Environmental Performance Assessment (EPA) of Tourism Accommodations: The Case of City of Mashhad, Iran

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ABSTRACT

The aggregate per capita of environmental practices within the tourism sector in a destination is not limited to public sectors' environmental agenda; but rather every element/part in the whole industry must involve in environmental practices adaptable and compatible with the activities of that unit or segment. Accommodation is one of the main parts of tourism industry with its noticeable impacts on environment that justifies this research to examine and explore the environmental behavior of this particular part of the tourism system. The present study aims to explore the nature of environmental performance (EP) of accommodation sector in the city of Mashhad, Iran. Mashhad is the prime religious destination for pilgrimage and non-pilgrimage vacationers. Being an attraction for pilgrimage tourism, the political economy of this urban area is interwoven with tourism in one hand, and sustainability and the industry`s future, on the other. To reach sustainability and business achievement in accommodation sector, hotels are liable to invest in means and measures of making environmental costs internal in short-term and decreasing the environmental impacts in the long-term. With a population of over 2.5 million people, Mashhad accommodates approximately 14 million tourists each year (ICHTO, 2010). The political economy of this metropolitan area is interwoven with tourism, thus, its environment and sustainability depends upon the environmental performance of tourism sector. The International Hotels Environmental Initiative (IHEI) (Forsyth, 1995) has established EP as part of the strategic decisions of the accommodation sector around the world. This is also a growing concern among the governments, industries, and communities. Furthermore, hotel managers are expected not only to have an understanding of their environmental performance, but also to be aware that

their sustainable existence depends upon the quality of the environment in the long run (Leslie, 2007). For the purpose of data collection and analysis, a quantitative method has been applied through administering 200 survey questionnaires to the managers of different hotels with different ranks. The questionnaire included 51environmental performance indicators. Findings revealed that overall environmental knowledge and awareness among the managers are low, which is also juxtaposed with lack of communication in environmental awareness. The study showed that waste management and recycling obtained a moderate point as enforced by the municipality. Water conservation is also practiced through the application of new water facets in the rooms. However, filtration process is not done and also, water wastage is taking place. The lowest point is given to energy consumption, which is still highly dependent on fossil fuels, especially petroleum. Not much attention is given to application and utilization of renewable sources of energy. In relation to landscape design and greening of the surroundings, hotels are negligent. Another deficiency that the study revealed is the lack of parking spaces, which can result in traffic and congestion. Finally, accommodation sector and managers need to strengthen their resolves towards environmental awareness and commitment if the aim of sustainability is on their agenda.

ÖZ

Turizm sektörü içinde kişi başı çevresel uygulamalar, toplam kamu sektörünün çevresel gündemi ile sınırlı değil, bu uygulamaların yanında, bütün sanayi sektörü içerisindeki her elemanın / kesimin uyarlanabilir ve segment faaliyetleri ile uyumlu çevre uygulamaları içermesi öngörülür. Konaklama, çevre üzerindeki farketkileri ileturizm endüstrisininana bölümdenbiridir. Bu nedenle, bu araştırma, turizm sistemibu özel bölümünün çevreseldavranışlarını incelemekve araştırmak üzere yapılmıştır. Bu çalışmada, İran'ın Meşhed kentinde dini inançlı veya inançlı olmayan tatilcilerin konaklama sektörünün çevresel performans doğasını keşfetmek hedeflemiştir. Bu kentsel alandaki politik ekonomi, bir yandan turizim sektörü ile ve bir yandan da geleceğin turizminin sürdürülebilirliği ile iç içedir. Konaklama sektöründe başarıya ulaşmak ve sürdürülebilirlik elde etmek için, oteller, yatırım yapmalı, kısa vadeliiççevresel maliyetleriölçmeliveuzun vadeliçevresel etkileriazaltmak için çalışma yapmakla yükümlüdür.

Konaklama, çevre üzerindekifarketkileri ileturizm endüstrisininana bölümdenbiridir. Bu nedenle, buaraştırma Meşhedşehri olaraksürdürülebilir birturizm destinasyonuiçingerekçearamak için yapılmıştır. 2,5 milyondan fazla nüfusa sahipyaklaşık20milyon turisther yıl(ICHTO 2010), Meşhed barındırmaktadır.Bumetropolalanınpolitik ekonomi, turizm veçevreileiç içevesürdürülebilirliği, bu sektörünçevresel performansınabağlıdır.

