive reuse is the way toward reusing building to new purposes. The aim of my research is to investigate the existing condition of the "Sahib Mahal" and recommend the new guideline for adaptive reuse. For that study, we focused on a one kind of adaptive re-use of heritage building as a boutique hotel according to the four main strategies of changes and impacts. There have been established criteria for changes and impacts, physical change, economic change, value change, and social impacts on the surrounding community. Research method is mixed qualitative and quantitative with case study type. As a mixed qualitative and quantitative research, the qualitative method focused on documentation on the case study named 'sahib mahal badin': location, building history, the surrounding community, and building characteristics, while the quantitative method focused on analyzing data in such a way that we could numerically compare the results easily. For the data collection, physical, economic, value change and social impact collected from secondary data, surveys, in-depth interview and questionnaires from owner and informants from surrounding community. The results showed that the level of physical, economic, and value changes of this heritage building to boutique hotel rose up after the reused, while the level of social impacts remains the decreased a bit less than the level before the reused. The four main strategies for investigative physical, economic, value, and social issues and the procedure utilized in this investigation can be a good guideline for producing another research procedure for different investigations of the changes and impacts of adaptive reuse of heritage buildings.

Keywords: Adaptive re-use, heritage building, sahib mahal, boutique hotel

I. INTRODUCTION

Pakistan is becoming more aware of the value of cultural heritage. There are many heritage buildings in Pakistan, each with its own history and value. Such heritage buildings have an impressive architectural style that needs to be preserved to recognize the quality of past workmanship and historical features, as it will be evidence of future generations of local history. With adaptive reuse towards heritage buildings, it can give many benefits in lots of aspects but what is adaptive reuse? It is a process that changes a disused building into a new building that can be used for a different purpose. So, this is a common mean adaptive re-use of heritage buildings is a form of strategy towards preservation of cultural heritage, as it extends the building's life and avoids demolition waste, encourages reuse of the embodied energy and also provides significant social and economic benefits to the society. Therefore, government of Sindh put thoughtful step on that they would be converted for a better and productive use. It was officially announced by the government to convert the heritage buildings into approved museums, parks, educational institutions, and hotels. So, for this study, we focused on a one kind of adaptive re-use of heritage building as a boutique hotel-a case study of 'sahib mahal' at badin district, according to the four main strategies.

In the case of adaptive reuse heritage building converted to the boutique hotel, there have been many standards for physical renovation, business investment, and heritage building evaluation (pongsermpol & upala, 2017). Started with the substantial renovation, there were architectural and interior standards applicable to boutique hotel design, e.g., a boutique hotel had to have four main distinct types of areas: guest room, public area, administration office and 'back-of-house' facility (pickard, 2002). Regarding business investment, there are five main issues in boutique hotel business operation: service design, operation, sales and marketing, finance and accounting as well as management (suksawasdi, 2015). To end with heritage building evaluation, there have been some standards regarding heritage value and authenticity such as cultural and socioeconomic value including regarding authenticity form and design, materials and substance, use and function, traditions, techniques and management systems, location and setting, language and other forms of intangible heritage, spirit and feeling, and other internal and external factors (whc, 2012). In addition, regarding social impacts to the surrounding community, there have not been many studies in the literature despite their significance. The social impacts focused on tourism could be perceived as positive, negative, or neutral. Each individual case can exhibit results that are much different from other cases (pongsermpol & upala, 2017). Therefore, adaptive reuse hotel projects have always resulted in changes of physical, economic, and value aspects as well as social impacts on the surrounding communities, so this study kept the focus on these four main strategies: physical, economic, and value change as well as social impact.

