

TRADITIONAL MARKETS IN ISLAMIC ARCHITECTURE: SUCCESSFUL PAST EXPERIENCES

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ABSTRACT

Contemporary cities are aiming to deal with architectural and urban heritage as a vital entity that can adapt to the modern life style and needs without sacrificing the region's identity and uniqueness, especially those cities that are historically and culturally profound, which has resulted in the possession of the architectural and urban heritage. Many Islamic cities worldwide are proud of their traditional markets. The market in Islamic cities has revived the city through its presence, while the city has formed the market according to its needs.

The main aim of this research is to verify the importance of lessons learned from old traditional markets in Islamic architecture which is characterized by the effective response to their physical environment. This main aim leads to many secondary aims. Firstly, the research aim to explain the relationship between the specialization of goods and the architectural form and general planning of the market, where the perpendicular or broken (bend) axis or any change in direction was an indication of the in change the types of goods. Secondly, the research aim to explore the relationship between the diversity of the physical environment of markets and the diversity of goods and then the diversity of the corridors width and the roofing style, and how this diversity affects shoppers and generates a state of pleasure and social interaction between the market and the shoppers and among the shoppers themselves. This leads to the importance of studying the concept of "traditional markets", resulting in the awareness of the importance of contemporary architecture which is linked to its' historical background and the population's awareness of that important relationship. To fulfill the research aim, this research studies and analyzes some successful effective case studies in the Islamic and the Arab world in an attempt to set a framework to design contemporary markets which have their distinct identity and special characteristics that meet the needs of the community. Based on the research findings and data analysis, the research anticipates setting its conclusions and recommendations.

Keywords: Islamic architecture, morphology, architectural environment, formation of traditional markets, urban fabric, traditional architecture, suq, physical environment.

1 INTRODUCTION

The traditional market (suq) refers to the place where all kinds of goods were sold. The market in the architectural archaeologist term is a building which includes a centered large courtyard surrounded by a group of shops overlooking to the road. In the markets, merchants engage in buying and selling. One of the most famous markets in the Arabian Peninsula is "Suq Okaz". Markets were known in Europe during the thirteenth and fourteenth century. Markets in Islamic traditional architecture were continuous and specialized in their goods. For example, Cairo markets as Cairo Qasabba or its great street, which starts from Fotouh gate in the north to Zuwaila door in the south. It contains hundreds of shops with wooden ceilings to protect merchants and buyers from winter's rain and summer's sun [1, pp. 155–246]. Cairo Qasaba is divided into five urban parts depending on the environmental needs; demographic, professional, commercial, administrative, ideological, climatic, etc. to give those architectural Presto an ecological succession. The distance ranged between 250 meters and 350 meters, and it is calculated in the Western references according to their environment as five hundred meters [2, p. 170].



Markets were usually located around the congregational mosque at the heart of the Muslim city. In general, the market has three main activities: production, wholesale and retail trade. Wholesale and retail trades are adjacent in the same market, and there are many branches of certain business. Also, the different goods that they sell determine the distance whether to be close or far to the mosque. Specialization in goods was the regulating rule in old markets. In addition, the quality of goods in particular places took into account the buyers' desires and their financial capacity [3, pp. 77–78]. In addition to these features, old markets in general, and especially the Islamic markets are characterized by the correlation of social life in the city to the market. The traditional market is also a place where people spend a long time there. Therefore, it offers comfort, entertainment and social interaction accommodations [4, p. 204].

Qaysariyya or Qaysria (plural; Kiesr) are roofed streets used as a market. Al qaysariyya in the archaeological term is a pattern of Islamic architecture, taken from the Greek “qaysariyya” known as Caesar Market or Imperial markets. They were used during the Greek era as stores and residences under the royal supervision. Then they were used in Byzantine architecture in Syria, Palestine, North Africa and then in Islamic architecture. The oldest Egyptian Caesars are built by Abdul Aziz bin Marwan at Fostat in the Mamluk period in Egypt, as Maqrizi said. The commercial street including Alkiesr is the most important planning element in the cities of ancient and medieval worlds in the East and West. The term “qaysariyya” was found in the documents of the Mamluk era, which means the architectural unit with a middle courtyard surrounded by several shops to display and store goods, topped by housing floors for the traders [1, pp. 245–246].

