

Conservation of historic urban core in traditional Islamic culture: case study of Isfahan city

Ali Assari¹, T.M. Mahesh² and Erfan Assari¹

¹Department of Civil Engineering, Isfahan Sciences and Research Branch, Islamic Azad University, Isfahan, Iran

²Institute of Development Studies, University of Mysore, Manasagangotri, Mysore-570 006, Karnataka State, India
ali_assari1358@yahoo.com

Abstract

The main objectives of this study are to identify the land use pattern of historic urban core in frame work of traditional Islamic culture and find out the significance conservation of heritage areas surrounding the main city core. The methodology of this study was based on SWOT analyzes, for assessment of strengths, weaknesses, opportunities and threats of a city forms, for preparation of plan for conservation of heritage area in Islamic traditional urban core. The result of this study investigated existing limitations and strength. Main findings lead to a conclusion that the traditional frame of historic urban core is stronger than the new elements of city and without consideration to structure of traditional Iranian city, development plan is impossible.

Keywords: Land use, Urban pattern, SWOT analyze, Iranian city, Conservation, Morphology

Introduction

Heritage is a part of cultural tradition of any society (Nuryanti, 1996) and conservation of this is an important part of modern urban policies. For the past at least half a century, historic cities have acquired an incomparable status in modern culture for artistic events and cultural identity of people. They have become the icons of global cultural tourism and coveted places for the enjoyment of a different lifestyle and for cultural experiences for millions of people (UNESCO, 2010).

Edmund bacon (1976) in his book in title "Design of cities" described that each city has specific principal elements which can be consider as the "central design structure" of the city form. Those elements in Isfahan are: 1) Bazaar 2) Meydane Naghsh-e-Jahan 3) Zayande-Rood River 4) Chahar Bagh Avenue. Nader Ardalan & Laleh Bakhtiar (1973) explained the concept of point and line, this concept assume center, as a single point in space and its moves in time and creates the line or the linear. Bazaar of Isfahan is the main element in this concept. In this case urban core of Isfahan city become the pattern of whole city.

Fig. 1. Iranian traditional cities source: Eckart EHLERS and Willem FLOOR. urban change in Iran. 1920-1941

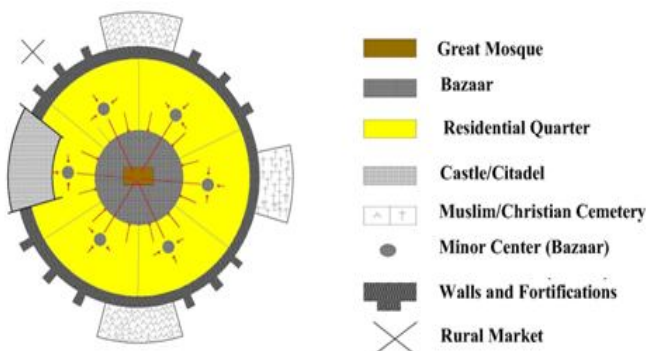
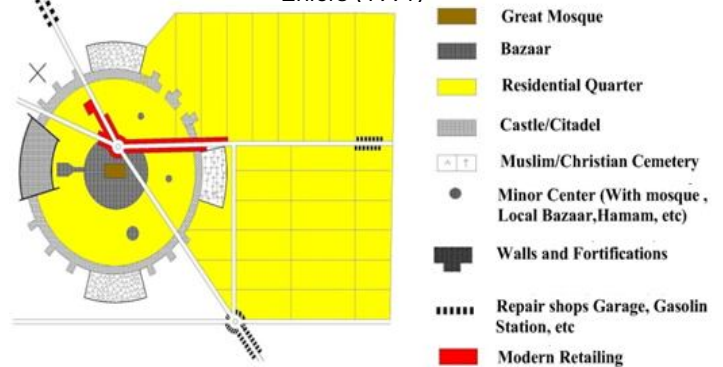


Fig. 2. Model of modernized Islamic city. Source: Eckart Ehlers (1991)



The purpose of this paper is to analyze strengths, weaknesses, opportunities and threats (SWOT) of the urban core in Isfahan city regarding to concept of central design structure and concept of point and line.

