

Sustainable Urban Rehabilitation of Historic Markets

“Comparative Analysis”

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Abstract - The functional and economic value of the heritage areas is considered one of the important and essential supports for the urban rehabilitation projects. All types of historic markets have its outstanding cultural, functional, and socio-economic values, which forms generally main resource and basic promotion for sustainable development. At the same time, each type of historic markets have an individual urban character; historic markets of craftsmanship, historic commercial markets, and historic vernacular markets, that captures a physical reference for visual identity and activity based identity. However, it seems to be a similarity of functional and heritage values, it is an essential differences in the intervention policies and criteria of rehabilitation. The paper aims to discuss a comparative analysis among the three types of historic markets, their urban character, cultural significance, and the rehabilitation polices. By using case study analysis, the paper concludes the main criteria and principles for intervention typology.

Keywords: *Sustainable urban rehabilitation; urban conservation; historic markets of craftsmanship; historic commercial markets; historic vernacular markets.*

1. INTRODUCTION

A large number of heritage areas in the old city centres are rich with their outstanding architectural elements and valuable historic public spaces, most of these areas have a type of historic markets or more, these historic markets are considered one of the most important cultural memory of the past communities; the architectural character, craftsmanship, the old life style with its customs, goods and traditions, and the vernacular commerce that were famous locally and regionally. Many of these historic markets in the developing countries maintain their original urban character with the aim of conserving and developing the valuable heritage areas and its economic identity. As cities modernized this inherited urban heritage areas began to show signs of stress became congested by car traffic; informal street vendors began to invade public spaces, and traditional land use patterns failed to meet the needs of the rapid development experienced by the cities. As a result, many historic commercial areas in the old city centre lost

importance and presence in the city life and became a source of informal uses, at the same time; the original historic identity began to disappear. In contrast to the perception of modernity reflected by high-rise buildings and highways, historic markets came to be seen as traditional and backward. Consequently, the most dynamic urban economic activities and high-income households abandoned many historic commercial centres, which often led to further deterioration and obsolescence of buildings and public spaces [1]. On the other hand the existing projects of urban rehabilitation of these historic markets in the Arab and Islamic countries need to discuss and re-evaluate its concept and results, most of these projects are suffering from an absence of effective policies and programs to promote rehabilitation; others have lost its outstanding cultural and social values. There is a lack of institutional arrangements and coordination in designing and executing heritage conservation plans, an absence of cultural and awareness, and a little interests from the specialists. These issues must be addressed in order to develop programs, for the rehabilitation of historic markets and focus on the conservation criteria and principles for the urban heritage inherent within these valuable commercial and craft areas.

2. URBAN CHARACTER AND TYPES OF HISTORIC MARKETS

“Society needs both cultural and physical roots, the historic qualities and visual image of the cities can satisfy at least one of these needs” [2]. The historic markets, in widely forms and functions, present a multiple significant roots of societies; culturally, socio-economically, and physically. These are considered as focal valuable areas within old cities where the vital core of history and collective memories are well established.

Old Arabian and Islamic cities have known historic markets such as craft markets, commercial streets, or wholesale vernacular markets; each type of them has a special character and outstanding identity.

2.1. Historic markets of craftsmanship

The concept of functional society has a deep location inside the Islamic cities, as in craftsmanship areas, which characterised the old Islamic capitals. The great economic activities are centralized in the core of these areas, the main value of these markets were the promotion of the industrial and economic role of the Islamic civilization over the world, that is refer directly to the political importance, and finally to meet the community needs.

These crafts areas became the cores of quarters, where the residential areas were established around, and the workers, artisans, craftsmen and merchants were settled in. Over time, almost every street within the crafts central areas had its individual craftsmanship, such as the markets of the copper, gold, arabesque, carpets, etc, which formed socially and economically "artisans communities".

The urban pattern of the historic markets of craftsmanship is widely famous with multi types of architectural buildings that reflect and matching with the crafts function and needs. There were three patterns; [3]

The open courts pattern "Wekala"

Where shops-Al Hawaneet- are attached together around big courtyard in the ground level, and the upper level were rented to the workers and artisans, as shown in figure1, which were known as Al-Wekala. The main social values of this type were the whole privacy for both the crafts and community resident community; the central courts were considered the core of social networking and commercial or economic activities.

The linear pattern "Kasaba"

This type is the main handicraft shops which were aligned on both sides of the main streets or wide secondary streets- that were open ended- of Islamic cities, which are called "Al- Kasaba", such as Kuwait historic market in fig 1, the main character in this pattern is the essential importance and effects in the urban tissue and visual character of Islamic cities.

The caesarean pattern "Sakaef"

Caesarean was known as a commercial building in Greek and Roman civilization, which means the imperial markets. This type was settled in the city centre and consisted of continuous rows of craft shops aligned narrow, connected and shaded streets, as Kuwait and Istanbul Caesarea market in fig 1.

All these patterns of historic markets have a strong urban character, which may summary in the following features;

- A great sense of place with continues cultural memory returns to the Islamic civilization period.
- Present a homogeneous visual character within the crafts and commercial spaces
- All linked urban spaces and building uses service the commercial function
- The urban pattern and character stems from the community culture and need
- The historic market identity based on the historic activities which have an essential effect in the place image

- Urban tissue reflects the social, cultural, and environmental dimensions of the urban context.

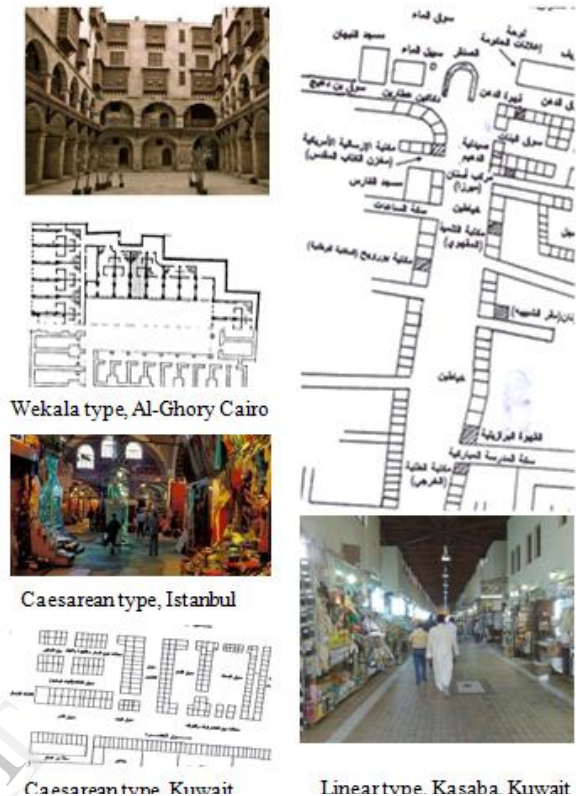


Fig.1 Urban patterns of Islamic historic markets of craftsmanship

2.2. Historic commercial markets

The concept of commercial squares returns to the Greek and Roman city centres, where Agora and Forum had formed the commercial and social core of these cities, which characterized by the connected shops, paths with colonnade, wide social spaces, and squared or circular patterns. This townscape had moved and developed in the medieval cities by the clear concept of the commercial market which centred the plan of the city beside the church and extended aligned the main streets. The Arabian cities had affected by this concept and the next time wrap of the Renaissance with the Ottoman period on the Arab countries [4]. The example of Egypt was the best one of the commercial districts developing, which started with Mohammed Ali – 18th. Century – till khedive Ismail which established the classic Cairo with fundamental shift from the Islamic patterns to the European character, figure 2 presents the main commercial districts and streets in Cairo [5].