Religion, trade and seeking knowledge were the reasons behind Arab Muslims traveling. Since traders, students and pilgrims travel for long distances, they need buildings to provide them with shelter in summer and winter, as they need to do their prayers [3, pp. 98–100]. As a result, we find khans (Fig. 1) on the trade roads and travel stations. The market; suq and (suwaiq); a small market in the heart of the Islamic city fulfills the needs of people. Bathrooms (hamamat) and schools are found beside them. Khans were considered to be stores for goods, marketing opportunities and exchanging goods beside the markets within the cities. There is the so called “Caravanserai”, which nowadays means Khan. The Silk Road was a motivation to build a large number of khans and caravanserais in the towns [5, pp. 194–195].

Commercial buildings were also built on the roads to lead to the holy places in the Islamic world. Religion, climate and social life were the factors behind establishing various buildings as markets and the architectural morphological form of the building.

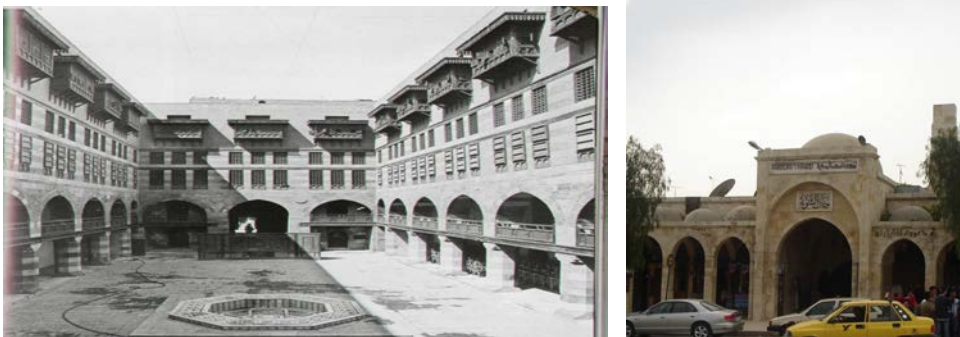


Figure 1: The Khan, one of the commercial buildings.

2 THE ARCHITECTURAL FORMATION OF THE ISLAMIC MARKETS

Morphology means the internal structure of the city and its elements. Mosque was the city center followed by the rest of the buildings, including the markets [4, p. 60]. The vaulted bazaar links the mosque and the most important public buildings in the city. Markets ranged in their goods types as bookshops, “Attarin” shops that sell medicinal plants and perfumes, fabric shops and shops for all kinds of food. The walls of the city were surrounded by shops for horses and their food and leather.

The Islamic city was integrated with the climate and nature; corresponding to the human needs in the city. The climates of Islamic cities are affected by the formation of the city, houses, markets, mosques, hotels (khans) and shrines. As a result, the markets were covered by wooden or metal vaults to protect people.

Moreover, the phenomenon of roofing streets covered both sides of the market to protect particular goods like silk and other fabrics. It was known as (Sagifah) i.e., roof such as Radwan Sagifah in Cairo (Alkhyamih) i.e., tent market. The covering patterns of commercial streets differ depending on the climate and the available building materials. In Cairo, the ceilings were flat, while in Andalusia they were from brick vaults, vine patios and wood. Stone vaults were used in Aleppo and other cities, but fabric tents prevailed in the cities of Saeed in Egypt [6, p. 198]. The Domed or vaulted linear market consists of lighting halls in every unit, which creates, in addition to lighting a cool area, ventilation in the hot and dry climate. As shown in (Fig. 2), that we find some traditional markets in some Arabic cities with commercial streets described as covering markets, roofed by vaults or domes. Some traditional markets are shown in following figure.



Aleppo, Syria



Aleppo, Syria



Tripoli, Libya



Tunis the capital of Tunis



Bab Ibhaz, Tunis



Sidi Bo Isead, Tunis

Figure 2: The traditional markets in some Arabic cities. (Photo by researcher.)