Uluslararası Oteller Çevre Girişimi (IHEI) (UNEP, 1995), dünyada konaklama sektörünün stratejik kararlar bir parçası olarak böyle bir uygulamayı kurmuştur. Bu

aynı zamanda hükümetler, sanayi ve toplum arasında giderek artan bir endişeye neden olmuştur. Ayrıca, otel yöneticileri, çevresel performansın bir anlayış var sadece beklenen, aynı zamanda sürdürülebilir varlığı (Leslie, 2007) uzun vadede çevre kalitesine bağlı olduğunun farkında olmalıdır. Otel yöneticilerinin, çevreselperformansıbiranlayış içinde olmasıbekleniyor. Ayrıca, yöneticileri, sürdürülebilirvarlığınuzun vadedeçevrekalitesinebağlı olduğununfarkındaolmalıdırlar.(Leslie, 2007). Veri toplama ve analiz için200anket soruyönetmeksuretiyle, nicel biryöntemuygulanmıştır.Sorularfarklıotel(farklı saflarında) yöneticileri ve51environmentalperformans göstergeleriniiçermektedir.Bulgular, yöneticilerarasındagenel çevre ile ilgili bilgi ve bilinçdüşük olduğunu saptadı.Aynı zamandaçevre bilincikonusundailetişimeksikliği de ortaya çıkan sonuçlar arasındadır.

Çalışmada, atık yönetimi ve geri dönüşüm'ün belediye tarafından zorunlu olarak yapılan ve ortak bir nokta olduğu meydana çıktı. Su tasarrufu, yeni su yöntemi ile uygulanmaktadır. Ancak, filtrasyon işlemi yapmadığından su israfının da olduğu saptandı.

Sonuçların en alçak noktasını, fosil yakıtlar ve özel petrol'ün yüksek oranda bağımlı olduğu enerji tüketimi verilir. En yüksek puan, yenilenebilir enerji kaynakları kullanımı için çıkmıştır.

Peyzaj tasarımı ve çevrenin yeşillendirilmesi ile ilgili olarak, otellerin ihmalkar olduğu çıkmıştır. Çalışmada ortaya bir başka eksikliği, trafik ve tıkanıklığa neden olabilecek park yerleri eksikliği.

Son olarak, konaklama sektörüve yöneticileri, çevre bilincinidoğrugiderirgüçlendirmek içinihtiyaç vardır. Taahhüt sürdürülebilirlikamacı.Son olarak, konaklama sektörü ve yöneticilerini, çevre bilincinine karşı güçlendirmeye ihtiyaç olduğu ortaya çıkmıştır.

Anahtar Kelimeler: Çevreselperformansı (EP), Sürdürülebilirlik, Sürdürülebilirturizm, konaklamasektöründe; Meşhed, İran.

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TABLE OF CONTENT

LIST OF TABLES

LIST OF FIGURES

Chapter 1

INTRODUCTION

1.1 Introduction

Iran is rich in varieties of tourism attractions. Iran's natural environment and its vast land mass of 1,648,000 Km² (636,000 Sq. mi), which is the sixteenth in size among the countries of the world, make the county a prime destination, potentially. With more than 2800 Km of coastlines, as well as, the high mountain ranges and 2 deserts, Iran has a spectacular physiography. The supply of recreational and tourism opportunities are endless. Such geographical/topographical characters render Iran a four-season country. The city of Mashhad, the focus of this study, is a traditional pilgrimage destination as well as a metropolitan area with overwhelming VFR tourism. Mashhad metropolitan area has gained even more significance with the onset of Islamic Revolution in 1979. The main factor attributing to the city is the shrine of Imam Reza, a revered religious figure in Islam, especially among the Shiite sect.

Mashhad is the second biggest city in Iran, and it ranks among the top 3 destinations for domestic and international tourists. The highest percentage of accommodation facilities is located in Mashhad (www.chto-khr.ir) with extensive variation to cater to different income levels. There are 113 hotels (Rooms: 8651, Beds: 24591), 488 inns (Rooms: 10978, Beds: 32435), 255 hotel apartments (Rooms: 5068, Beds: 14229), and one motel in Mashhad (www.chto-khr.ir). The major "Hoteliers Association" in Iran belongs to Mashhad that represents a powerful sector in tourism industry.

According to the recent data, the city houses 2.5 million people and accommodates about14 million tourists annually (www.chto-khr.ir). Average annual growth of the population is 2.5% (Statistical yearbook of Mashhad Municipality, 2010).

