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Regeneration of sustainability in Contemporary Architecture: Approach Based on Native Function and Activities to Strengthen Identity

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Abstract

Qatar is exemplary for a country that has experienced fundamental economic and political changes in the last decades. One of the challenges that Qatar faces in achieving the national vision 2030 is the environmental development. This is by management of the environment such that there is harmony between economic growth, social development and environmental protection. Identity becomes an increasingly prominent topic in GCC region. It is a way of locating people within their social context and one with clear relevance to environmental attitudes and behaviors. This paper focuses on a valid input to strengthen the identity as a part of the urban context in Qatar and describe how it is relevant to the natural environment. There are many researches that have directly or indirectly addressed environmental identity, and that has shown the importance of identity in the building elements. This study analyzes data about three districts throughout Doha city- the capital of Qatar. The study aims at determining whether cultural practices were associated with stronger local identity.

In this paper, a detailed review of the contemporary architecture in Qatar is carried out. This review demonstrates where 'Traditional Criteria' are available in three chosen contemporary areas in Doha- Native Function/ Activities responsive contemporary trend. An analytical study based on a survey process produces a framework of unifying cultural practice with contemporary architecture in the State of Qatar. The results of the cases study demonstrate what was learned and what was gained in understanding the Qatari contemporary architecture and how the cultural practice can be integrated to the contemporary architecture to support the identity of the country.

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1. Introduction

The local sense of place is at risk if it is not properly sustained. The increase of globalization has led to a homogenization of urban identity. This is particularly the situation in smaller urban areas, which do not receive as much attention, and frequently find themselves attracted to foreign ‘solutions’, which do not value the local identity. (Radstrom 2011). Middle East is undergoing transition from traditional economies and societies to one of modern development, which has yet to find any real stability. This is most clear and most evident in the field of urban design and planning. It can be pointed to the many changes brought about through growth and transition, whether it is in the form of the built environment or the increase in squatter communities and people at the edges of the town. While the origin of the city was dependent on mainly external factors, the Arab city’s traditional development pattern was affected by a variety of other factors, one of which is the division of the social hierarchy (Bianca 2000 and Lapidus 1969).

The urban includes buildings landscape and activities. All together can draw the whole trend of the area of the town. (Madanipour 2008) states that public domain extends from the streets, squares and parks of a town or city into the buildings; it makes the most important part of towns and cities. This is particularly obvious in cities in the Middle East, where single buildings are an integral part of the general fabric and where urban neighborhoods have traditionally organized their functions and services in relations to the whole. In this regard, Wen mentioned: “The task for contemporary architects is to take the old and now culture into consideration, and to find out a practical approach to vitalize the tradition” (Wen 2010).

The building environment of Arab cities has undergone major transformations, where the last two decades have witnessed numerous scientific achievements that have resulted in significant fundamental changes to architecture. Due to the forced pace of modernization, the conflict between traditional values and imported ideas has been quite sharp in some countries and recently the resulting resentment gave rise to fundamentalist movements (Saqaaf, 1986). Identity is one of the essential goals for the future of a good environment. Cities and regions are facing great challenges as a consequence of globalization. The term “globalization” was coined in the latter half of the 20th century, but the term and its concepts did not permeate popular consciousness until the latter half of the 1980s (Holm, 2006). The phenomenon of globalization has attracted more significant global attention than perhaps any other issue in recent memory. Globalization as the intensification of worldwide social relations that link distant localities in such a way that local happenings are shaped by events occurring many miles away and vice versa (Oncu and Weyland, 1997). In that sequence, globalization is considered a discourse of knowledge that elevates awareness of the links between various scales of life. The Encyclopedia Britannica defines globalization as the process by which the experience of everyday life is becoming standardized around the world (Adam, 2008). It is also a contested discourse exhibiting many variants, some of which are clearly more influential than others.