Islamic markets were usually roofed by mud and wood, and then these materials were replaced by stones and bricks for the domes and vaults. On the other hand, food markets used to sell food in tents to protect goods and buyers. The climate also affected khans' formation. The plains' khans were wider than mountains' khans. In cold countries, khans didn't have open courtyards while the khans in hot countries did. The revival of commercial activities during the pilgrimage season reflected on markets [7, pp. 56–60].

Markets were commonly located near mosques. There were many kinds of markets as the Season market (Al Mawasem) which is a seasonal market, and (Al Sowaiqa) which is a mini market i.e. a group of commercial markets that are the center of all sectors in the city. One of the famous small markets in Cairo was "The Prince of Armies" and "Fishermen". The Khan, the Caravanserai, Qaysariyya, Suq and the Mini-Suq were trade buildings that served shopping. The Khan and the Caravanserai are stores for goods, in addition to providing housing and security for merchants. There is another type of market called Arasta. It is a kind of market that is in line with religious buildings, as in Isfahan (Mader-i-Shah), besides Kava, Flar, Arasta in Cordoba market which consists of two rows of 24 shops [3, p. 99].

2.1 Architecture and the environmental sources

The Islamic architecture was formed by several environmental sources; religious, cultural and climatic. They strengthened the identity of architecture and deepened its character. The precepts were issued by the second Caliph Omar Ibn Al-Khattab to comply with the dimensions of the streets and houses that are around the mosque and the Emirate's House. Philosophers and thinkers like Ibn Sina submitted similar and significant architectural principles. Scholars like Ibn Al Rami (in 36 AH) in his book; *The Declaration in Architecture Terms* introduced important regulations and health rules, and talked about architectural errors and effects, such as the failure to protect the building from smoke...etc. and imposing respect on others.

Islam took care of roads which can be seen as the arteries of the city where humans and economic activities joined. The legislations and laws have paid attention to protect the environment and to clean the Islamic cities. There are many conditions that should be done in the butcher shop to avoid hurting the public and the road. As well as the baker's shop that should have a high ceiling and ventilation holes to get rid of the smoke. Jurists have defined the causes of damages in the city into three types: smoke, odor and disturbing sounds. Therefore, the industrial buildings that caused these damages were built in suburban areas [8, pp. 160–165].

Islamic architecture fulfils the needs of Muslims. Some believe that it provides the opportunity to meditate and breakup boredom. This explains why some environmental processors in the Islamic city planning succeeded in performing more than one successful function at a time.

2.2 How are markets formed?

The architectural and functional forms of markets were determined since the early centuries of Islam. The most famous commercial centers of Abbasid Baghdad, Umayyad Spain, Fatimid Cairo and Bukhara were mentioned in the Islamic literature of historians and geographers. Cordoba represents the important market in the west of the Islamic world which had all kinds of Eastern goods. Bukhara was the point that connected between India, Far East, and northern Europe. Silk comes from China via Sasanian land to the Upper



Euphrates to be sold in Rome, or comes from India via Yemen and the Arabian Peninsula through Petra, as well as through Palmyra to get to Rome and then to Constantinople [5, p. 194].

Al-Maqdisi described Egyptian markets by saying that these markets gather Al Andalusia, Turkey and Chinese goods to store them or to sell them in partly roofed markets that are in narrow streets. Ottoman markets are considered to be the most important market patterns. They were often domed as shown in (Fig. 3).

These distinctive shapes of the markets were identified by their known shapes since (2000) years BC. Both shapes included the open arena and the roofed road that were lined with shops on both sides. Islamic markets throughout the Islamic world were specialized markets based on their goods. They started from the shops that were near the mosque selling books and leather goods, to the shops that sold fabrics, clothes, silk and gold until you reached the shops that manufacture leather which were placed outside the city. The Bazaar is the standard form of roofed markets by vaults which are linked with each other by a high domed space, or an open intersection area. The market is often closed by a wall or a fence. The bazaar is a self-grown phenomenon and is associated with the same basics of the city formation.

Ibn Battuta noticed during his visit to Constantinople in (1331 AD) that the bazaar was organized according to what was sold in it. Each bazaar market had gates that were closed at night. Al Qaysaria was an oblong hall, roofed and colonnaded, often (and always in Ottoman Turkey) domed, with a door at one or both of the short sides that was securely locked at night [9, p. 140]. qaysariyyas, and especially Ottoman bedestens, are fortresses of trade and commerce and, by extension, the commercial support of the entire realm.