The urban pattern of these historic commercial markets is varied- according to areas- from *commercial district* to *commercial street*. Both of them are related to some features;

- A wide continuous streets with attached shops for mixed types of goods, often with roofed paths
- Linked with circular squares and a radial patterns, some have large space for commercial activities

- Contain a city centres mixed use; administrative, cultural, services, and residential uses.
- Strong urban and architectural character with outstanding elements and styles.

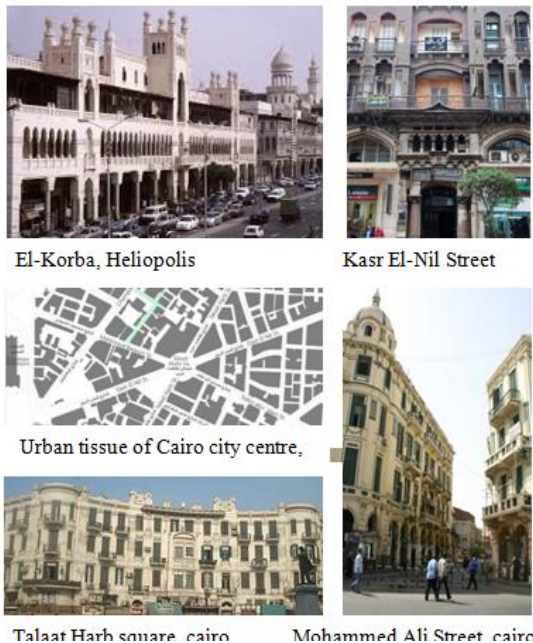


Fig.2 The urban character of the historic commercial districts in Cairo city centre and Heliopolis

2.3. Historic vernacular markets

Vernacular markets are opened or covered sites at the city centres or edges, where commodity trading and heritage products, agricultural and craft folk, aromatic plants, etc [6]. These markets, as historic value, established its cultural and social significance from the functional continuity and the community need, particularly, for the wholesale and its relation with the lower income districts. Vernacular historic markets gained their heritage identity without outstanding buildings or historic architecture, special orders or style, indeed its outstanding visual identity are based on the heritage activities and traditional products. The vernacular historic markets- by extremely difference with the historic commercial markets with strong architectural style or historic markets of craftsmanship with deeply place heritage identity- have a strong potentiality for socio-economic values by the essential correlation with the community needs. The main urban patterns of these commercial areas are [6];

Extended bazaar pattern;

Consists of two facing groups of bazaar type which are separated by a covered passage, such as Aswan vernacular market in figure3, the bazaar type has a harmony in architectural simple character and the types of heritage goods. It is the most patterns that related to the city urban tissue.

Open yard pattern;

The shops are isolated in temporary structures such as wood or tents, around an open yard which forms the market centre and activity forum.

Ruler pattern;

The shops are attached together and straight aligned, facing an aggregated square for the commercial activities, such as Al-Zall vernacular market of KSA, in figure 3. This pattern are often located in the edge of the cities and specialized in the wholesale trading.



Fig. 3 Vernacular markets and traditional products and commercial character

The three types of historic markets have a special urban character which can promote the diversity value of heritage types and enhance the cultural significance of the historic cities.

3. HISTORIC MARKETS AS AN URBAN HERITAGE VALUE

Conservation decisions- whether they are concerned with giving a building “heritage” status, deciding which building to invest in, planning for the future of a historic site, or applying a treatment to a monument-use an articulation of heritage values [7] (often called “cultural significance” which means aesthetic, historic, scientific or social value for past, present or future generation as a definition in the International Charter for the Conservation and Restoration of Monuments and Sites (Venice 1966) [8].

The important of historic markets as an urban heritage significance returns to the following justifications:

3.1. Aesthetic value

The aesthetics of the past might simply be appreciated and valued for their own sake [9]; it may result from the combination or juxtaposition of many historic buildings that reflect creative and effectiveness abilities to highlight the essence and substance [10]. So that historic markets have great aesthetic appeal which results from its picturesque qualities, as in figure 4;

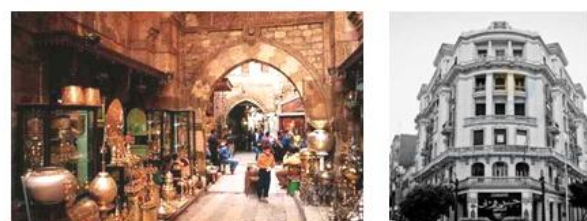


Fig.4 Architectural forms and harmony in Khan El-Khalily market, historic Cairo and the commercial squares in Cairo city centre.

Both of the historic markets of craftsmanship and historic commercial markets are redolent of a period of genuine craftsmanship, individuality in forms, physical comfort, simplicity of design forms and richness in offered goods, exemplifies the human scale, harmony of colours, openings, and proportions, diversity in facade design, outstanding types of craftsmanship, creativity in design and art, specific and distinctive architectural character locally and regionally. Oppositely, the vernacular historic markets which gained its aesthetics value from the unity of its activities, the harmony of its visual image, and the simplicity in forms and expression.

3.2. Value for architectural diversity

Most cities are made up of buildings from a range of periods in a variety of styles and idioms. Thus, the past may be valued because of its juxtaposition with the present [9]. In particular, historic markets- in each type- provide a unique potent in the cityscape, contrasting with the interminable monotony of much modernist architecture, but integrating with previous periods and the subsequent.

Their essential architectural character results from the strong visual image which combines between individuality and personality from the unity of internal spaces and the harmony and contribution with the urban context [10].

Generally, historic markets of craftsmanship have its value through their contribution to the architectural record and the urban scene. On the other hand the strong identity inherent in historic commercial markets is reflected by the architectural order and unique style which refers a long richness record of architectural elements, particularly in city centres which have developed with harmony along ages. However the essential value of the vernacular markets is related to the prevailing activity, not from the architectural character, they present one of special spontaneous type of architecture which may contribute in the architectural diversity.

3.3. Value for environmental diversity

The human scale environment of the interiors of many historic markets has a great contrast to the monumental scale of the modern shopping malls, as figure 5. The essential value of the traditional environmental techniques; usage of natural materials for construction and finishing, natural ventilation system, shading types and thermal insulation, natural lighting, energy control, etc.