The tension between local and global architecture forces has long existed, with two opposing forces. One force seeks to safeguard and promulgate established indigenous architectural traditions, forms, decorative motifs and technologies. It advocates historical continuity, cultural diversity and preservation of identity, all symbolized by a particular architectural vocabulary, just as spoken languages and local dialects impart identity. The other force promotes invention and dissemination of new forms using new technologies and materials in response to changing functional needs and sensibilities. It places a premium on systemization, flexibility and interchangeability (Lewis, 2002).

This paper adopts the idea of Oliver (Oliver 1997) by integrating the traditional architecture that is related to the local environment contexts and available resources into contemporary architecture in Qatar. The relationship between Architecture and the Climate is always a hotspot in the recent Architecture studies. Traditional architecture, which perfectly show the principle of climate oriented Architecture, have become very popular study project by more and more researchers. This paper develops a framework for integrating a native Qatari cultural practice into the contemporary architecture that as an approach for strengthen the identity of the country. It is a continuation of a previous published paper (Ibrahim, 2013) that focused on the theoretical part of the topic by studying the three variables of traditional architecture (Building components, landscape components and function/ activities). In this paper, the results of the qualitative survey are to be concluded to establish the developed framework for implementing Qatari architecture language toward any proposed contemporary urban.

2. The case of contemporary architecture in Qatar

It has been argued that contemporary architecture is difficult to be identifying because it couldn't be recognize as a clear style not only in the whole country but also in the small neighborhood (Alsultani 2011). Modern architecture period was in early to mid-twenty century and known for its clean lines and also for emphasizing on function. (Antarikananda et al. 2006) stated that contemporary architecture becomes an example of internationalism. Internationalism means eliminating the local tradition to global masses, which had no identity or reflect any traditions. Mostly traditional architectural element had been forgotten and even ignored. However traditional architectural elements are wealthy in content. It consist a rhythm between environment, materials, necessities of living and the use of space. If contemporary architecture implements traditional element, it could be directed to reach the cultural continuity. Also it could be guided to reach climate-adapted and sustainable architecture. Today's contemporary architecture depends on the mechanically controlled environments, to reach comfort zone. However this will increase the use of energy consumption. Accordingly, it is important to explore the design concepts of traditional architecture and to make an attempt to incorporate it into the design patterns of contemporary architecture.

A real cultural sustainability will be achieved through the integration of the local identity into urban development. The local authority in Qatar developed a national vision to strengthen the local identity. Qatar National Vision 2030 builds a bridge between the present and the future. It states, "Qatar will seek to build a safe, secure and stable society based on effective institutions. The country will promote tolerance, benevolence, constructive dialogue and openness toward other cultures in the context of its Arab and Islamic identity. Moreover, it will provide its citizens with their basic needs and guarantee them equal opportunities" (Qatar National vision. 2011). Also Qatar National Vision 2030 (QNV 2030. 2011) builds on a society that promotes justice, benevolence and equality. It embodies the principles of Qatar's Permanent Constitution, which protects public and personal freedoms; promotes moral and religious values; safeguards traditions and cultural identity; and guarantees security, stability and equal opportunity. Social development requires broad participation of all citizens and the government, working together to fulfill the basic rights of individuals and the needs of the state.

In his work, Ibrahim cited that the architecture in Qatar was concerned in protecting the internal spaces from the intense character of the environment. The trend was negotiated in old architecture. This is because of using local building materials and trend that meet the environment (Ibrahim. 2013). The buildings at this time are to build for last without harming the nature as shown in Fig. 1.a. Since Qatar becomes an open country to the whole world; it had been affected by the changes in architecture. The huge development in Qatar few years ago increased the flow of people with different cultures and life styles. This variety of cultures in addition to the open market and globalization affect the style of architecture in Qatar. It becomes more open and accepts other cultures and had been expressed the latest building's technology. As a result, Qatar begun to emerge as a global centre for media, education, culture, and finance through huge investments and several initiatives such as the Al Jazeera Channel, the Doha Economic Zone, the Education City, Science and Community Development. A construction boom that erected skyscrapers, sport facilities, gated communities and iconic museums. Therefore, in Qatar, the contemporary architecture can be defined as a mix of European, Asian, Islamic, Arabian and local trends. Accordingly, it is difficult to recognize a clear architectural image for Qatar in general and Doha city in particular, Fig. 1.b.