There were three types of traditional markets: the market that has a network of roofed roads with fortified gates, a monumental building with a roofed center and is generally open to the inside and Khans or Caravanserai. There were often two or more bathrooms (hamamat) in the market, as shown in Fig. 4.

Eleanor Sims believes that the root of the adopted styles of the designs in these commercial buildings and oases is the architecture that Muslims knew during their travels and conquests along with their talent and needs. The simple design which characterized the market remained throughout the centuries despite different places and building materials without losing the identity or the character of the market. The Arabic suq is a market located on four streets; each in a different direction. So, it is the central market generated by the cross roads. The first Islamic market was called Chahar-Suq, for the major intersections within the covered network of market streets.



Figure 3: Ottoman Bazar in Istanbul.

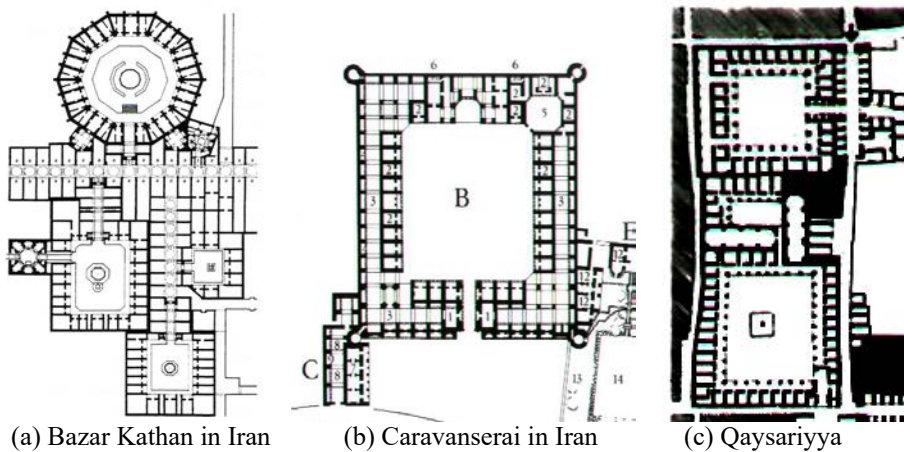


Figure 4: Types of traditional markets: Al Bazar, Caravanserai, and the Qaysariyya.

It was made up of roofed streets with their extensions. The Turkish Carse or the Turkish market was a huge junction with a roofed network of shopping streets, the whole market complex [3, pp. 97–105].

Aleppo markets are considered as one of the best preserved ancient markets so far because they were crossed streets which were sometimes covered with domes or were left open [10, p. 287]. AS shown in (Fig. 5). Walls, floors and ceilings in the old markets were the means for exhibiting goods. Markets were attractive points in the urban fabric of the city, fixed in their position but they were not the original constructed buildings.