Due to tourism and population growth, the city has experienced an intensive sprawl, which has not been guided by a formidable urban planning (i.e., lack of a deliberate master plan). As a consequence, various environmental problems and uncertain sustainable urban system are warranted (Statistical yearbook of Mashhad Municipality, 2010).Some of the alarming environmental problems are the water shortage, air pollution, haphazard physical development, waste problem, to name a few. The tourism sector is intensifying the present problems and the situation demands an immediate attention. The accommodation sector in the city is by far a contributing factor to the environmental challenges at present and in the future. Environmental performance of accommodation sector has become an important issue in terms of impact, business, cost, marketing, image, employee loyalty, and overall sustainability (Graci and Dodds, 2008). With the pressure that accommodation sector applies on consumption of energy, water, food, space, discharge of waste material, and competitiveness , the sector's proactive environmental commitment has been explained by various theories including resource based theory of the firm and neo-institutional/stakeholders theory as means of motivation to commit to environmental performance (Correa and Sharma, 2003; (http://www.allacademic.com/meta/p87017_index.html).

One of the main pillars of tourism industry, the accommodation sector, with its obvious environmental impact, justifies the present study in quest for a sustainable tourism destination in the city of Mashhad. Being a magnet for pilgrimage tourism

and non-pilgrimage holidaymaking, the political economy of this urban landscape is intertwined with tourism in one hand and its future sustainability in another hand. To achieve both sustainability and business success in this sector, hotels are responsible to invest in means and measures of internalizing environmental cost in the short term and reduce environmental impact in the long-term.

This research presents some perceptions on tourism accommodations` energy consumption. The research discusses the environmental performance of tourism accommodations in the city of Mashhad, Iran. Research questions were designed and distributed to the owners and managers of Mashhad`s accommodations in order to understand the environmental performance in Mashhad`s tourism accommodation sector. The research is limited to all classified tourism accommodations such as hotels, hotel apartments, and inns in the city of Mashhad. The number of Mashhad`s tourism establishments has grown over last two decades which includes a huge variety in terms of provided services and the size. This expansion has brought many challenges and impacts to the environment, economy, and social life of urban area of the city of Mashhad.

Accommodation sector plays an important role in greening their operation and positively affecting the quality of the environment in their respected destinations (Holden, 2000). The interaction between environment and hotels' operation is manifested thorough consumption of water, waste disposal, use of energy, congestion, and traffic, surrounding landscape, use of chemicals for cleaning and washing, and the environmental awareness of accommodation sector employees. Therefore, the extent of their environmental behavior is a determining factor towards protection and quality of the environment (Buckly and Araujo, 1996; Ali et al, 2008).

Environmentally friendly policies and behaviors of the management system in the accommodation sector can also bring business success to the market, as well as, cause cost reduction in the production and consumption of this sector within the broader tourism industry (Holden, 2006). However, the realization of this process depends upon managers' commitment to specific environmental decisions such as environmental auditing, training, and dissemination of awareness among the employees and tourists alike.

1.2 Organization of the Study

The study is composed of six chapters. The first chapter is Introduction. In this chapter , study`s organization, the purpose of the study, the objectives of the research, research methodology and data analysis, and the pilot study of the research have been described in brief. Chapter 2 describes tourism in Iran and focuses on Iran`s history, culture, natural resources, and political economy of the country. This chapter is also introduces the city of Mashhad and its geographical, and historical characteristics, as well as, its tourism profile. Chapter 3 discusses tourism and its development. In this chapter, tourism industry has been categorized into mass and alternative forms where pilgrimage and urban tourism are emphasized. Chapter 4 discusses environmental impacts of tourism, ecotourism, sustainable tourism, and resource based theory. Chapter 5 addresses research methodology and data analysis and descriptive statistics. Chapter 6 is the final chapter that concludes the study and addresses the findings.

1.3 Purpose and Objectives

The study aims to:

- Assess the extent of environmental commitment of accommodations (hotels, inns, and hotel apartments) in the city of Mashhad, Iran.

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- Gauge the environmental impact of accommodations sector (hotels, inns, and hotel apartments) in the city of Mashhad, Iran sector.

- Assess the environmental performance of the accommodations (hotels, inns, and hotel apartments) in the city of Mashhad, Iran.

- Identify the practical application of environmentally approached measures.

- Explore the business success of accommodations (hotels, inns, and hotel apartments) in the city of Mashhad as an attribute of their environmental practices/performances.

1.4 Research Methodology and Data Analysis

A quantitative research method is utilized in this study. Data collection is achieved through distributing a survey questionnaire to the managers/owners of different types of accommodations in the city of Mashhad, Iran. The aim was to contact as many hotels as possible for the purpose of data collection. The compiled data was analyzed using SPSS 17 (http://www.spss.com) where the EP categories were translated into hypotheses.