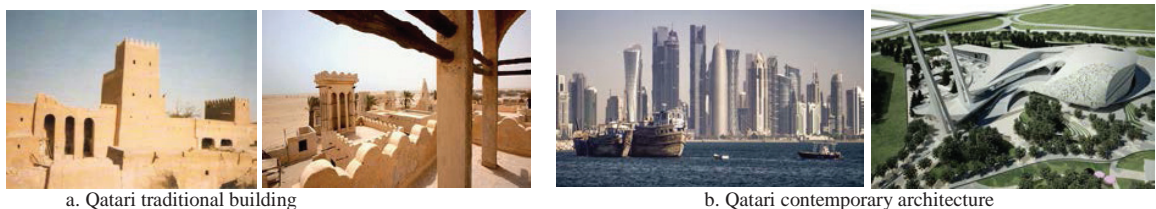


Fig.1. Qatar's transition from traditional to global architecture.

There have been many attempts to explain and define the bond between people and their physical settings in many different ways. Place identity, place attachment, and sense of place are some of the concepts that involve the relationship of humankind and his environment. All these concepts refer to the affective and cognitive relationship between human and the physical environment. However there is no consensus on definitions of these concepts, especially how place identity and place attachment is related to each other. Both place identity and place attachment concepts have been regarded as being components of personal identity, while Stedman recognizes place attachment as an objective dimension for measuring the sense of place (Najafi & Shariff 2011).

2.1. A methodological framework for case study selection

The purpose of this part is to evaluate the value of integrating the native function/ activities into the contemporary architecture in Qatar. The cases selection focus on diverse, influential and most different cases. The selection covers different trend of contemporary architecture in Qatar. Each case has different urban context and trend. The three trends are completely global architecture (Al-Dafna area), mix between global and traditional (Pearl Qatar) and traditional with historical background (Souq Waqif). The description of each area as follows:

- The case of AL-Dafna area

Al- Dafna area is a seaside district of the Qatari capital Doha located on the West Bay area. The district is currently rapidly developing into a central business district, and since the late 1990s dozens of skyscrapers have raised in the district, with over fifty more planned. The district was literally created in the mid-1980s following a massive land reclamation project along Doha's coastline and started to develop in the mid-1990s.

Today, Al Dafna is rapidly becoming Doha's new downtown district and with the massive amount of recent development towards the north of Doha. High-rise building of offices and hotels take shapes the financial and commercial district of Dafna area and along the crescent shape and beautifully landscape Doha Bay in Al Corniche Doha. Fig.2 shows the characteristic of the architecture and landscape components in the area.



Fig. 2. Building elements, landscape components and activities in Al- Dafna area.

- The case of Souq Waqif

Souq Waqif is an important souq in Doha- the State of Qatar. This shopping destination is renowned for selling traditional garments, spices, handicrafts, and souvenirs. It is also home to dozens of restaurants serving cuisines from all over the world, Fig. 3.

Although this market dates back at least a hundred years, it has been recently restored back to its original glory. It is now considered one of the top tourist destinations within Doha. Thousands of people from across the region frequent this market to purchase traditional goods such as wool, traditional THOBES, jewellery and perfumes.

Lately Souq Wakif became a hotspot for art galleries and workshops, hosting several art galleries and events. It also hosts local concerts during the holiday seasons. The renovation of the Old Souq was carried out using photographs shot in the mid forties and fifties. In addition to these photos, official records and documents, as well as thorough accounts from people living in the old site, were used as a guide for the restoration program.



Fig. 3. Building elements, landscape components and activities in Souq Waqif.

- The case of Pearl Qatar

The Pearl- Qatar is a man made island spanning nearly four million square meters. The Pearl will create over 32 kilometers of new coastline, for use as a residential estate with an expected 15,000 dwellings and 45,000 residents. It is crafted from a mix of Arabic, Mediterranean and European culture- offers cosmopolitan charm, outstanding beauty and a contemporary architecture, Fig. 4.