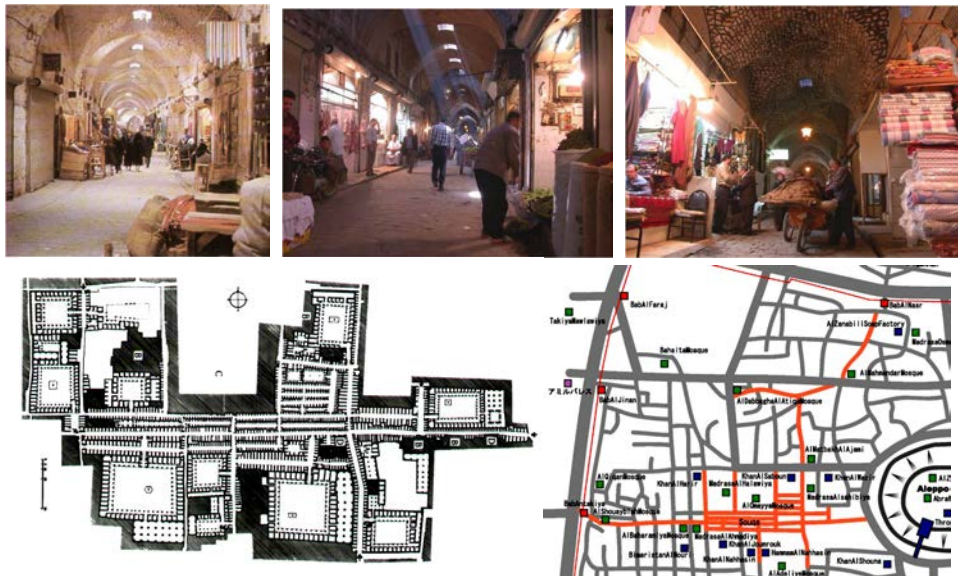


Figure 5: Al Bazar in Aleppo: the market that has a network of roofed roads with fortified gates.

Thus, the market was born in an urban fabric and it had an obvious role in forming this fabric. The effect was mutually harmonious in order to be difficult to us to decide, at the beginning, the origin of this relation and which one is more effective, the market or the urban fabric. The traditional markets vary in size, goods, shape and space to meet the social and psychological needs of the shopper. The inherited architecture responded to the needs of Muslims; the settled ones and the travelers and this is what the buildings and the diversity of their functional types witnessed. The buildings were often simple not luxurious; that's why few of them remained.

3 THE ISLAMIC MARKETS AND URBAN FABRIC

Markets in the inherited city within the urban fabric were set in two locations:

The market outside the city walls: They were often specialized with equipping trips and stables around the gates of the city. These markets were separated from the housing area, because of the smoke, odors, or because of the security factor – as safety is required. Sometimes, some of these markets were connected with houses or what was called (Arrabd) such as Al Mahdia city, and as in Cairo; building such markets forced them to stay in Fustat.

The market within the city walls: These roofed markets were often located at the heart of the Islamic city; around the mosque, with one floor. At the beginning of the Islamic period, in Medina, the market was a free land near the mosque. Then they were developed until they turned into continuous linear shopping corridors. They appeared on the main roads or semi-main ones in the city. These markets linked the main gates and city centers. This designed method appeared in the Umayyad era, and it was very clear in Baghdad in the Abbasid era with the specialization in the markets. There were other markets near the city gates which continued the previous pattern, and this is what we see nowadays at Damascus gates as Bab Tomas and other gates [11, p. 185]. This was clear in Cairo Qasaba, which is divided into five parts. The first part begins with Al Hakim Moseque and the northern entrance of Cairo Al Fotouh door and ends with Sabeel and Al Selehdar Mosque. It was specialized with steels industries. The second part, extends from Al Selehdar Mosque and Sabeel Katakhda achool (kutab). It is specialized in trading contemporary aluminum. The third part ends with a group of Qalawoon and specialized with copper industries. The fourth part is located between Al Salihia and Al Ghoureya. It is specialized with gold and currency change. The fifth part, which is between Al Ghoureya and Muhammad Ali, is specialized in fabrics, carpets, cotton and textiles [2, pp. 173–176].

There were other markets, held weekly or seasonally in the Islamic city, within the open lands and on the main roads of the city. In Tunis, we can find all these types of markets, both central and linear. Linear markets are generally with bent or straight axes, and roofed. While the squares are open and the corridors and the axis are crossed so they all generate markets with parallel or perpendicular corridors as Istanbul markets [12, p. 289].

Markets in Islamic cities nowadays are either old markets which are preserved, traditional ones that are still used, modern markets that have an inherited architecture, or markets living in the present time away from its past.

We can see that many Arabic and Islamic cities still retain and preserve the old Islamic and traditional markets. Some of Baghdad's traditional markets are Bab Al Agha market, and Al Safareen market. There is also Al Samoaal Street that has many khans which represent places to wholesale markets. Another example is Al Kadhimiya markets (Al Astarabadi market) which is the most famous one roofed with truss. The Arab market in Al Shorja area in Baghdad is considered a modern market. There is also the Indian roofed



market which sells spices in Basra city. And there are the old traditional Al Mosul markets including Bab Al Toob market.