Morphology of Iranian traditional city

Structure of Iranian traditional cities reveals a general rules in all those towns, Bazaar, usually taking a linear shape, acted as the spinal column of city and continued towards the main gates of town. As per the concept of center point 'it moves in time and creates the line' (Ardalan & Bakhtiar, 1973) and also passageways were in fact branches of the linear Bazaar which connected the city centre to neighborhood centre (Karimi, 1997; Ramezani & Hamidi, 2010).

The Great Mosque

It is located in the heart of the city and was usually surrounded by the bazaar as the case of central mosque (Masjed Jame) in Isfahan where the weekly Friday prayers were held and attached to it was the Madrassa providing religious and scientific teaching.

Bazaar

Bazaar means a marketplace or assemblage of shops where miscellaneous goods and services are displayed to buy and sell (Pirnia, 1990). The word "bazaar" refers to

"waazaar", which is an ancient Persian word (Porushani, 1995). Iranian traditional city located outside the main mosque provided the economic activity in the town. Goods sold were usually spatially distributed corresponding to their nature. Sacred items such as candles, incenses and perfumes were sold close to the mosque as well as items that would be sold by booksellers and binders (Soltanzade, 2001) while the rest of the goods were found at a further distance. The central area was also the gathering of other public activities such as social services, administration, trade; arts and crafts and baths. There have been three types of bazaar in the cities of ancient Iran: Periodic bazaar, Urban bazaar and Local bazaar. Urban bazaar was popular for accommodating commercial activities as well as social and cultural activities of people. Architecturally speaking, urban bazaar is a covered public passageway which is surrounded by shops and stores in two sides. It was, therefore, a place for shopping, walking, social dialogue, and cultural interaction of people. It has acted as the most important and influential public space in ancient cities and towns of Iran (Pirnia, 2001).

Citadel

Also known as Casbah, representing the palace of the governor, the citadel was surrounded by its own walls and constituted a district on its own with its own mosque, guards, offices, and residence. It was usually located in the high part of the town near the wall (Bosworth, 2007).

Residential quarters

Surrounding these public structures were the residential areas, with high density and each quarter had its own mosque used only for daily prayers (Ehlers & Floor, "Urban Change in Iran, 1920-1941" in Iranian Studies, 1993), Quranic School (Madrassa), bakery, shops and other first necessity objects. They even had their own gates which were usually closed at night after last prayers and opened early morning. They were also ethnically organized, Muslims grouped in quarters and Jews in others so that each group could practice and celebrate its own cultural beliefs.

Study areas

Malek shah chose Isfahan as the capital of his kingdom and created the old square of Isfahan (The

Saljuqids:1040-1194; Source: Iran Chamber Society). Isfahan was the capital of Shah abas safavi. Naghsh-e Jahan Square with surrounded buildings: Shah Mosque, Ali Qapu Palace, Sheikh Lof Allah Mosque, and Isfahan grand bazaar were of Safavid era (Safavid Empire:1502 - 1736; Source: Iran Chamber Society).

Naghsh-e-Jahan is a square situated at the center of Isfahan city, Iran. Constructed between 1598 and 1629, it is now an important historical site, and one of UNESCO's World Heritage Sites (Wilber, 1981). The minimum height in Isfahan is 1550 meters around Zayandeh Rood and maximum is 2232 meters in Sofeh Mountains. Annual average precipitation and temperature is 121.1 mm and 16.2°C, respectively. Isfahan is the capital city of Isfahan province and the third biggest city in population in Iran after Tehran and Mashhad and one of Iran metropolises. In recent decades, it has been the center of attention and high density of population because of concentrate of economic activities like industrial, tourism and also demands for cultural development due to concentration of different types of industries, housing, transport, business, cultural, educational and entertainment uses.