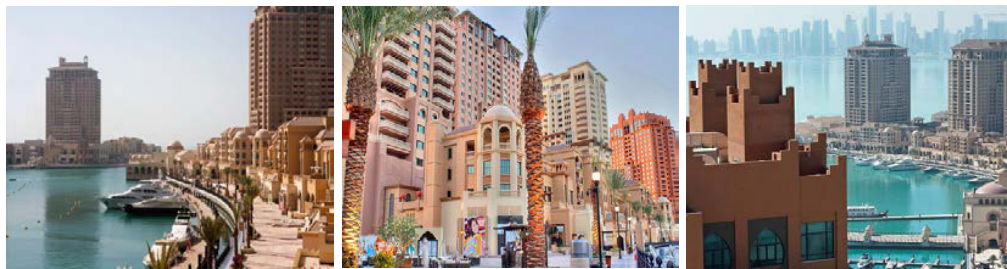


Fig. 4. Building elements, landscape components and activities in Pearl Qatar.

2.2. Questionnaire- Tabulation and procedures

A questionnaire consists of six straight close-ended questions, taking into account six elements/parameters that related to the cultural practice in terms of native function/ activities: 1) traditional festivals events, 2) Traditional crafts and souvenirs, 3) traditional food and drinks, 4) traditional manufacturing/ industry/ workshops, 5) tours/ transportation/ trips and 6) any other cultural practice. The seventh question is related to the opinion of the surveyor about the three districts in terms of reflecting the local identity in general, Table 1.

Table 1. The questionnaire includes the six cultural practices that are related to function/ activities

Function/ Activities: Activities and functions that symbolizes the culture of Qatar.			
<i>Evaluate the following function/activities in terms of Qatari traditional trend.</i>			
<ul style="list-style-type: none"> • Rate using the following scale: 			
1. Traditional festivals events.			
<input type="radio"/> Traditional	<input type="radio"/> Moderate	<input type="radio"/> Not traditional	
2. Traditional crafts and souvenirs.			
<input type="radio"/> Traditional	<input type="radio"/> Moderate	<input type="radio"/> Not traditional	
3. Traditional food and drinks.			
<input type="radio"/> Traditional	<input type="radio"/> Moderate	<input type="radio"/> Not traditional	
4. Traditional manufacturing/ industry/workshops.			
<input type="radio"/> Traditional	<input type="radio"/> Moderate	<input type="radio"/> Not traditional	
5. Tours/ transportation/ trips			
<input type="radio"/> Traditional	<input type="radio"/> Moderate	<input type="radio"/> Not traditional	
6. Others please state:			
<input type="radio"/> Traditional	<input type="radio"/> Moderate	<input type="radio"/> Not traditional	
7. Arrange the three districts "Al-Dafna, Souq Waqif and Pearl Qatar in terms of reflecting the Local Identity in general			
Strongly reflects local identity:	Moderately reflects local identity:	Weakly reflects local identity:	

The three areas assessed by ten expert and professional interested in the topic of the identity in architecture. The three cases study investigated carefully by the experts and built on a matter of facts in terms of the existence of the six parameters in each study area. Also, the seventh question answered by the expert to conclude the value of the three districts of reflecting the local identity. The most of the weight is given to Souq Waqif in all the cultural practice parameters; followed by Al-Dafna area and finally the Pearl Qatar, Fig. 5. The three areas also ranked by the experts in terms of using the Qatari architecture language and global architecture as follows:

- Al- Dafna area- Low value traditional and strong global architecture.
- Souk Waqif- Strong value traditional and low global architecture.
- Pearl Qatar- A mix between traditional and global architecture.