There were other markets in Tripoli of Libya. These markets were specialized in Libyan folk traditional costume. There were brides' markets equipped with all their requirements. Also, there were the Cairo markets in Khan Al-Khalili which were well known and Sanaa markets near Bab al-Yemen, including the salt market. Some are specialized with certain goods and their stores are around the unroofed centered yard. There are a lot of traditional markets in Seaoon and Hadramout (Yemen).

In Amman, Jordan, we can find Al Bukhariya market, named after the Bukhara people immigrants who lived in Amman in the mid-twenties of the twentieth century. This market was built around Al Hussein Mosque area in 1930, and then in 1950 it was moved to the opposite side of Al Hussein Great Mosque. Currently, it sells accessories, some gifts for tourists and supplies for tailors. Also, there is Manco market built in 1942, the first market for pedestrians. It's connected with Basman Street through an arch and some stairs. It is still working efficiently compared with the modern markets, because it has a convenient environment for shopping [13, pp. 400–401]. Damascus is known for its old special markets. It has seven gates which work as commercial markets. A lot of Ottoman buildings and new markets, such as Al Hamidiya and Al Muhagereen were established there. Old Damascus has an oval-shape. Its long diameter is Medhat Basha Street or the Eastern door, with a length of 1600 m, and a small diameter of 1000 m. The history of Al Hamidiya market goes back to 1780AD/1195AH. The governor Hussein Nazim Basha changed the wooden roof of this market and the other big markets with iron and zinc roofs to protect them from fire [14, p. 190].

In Hamidiya market they sell all kinds of textile products of different origins, as well as Oriental antiques and refreshments. The market dimensions are about (600 m × 15 m) and its height is about two floors.

Damascus also includes Al Hal market. It is a wholesale market for fruits and vegetables. It was built in the era of the French mandate. Traders' stores were on the ground floor while cheap hotels were on the upper floors [15, pp. 108–110].

Medhat Basha market (the straight market), sells all kinds of fabrics and Abayas. At the end of the market, there were shops that sell perfumes and spices. Near Medhat Basha market there were large buildings that served trading services, such as Khan As'ad Basha. In Sarouja, there were Al Ateeq market, King Faisal Street and their sub markets. Al Khoja market or Khaja market was specialized in manufacturing bags. There were other markets, such as Ali Basha Market, Al Srojiyeh, Al Zarabliyah, Al Tiben market, Al Kheel market, Al Ateeq market, etc. [16, p. 446].

Markets were connected to each other, beginning with the narrow roofed Qawafeen market which connected and ended at the unroofed Silah market, in addition to Al Qaimariya market, etc., until they reached the number of 58 old traditional inherited markets [9, pp. 437–438].

Damascus was famous for its wonderful markets. Some of them disappeared from the modern map of Damascus while others witnessed the long history of this commercial city. The Ottoman markets form an integrated architectural unity containing commercial stores; the Khan, the Mosque, the bathroom and the school. Its best examples are Al Khayateen Market and Al Hamidiya market in Damascus. In Al Khayateen market there is Khan Khojah which is located in the southwest of the Umayyad Mosque. And in the silk market there was another khan called Khan of silk (Al Hareer).

In Aleppo there is Al Najareen vault (qaboo). It is a roofed market in Al Bayada inside Bab Al Hadeed (door of iron). Throughout the past ages going back to the tenth century

BC, Aleppo remained the global economic commercial center linking the continents and oceans, and it also remained to be the route crossed by the silk, spices, textiles and perfumes traders. The trade volume doubled in Aleppo during the Ottoman rule and the Khans and markets were expanded [17, pp. 1–2].

In Syria, there was also Dannoun Khan on the road between Damascus and Deraa, while Al Maaz Khan was on the road between Damascus and Homs, close to Al Qatefah town and Toman Khan was located in the south of Aleppo. Also, Al Sabeel Khan was on the road between Hama and Aleppo. In addition, Al Asal Khan was located on the entrance of Aleppo. Ayyash Khan was near Adra town, at the crossroad of Baghdad. Now, the question is, do we have to build twins to our traditional markets in the Islamic architecture? And what did our old inherited markets achieve?

What about the modern experience of Arab markets? In Nazwa, Oman, there is a huge market consisting of ten buildings, surrounded by an external wall and doors. It integrates with the urban fabric and makes its traditional architectural components of original ones. The function of the market is to sell vegetables, fruit, meat, dates and fish and to be a restaurant [18, p. 140].