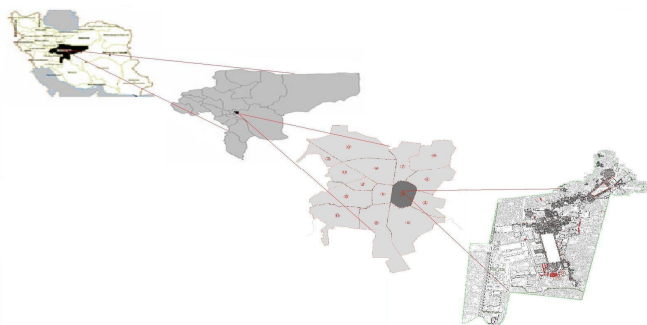
Historical overview of Isfahan city

History of Isfahan city core consisted of two parts, the old section, which started from the old square, close to the Friday mosque, and the new section, which started from Naghsh-e-Jahan square (World View Square) today called as the Meydan-e Emam, with its measurements of 1680x523 ft and connected to the old section (Karimi & Motamed, 2003). By the 11th century, after selecting Isfahan as the capital of Saljuqi period, the old square had become the center of the city and old square become such an important urban space, that is a big difference in that particular era. It had a castle, bazaar, and mosque

Fig. 4. Isfahan city core during the Saljuqi and Safavi period



Fig. 3. Location of the Isfahan urban core





and residential. There were some peripheral markets along the main streets radiating from the old square from at least that time. The 1.5Km (1,650-yard) shopping street is still the main street in the bazaar, the longest vaulted bazaar street in the world (Weiss *et al.*, 1998). After selecting Isfahan as the seat of Shah Abbas safavii, a new core was designed between the old bazaar and the square. Creation of Nagsh-e-Jahan square played an important role in Isfahan's town planning. The important point is the best design for connecting of this new square with the old structure of the city core. The purpose of design was linking it with the main chain of the grand bazaar, which extends from the Old Square (Sherban & Browner, 1976; Karimi & Motamed, 2003).

Shah Abbas redeveloped the city extensively and had a number of new bazaars built: the buildings surrounding the Nagsh-e-Jahan square (originally including a large number of coffee houses), to the south east and the large bazaar to the north, where the old core was located (Walcher, 1997).

Land use structure and zoning

Zoning is a tool that allows communities to support the existing uses of land and to promote the desired future development patterns in order to maintain the health and welfare of the community over time (McKay, Banash, & Miner, 2009).

The city core of Isfahan consists of 842± acres of land generally divided into 25 categories of land use. The majority of the city's land, 303 acres or 36%, is devoted to its residential neighborhoods. Land under transportation use is 182 acres which constitutes 21.6 per cent of total land use and commercial and bazaar is under 107 acres or 12.7%, which is next to largest categories of land use.

Public and semipublic, garden and park and open space are comprise 4.3, 4.2 and 3.7 per cents respectively.

In category of public and semi public administration disciplinary with 4.3 percent and cultural with 3.4 percent got the highest rank in land use planning. Industrial uses under 15 acres constituting 1.8 per cent land in the core area of the city.

According to Fig. 8 and 9, building with more than 30 years old got the highest rank 62.8 percent in age structure of Isfahan city core and 61 per cent of the structure is of good quality. In other words, reconstruction and renovation of this part of the city should be the main concern of the local authorities.

Objectives of heritage conservation

This section highlights the main objectives of Isfahan heritage conservation and key features which are relevant to the study. It includes: to study on the significance of conservation of heritage areas surrounding the main square in various eras (Ahmadi, 2007); to study the existing land use pattern in heart of the old center of Isfahan; to assess strengths, weaknesses, opportunities and threats of a city centers the basis for preparation of Iranian city development plan (Ahmadi, 2004). A city level SWOT analysis has been based on conservation of urban center of Isfahan city. This study has been divided into two sections each describing the strengths, weaknesses, opportunities and threats respectively. And also seeks to identify some of the key strengths and weaknesses that characterize Isfahan city core, as well as some of the significant opportunities and possible threats that Isfahan city core faces.