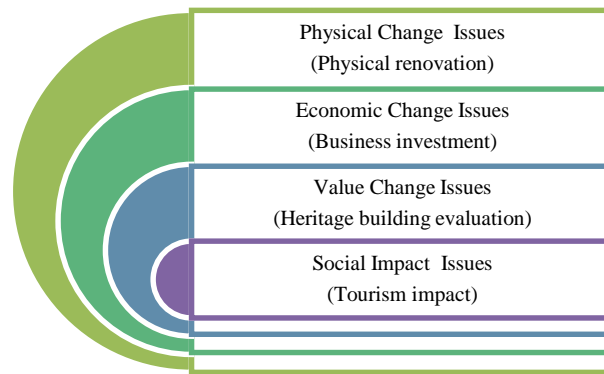


Fig. 1: Four main issues of research

II. RESEARCH AREA

Sahib mahal located in city Tandobhago, district Badin. The total area of the district badin is 6,527 square kilometres and the district badin comprises of five tehsils, namely: badin, matli, tando bago, golarchi and talhar. Historically, the area was the centre of the ancient indus valley civilization. With the introduction of the devolution system⁴, the talukas have been subdivided into 46 union councils, 109 tapas and 511 dehs⁵. Badin has a mild climate. Rainfall is highly erratic and unpredictable with an average rainfall of 258.8 mm⁶. Badin district is situated between latitude 24° 13' to 25° 12' north and longitude 68° 21' to 69° 20' east. The district is bounded in the north by hyderabad, in the east by mirpurkhas and tharparkar districts, in the south by the arabian sea and rann³ of kutch, which also forms the international boundary with india, and in the west it borders thatta and hyderabad districts.

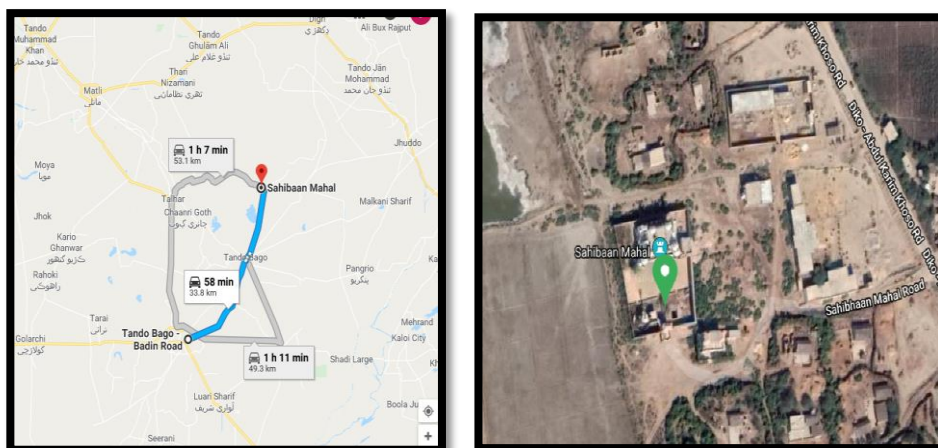


Fig. 2: Location Maps of “Sahib Mahal Badin”

III. BACKGROUND HISTORY

Sahib mahal was built by mir khuda bux talpur, one of the members of royal mir family. He built the mahal in his wife’s name. The mahal was constructed in 1922 to 1947. According to the old natives of this area the labors came from india to build this beautiful monument. The wood and the furniture were imported from belgium. The time of 1940s there were no railway track and roads which connects the metropolitan cities to this boutique town of khadaro so all the stuffs came through ships. Mahal’s boundary is not more than four acres and is surrounded by lush green farm. The building had three stories, five entrances, six circular domes, and two each on ground, first and top floor. Each dome has a room with terrace and colorful windows. The castle also has two terraces each on left, right and back side. On the front right there is a round shaped swimming pool which can be reached from ground as well as first floor by walking over the boundary wall and also via an underground tunnel.

The mahal is built at the center of the beautiful fields and a beautiful view can be seen from the roof in sunrise and sunset with the natural fragrance of fields. Neem trees and other kind of trees outside and inside the mahal are making it look more beautiful. This mahal has not yet lost the true essence of it. The entrance door of mahal is 70 years old and the wood is damaged but still it gives a suitable image of mahal. The sahib mahal is no doubt an amazing creativity of hands. There is a sculpture of taj mahal on the entrance of mahal.