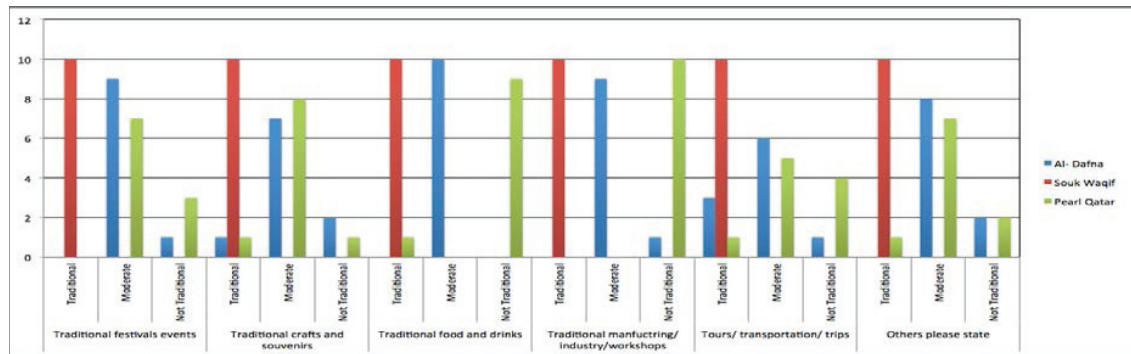


Fig. 5. Native function/ activities assessment by experts of the three study areas.

2.3. Questionnaire- Results

In this stage, the three cases study assessed by 120 stakeholders for the previously mentioned cultural practices and how they relate the function/ activities with the ranked identity value in each area. The questionnaire targeted different stakeholders characteristics include: locals, expatriates, and tourists. The results and analysis of each area is concluded as follows:

- In Al- Dafna area, the “Function/ Activities” is “Not Traditional” according to more than 55% of the surveyors, as shown in Fig. 6. However, there are some activities that are giving some traditional dimension such as: seasonal festival events and tours in Corniche road in addition to traditional boat (Dhow) that stacked and distributed in a dominant way. These native conceptualized the local identity in Al-Dafna area.

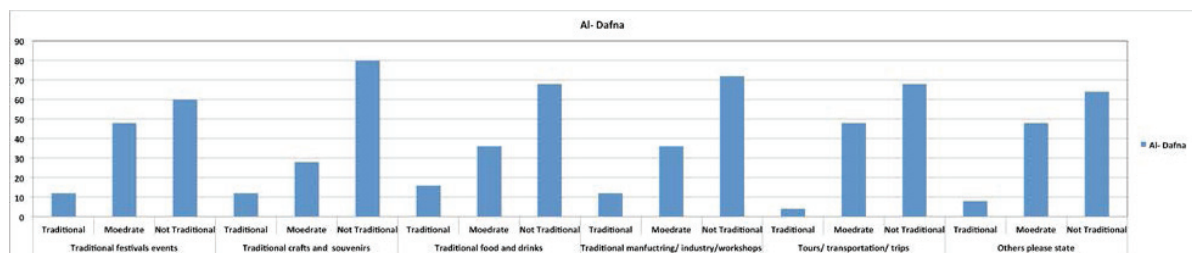


Fig.6. Function/ Activities in Al- Dafna- Surveyors answer.

- In Souq Waqif, there are many traditional function/ activities that are reflecting the traditional, however, there is a missing in the tours/ transportation trips that need to be more significant to qualify the traditional aspect, Fig. 7. However, the local identity is dominant in the architecture elements in Souq Waqif and the reason beyond the area to be the most significant traditional region in Doha.

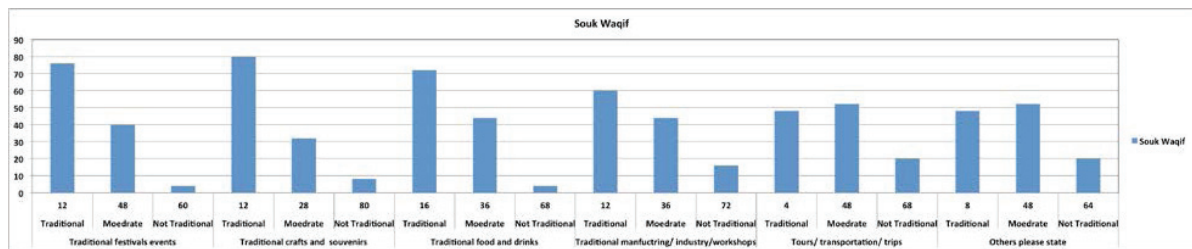


Fig. 7. Function/ Activities in Souk Waqif- Surveyors answer.