Aleppo market

Istanbul historic market

Fig.5 environmental diversity in historic markets

3.4. Value for functional diversity

The functional diversity value is resulting from different types of space in buildings of varying ages, which enables a mix of uses in an urban context [9]. Thus there may be a synergy between different functional uses in historic markets resulting from the nature of compatibility and harmony inside the market and synergistic relationship with the nearby uses of city centre. Similarly, historic markets areas- in each type- may offer lower rents that attract categories of economically marginal but socially, that allow localization of important activities to have a place in the historic area.

3.5. Resource value

The definitions of conservation focused on checking the rate of exhaustion of natural or human resources and checking obsolescence in man-made resources, such as buildings whether beautiful, historic, or just plain practical, buildings may be better used than replaced [11]. The historic markets have their resource value in the tangible and intangible heritage contents; figure 6, their value is growing when investing resources by less expensive in terms of energy usage.



Al-Safafir Market, Baghdad Istanbul market Khan elKhalily,

Fig.6 The human resource value and intangible heritage of craftsmanship

3.6. Value for continuity of cultural memory

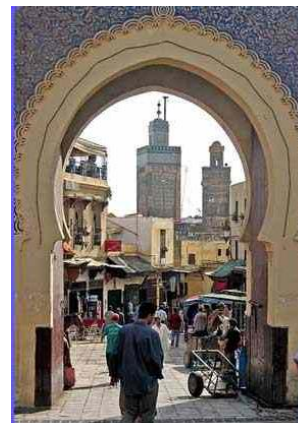


Fig.7 Historic market of Fez city "Morocco", the continuity of cultural memory is the main heritage value.

It is not merely an aesthetic or visual continuity, but also a continuity of culture memory that seems important. Visible evidence of the past can contribute pedagogically and educationally to the cultural identity and memory of a particular people or place [9].

The built environment of historic markets is one of the elements which are compatible and homogeneous with other traditional craftsmanship, old goods, smells, sculptures, customs, etc. It

also provides the main context for understanding the history as a living part of the community life and development with a sense of orientation to promote identity and local personality, figure 7. It is important to increase concerns for the continuity of identity that compatible with

the community needs, in the historic markets of craftsmanship, there is still a strong cultural identity but also a full reflection to the present needs that increases the cultural memory value and highlights the heritage significance.

3.7. Economic and Commercial value

Most of historic areas generally have an aesthetic, social, and cultural values rather than a tangible economic or commercial value. Nevertheless, in a historic context where public funds cannot subsidize all required for conservation, the economic and commercial justifications for conservation must ultimately underpin all others [9]. So that, the commercial value -in all types of historic markets - is the essential core of conservation and rehabilitation policies, in the time of planning a strategy for conservation investment and marketing such as tourism, museums, cultural and recreational activities, etc, as shown in figure 8. The conservation strategy in historic markets is oriented directly to preserve the historic architectural character, craftsmanship, handmade and traditional products, which are, themselves, considered great economic and commercial values for the local communities and governments at the same time. Indeed, there are dual economic values on the level of the tangible heritage; Cultural and natural context of historic markets, and on the level of intangible heritage; traditional practices in craftsmanship, costumes, traditional food, smell, folks, sense of historic place, spiritual symbols, meanings, and memories.



Jeddah historic commercial market, KSA, Khan El-Khalily, Cairo



Aleppo historic market, Syria Istanbul historic market, Turkey

Fig.8 Craftsmanship in Islamic market and economic and commercial values

As a result of the previous analysis of urban character of historic market types and their heritage values diversity, historic markets are considered the essential cores of the heritage cities; each type of them has a special cultural sense and socio-economic significance. Generally, *the paper concludes* the main differences of the three heritage types of historic markets on the level of urban character and values as summarized in the following table;

Tab.1 The urban character and cultural significance of historic market types

Urban character & values	Historic market of craftsmanship	Historic commercial market	Historic Vernacular market
Location	Inside historic cities	Historic city centres	Historic city edges, centres
Uses & activities	Industrial, commercial, social	Commercial, recreational	commercial
Architectural elements & streetscape	Authenticity of historic elements; gates, buildings, materials, styles structures orders. vista,	Historic buildings, orders, sheds, colours landmarks, modern development	Temporary, light structures, sheds, entrances, colours
Sense of place "identity"	Strong cultural image	Commercial-cultural image	Commercial image
Visual character	Strong harmony with the old shops and crafts	Moderate harmony with new shops style & goods	Harmony with the same good types
Urban tissue	Spontaneous, irregular, small private spaces	Regular pattern, wide squares, private paths	Wide yards, spaces and streets
Community needs	Cultural and socio-economic needs		
Aesthetic value	Based on visual architectural order, elements	Based on architectural order, and historic elements	Based on simplicity
Architectural value	Each type presents a historic architectural style in markets & commercial buildings		
Environmental value	Human scale & environmental treatments	Mixed of human and monumental scale & limited environmental treatments	Commercial, commercial
Functional value	Industrial, commercial, social	Commercial, recreational	
Resource value	Strong human & man made resources	man made resources	
Cultural value	Heritage crafts and buildings	Heritage buildings	Heritage goods
Economic value	industrial, commercial, and touristic development	Commercial and touristic development	

Indeed, they have a growing awareness which entails planning for conservation policies; renewal, rehabilitation, preservation, replacement, etc.

4. REHABILITATION OF HISTORIC MARKETS

The concept of conservation has expanded from archaeological and heritage conservation to sites of cultural values conservation, also the conservation polices developed from heritage building adaptation to comprehensive urban context rehabilitation. The local urban development has related to urban rehabilitation of heritage sites and the integrated concept of conservation and local community development acted as an innovative creative process that aims to conserve the heritage, cultural, and aesthetic aspects as well as develop the environmental, social, and economical aspects.

The historic markets highlight as a valuable urban sites that is considered one of the most famous vernacular and traditional heritage sites, as previous, it presents both of

Physical condition	Behaviour of materials and structural systems, deterioration causes and mechanisms, possible interventions, long-term efficacy of treatments, situation of urban context, etc.
Management context	Availability and use of resources, including funds, trained personnel, and technology; political and legislative mandates and conditions; land use issues, etc.
Cultural significance and social values	Why an object or place is meaningful, to whom, for whom it is conserved, the impact of interventions on how it is understood or perceived, etc.

tangible and intangible heritage values, promotes local character, personality, individuality, and acts as outstanding touristic sites.

Problems related to visual environmental pollution, transit and access, deterioration of historic facades, informal commercial activities and overcrowding by vendors, resettlement of marginalized and lower income residents, traffic and lack of parking, etc, that reduce the attractiveness, historic markets. So there is an urgent need to develop comprehensive plans for conservation and sustainable rehabilitation.

4.1. Rehabilitation policies

Value has always been the reason underlying heritage conservation. Until the 1940s few countries in the world appreciated the value of their historic cities. Attention was focused on the monuments individually, considered in isolation from their urban surroundings. After the Second World War and its mass destruction of the historic cities in Europe, it had been much greater awareness of the unique character and underlying values of historic areas sensitively and constructively [12]. That was the scale shifts from individual building usually at neighbourhood or district scale to include overall surroundings of valuable buildings, but also there was the strategy shifts from passive preservation to multi-dimensional rehabilitation including economical, social, and environmental concern.