A. Materials used in construction

Building is made with cement brick masonry. Surrounding base of building is made with bricks. All walls are found to be plastered with cement & river sand, masonry work has done with burnt bricks with lime & river sand mortar. Cemented colored tiles (8"x8"x3/4") are fixed at inner floor of the building. Whole building is plastered with cement except two walls in 1st main entrance verandah walls only finishing layer of lime plaster found and white wash is done on it.

B. Design characteristics of "Sahib Mahal Badin"

1. Ground floor

Ground floor consists of five verandas (main front, 2nd front, back, left, right), three rooms, one kitchen, two stair cases, three bathrooms, two domes rooms, four store rooms. Stair case exists in right side veranda to go top floor. The covered area of the ground floor is 463sq. Yards (4160-sq-ft). Height of ground floor is 12.6'. Walls are plastered with cement sand mortar & distemper color is used on walls. Ground floor contain compound wall in between sahib mahal structure consists, the boundary wall needs restoration. It has swimming pool within the boundaries of mahal now it is in very bad condition needs restoration work. Plaster of kitchen walls are totally scratched out & major masonry portions are demolished needs re-masonry for the demolished parts of the wall. Floor is entirely destroyed needs concreting plastering & tile work.

2. First floor

The covered area of the first floor is 5944 sq-ft. It contain two open to sky terrace (front & back). Its front & back verandah are covered. It consists of two terrace in left & right side of the first floor. It consists of three rooms. It has seven balconies. It consists of two bathrooms. Five doors are fixed for connecting the open terrace. Nine doors fixed in rooms & one door is fixed in back sided to terrace. At the right side of the front verandah two domes rooms to be found which are consisting of three doors & six windows with one balcony. At the right & back sided terrace two circular domes rooms which are in fine condition.

3. Second floor

Second floor consists of one room, seven balconies, and two domes room. Height of second floor is 12.6'

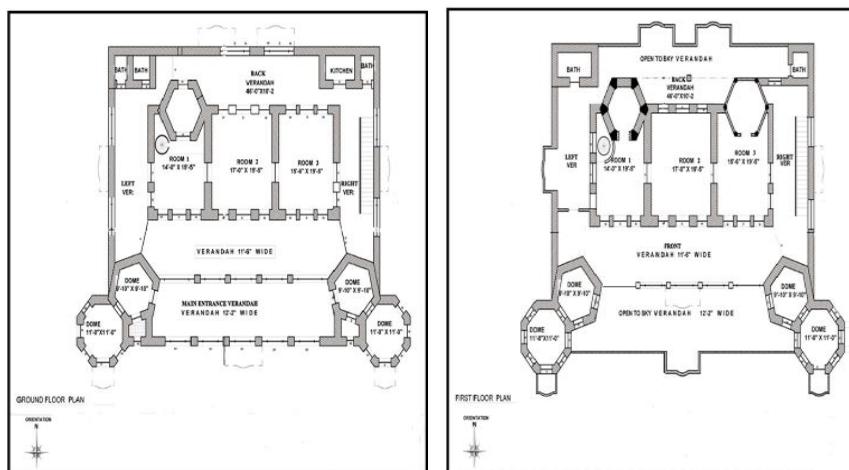


Fig.3: Existing floor plans of "Sahib Mahal Badin"

IV. PROBLEM STATEMENT

Approximately 30% of our country have already wasted the production of buildings in Pakistan; such buildings may need minor support to make it stable and safe to visit. It is difficult to maintain the building structure with keep the originality of the building which it is the attraction of the tourist to come. Maybe some of us were think those are not necessary for our economy but let's thinking about it for a moment, if we can reuse the building that will be an economy solution problem for our country rather we demolish the building and rebuild the new one.

V. AIM

Aim of the research is to analyze the existing condition of the "Sahib Mahal" and recommend the new guideline for adaptive reuse of heritage building to boutique hotel.

VI. OBJECTIVES

- To collect the data regarding four main strategies of changes and impacts.
- To find out the physical, economic, and value changes that occurred after an adaptive reuse of "Sahib Mahal".
- To find out the social impacts on its surrounding community.
- To provide the information and guidance for adaptive reuse of heritage building as a boutique hotel building.