1.5 Pilot Study

To make sure of the survey quality in terms of reliability and validity which are highly essential; it should be guaranteed if the survey is measuring things consistently and the survey is measuring what it says it is measuring. Further validity test was done prior to the main field study where the questionnaire was tested in a pilot study by means of face-to- face semi-structured interviews with 20 managers and owners of various accommodations in order to establish the clarity and

suitability for the tourism industry. This is also helpful in clarifications of terminologies and concepts that are important to the development of the questions. This paved the way for designing and finalizing the final questionnaire and allowed a further shape up of the instrument in terms of construct validity.

Chapter 2

TOURISM IN IRAN

2.1 Geography of Iran

Iran, with a landmass of 1,648,000 Km² (636,000 Sq. m.) is the sixteenth in size among the countries of the world. The natural environment and the vast land mass make the county a prime destination, potentially. With more than 2800 Km of coastlines, as well as, the high mountain ranges, Alborz and Zagros, and 2 deserts, Dasht-e-Kavir and Lut Desert, it has a spectacular physiography (See figure1).Iran is divided into 30 provinces. Sistan and Baluchistan with an area of 181, 785Km² is the biggest among the provinces. The most populated province is Tehran with a population of 12 million (www.ichto.org).

Figure 1: Map of Iran
Source: www.ichto.org

The supply of recreational and tourism opportunities are endless. Such geographical/topographical characters render Iran a four-season country. Iran has considerable raw potentials for tourism development.

2.2 Political Economy of Iran

Iran has 16% of the world`s gas resources and about10% of oil reserves. As O'Gorman et al. (2007) explain; the economy and business of Iran are inconsistent complexes. It is estimated that more than 80% of Iran`s export trade is from its oil and gas resources, which has a direct influence on the other sectors of Iran's industry. This fact has made Iran`s tourism industry too weak among other countries to compete in the global tourism market. Iran`s political tensions with other countries has decreased the number of international tourists, in one hand, and depicts an unsafe image for investors, on the other hand.

O`Gorman et al. (2007) also mentioned that lack of foreign investment and management are the most important problems in Iran tourism industry. They also argued that Iran is not a member of the General Agreement on Tariffs and Trade (GATT) or a member of the World Trade Organization, which decreases the participation of Iran in global trade markets.

In Iran`s tourism sector, there are some international investments in a small number of hotels. These hotels belong to Iranian investors who live abroad and there is no international brand affiliation. 'Bonyad', which is a governmental firm, owns the largest hotel groups, as well as, a major tour and travel-operating firm. Private sectors run retail tours and small hotels in Iran`s tourism industry. Baum (1996, 1999) believes that lack of foreign investment has positive influence on Iran's

tourism industry. As an example, he believes that "Ownership isolationism, in small peripheral tourism locations, can have benefits to a tourism economy."

O`Gorman (2007) stated that Iran`s national and regional marketing level is product oriented and has a small input from Iranians visit the historical and cultural sites and from handicrafts made by local people.

Based on Central bank of Iran`s statement, high price of exported oil, has doubled the country's GDP from 2001 to 2005. Meanwhile inflation rate has increased from 11.4 in year 2001/2002 up to 19.3 in 2005/2006. Unemployment has a raise from 10.3 to 14.7 from 2005 to 2006 (See Table 1).

Table 1: Iran`s key economic indicators

	2001/2	2002/3	2003/4	2004/5	2005/6f
GDP ($bn)	106.05	114.29	131.65	160.0	217.0
GDP per capita ($)	1590	1681	1908	2353	3100
Inflation (%)	11.4	15.8	15.6	14.8	19.3
Unemployment (%)	14.2	12.8	11.3	10.3	14.7

Source: Central Bank of Iran figures (as of June 2005). Forecasts: Iran Economics Magazine (June 2005).

2.3 Iran`s Historical and Cultural Resources

Rich range of historical and cultural provisions represents a 10,000- year background of human history. Persian people have had a deep involvement in tourism. Recorded historical facts show that there is significant evidence of hostels that date back to 2000 BC. Owners of these hostels provided accommodation, food, drink, and sex for passengers (O'Gorman et al, 2007).

Iran`s tangible heritages contain not only local histories and cultures, but also the influence of invaders such as Greeks, Arabs, Mongols, and western countries to name a few. Today, Iran's heritage draws significantly on indigenous histories (O'Gorman et al, 2007).