- In Pearl Qatar, all the function/ activities are not traditional, Fig. 8. This is minimizing the traditional dimension in the area based on the surveyors answer. However, the designs and characteristics of these areas have been inspired by Arabian architectures, coming together to form this unique environment that reflects the local identity in the region.

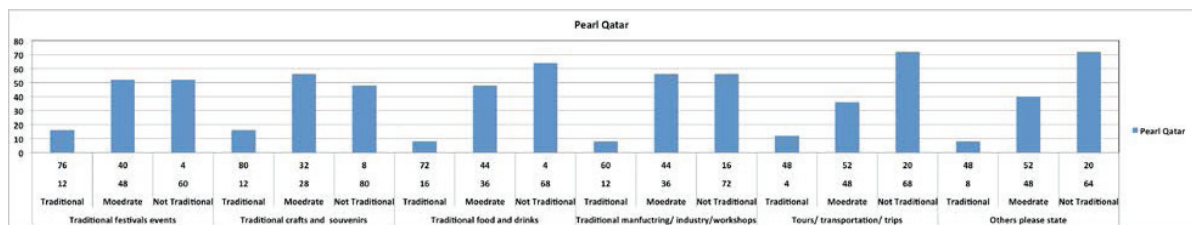


Fig. 8. Function/ Activities in Pearl Qatar- Surveyors answer.

Fig. 9. shows a comparison of the function/ activities in the three cases study. It is clear that Souq waqif is the highest traditional score for the all function/ activities elements followed by Al-Dafna and Pearl Qatar districts, which are fluctuated between the value “Moderate” or “Not Traditional” in the six parameters of “Function/ Activities”.

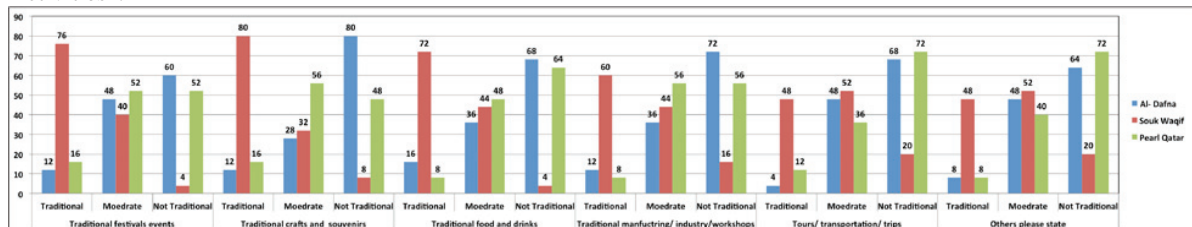


Fig. 9. A comparison between the three cases study- Function / Activities.

Regarding the seventh question in the questionnaire: Arrange the three districts “Al-Dafna, Souq Waqif and Pearl Qatar in terms of reflecting the Local Identity in general. The answer of the surveyors concluded as shown in Fig. 10 as follows:

- 100% of the surveyors stated that Souq Waqif is reflecting the local identity “Strongly”.
- 58% of the surveyors stated that Al-Dafna is reflecting the local identity “Moderately”.
- 42% of the surveyors stated that Pearl Qatar is reflecting the local identity “Weakly”.