VII. RESEARCH METHODOLOGY

Research methodology that explains the target case study, concern issues, research tools, data collection, and mixed qualitative and quantitative method.

The study focused on one representative case, “sahib mahal badin” and used data collection methodology constructed according to the four main issues of concern.

As a mixed qualitative and quantitative research, the qualitative method focused on documentation on the case study named ‘sahib mahal badin’: location, building history, the surrounding community, and building characteristics, while the quantitative method focused on analysing data in such a way that we could numerically compare the results easily.

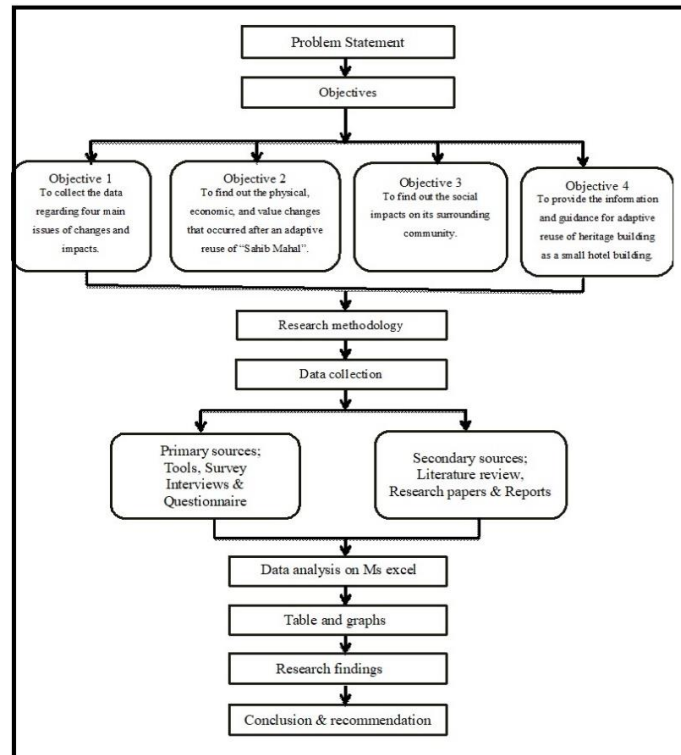


Fig.4: Research Flow Chart

VIII. DATA COLLECTION

There were two main steps in data collection. (1) In the pilot survey, the first round of interviews with the building owner and twelve informants from the community surrounding sahib mahal badin was in March 2018. (2) For the final stage of data collection, the survey and the second interviews were performed in September 2018. The interview guideline form for the building owner and informants was adjusted from that used in the pilot study so that it was easier to understand and suitable for differentiation of changes between the past and the present.

IX. RESULTS

Data obtained by assessments from the building owner and 12 informants from the surrounding community, which are separated into five sections. Data obtained by surveys from the building owner and informants from the surrounding community, which are separated into four sections.

- Physical Change
- Economic Change
- Value Change
- Social Impact

M.S Excel is used to generate bar charts from the survey data.

A. Physical change

Physical change is focused on building physical renovation, Sabib Mahal is facing many problems, structural, architectural and various other monument related problems. Sahib Mahal was left vacant for a period of time, the physical condition was in disrepair due to lack of use. Mir ali akbar talpur is now a caretaker of this mahal but because of the less interest it has become the damage palace with no renovation.

Culture department should pay the price of property and undertake this property to renovate this heritage building because of the infrastructure of the mahal has a much importance regarding the historical aspect and also according to the cultural and

archaeological fields. Data on physical change were collected from secondary data, survey, and in-depth interview from “Sahib Mahal” owner. Sahib Mahal was recently renovated by culture and archaeological department. Several views are shown in figures below.



Fig.5: Exterior views before and after renovation of “Sahib Mahal Badin”

For the physical change study, we investigation on physical changes occur in sahib mahal before and after renovation, with the help of five main issues.

1. Building Structural Strength

As for the “Building’s Structural Strength”, the column, beam, floor, and roof framing were all in not good condition. There was change in structural strength after renovation.