Iran has 13 cultural locations, which are recognized as World Heritage Sites by the United Nations Educational, Scientific, and Cultural Organizations (UNESCO) as follows:

- Armenian Monastic Ensembles of Iran (2008)
- Bam and its Cultural Landscape (2004)
- Bisotun (2006)
- Meidan-e-Emam, Esfahan (1979)
- Pasargadae (2004)
- Persepolis (1979)
- Sheikh Safi al-din Khānegāh and Shrine Ensemble in Ardabil (2010)
- Shushtar Historical Hydraulic System (2009)
- Soltaniyeh (2005)
- Tabriz Historic Bazaar Complex (2010)
- Takht-e Soleyman (2003)
- TchoghaZanbil (1979)
- The Persian Garden (2011)

Persian Garden of Iran is one of the six sites inscribed in UNESCO's World Heritage List. The property includes nine gardens in as many provinces. Always divided into four sectors, with water playing an important role for both irrigation and ornamentation, the Persian garden was conceived to symbolize Eden and the four Zoroastrian elements of sky, earth, water, and plants. These gardens, dating back to different periods; since the 6th century BC, also feature buildings, pavilions and

walls, as well as sophisticated irrigation systems. They have influenced the art of garden design as far as India and Spain (www.unesco.org).

UNESCO inscribed five Iranian elements on its List of the Intangible Cultural Heritage of Humanity in November 2010. The music of the Bakhshis of Khorasan region, the Pahlevani and Zurkhaneh sport, the Iranian passion play 'Tazieh', the traditional skills of carpet weaving in Fars region, and the traditional skills of carpet weaving in Kashan, were all registered on the list during the Fifth Session of the Inter-governmental Committee in Nairobi which was held from Nov. 15 to 19 in 2009. Novruz and the titles and items of the Radifs in Iranian music were inscribed on UNESCO's List of the Intangible Cultural Heritage of Humanity. There are also 56 properties, which are submitted to the tentative list. (www.unesco.org).

Iran has been located between the main cultures like Middle Eastern, Asian, and European. Therefore, its culture and heritage have been influenced by these cultures. The most famous historical road, Silk Road, from china in east toward Istanbul in the west, passed through Iran and Iran was the crisscross of the cultures (O'Gorman et al, 2007).

Iran is a multi-cultural nation; this unique characteristic has implications for tourism. Iran has different people, cultures, languages, and religious groups. In each region of Iran, we will find people who belong to various tribes and speak different languages. In the northwest of Iran, the people are Azeri Turks and speak Turkish in their homes. In the southeast, the people are Baluchi and speak the Baluch language. There are small tribes of nomads scattered throughout the country. These nomads live in black tents and speak many different languages. There are seven minority

societies and tribes and five different languages, including Kurdish, Turkmen, Azeri, Arabic, etc. Different religions include a majority of Shiite Muslims (98%), Jews, Sunni Muslims, Zoroastrians, and Armenian Christians. This diversity has made the country rich regarding culture and can be a significant potential in terms of tourism development (www.ichto.org).

2.4 Iran's Natural Resources

Tourism in Iran has been described by terms of natural assets. Khajehpour (2006) argued that with the population of 75 million, Iran possesses rich natural resources including gas, oil, and mineral mines. A large amount of the world's natural resources of oil (10%) and gas (16%) belong to Iran. Iran is also rich in mineral resources. O'Gorman (2007) argues that Iran`s oil and gas are very important and strategic for the country but they produce few job positions for the 20% young unemployed labor force.

Tourism industry of Iran uses the capital made by oil and gas exportation as an expansion tool but it is also notable that Iran's government does not have a strategic plan to invest more in tourism industry. Tourism industry can increase the labor force employment in different stages of the industry.

2.5 Tourism in Iran

Effects of religion can be seen in Iran as a destination for domestic and international tourism. There are restricting laws for social and cultural behaviors like dressing and alcohol consumption and other recreational drugs. These rules have negative impacts on the image of Iran as an international destination, on one hand, and the role of indigenous people in tourism, on the other hand (O'Gorman et al, 2007).

As O'Gorman et al. (2007) state, pilgrimage tourism is undoubtedly important in Iran. Zoroastrian temples are attracting international tourists. Iran is the motherland for Zoroastrianism religion. Pilgrimage tourism is the most important kind of tourism in Islamic countries. In Iran, domestic and regional pilgrimage tourism to holy Shiite shrines is a huge market. The holy shrine of Imam Reza in Mashhad and the shrine of Masume in the city of Qom attract Iranians to visit these sites several times per year. These shrines are also a big attraction for the Shiite Muslims in Arabic countries. Iran`s historical and cultural sites attract many international and local tourists. Isfahan and Shiraz are the most attractive cities for cultural and historical international tourists.