The Modern shopping center was established in Al Sharjah to create a new style in architecture. Despite the adoption of similar plans and wide corridors, their relationship to each other, and the heights do not give the same feeling that humans felt by the traditional markets that are two meters wide. Noting that, the width of the markets' corridors has a role in increasing the efficiency of the environment [19, p. 130]. There are modern marketing centers in the Arab Gulf cities such as Al Ghurair and City Centre in Dubai, Warba Center, Deera Center and Al Rashed Center in Al Khobar in Saudi Arabia.

In Baghdad, many marketing centers with multi floors were constructed but they were not multi-functional (i.e., they are only for selling and purchasing). The designs were repeated in different areas and lack the elements of commercial attraction. Also, their design is incompetent with the surrounding urban fabric, as Al Mansour market, Al Mustansiriya market and Al Adel market, and Al Thulathaa Market with a different design.

These marketing centers are not connected with the urban fabric and the surrounded area. According to this, the Islamic markets popped-up and composed the urban fabric. They exchange positions with them according to their importance. So, we do not know if these markets composed the urban fabric or if it formed them. In the modern markets, the shopper does not enjoy moving because they combine all the shopper's needs under one roof. The diversity should be in the market's form and not in just what it contains. Modern markets lack diversity in both their goods and their physical environments. These markets take you to a long and boring journey, full of odors without living any social interaction with others.

4 CONCLUSIONS AND RECOMMENDATIONS

Traditional markets in Islamic traditional architecture are extended horizontally with one floor or more, while most contemporary Arab markets are extended vertically with multi-floors and are protected from the climate. Their goods ranged which assures specialization in the kinds of goods. Markets were specialized and this reflected on the specialization of goods through the architectural form and general planning of the market, where the perpendicular or broken (bend) axis or any change in direction was an indication of the in change the types of goods.

Markets in the past ranged in the width of their shopping streets. They got narrower when they become less populous. So they were responsive to the number of shoppers and the importance of goods. The diversity of the physical environment of traditional markets



comes responsive to the diversity and change of goods and then the diversity of the corridors width and the roofing style. This diversity affects shoppers and generates a state of pleasure and social interaction between the market and the shoppers and among the shoppers themselves. Besides the element of surprise and change of optic shots along with the shopping streets which make it an interesting environment and helps the shopper to break out of boredom due to the diversity of size, shape and direction of the market. This refraction of the directions enriches the architectural image and the image that is saved in the human's memory. Richness and optical enrichment are greatly affected by the diversity of information and signals that were sent by the design.

The traditional market accommodates future variables and is in constant change through the adoption of the repetition principle. Markets were also used for gatherings of people on certain occasions. So they are integrated with the social use and physical environment of old markets, that were mature. They also met the needs of the community by encouraging the social interaction among shoppers, which doesn't exist in most of the modern markets' environments.

Perhaps the contemporary Arab multi-floor marketing centers exceed some of the negatives. In this age, technology helped these centers from the efficient processors to achieve the climate compatibility and efficiency inside the building, but these marketing centers did not fulfill their goal in entertaining the shopper and they do not represent the Arabic identity. Markets are one of the most important buildings that reflect the identity of the country for being the station for shoppers. Most modern markets failed in communicating with the old buildings and to fulfill the contemporary shoppers' needs. In the past, the traditional Islamic markets were a reflection of a harmonious society connected with its past and present. This does not mean the absence of models that achieved these purposes. The market's design was a complementary episode of its architecture series.

The market should grant the shopper the opportunity to relax within an effective and efficient internal environment. This should be a target that is taken into consideration while designing the modern marketing centers. So, the marketing center should include entertaining activities. We have to study the physical environment of the Islamic traditional architecture to find the architectural shape that achieves the balance between the humans' needs and the environment.

We should also help the shopper to easily reach the marketing center, find a parking, and take care of the external environment by planting it. In addition, there is the need to achieve the distinctive character of the market and its street through the architectural designs that suit our traditional and original inherited architecture, and while taking into consideration the environmental dimension while designing the commercial market as well as the importance of adopting local architectural heritage.

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