SWOT methodology

The present study is based on descriptive research. It is considered as applied type in terms of objective. Information and data has been collected through studying Isfahan literature, municipality of Isfahan, Iranian organization of cultural heritage crafts and tourism and ministry of housing and Urban Planning. For obtaining necessary information at this study, required data have been collected through library-based studies and interview.

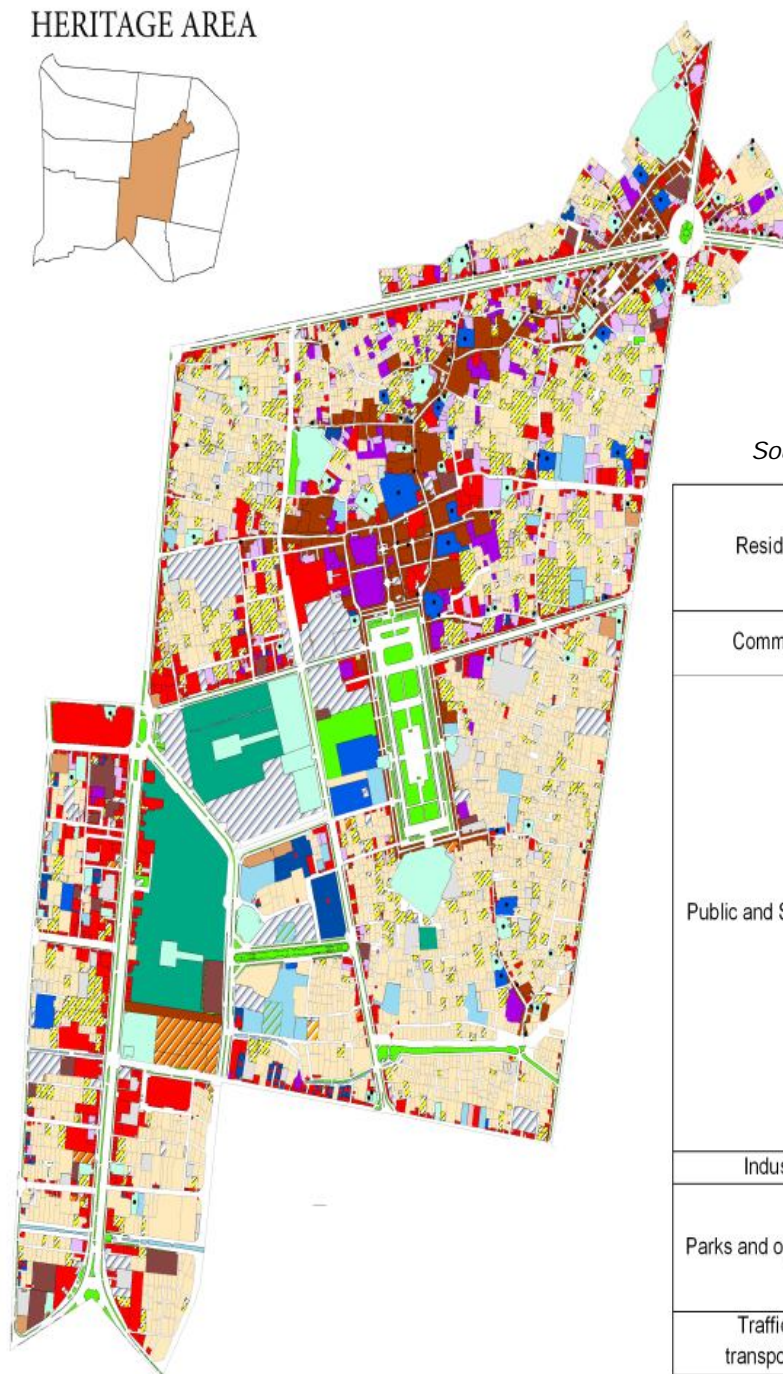
This study is based on internal and external urban conservation factors. Internal factors can be classified as strengths (S) or weaknesses (W), and external factors can be classified as opportunities (O) or threats (T), and strategic urban conservation is referred to as SWOT analysis.