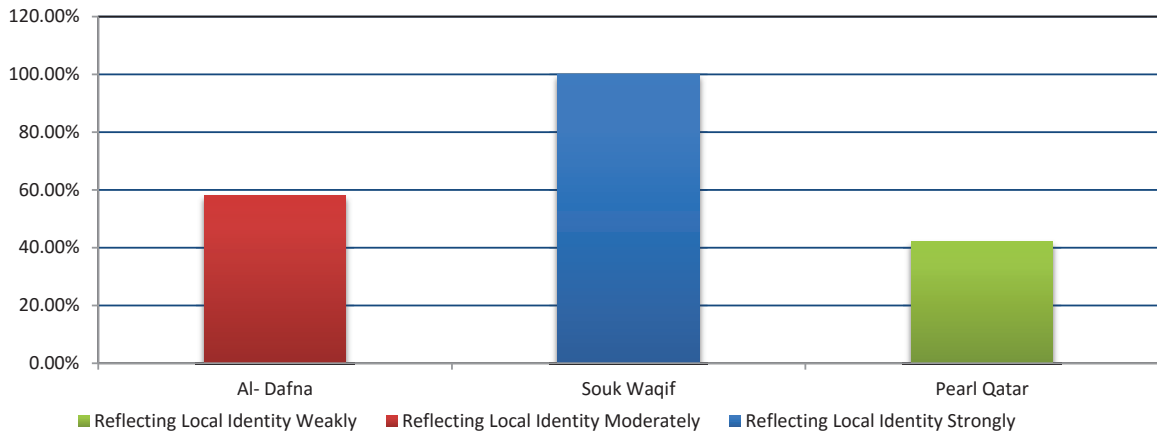


Fig. 10. The rank of the local identity in the three cases study according to the surveyors' response.

2.4. Questionnaire- Analysis

The survey study highlighted some of the key points that were uncovered in the results. The study included three contemporary areas in Doha. Each area classified by experts in the field of the identity in the architecture. The classification of the experts concluded to consider Al- Dafna area as low value traditional, Souk Waqif as strong value traditional and Pearl Qatar as a mix between traditional and global architecture. The surveyors assessed the local identity of the three areas to be: Al- Dafna area as moderate value traditional, Souk Waqif as strong value traditional and Pearl Qatar as low value traditional, Fig. 11 shows the comparison between the response of the experts and surveyors.

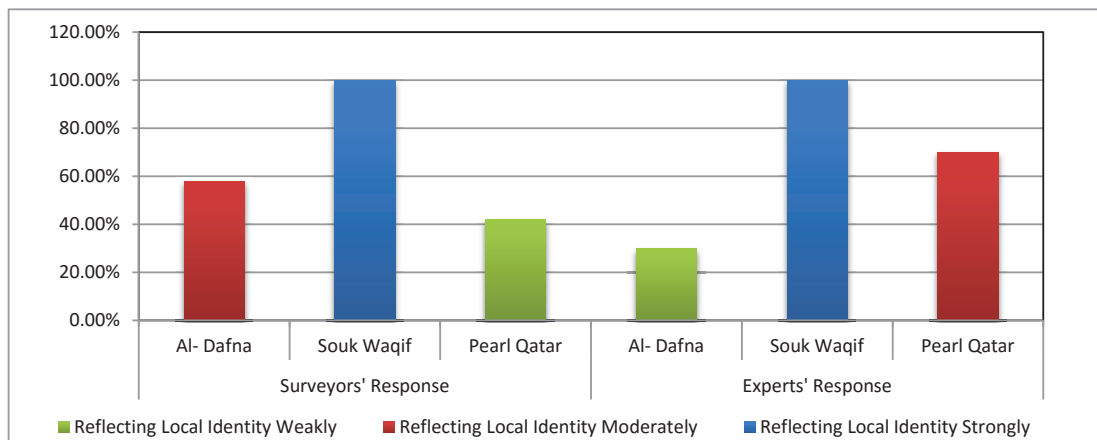


Fig. 11. A comparison between the response of the experts and surveyors to the rank of local architecture in the three cases study.

In reference to the comparison between the experts and surveyors response, we can find that both are agreed that Souq Waqif is reflecting the local architecture strongly. However, there is different conclusion regarding to the Al- Dafna and Pearl Qatar. The following points are accordingly reached:

- There is no argument that Souq Waqif is reflecting the local identity of Qatar strongly. This is because the historical background and Qatari architecture language that is dominant in the area. The origins of the Souk Waqif date from the time when Doha was a village and its inhabitants gathered on the banks of the wadi to buy

and sell goods. The revitalization project, a unique architectural revival of one of the most important heritage sites in Doha, was based on a thorough study of the history of the market and its buildings. 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. This is why all the result of the survey is the same for the experts and the surveyors. In fact, though the native function/ activities are dominant in the area, it is not affecting the local identity that the Souq reflects by using the local architecture elements and the connection of the area with the past.