The concept of *urban rehabilitation* has been emerged, which means determination of some policies to the historic markets such as; creative use and re-use of older parts, structures are repaired and elevations are modernised, to facilitate their continued use, especially as shops and warehouses. This often includes *upgrading* of infrastructure services, but on a modest scale, allowing the *preservation* of the existing urban pattern and fabric. Where necessary, some change of use may be incorporated, but on a small scale. *Demolition* should normally be reserved for structurally unsound buildings, but may also sometimes be needed in order to provide space for essential social services, infrastructure or open space, etc [12]. In the cultural heritage conservation and rehabilitation field, the typology of intervention policies - preservation, restoration, reconstruction, reuse, renovation, demolition, upgrading, improvement, etc- can be

determined through the following factors [13] as shown in the table 2.

Table2. The main factors affect in determination of rehabilitation policies.

The case of historic markets in the old cities has mainly considered as part of the historic city, therefore the rehabilitation policies have to be planned comprehensively by great awareness of social values and community needs.

4.2. Rehabilitation aspects

Rehabilitation strategies should aim to avoid the idea of static preservation, and not attempt to "fossilise" the past and convert it into a sort of open-air museum.

Advocates of rehabilitation policies emphasise the importance of a comprehensive and integrated approach of planning for older areas, and especially the need to consider complete conservation / rehabilitation areas. Of course, particular buildings of special historic and/or architectural interest should be preserved as part of the overall scheme. But the real focus is on the activities and uses of the buildings taken as a whole, and the need to upgrade selectively and adaptively. This rehabilitation approach raises a variety of crucial issues, [12].

Actually, there are some detailed factors related to the characteristics, existence conditions, and environmental factors of each historic area, affected in all these aspects [12], as shown in table 3.

Table 3. The main aspects related to rehabilitation policies

Political	Establishment of a national policy in support of rehabilitation of urban heritage community participation in the formulation and execution of rehabilitation schemes
cultural	The contribution of rehabilitation projects to the strengthening of indigenous cultural traditions and forms The role of historic city centres, their physical characteristics and their social life in the local culture Importance of historic city centres as an area of special tourist interest
social	The effectively participation of the poor, who generally comprise a majority of those living in the historic areas, in the rehabilitation process The retaining of the community of low-income residents in the face of changing land uses and values The protection of low-income residents from the impact of "gentrification"

economic	The finance of urban rehabilitation Types of partnerships The competence of older land uses and new activities The impact of increasing land values and/or taxes The consolidation of older area contribution of the urban economy The tourism economic role in the historic context
urbanization	The preservation of the urban pattern and tissues of historic city areas in the face of necessary upgrading and land use changes The adaptation of the historic quality of the mixed-use environment to modern conditions

4.3. Sustainability and rehabilitation

The scope of urban cultural heritage has broadened considerably since the Venice Charter of 1964, with UNESCO and ICOMOS at the forefront of this shift to include environmental and social factors as well as intangible values. At this point, there is a need to emphasize that if interpretation *urban heritage as an evolving inter-relationship between history, ecosystems, and culture*, this interaction must be seen as a multi-layered integration of natural and cultural heritage [14]. Since that time, strategies for conserving the built environment in historic areas are designed according to figure 9.

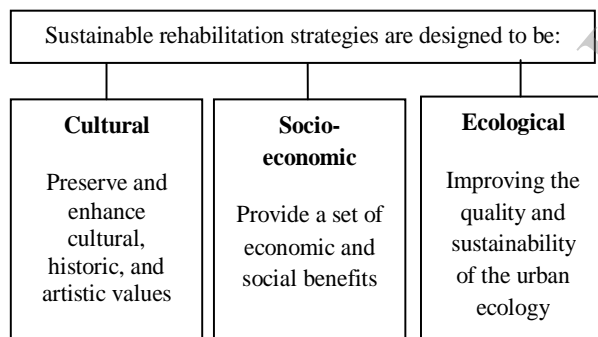


Fig.9 The comprehensive strategy of urban heritage rehabilitation and sustainability dimensions.

Conservation and rehabilitation policy can be both economic and ecological if the overall systems are balanced, starting with energy production and consumption. Conservation of urban heritage can be genuinely sustainable to the extent that it revitalizes communities by creating a dynamic, growth-oriented mix of new functions that regenerate economic and social life, while at the same time reducing energy consumption and increasing the use of renewable resources [15]. Thus, a good heritage conservation strategy inherently takes into account, the long term sustainability goals of the region. However, seldom is a cross-reference made between urban heritage and sustainability, historic conservation and

downtown revitalization are considered, in and of themselves, sustainable developments because of [16];

- Repairing and rebuilding the historic wood windows would have meant that the dollars were spent locally instead of at a distant window manufacturing plant. That's economic sustainability, also part of sustainable development.
- Maintaining as much of the original fabric as possible is maintaining the character of the historic neighborhood. That's cultural sustainability, also part of sustainable development.
- Rehabilitation of historic building reduces waste generation.
- Reusing a downtown historic building, increases recycling. In fact, historic preservation is the ultimate in recycling.

As a result of the importance of sustainability criteria that integrated with conservation strategy, it must demonstrate the contribution of historic rehabilitation to broader "sustainable development," "Smart Growth," "energy conservation," and environmentally-sensitive or "green" community planning [17], so that the need of involving the sustainability goals into conservation policies became an imperative.

Rehabilitation policy implies choices among different values, objectives, uses, functions, materials, technologies, and combinations among new and ancient architecture, and between arts and sciences. By considering the previous analysis of historic market; types, heritage character, cultural significance and the importance of rehabilitation as an urgent intervention- with its related aspects- it is necessary to compare different principles and criteria of historic markets sustainable rehabilitation for each type of them by analyzing the best practices for three latest case studies as in the following projects;

- Urban Rehabilitation of Tabriz Bazaar, Iran (Aga Khan Award, 2013) as historic market of craftsmanship
- Urban Rehabilitation of Waqif market, Doha, Qatar (Aga Khan Award, 2010) as historic commercial market.
- Urban Rehabilitation of Mohayl, Asir, kingdom of Saudi Arabia (National program of rehabilitation of vernacular markets in K.S.A, 2010) as historic vernacular market.

5. CASE STUDIES ANALYSIS

The concept of integrative strategy of sustainable rehabilitation in historic markets is still new and unfamiliar in most rehabilitation literature and theoretical researches. Intellectually and professionally it remains limited, it is still a separate application which has not yet generated significant support. However there were more developing in the practical level along many successful case studies which have invested its cultural and economic resources underlying in many historic market types for increasing the functional integration of urban heritage spaces with deeply promotion to conservation and sustainable development.