Reinforcement used in beams, columns, and roof slabs it is not found in good condition some portions the reinforcement bars appeared and rusted due to humidity or weathering affects needs renovation of bars. Some views are shown in Figures below.



Fig. 6: Views of structural renovation of “Sahib Mahal Badin”

Columns constructed with R.c.c and chips work is found over columns and found in average condition. All cantilever beams found to be damaged, needs repairing work some of them should be dismantled and needs re-fix. Floor inside the building is made with cemented tiles which are in not good condition and floor tile should be removed out and levelling concreting and replacing with new tiles with same specification, material and techniques used and were improved after the renovation.

2. Building Architectural Condition

For the “Building Architectural Condition”, the former conditions of the brick wall, false ceiling, and door-window system were low level and got better after renovation.

Architectural work on outer sides of building found in week condition, it is much improved after the renovation. Several

views are shown in Figures below.



Fig. 7: Architectural condition before and after renovation of “Sahib Mahal Badin”

The former plaster of compound wall, sahib mahal walls, kitchen and swimming pool should be removed and re-plastered after renovation.

White and grey deposits found on brick masonry walls of the mahal it shows the presence of soluble salt due to salinity problem & humidity, wall needs water proofing coat at least 2' from ground level to control the dampness, colour of walls almost scratched, distemping required.

Whole building is plastered with cement except two walls in 1st main entrance veranda walls only finishing layer of lime plaster found and white wash is done on it, plaster is almost removed & cracks are occurred on it, it needs removing of old plaster & required re-plaster.

Plaster and brick masonry is deteriorated from various parts of building because of water logging and salinity problem.

All doors, windows and ventilators found in worst condition after renovation these are cleaning, repairing, replacing of glass and polishing.

All of the finishing materials such as floor and wall finishing materials were in dilapidated condition and were improved after the renovation.

3. Various Building Systems

As for the “Various Previous Building Systems”, electrical, water supply, drainage, air-conditioning, and fire protection systems.

The air-conditioning, and fire protection systems had been in the worst condition or nonexistent and were improved into a good, very good, and moderate condition, respectively.

The moderate condition of the former electrical, drainage system was improved into a good condition while the bad condition of the water supply system was improved into a good condition as well.

4. Interior Condition

As for the interior conditions, all built-in furniture, movable furniture, and decoration were previously presented but, after renovation they were installed in good condition, except the appliances were not available. Several views of the interior are shown in Figure:

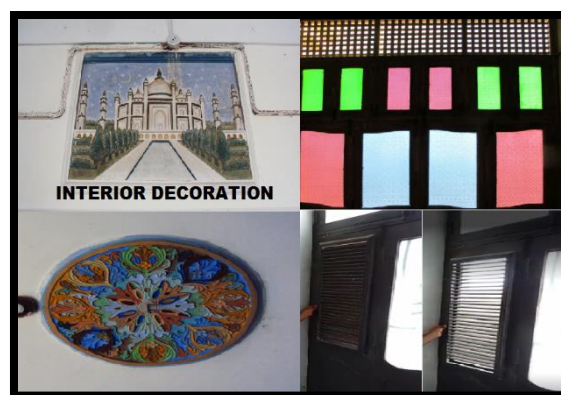


Fig. 8: Interior decoration of “Sahib Mahal Badin”

5. Exterior Condition and surroundings

Lastly, as for the exterior and the surroundings, previous landscape, plants and fences had been present form but after renovation there were much improve and good condition. Several views of the exterior are shown in Figure:



Fig. 9: Exterior views of landscape, plants & fence of “Sahib Mahal Badin”

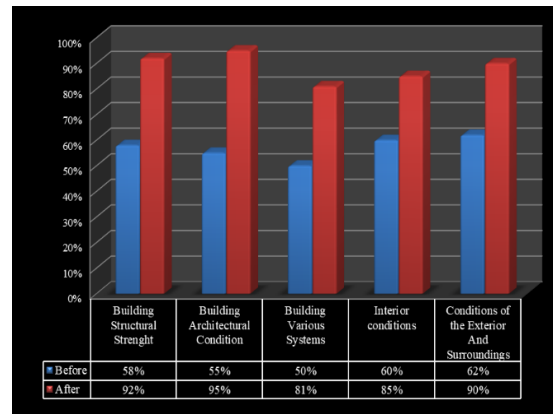


Fig10: The bar chart shows that a summary with numerical evaluations of the physical changes

B. Economic change

Economic change focused on boutique hotel business, as the data on economic changes were collected from survey and in-depth interviews from “Sahib Mahal” owner.