2.5.1 Tourism in Iran before and after the Islamic Revolution

As UNWTO in 2006 stated, before the revolution, from 1969 to 1977, Iran`s international tourist number was increased from 200,000 up to 700,000 per year. This increase was based on Iran's government policies to attract more international tourists and the cultural situation of Iran. Many International Chain hotels, like Hyatt and Hilton, had built their branches in Iran in different cities like Tehran, Mashhad, and Shiraz. After the Islamic revolution in 1978, due to government's religious policies, political crisis and international sanctions, and the 8- year war between Iran and Iraq, numbers of international tourists decreased from 680,000 to 200,000. In 2004 the number of visitors grew up to more than 1.6 million (See figure 2).
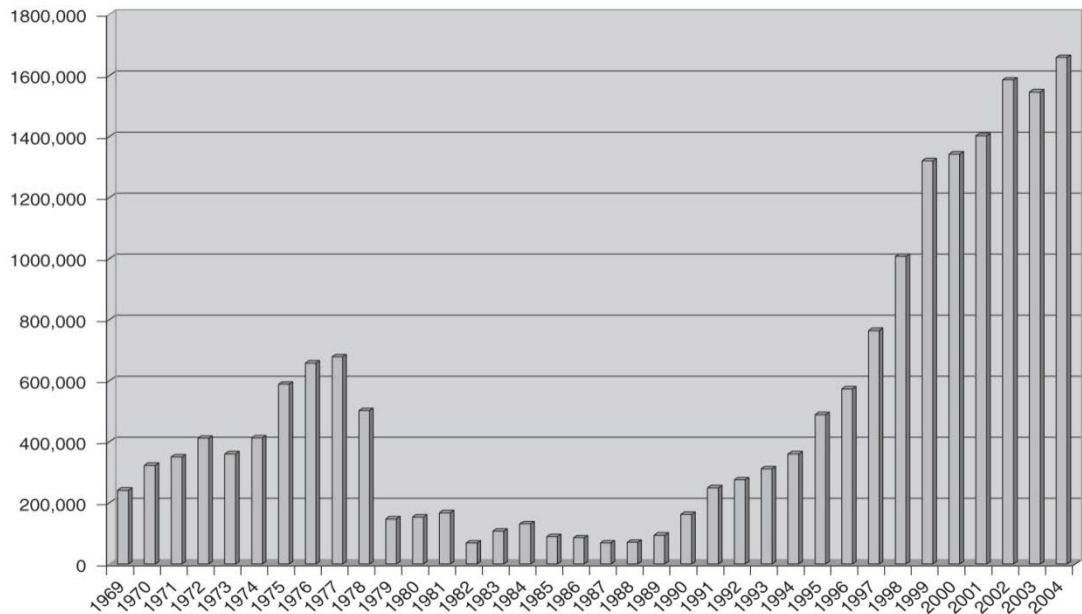
Figure 2: Inbound Tourism of Iran

Source: UNWTO Compendium of Tourism Statistics, 2006

It is estimated that from 1.3 million international tourists and 32.5 million domestic tourists, Iran earned 733 million US$ (ITTO, 2002).

2.5.2 Iran's Inbound Tourist Profile

Iran`s international tourist market is primarily from its neighbors. The main market outside Iran visiting the country is from Arab countries that have Shiite Muslims like Lebanon, Iraq, Syria, Kuwait, and Bahrain. 30% of tourism in Iran belongs to pilgrimage, 26% belongs to VFR travelers, 30% to business sector, and only about 10%   of the market accounts for sightseeing segment (www.ichhto.org).Weak infrastructure, lack of data, and lack of marketing are the most important reasons of the low percentage of sightseeing tourism (10%). Most of the local tourism operates in urban areas like Tehran; family and group trips are taken to coastal regions, such as Caspian Sea and Persian Gulf; Isfahan, and Shiraz are the destinations of cultural heritage tours and religious tours' destinations are Mashhad and Qom (Alipour and Heydari, 2004).