5.1. Urban Rehabilitation of Tabriz Bazaar, Iran, as historic market of craftsmanship, 2013

The project locates in Tabriz, Iran (Central Asia), and is considered one of the famous historic market of carpet industry which the unique handicraft in Iran and over the world. Tabriz Bazaar was officially protected in 1975 and covered by special stewardship measures until 2010, when it was added to the World Heritage List. The complex covers 27 hectares (270000 m²) with long over 5.5 kilometres of covered bazaars. The architect was: Cultural Heritage, Handicrafts and Tourism Organisation (ICHTO) of East Azerbaijan Province, Tabriz, Iran Office, which started the design stage on 1994, and execution was completed in 2006. The project won the Aga Khan Award for architecture in 2013 cycle. By the late 20th century, its brick buildings were crumbling due to decades of neglect, and a management framework was established, based on the *participation* of the “bazaar” community, together with municipal authorities and the (ICHTO). A successful pilot restoration and rehabilitation project was decisive in winning over shopkeepers to the advantages ensuing from an overall rehabilitation project that would conserve and revitalise the valuable heritage of the Bazaar [18].

Cultural significance and urban character

With origins in the 10th century, the Tabriz Bazaar has long functioned as a main commercial centre for the city [19]. The Bazaar belongs to the pattern of caesarean with vaulted roof. The architectural and resource value of the Bazaar is essentially in using brick: a singular monolithic material turned into structural and ornamental poetry. The principal expression is the unique vaulting, coordinating light, climate, structure and ornament. The aesthetic value reflects the unique vaulting and domes present intricate geometries and the *timcheh* (domed nodal crossroads) combine spatial importance with other space-covering geometries, as shown in figure 10. The continuity of cultural memory is in the strong structure that dates back 240 years but the site as a place of trade has its origins as far back as the 10th century. It is considered one of the largest brick complexes in the world.

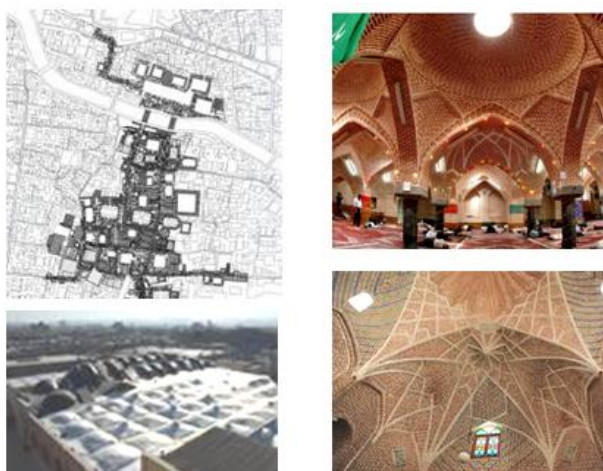


Fig. 10 The unique architectural character and urban value
The Bazaar was added to the World Heritage List in 2010

The functional and economic value depends on the famous crafts inherent in the Bazaar and its commercial and social activity that related to the community needs.

The cultural significance is not only referring to the outstanding architectural character, but also to the urban value that inherent in the outstanding urban tissue, hierarchy and continuity of spaces. Contrasting and harmony in human and monumental scale and environmental treatments, strong resource and economic value is based on crafts, natural and manmade.

Rehabilitation policies and Aspects

The rehabilitation policies depended on the current conditions of the Bazaar, but essentially, focused on the conservation of both the built and crafts environment. The policies were varied from static restoration to dynamic revitalization of the carpet industry. The main aspects that affect in the rehabilitation strategy were:

Political; The main aspect that affected in the rehabilitation strategy was community participation, during the pilot restoration project, the government contributed 85 % of the financial coverage and the bazaar community contributed 15 %; in subsequent stages, the bazaar community – convinced of the value of the restoration – provided up to 90 % of the funding.

Cultural; under the direction of the design team, managed to achieve is to return to prominence a historic and living city artefact to the centre of the community’s lives.

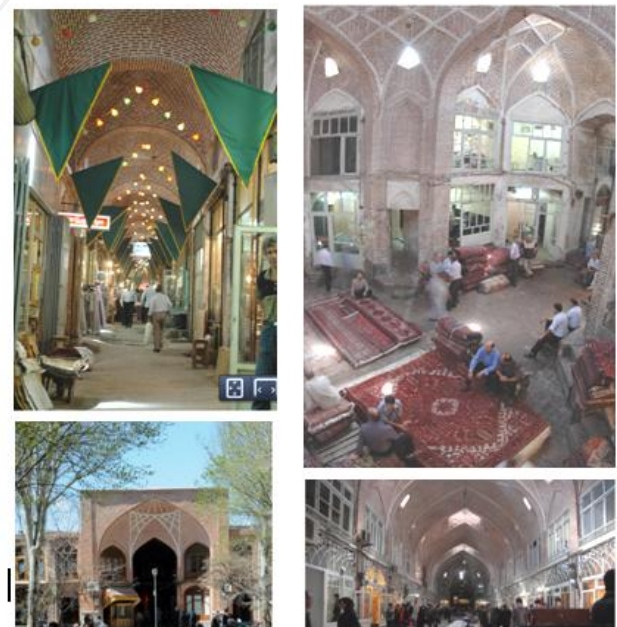


Fig. 11 The rehabilitation of craft and commercial spaces

The project has contributed to the revival and transfer of lost building techniques and skills and has shed light on an important model of this essential everyday typology that challenges us about the quality of commercial space.

Social; The Master Jury found that the project was, with its 5500 shops, “a remarkable example of stakeholder

coordination and cooperation to restore and revitalize a unique structure” [18].

Economical; the great investments and employment opportunities for revitalization of 5500 shops of a unique craft in the world and rehabilitation projects to the tourism investments and development.

Urbanization; since 2000, numerous complexes within the bazaar have been rehabilitated, infrastructure has been improved and public facilities have been built. It is a great reference and example of high-quality architecture and living urban fabric that is still in use as originally intended.

Sustainability dimensions

The sustainable rehabilitation of Tabriz Bazaar is a unique example of cultural sustainability that is considered an urban conservation and development project in which heritage plays the role of catalyst and it has reclaimed its position as the dynamic urban centre of the city of Tabriz [18]. The restoration and preservation of the unique structure of vaulting and the original natural resource “brick”- that covers 27 hectares with over 5.5 kilometres of covered bazaars- was a great practical project for conserving resources and improving the quality and sustainability of urban ecology.

On the level of the socio- economic sustainability, the project has provided 5500 shops to the city centre life, as in fig 12, developing the community lifestyle, and contributing in the advancement of the national economy.



Fig.12 The sustainable rehabilitation of shops, views before and after the project execution.

5.2. Rehabilitation of Waqif market, Doha, Qatar,) as historic commercial market

The project locates in Doha, Qatar (Arabian Peninsula), the origins of the Souk Waqif date from the time when Doha was a village and its inhabitants gathered on the banks of the valley to buy and sell goods. The architect was: Private Engineering Office, Mohamed Ali Abdullah, which started the design stage on 2004, and execution was completed in 2008. The site covers 16.4 ha (164000 m²), figure 13.



Fig. 13, The historic commercial streets in Waqif market.

The project won the Aga Khan award for architecture in 2010 cycle to present a unique architectural revival of one of the most important commercial heritage sites in Doha [20]. Souk Waqif is renowned as one of the most important commercial centres of its time [21].