For the economic change study, we find out the changes occur in building economy after reuse as the boutique hotel building with the help of five main issues.

1. Building Price

The “Building price” that mean the building overall estimated value that was at the high level before the reused, and rose to a highest level after the reused.

2. Exact Operational Cost Per Month

The “exact operational cost per month”, such as for structural work, building work, interior work, and mechanical system work for the before vacant building was at the low level, after the reused, the exact operational cost per month was at a moderate level.

3. Average Income Per Month

The “Average income per month” for the before vacant building was at the zero level, after the reuse, the average income per month assessed from hotel operation with deducted operational expenses was at a high level.

4. Owner’s Satisfaction Score

The “Owner’s satisfaction level” was at a moderate level before the reused and after the reused, level of satisfaction toward the income from hotel operation rose up to a high level.

5. Overall Score Form Consumer’s Rating

The hotel’s “Overall score from consumer’s rating or Tourist satisfaction” was at the high level before when it was a vacant building, after the reused satisfaction score by visitors much improved from the high to highest level.

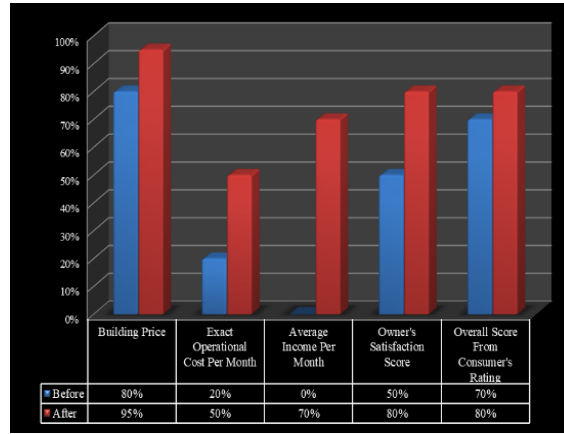


Fig.11: The bar chart shows that a summary with numerical evaluations of the economic change

C. Value change

Value change focused on heritage value, as the data on value changes were obtained by in-depth interview and questionnaires from “Sahib Mahal” owner and 12 informants who had been living near the building, we found that the overall level of perception of the boutique hotel building value increased high to highest after the building was reused. On the average, almost every perceived value of the former building got a high score than the perceived value after the reused into a boutique hotel. For the value change study, we find out the changes occur in building heritage value after reuse as boutique hotel building with the help of five main issues.

1. Value Of Cultural Heritage Identity

The perceived values of “Cultural heritage identity” was at the high level before the re-used and rose to a slightly more than high or same high level after the re-used.

2. Design Value

“Design value” rose up to highest level after the re-used

3. Aesthetic Value

While the “Aesthetic value” rose up to slightly more than high or same after the re-used.

4. Cultural Value

However, the new perceived “Cultural value” was at a high level, before and rose to slightly more than high or same high level after the reused.

5. An Integrated View Of All Values

The “Integrated view of all perceived values” was at a high level, rose up highest from the value before the reused.