Iran`s natural and cultural characteristics have made huge job opportunities in tourism sector. 75% of Iran's population is about 30 and most of the people who belong to this group live in urban areas and are unemployed. It means that Iran's government should create 800,000 jobs per year (Khajehpour, 2006). Unfortunately, based on suspicious views about the foreigner investors, development in tourism sector is not sufficient. Lack of investment has made a challenge in hotel sector of Iran's tourism industry. Iran's government, after the Islamic revolution, confiscated the international franchise hotel groups in Iran like Hyatt, Hilton, etc. International investors are frightened to bring their capital in order to invest in Iran.

O'Gorman et al (2007) believe that lack of long-term vision, and central and governmental tourism management and lack of expert human resource in pre-entry training and in relation to the in-service training are some of the most challenging issues in Iran's tourism sector.

According to O'Gorman et al (2007), there are several challenging problems in Iran`s tourism international marketing. These challenges are related to cultural issues like 'hijab' requirement for women, and the ban on alcohol, national image, and regional political concerns. As an example, they said that Chinese tour operator hesitated to promote Iran because of 'hijab' requirement.

The Case of Mashhad

2.6 City of Mashhad

2.6.1 Location and Geography

Mashhad, the case of the present study, is the capital of Khorasan Razavi province, located in the northeast of Iran. Mashhad is located at latitude of N 36°17' 45 and

longitude of E 59° 36' 43. The city with an area about 27478 Km² is located in northeast of Khorasan Razavi province (See Figure 3).

Figure 3: Map of Iran and Mashhad Location
Source:www.ichto.org

Mashhad is the second biggest city in Iran, and it ranks among the top 3 destinations for domestic and international tourists. The highest percentage of accommodation facilities is located in Mashhad (www.chto-khr.ir) with extensive variation to cater to different income levels. There are 113 Hotels, 488 Inns, 255 Hotel apartments, and 1 Motel in Mashhad (See Table 2). The major "Hoteliers Association" in Iran belongs to Mashhad that represents a powerful sector in tourism industry. According to the recent data, the city houses 2.5 million people and accommodates about14 million tourists annually (www.chto-khr.ir). Average annual growth of the population is 2.5% (Statistical yearbook of Mashhad Municipality, 2010).The population of this city due to its excellent situation in pilgrimage, touring, commercial, agricultural and emigration power is being developing.

Mashhad is a traditional pilgrimage destination as well as a metropolitan area with overwhelming VFR tourism. Mashhad metropolitan area has gained even more significance with the onset of Islamic Revolution in 1979.

Table 2: Accommodation facilities, rooms and beds by rank

Title	Total	Five Star	Four Star	Three Star	Two Star	One Star
Accommodation Facilities	856	3	167	160	192	334
Room	24697	617	5319	6666	4684	7411
Bed	71255	1630	15704	19284	13420	21217

Source: www.chto-khr.ir

The main factor attributing to the city is the shrine of Imam Reza, a revered religious figure in Islam; especially among the Shiite sect (See figures 4 and 5). Mashhad is one of the major cities that require special attention as a magnet for the Shiites due to being the location of the shrine of the 8th Shiite's Imam. As the majority of Iranians are followers of this sect, pilgrims throughout the year overrun the city.

Figure 4, 5: Shrine of Imam Reza
Source: www.aqrazavi.org

2.6.2. History of Mashhad and the Holy Shrine

In Arabic, Mashhad means 'rendezvous, place of pilgrimage, and a picturesque place'. Generally, Mashhad means 'a place of martyrdom'. This city, which is the last residence of the eighth Imam of the Shiites, was a pleasant village with a temperate weather and was called "Sanabad". It was located at a distance about 24 kilometers from Tous; the capital of Khorasan province. Hamid-ibn-e-GhahtabeyeTaei was nominated for Khorasan Emirate in the period of Mansour and Mehdi-e-Abbasid. He established a glorious foundation and pleasant garden to organize a place for the residence and repose of Abbasids` caliphs that traveled from Baghdad to Khorasan. Burying the holy body of Imam Reza in the year 203 Anno Hejira in Mashhad caused to develop the city increasingly and Sanabd village become a large city and after a while was called "Mashhad al Reza" and at that time, the major center (current city of Mashhad) was formed.

2.6.3. Mashhad as a Cultural City

Mashhad is also considered as a cultural city. Ferdowsi (940-1020), the greatest epic poet of Iran, who composed 'Shah Name', is buried in Toos village, near Mashhad (See Figure 7). The tombs of Omar Khayyam (1048-1131) and Attar (1145-1221) are also located in city of Neyshabur, about 100 km far from Mashhad. Kamal ol-molk, the most famous Persian painter is also buried in Neyshabur (See Figures 6and 8). Khorasan has been called the 'Land of Sufis'. Based on this historical and cultural archaism, many seminars, and national days are held in Mashhad that bring many international and local tourists to the city.