Strengths

Isfahan city is famous for the squares and bazaar which has been created in 11 and 17 century, Isfahan has several strengths. The strengths related to sectors include location of the city, tourism, heritage, bazaar and commerce activity, traditional arts and architecture. It includes: a) Market Center and bazaar for small towns and other cities. b) Uniquely beautiful cultural heritage in whole of Isfahan city. c) Amount of good quality of



Fig. 6. Land use map in selected area



Source. Bavand Consultants Architect and planners

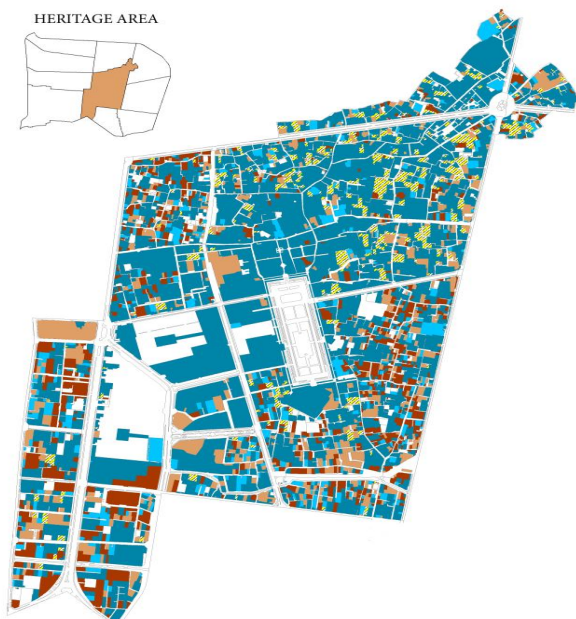
Residential	residential		882174	25.9	36
	Abandoned and dilapidated		261222	7.7	
	vacant land		82635	2.4	
Commercial	commercial		280761	8.2	12.7
	bazaar		152605	4.5	
Public and Semi Public	education		62639	1.8	19.6
	pg education		21303	0.6	
	religious school		33626	1	
	cultural		116462	3.4	
	religious		48629	1.4	
	health		29463	0.9	
	sanitation		4803	0.1	
	Administration - disciplinary		146012	4.3	
	tourism		25515	0.7	
	Social Services		1579	0	
	Urban facilities and equipments		62668	1.8	
	stores		77368	2.3	
	Transport facilities		43224	1.3	
Industrial	industrial		60235	1.8	1.8
Parks and open spaces	garden		142937	4.2	8.1
	park and open space		126616	3.7	
	sports		5963	0.2	
	Entertainment		1332	0	
Traffic and transportation	transportation		736326	21.6	21.6
	river and Maadi		6235	0.2	0.2
Total			3412332	100	100

Fig.7. Summary SWOT matrix for selected heritage area in Isfahan city

STRENGTH	↔	OPPORTUNITIES	→	S-O	<ol style="list-style-type: none"> 1. Attraction of tourism for cultural heritage and central design structure among the long period 2. Restoration of residency and subway networks for prevent migration and reachable from the city core. 3. Sustainable development regarding to sprit of city and building construction
STRENGTH	↑	THREATS	→	S-T	<ol style="list-style-type: none"> 1. Decentralize planning considering value of cultural heritage and bazaar in city core. 2. Create the subways network far from the heritage monuments and avoid construct the high building in buffer zone.
WEAKNESS	↑	OPPORTUNITIES	→	W-O	<ol style="list-style-type: none"> 1. Planning for public and transportation in CBD and design the multistory parking 2. Increase the heritage awareness and traditional hand craft by advertizing to create job opportunity for young age population. 3. Create shopping centers far from the main square to prevent concentration commercial areas in old city center.
WEAKNESS	↔	THREATS	→	W-T	<ol style="list-style-type: none"> 1. Limitation for the entrance of whole vehicles in heritage part of the city in peak traffic hours 2. Avoid connection between draining and swage network to Zayandeh- Roud River