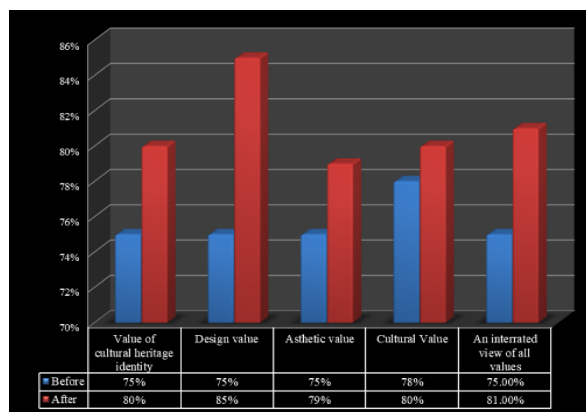


Fig.12: The bar chart shows that a summary with numerical evaluations of the value changes

A. Social impact

Social impact focused on tourism impact, as the data on social impact were obtained by in-depth interview and questionnaires from 12 informants from the surrounding community. We found that the overall impact on the community before and after the re-used to boutique hotel project was at a low level. On average, the level of each impact was low and only slightly different. For the social impact study, we find out the social impacts on surrounding communities after reuse the sahib mahal as a boutique hotel building with the help of five main issues.

1. Environmental Impacts and Pollutions

The before and after levels of perceived impact on the “Environment and pollutions” (Noise, Odour, traffic condition, and population density) were the same at a low level.

2. Community Economic Development

For the level of perceived impact on the “Community economic development”, (Income from tourism, and Income from other means) it was slightly higher than that before the project was done on the average. Apparently, this increase was from the consideration of higher income from tourism development.

3. Stakeholder’s Relationship

For the “Stakeholders’ relationship” (Community interaction, and Participation) were also the same but at a slightly higher level. The adaptive reuse of heritage building to boutique hotel made the community physical environment better, but they did not have much effect on the community’s infrastructure. There was more public social interaction but more than half of the informants expressed a neutral opinion, no positive or negative comments.

4. Privacy Impact

For the impact on “Privacy” (Original way of life), former lifestyle and serenity were not affected even though the community became better known to outsiders.

5. Security Impact

The perceived level of impact on “Security” (Robbery, Crime) was higher than before shown from the lower level of the possible danger. Some informants thought that the security at night was heightened because of more luminance in front of the building.

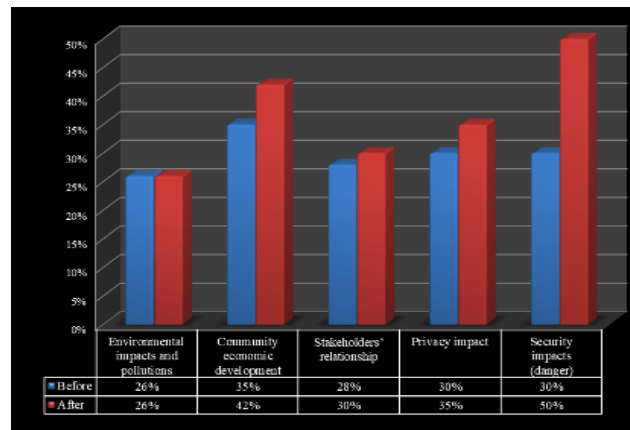


Fig.13: The bar chart shows that a summary with numerical evaluations of the social impacts

X. DISCUSSION AND GUIDELINE

Discussion which explains analyze the results in the overview, and result guideline; the process for data analysis under this research was set out in three parts.

- Outcome of changes and impacts effected by AR-HB-SH
- Comparative results of changes and impacts
- Result guideline

A. Outcome of Changes and Impacts Effected By Ar-Hb-Sh

For the physical change, we found that the average level of physical change perceived by the owner rose up from a moderate level (57%) before re-used to a level between moderate and high (88.6%) after re-used, the former building’s structural strength and architectural condition was in high level but the levels of various building systems, interior condition, and conditions of the exterior and the surroundings were successively moderate. After re-used, the building’s structural strength, and architectural condition, was perceived to be at a highest level, and building various systems, interior conditions and exterior conditions and surroundings at a high level.