- Regarding Al-Dafna area, the opinion of the experts and the surveyors is different. When the experts assessed the area in terms of reflecting the local identity, they considered the global architecture that is clear in the significant hi-tech skyscrapers and other popular malls, ministries and governor buildings. In fact, 58% of the surveyors assessed the area as a moderate rank in terms of reflecting the local identity. Also most of the surveyors' response to the native function/ activities was a moderate value. This means in spite of the global building, the native cultural practice in the area played a good role in reflecting the local identity.
- In Pearl Qatar, the architecture trend is a contribution to the development of architecture relevant to the Arab world. The architecture in Pearl Qatar is reflecting the local identity compared to Al-Dafna area. This is why the experts categorized the area under the rank of moderate in reflecting the local identity after Souq Waqif and before Al-Dafna area. The response of the surveyors that is related to the area that reflecting the local identity is 42% of the surveyors agreed with Pearl Qatar as weakly reflecting the local identity. However, the comparison between the three cases studies in Fig. 10. Shows that Pearl Qatar is not traditional in many types of cultural practice activities. This conclusion affects the value of the area in reflecting the region identity accordingly.

3. Conclusion and discussion

Urban identity has always been a popular research subject for various disciplines, such as psychology, philosophy, sociology, human geography and anthropology. However, urbanization and globalization processes, which have caused a rapid change on our environments, have brought the concept of identity on the agenda of planners and designers in the last few decades. The urban identity of a community is an exceptionally valuable component of sustainable urban-cultural development. Despite its focus on traditional building elements, the influence of culture practice is emphasizing the local identity.

One of the significant impacts on urban spaces of Qatar is the contemporary architecture that emphasising the global trend. Such changes in urban environment are often due to changing lifestyles, which is an important factor in identity of urban spaces. The major concern of the identity related research is on the sustainability of place identity. The research shows that the traditional architecture in Qatar has its distinguished style that reflects the real taste of the people, who built the houses and of those who lived in them. The people of the region are governed by certain inherited social traditions and. People are also bound by the prevailing environmental conditions, as regard to the building material that suits the climate. The building material and the climate are the main two factors that direct the way and decide the style of the building elements.

It is concluded also the Qatari traditional architectural and the key issues dealing with native function/ activities in three cases study. The aim of this part is to: 1) give an overview of the traditional architecture on the mentioned cases; 2) assess the cultural practice- function/ activities; and 3) deal with this culture practice to be integrated with contemporary architectures. A questionnaire is developed, taking into account the concluded assessed elements/parameters of the cultural practice that affect the traditional value. The result of the questionnaire had been analyzed for each case study as an approach for integrating the native function/ activities into contemporary architecture in Qatar to strengthen the country identity. Three cases of contemporary architecture in Qatar (Al-Dafna, Souq Waqif and Pearl Qatar) have been investigated. The purpose of this part is to evaluate indicators based on native traditional function/ activities to be integrated into the urban contemporary environment with the support of city image and urban identity. Based on the previous study- establishing traditional architecture values in the three cases have been evaluated. The result of this section is having a conclusion regarding the value of traditional Qatari architecture in three urban districts versus the native function/ activities. A comprehensive analysis for a qualitative survey is carried out to establish the required indicators include: identifying the historical background, function, physical elements, building materials, and physical surroundings.

A validation stage has been conducted by a technical review from decision makers and experts in the field. An analyzing of the surveyors response regarding the traditional value of each area of the cases study have been conducted. The comparison between the surveyors' response and the traditional value rank of each area by the experts has been conducted.

The conclusion recommends planning knowledge must begin to provide theoretical frameworks for sustaining the sense of place. This involves setting guidelines, which holistically address all aspects of place so that local places are able to continue in the culture and traditions, which have historically been the foundation of their identity.

Acknowledgements

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