Fig. 8. Age of the buildings in selected area

source: Bavand Consultants Architect and planners








		number of house	area sq2	percentage
10 years old and less		775	268133	11.6
11 to 20 years old		540	179428	7.8
21 to 30 years old		1067	295797	12.8
more than 30 years old		3987	1452854	62.8
fit for demolish		238	115482	5

Fig .9. Quality of the buildings in selected area



Source. Bavand Consultants Architect and planners

	number of house	area sq2	percentage
good 	3893	1416767	61.0
fair 	1296	408430	17.6
bad 	620	128014	5.5
fit for demolish 	667	256693	11.0
Under Construction 	182	112652	4.9

buildings are 61% (Bavand Consultants Architect and planners, isfahan, 2010). d) Central design structure (Bavand Consultants Architect and planners, 2010). e) Very important Tourist Destination: prominent cultural monuments worth seeing including Naghsh-E-Jahan squares and Chahr Bagh (four gardens) streets of the city, and a number of cultural and tourist events in the city core. f) Rich cultural and historical heritage (intangible heritage, cultural and Islamic architectural heritage that has been preserved). g) A concentration of cultural institutions and societies operating in the city core. h) Naghsh-e-jahan square is in the UNESCO (1979) list (http://whc.unesco.org/archive/advisory_body_evaluation/115.pdf).

Weakness

Lack of drainage and sewerage network especially in the Nagsh-e-Jahan square; Lack of parking space in the center of Isfahan city; Lack of proper public transport system leading to skewed traffic composition on the road network of the city; Citizens migration; Lack of awareness among in the city people towards heritage conservation; Concentration of major commercial activities within old city area, causing severe congestion; high average age of population in urban core.

Opportunities

It can attract more tourists because of its rich heritage and culture, especially foreign tourists; The Government is currently focusing on restoration of residency in heritage texture and improvement of basic services in city core of Isfahan to prevent migration from the city core; Improving linkages to city core with subway road networks; The city core of Isfahan have several heritage sites and cultural monuments requiring minor restoration works in order to restoration of urban spirit; Maintaining and restoring the spirit of the city is based on principal elements of Isfahan urban structure in early era.

Threats

The change of demographic and social structure of citizens living in the urban core of Isfahan city; Distance between the historical centre and the surrounding areas despite the Zayandeh Rood river in center position; Lack of a partnership program to support the increasing labor migration and increasing unemployment effects in Isfahan city core; Increasing the emigration of young people; Zayandeh Rood River has become a wastewater drain and is heavily polluted as a result of raw sewage inflow and dumping of solid waste; High growth rate of vehicles on road causing congestion, delay, safety, pollution; Vibration of subways become as the main threats for heritage monuments; Height of the building is break sky line in buffer zone of Naghsh-E-Jahan square where natural calamities and human damage are become threat for heritage monument.

Summary of findings and suggestions

It is not enough to identify the strengths, weaknesses, opportunities, and threats of conservation of Isfahan urban core. In applying the SWOT analysis it is necessary to minimize or avoid both weaknesses and threats. Weaknesses should be looked at in order to convert them into strengths. Likewise, threats should be converted into opportunities. Lastly, strengths and opportunities should be matched to optimize the potential of a plan for conservation (Doratli *et al.*, 2004). Some suggestions are: Focus on attracting tourists for cultural heritage; Restoration of residency and subway networks; City development should foster the spirit and culture of the city and building architectural marvels; Decentralize planning considering value of cultural heritage and bazaar in city core; Create the subways network far from the heritage monuments and avoid construct the high building in buffer zone; Planning for public and transportation in CBD

and design the multistory parking; Increase the heritage awareness and traditional hand craft; identify the skilled human resource of traditional importance and train them further; Create shopping centers far from the main square to decongest the commercial areas in old city centers.