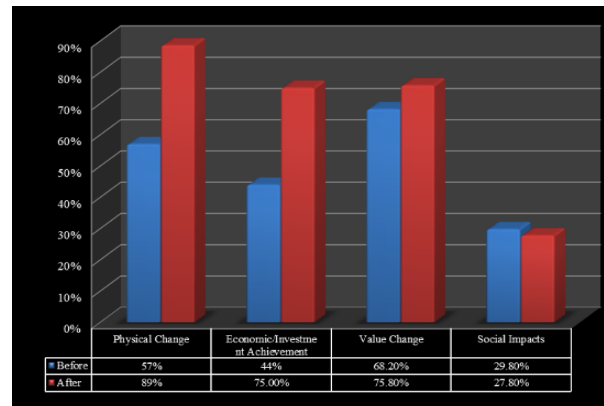


Fig.14: Bar chart of levels of changes and impacts effected by AR-HB-SH

B. Comparative results of changes and impacts

With respect to the four main strategies, the results from the assessment of the adaptive re-use of heritage building to boutique hotel building named “Sahib Mahal Badin” showed that the level of physical change rose up a little more than twelve percent (12.8%) while the level of economic change rose up thirty one percent (31%) while, the level of value change rose up a little more than five percent (5.4%) and while the level of social impact was at the same level or a little less than before reused (-2%).

C. Result guideline

Four main strategies used in this research can be a good general guideline for changes and impacts of adaptive reuse of heritage building to boutique hotel. Good business management and focus on the intended target guests that match well with a particular project are very significant for business success. In addition, adaptively reused boutique hotels that were not heritage buildings can also be studied this way. The four main strategies can be used to examine any old buildings turned into boutique hotels with similar procedures.

Comparatively, these adaptively reused boutique hotels might have low scores on value perception and social impact issues but high score on the level of physical changes and it might achieve a high score in economic changes. No matter what they may be, the results from this kind of studies can make the hotel owner and other informants understand their situation more clearly. Most hotel owners may be a newcomer to the community that the hotel is located in. If there is not much negative social impact to the surrounding community, the owner can run their hotel business happily.

On the other hand, if there are a lot of social impact issues to the community, the owner and stakeholders can examine what the causes are and make an effort to solve the problems such as participating with the community more and developing the environment of the community more, and so on. The hotel owner can compare the levels of physical and economic changes of his AR-HB-SH to those of other AR-HB-Boutique hotels. Moreover, if the owner can add some values to the building, he can enhance his hotel business as well. Referring to the introduction, this case study is a good representative of adaptive reuse of heritage building to boutique hotel of which changes and impacts to the community were clear.

XI. CONCLUSIONS AND RECOMMENDATION

For changes and impacts, this research focused on the physical, economic, and value changes, as well as social impacts of adaptive reuse of a heritage building to boutique hotel named “Sahib Mahal” in Badin. We found that the level of physical, economic, and value changes rose up to 12.8%, 31% , and 5.4%, respectively, from before the reuse while the level of social impacts stayed the same or decreased very little from the level before the reused (-2%).

This mixed qualitative and quantitative research may not be generalized completely to another case with a significantly different context, but the four main strategies, physical, economic, value, and social issues, used in this research can be a good general guideline for generating a new research procedure for other researches of the changes and impacts of adaptive reuse of heritage building to boutique hotel.

A. Conclusion

For changes and impacts, this study focused on the physical, economic, and value changes, as well as social impacts of adaptive reuse of a heritage building to boutique hotel named “Sahib Mahal” in Badin. We found that the level of physical, economic, and value changes rose up to 12.8%, 31% , and 5.4%, respectively, from before the reuse while the level of social impacts stayed the same or decreased very little from the level before the reused (-2%).

B. Recommendation

This mixed qualitative and quantitative research may not be generalized completely to another case with a significantly different context, but the four main strategies, physical, economic, value, and social issues, used in this study can be a good

general guideline for generating a new research procedure for other studies of the changes and impacts of adaptive reuse of heritage building to boutique hotel.

C. Scope of the Research

The scope of the research focuses on sahib mahal as a boutique hotel in the Badin area. As far as the scope of the research is concerned, we chose only this over 70-year-old building with a deeper focus on mixed qualitative and quantitative research. The reason for this selection was that "Sahib Mahal" was in the inner Badin area, a good representative who was located in a mixed-use community, an old, outstanding historical trading community.

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