Cultural significance and urban character

Souk Waqif was originally a weekly market for local Bedouins. Coinciding with the emerging of modern Qatar, the souk developed to expand in multiple spaces and mixed activities to include mosque, housing, shopping destination with colonnades is renowned for selling traditional goods; garments, souvenirs, and handicrafts. The main features of urban character is the traditional Qatari architecture; natural materials, unique arches, colonnades and an intricate labyrinth of street patterns, offers a natural shelter from the country’s harsh climate, which generate the prevailing architectural value of souk Waqif, figure 13,14 .



Fig. 14 Market retains its distinctive historic character; view from the market spaces.

The spatial experience is so unique. Strolling in open air along the winding souk streets and the twisting narrow alleyways is itself an interesting journey with valuable diversity of human scale environment; evoking a sense of connecting to the past of Qatar’s ancestors lives before development [22]. That reflects the cultural value inherent in souk Waqif, with the authenticity heritage in the midst of prevailing globalization and modernization in Qatar, figure 15. The souk reflects the core of original civilization with its architectural character, outstanding arts and commerce. The resource, functional and economic value were based on the historic commercial functions that are highlighted and promoted in the rehabilitation policies.



Fig.15 The cultural and architectural values of Waqif historic commercial district

Some of the goods sold in this market were imported from Iraq, India and Africa. Although this market dates back at least a hundred years, it has been recently restored back to its original glory [20]. It is now considered one of the top tourist destinations within Doha, Which enhanced the souk value for the continuity of the Qatari cultural memory.

Rehabilitation policies and Aspects

The commercial boom led to indiscriminate construction activity in the region. The buildings did not conform to the history or architecture prevalent in the area, and therefore tarnished the beauty and aesthetics associated with culture of the region, which led to the area being disassociated with the heritage and culture of Qatar. In 2004, His Highness Sheikh Hamad Bin Khalifa Al-Thani, Emir of Qatar, issued an edict to revive the area to its original and traditional splendour [30]. The revitalisation project was based on a thorough study of the history of the market and its buildings, and aimed to reverse the dilapidation of the historic structures and remove inappropriate alterations and additions [20]. The physical conditions before the rehabilitation project were one of the main criteria for determination of the rehabilitation policies. figure 16.



Fig.16 The historic market conditions before restoration and rehabilitation projects.

The main aspects that affect in the rehabilitation strategy were:

Political; The main goal of the rehabilitation project was representing souk Waqif as a showcase of traditional architecture, handicrafts and folk art and evoking the feeling of traditional Qatar heritage. So that the national authorities established a comprehensive strategy for the target activities and new compatible functions.

Cultural; The architect attempted to rejuvenate the memory of the place: modern buildings were demolished; metal sheeting on roofs was replaced with traditionally built roofs of *dangeal* wood and bamboo with a binding layer of clay and straw, and traditional strategies to insulate the buildings against extreme heat were re-introduced. Some new features were also introduced, such as a sophisticated lighting system that illuminates the market's streets [20].

Social; It was renovated as a traditional open-air public space that is used by the original shoppers, tourists, merchants and residents- of those living in- alike [22]. That ensures the retaining of the community of low-income residents in face of new uses.

Economical; The 164,000 sq m souk which is home to around 500 shops has become a famous tourist attraction for the fusion of traditional and modern elements and uses such as its sophisticated lighting system. Allocated in the centre of the main alley is Waqif Art Centre. Different local and foreign artists display their creative handwork, especially in forms of photography, painting and sculpture. It is also a place for conducting workshops for children and youth in different art subjects. The souk spatial experience is usually used to inspire participants. Moreover, in addition, it is a place for events such as cultural symposiums and lectures covering all subjects dealing with art and creativity. Periodically, evenings of celebrations and creative popular music recitals are artfully organized on weekends and national holidays. Among the successful events which have been held at the Souq included the Spring Festival, Eid Al Fitr and Al Adha festivals, concerts of popular Arab artists, and musical events during weekends all catered to the multi-cultural population of Qatar and visitors, figure 17. Currently, around 20,000 to 30,000 visitors come to Souq Waqif during weekdays and can reach up to 40,000 during weekends [22].



Fig.17 Types of activity rehabilitated and renovated in souk Waqif; commercial, recreational, festival and folks.

Urbanization Artisans were employed to reconstruct the buildings and traditional materials such as gravel (Walles, Aldngel) and bamboo mats were used to rebuild the market [21].

Souk Waqif is set to further cement its reputation as Doha's tourist hub with plans taking place to establish new facilities including new hotels and additional parking areas. Ten new hotels are set to rise as part of the management's ambitious plans to develop the already prominent souk, [22]. The new uses were planned with integrated to the original urban pattern, and the traditional sense of commercial places. In the same time, both of the new functions allocated and the new building generated was adapted with the historic environment and the economic development needs.

Sustainability dimensions

The successful renovation highlights the nobility and wisdom behind the region's traditional architecture in the face of modern construction devoid of any cultural identity. This traditional experience made souk Waqif imperative and the prime place to visit for locals, which promotes the cultural and social sustainability. Expatriates and tourists alike its urban context and the city are unique considering the architectural components, and environmental, cultural and social context. Lessons learned from studying economic sustainability in Doha are expected to add remarkable input to the understanding of the city urban development and the resulting economic and social change [23].

5.3. Rehabilitation of Mohayl, Asir vernacular market, KSA

The Saudi Commission for Tourism and Antiquities has developed a program for rehabilitation and development the vernacular markets throughout the Kingdom with participation of the Ministry of Municipal and Rural Affairs in 2010. Their goals were focused on the conservation of the markets heritage values and promote

their roles in touristic development; where the vernacular markets are considered the essential resource for tourism around the Kingdom regions. In the same time there is a need for enhancement the Saudi cultural heritage and representation of the historic urban character. The objectives included the conservation and promotion of the cultural significance and historic character of regions, touristic development, environmental conservation and improvement, preparation of sustainable rehabilitation planning for historic vernacular markets and their urban context [6].

Asir is a region in south of Saudi Arabia characterized by its high mountains and fertile lands, and has a unique architectural character, figure 18.

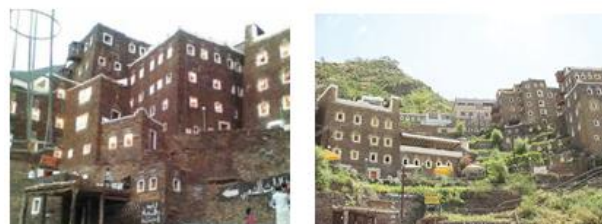


Fig. 18 Asir architectural character and unique cultural identity

The vernacular markets in Mohayl Governorate were spread everywhere along time, some of them still alive and has a growing importance for centuries. One of the largest and most famous was Saturday market. It is packed with historic commercial activities within specific privacy and constancies.