Conclusion

The core of every traditional historic city has a life based on many years of history and human experience. Focusing on conservation of historic urban core on the basis of studying, the past urban pattern of the city helps us to transfer this legacy to next generation. This helps the Urban planner searching for causes destruction of urban core in traditional cities and to propose solutions. In this way it seeks to conserve the heritage area not only a few steps of action plan such as drainage and narrow road, its requiring social studies and careful planning. As per our study, age 62.8% of the buildings are >30 years old and 61% of the buildings are in good condition in selected area. This indicates that renovation in this heritage area has been relatively successful. It is evident that the existing pattern of Isfahan city core has not only been shaped by its history and functions. But also by its surrounding area which is created in its context. This study suggests that, study the Structure of Iranian traditional cities before doing any action plan is very important; it has taken effect from the Conservation of historic urban core in traditional Islamic culture. Explaining of the Iranian city by regarding the land use and elements structure of the city can be more useful.

References

1. Ahmadi A (2004) Information and Communication Technology Strategic Planning. University of Science and Technology, Tehran.
2. Ahmadi F (2007) Tsinghua: Balance urban revitalization for social cohesion and heritage coservation. Iranian experiences of urban revitalization in historic districts. UNESCO International Seminar. pp:109-114
3. Ardalan Nader and Bakhtiar Laleh (1973) The sense of unity; The sufi tradition in Persian architecture. University of Chicago Press, Chicago.
4. Bosworth CE (2007) Historic cities of the Islamic world. Brill, Boston
5. Doratli N, Hoskara SO and Fasli M (2004) An analytical methodology for revitalization strategies in historic urban quarters: a case study of the Walled City of Nicosia, NorthCyprus. *Cities*, 21, 329-3248.
6. Ehlers E (1991) Cities. iv. Modern urbanization and modernization in Persia. *Encyclopaedia Iranica*, 5 (6), 623-29.
7. Ehlers E & Floor W (1993) "Urban Change in Iran, 1920-1941" in Iranian Studie. Taylor & Francis, Ltd. on behalf of Intl. Soc. for Iranian Studies, 26(No. 3/4 Summer), 251-275.
8. Karimi K (1997) The spatial logic of organic cities in Iran and the United kingdom. Proc. Space Syntax 1st Intl. Sym. London. pp:1-17.
9. Karimi K & Motamed N (2003) The tale of two cities: the dynamics of the city of Isfahan in the past and the present. Proc. 4th Space Syntax Symp. 14.1-14.16.
10. McKay FE, Banash A & Miner T (2009) Mohawk Trail Scenic Byway Eastern Section – Athol to Greenfield Corridor Management Plan. Franklin Regional Council of Governments, Greenfield.
11. Nuryanti W (1996) Heritage and postmodern tourism. *Elswier Science Ann. Tourirm Res.* 23(2), 249-260.
12. Pirnia K (1990) Islamic architecture of Iran. *Elm-o-Sana'at Publ., Tehran*
13. Porushani I (1995) Bazaar. Encyclopedia of the Islamic world.
14. Ramezan S and Hamidi S (2010) Privacy and Social Interaction in Traditional Towns to Contemporary Urban Design in Iran. *Am.J. of Engg. Appl. Sci.* 3 (3), 501-508.
15. Sherban C and Browner K (1976) Why Isfahan? The Architectural Press. pp: 255-259.
16. Soltanzade H (2001) Iranian Bazaars. Cultural Research Bureau Publ.
17. UNESCO (2010) Preliminary Report on the Draft Recommendation on the Historic Urban Landscape. Pari: UNESCO World Heritage Centre.
18. Walcher HA (1997) Between paradise and political capital: the semiotics of Safavid Isfahan. *Middle Eastern Natural Environments J.* 103, 330-348.
19. Weiss, Walter M and Westermann, Kurt-Michael (1998) Bazaar: markets and merchants of the Islamic world. Thames & Hudson.
20. Wilber D (1981) Iran: past and present. Princeton University Press