Cultural significance and urban character

Mohayl vernacular market located in the core of Asir Mohayl governorate, it abounds with huge popular and diverse legacy earned him wide acclaim and high demand. The vernacular market exhibits variety of heritage products and unique crafts which are valuable for shoppers, tourists, and visitors from all over the kingdom. Mohayl market is the largest historic vernacular market in Asir region which reflects the history of Asir and the culture of its community.

The urban character of the market – as open yard pattern- is attached shops in temporary metal structure, in front of an open yard which forms the market extension as activities forum, figure 19.

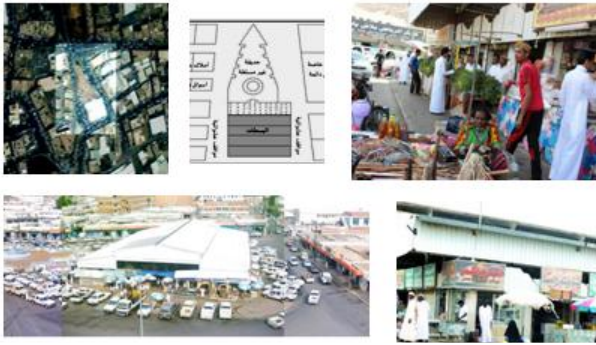


Fig. 19 The urban character of Mohayl vernacular market, it is temporary structure and has its value from heritage crafts and products.

Mohayl market gained its heritage values from its correlation with history and traditions of local community- not from architectural orders or styles- the socio-cultural values are deeply inherent in social fabric of Mohayl Asir since centuries integrated with historic value, and these values are the essential base of rehabilitation strategy. The strong economic value is based on the products diversity of heritage handicrafts; customs, swords, pottery, palm fronds, traditional foods, dates and aromatic plants, figure 20. These heritage products- as valuable resources- are considered a wide economic base for the local community as well as for all the region of Asir.

The value of environmental diversity for Mohayl vernacular market has its importance from the contrasting with the modern shopping malls, human scale, and sense of traditional space environment. The built environment is dwarfed and unskilled versus heritage products, which enhance the commercial and social values of the heritage market.

The continuity of cultural memory prevailing in Mohayl market related not only to the historic crafts and products, but also to the traditional method of selling, the seasonal festivals and way of celebrations related to the market, etc.



Fig. 20 Mohayl vernacular market, the traditional goods; agricultural products, handicrafts and popular food..etc.

Rehabilitation policies and Aspects

The cultural significance of Mohayl vernacular market was the starting point of the rehabilitation project, at the same time the current condition of the market was required for urgent intervention to conserve its heritage features and develop the visual character that integrated with Asir architectural character.

The rehabilitation program adopted by the Supreme Commission for Tourism and Antiquities has provided a best practice to promote the heritage character of the vernacular markets in all the Kingdom regions. The heritage character promotion represents the architectural elements prevailing in the region to create the market built environment, which contributes in compatibility and enrich the cultural significance by the architectural value enhancement.

The main aspects that affect in the rehabilitation strategy were:

Political; the rehabilitation policy depended on usage of the public and private properties within the market lands and around. By convincing the owners to contribute and participate in the project, and exploitation the correlation with the near small markets to maximize utility [6].

Cultural; the main concept of the market rehabilitation is elaborated the revitalization visual image of Asir urban character, which reflect the historic architectural background, the intervention policies included the development of the crafts and heritage product shops and spaces. The existing temporary structure will be demolished, and replace the new buildings with Asirian architectural character and local identity [6]. The same historic materials, facades, proportions, colours, and spaces are reused and redesigned, figure 21, 22.



Fig.21 The rehabilitation policy depended on revitalization of Asir architectural character and enriches the heritage value of Mohayl market.



Fig. 22 The space character localized of the rehabilitation polices enhanced the architectural value and Asir cultural identity

Social; The project sought to provide large shaded spaces to social activities that related to the community traditions. The Supreme Commission for Tourism and Antiquities ensures all funds for planning and execution, and the Secretariat of Asir region and the municipality of Mohayl Asir execute the rehabilitation projects [6]. There was a highly promotion for the low-income residents in the market by protect their commercial products and areas in the rehabilitation planning and processes.

Economic; One of the main targets of the project was providing new employment opportunities and developing the existing commercial services and facilities, generating new shops and commercial spaces, stores, parking areas, etc which can develop the economic values and encourage the commercial and touristic investments.

Urbanization; planning of the market area included some urbanization policies such as; improvement of the existing infrastructures network, main roads, entrances, street and pedestrian networks, provides parking areas, new shops with wide range of areas, introduction of new spaces, recreational areas, gardens and facilities, [6] as shown in figure 22. The rehabilitation policies have improved the quality of the market built environment and the community lifestyle, the adaptation of the historic identity and modern conditions.

Sustainability dimensions

The cultural sustainability was the essential dimension for the rehabilitation strategies provided for Mohayl vernacular market, the conservation of the local culture and traditions was the starting point of the rehabilitation policies, which ensures the continuity and support of the cultural identity of Asirian heritage. By improving the built environment of the market shops, spaces, and facilities, the social and economic development will be sustained, which promote the community upgrading. The strategy produced in the project focused on revitalization of Asir urban character, however, the reconstruction of the market new buildings and the creation of the new visual character with contrasting of the current conditions, the processes and the action plans respect and conserve the natural, cultural, and social resources inherent in the local community. The project produced a practical sustainable strategy to

rehabilitate a vernacular historic market with highly enhancement for the cultural identity of the communities.

6. CONCLUSION AND RESULTS

Most applied plans for historic markets rehabilitation have a common target which adopted the conservation of historic markets with sustainable rehabilitation as a cultural, economic, and touristic central focuses in the old cities. That depends on redesigning urban and architectural forms applying integration and harmony between the past with its historic senses and the present with its potentials and technology, the combination of authenticity and modernity. Each type of historic markets has its character and unique cultural significance which is varying from each other.

The main result of the paper is formulating the principles of sustainable rehabilitation polices concluded and generated from the three types of historic markets. It depended on the urban character and cultural significance for each type of them which explain and proof the deep and direct correlation between these urban and cultural features and the rehabilitation policies, as shown in table 4.

Table4. The main principles for sustainable rehabilitation of historic markets according to the comparative analysis of the case studies

	1	2	3
	Historic crafts market	Historic commercial market	Historic Vernacular market
Sustainable rehabilitation principles of historic markets			
Goals	1	Conservation of the built heritage and historic crafts, revival the unique urban fabric, structures and skills. Promote sustainable investments and employment opportunities. Improving the quality of life and sustainability of urban ecology.	
	2	Revitalization of the historic image, memory, and social value of the market. Represent the market as a showcase of traditional architecture and local heritage.	
	3	Rehabilitate the vernacular market as a tool for the local heritage enhancement. Conservation of the market heritage resources and values, promote their role in the economic and touristic development. Re-planning the market with promoting the traditional architecture and enriching the visual image and cultural values.	
Constraints	1	High obligation for changing original image and visual character; crafts and its related architecture, uses, and activities. Limitation in addition new buildings or activities. Clear determination of conservation area and specific preservation roles.	
	2	Conserve all of the architectural character elements. Clear determination of the allowable new activities. Specific requirements for new constructions to be compatible with original urban pattern, uses, materials, facades, etc. Reintroduce all original materials and traditional techniques in restoration or renovation.	
	3	Represent the historic commercial function through revitalization of the local architecture by imposition of full specific construction requirements, determination of rehabilitation area, and full obligation of using the original architectural character, materials, and techniques in new building construction and design.	

policies	Mainly based on restoration and preservation of the built heritage and revitalization of historic crafts. Improve infrastructures and limited construction of public facilities.	1
	Wide range from restoration, adaptive reuse, renovation and reconstruction. New constructions are allowable for cultural, recreational, social and touristic activities. Demolition of all buildings, activities, or even elements and materials those are incompatible of the heritage character.	2
	Mainly depends on reconstruction and renovation of the market built environment with highly respect and conservation of the heritage crafts and products. Demolishment the temporary light structures of the market and replacement with the new buildings related to the local architectural character. Re-planning the market area with improving the social life, public and commercial facilities, community services, etc.	3
Management	Careful management to return the historic crafts to the community life; marketing, tourism, exhibitions, training for skill developing, part of local economy. Stakeholders' coordination and cooperation to revitalize the unique values. Community convince of participation levels and responsibilities.	1
	Comprehensive management strategies for localization new activities adapted with the original ones. Community acceptance and need are the main requirement. National legislations have to be formulated to execute the rehabilitation policies. Partnership has to be managed to integrate with the community needs and the new users.	2
	Formulation of comprehensive land management strategies for the determination of land uses and rehabilitation area. Community participation has to be managed in wide range of aspects; funding, land donation, execution, etc. One of the main challenges faced the rehabilitation planning is the movement alternatives of the original residents and merchants during the execution stage which must be managed carefully.	3

The main recommendation for planning a sustainable rehabilitation of historic markets- in all types- can be summarized as the following;

- Integrated conservation policies of cultural and environmental contents must be adopted to produce relevant economic and social benefits overall.
- Tourism has to be the most integrative activities of urban heritage rehabilitation; it helps increase property values, wealth, jobs, and incomes.
- Historic markets can again become the most attractive places where traditional activities of the “old economy” in all historic cities.
- Historic markets- in all types and patterns- must realize that in order to compete in global markets to attract capital, economic activities, and most importantly, people, they first need valorize their specific cultural identity, represented best by their historic urban core.
- An urgent need for rehabilitation approaches which maintain - or better "sustain" - the typical and essential qualities of the historic markets, and of the life of the resident communities, by adaptation the physical structures and economic activities in

accordance with the needs of the present and community participation.

- Adaptation of forms and function can proceed, by conserving the historic character and tissue.
- Our heritage contents need more of interests and efforts to be conserved as an essential core of local identity.

7. REFERENCES

- [1]- A. Quartesan and M. Romis , *The Sustainability of Urban Heritage Preservation ,The Case of Oaxaca de Juarez* ,Inter-American Development Bank , Institutional Capacity and Finance Sector , No. IDB-DP-127, Washington, D.C., U.S.A., August 2010.
- [2]- R. Worskett. *The character of towns; an approach to conservation*, Architectural Press, London, 1970.
- [3]- K. M. Al-Sheikh, *Aspects of environmental coexistence*, Cairo University, Master thesis, 2014
- [4]- M. Hammad, *City planning humanitarian along ages*, General Egyptian organization of book, Cairo, 1995.
- [5]- A. F. Sayed, *Urban Development of Cairo city; since its inception until now*, Egyptian Lebanese House, Cairo, 1997.
- [6]- Saudi Commission for Tourism and Antiquities, *The program of rehabilitation and development of the vernacular markets in K.S.A*, Riyadh, 2010.
- [7]- M. de la Torre, *Assessing the Values of Cultural Heritage*, Research Report, The Getty Conservation Institute, Los Angeles, 2002
- [8]- *The Australia ICOMOS Charter (the Burra Charter) for the Conservation of Places of Cultural Significance*. GDRC Research Output, www.gdrc.org
- [9]- S. Tiedsell, T. Oc and T. Heath , *Revitalizing Historic Urban Quarters*, Architectural press, Hartnolls Ltd., Bodmin, Cornwall. Great Britain. 1996
- [10]- S. Hawas and M. Embaby, *Value map project: monitoring and documenting the underlying values of the content of the urban and natural environments*, Third International Conference, Faculty of Engineering, Cairo University, Department of Architecture, Cairo 21-23 February 2006.
- [11]- N. Lichfield, *Economics in Urban Conservation*, Cambridge University Press, Cambridge, 1988.
- [12]- F. Steinberg, *Conservation and Rehabilitation of Urban Heritage in Developing Countries*, Habitat Intl. Vol. 20, No. 3, pp. 463-475, Elsevier Science Ltd , Great Britain. 1996.
- [13]- E. Avrami, R. Mason, and M. de la Torre, *Values and Heritage Conservation Research Report*, The Getty Conservation Institute, Los Angeles, 2000.
- [14]- F. Romana Medda and et al, *Economics of Uniqueness: Cultural Heritage Assets and Historic Cities as Public Goods: Innovative Financial Mechanisms for Urban Heritage Brownfields* , World Bank, Washington, DC, May 2-3, 2011 .
- [15]- L. Fusco Girard, *Innovative Strategies For Urban Heritage Conservation, Sustainable Development, and Renewable Energy*, Global Urban Development Magazine, Volume2, Issue1, March 2006.
- [16]- D.D. Rypkema, *Downtown Revitalization, Sustainability, and Historic Preservation*, National Main Streets Conference Closing Plenary Session –Seattle, Washington, March 28, 2007.
- [17]- D. Rypkema and C. Cheong, *Measuring Economic Impacts of Historic Preservation; A Report to the Advisory Council on Historic Preservation*, Place Economics, Washington, DC, University of Pennsylvania, School of Design, Historic Preservation Program, November, 2011
- [18] *Rehabilitation of Tabriz Bazaar*, Tabriz, Iran, Project Briefs, Aga Khan award for architecture, 2013. Aga Khan Trust for Culture, <http://www.archnet.org/site/publications>
- [19] Aga Khan award for architecture, 2013, winning projects, <http://www.akdn.org/Architecture>.
- [20] Aga Khan award for architecture, 2010, winning projects, <http://www.akdn.org/Architecture>.
- [21]- F. Al- Suliti, *Souq Waqif: An Exceptional Cultural Experience*, Moqarnasat, Islamic Art and Architecture, Doha, Qatar, 2012. <http://www.moqarnasat.com/>

- [22]- A. A. Alraouf, *A Tale of two Souqs: The Paradox of Gulf Urban Diversity*. Open House International, Vol.37 No.2, June 2012.
- [23]- D. Noufal, *Social sustainability and the historical district projects: Souq Waqif in Qatar as a case study*. Arts, Behavioural and Social Sciences. Humanities and Islamic Studies, Qatar Foundation Annual Research Forum.2012, AHOS1.

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