Figures 6, 7, 8: Tomb of Khayyam, Tomb of Ferdowsi, Tomb of Attar
Source: www.chto-khr.ir

The holy shrine is not only a historical building but also an architectural feature.

Tomb of Nader Shah (Nader the King-1688-1747); the founder of Afshari

monarchy is also in Mashhad. Mashhad was the capital of Iran during Afshari period

(See Figures 9, 10, and 11).

Figures 9, 10, 11: Tomb of Nader Shah (www. chto-khr.ir)
Source: www.chto-khr.ir

2.6.4 Tourism Accommodations in Mashhad

As mentioned above city of Mashhad has the most accommodations among the other

cities of Iran. Mashhad has 113 hotels which contain 3 five- star, 10 four -star, 34

three- star, 29 two- star, and 37 one- star hotels (See Table 3). As it appears most of

the hotels in Mashhad are 3- star hotels. These hotels have totally 8651 rooms and 24591 beds.

Table 3: Hotel accommodation facilities, capacity per month and occupation percentage by star

stars	Number of hotels	Number of rooms	Number of beds	Capacity per month		Occupation percentage	
				Rooms	beds	rooms	beds
Total	113	8651	24591	259530	737730	292	300
5 star	3	617	1630	18510	48900	58	59
4 star	10	1155	3438	34650	103140	56	58
3star	34	3551	10082	106530	302460	63	65
2 star	29	1445	3980	43350	119400	55	57
1star	37	1883	5461	56490	163820	60	61

Source: (www. chto-khr.ir), 2010

Most of international tourists choose three star hotels, which shows the income level of pilgrims who come to Mashhad is good. It is observed that Iranian tourists choose three -star hotels rather than the others. Based on these facts, it is beneficial to build a three -star hotel in Mashhad (See table 4).

Table 4: Passengers entering and exiting hotels by hotel`s ranking

Stars	Entering passengers			Exiting passengers		
	Total	Iranian	Foreign	Total	Iranian	Foreign
Total	986782	920397	66385	990886	927098	63788
Five star	37009	34560	2449	37375	34977	2398
Four star	101888	96134	5754	111393	105509	5884
Three star	415389	374871	40518	411023	372109	38914
Two star	234772	228705	6067	236318	230682	5363
One star	197724	186127	11597	194777	183821	10956

Source: (www. chto-khr.ir), 2010

Out of 255 hotel apartments in Mashhad, 232 belong to class 1, and the rest are class two. 5068 rooms and 14229 beds are available in hotel apartments (see Table 5).

Table 5: Hotel apartments` room and bed

Title	Total	Class 1	Class 2
Hotel Ap.	255	232	23
Room	5068	4339	729
Bed	14229	12237	1992

Source: (www. chto-khr.ir), 2010

Mashhad has 488 inns. 157 top, 65 class one, 140 class two, and 126 class three. Mashhad inns have 10987 rooms, and 32435 beds.

Table 6: Inn accommodation facilities by rank

Title	Total	Top	Class1	Class 2	Class3
Inn	488	157	65	140	126
Room	10978	4164	1189	2510	3115
Bed	32435	12266	3519	7448	9202

Source: (www.chto-khr.ir), 2010

Mashhad hosts about 14 million tourists per year. The high season is from 22 of July till 22 of August (See Table 7).

Table 7: The distribution of passengers entering Mashhad by month

Month	Numbers	percent
Total	13647188	100
March 21- April 20	1216910	8.9
April 21- May 21	1096546	8
May 22- June 21	1124799	8.2
June 22- July 21	1285348	9.4
July 22- August 22	1514764	11.1
August 23- September 22	910108	6.7
September 23- October 22	1203141	8.8
October 23- November 21	1171949	8.6
November 22- December 21	1098396	8
December 22- January 20	904437	6.6
January 21- February 19	1131882	8.3
February 20- March 20	988908	7.2

Source: (www. chto-khr.ir), 2010

Approximately, 82 % of tourists come by bus. Because of the low price of fuel, and the low-income level of tourists, the travelers prefer to take bus rather than plane and train (See Table 8).

Table 8: The mode of transportation used by passengers visiting

Vehicle Type	Passenger	Percent
Car	739063	5.4
Bus	11210375	82
Minibus	1697750	12.4
Total	13647188	100

Source: (www. chto-khr.ir), 2010

According to the 'Municipality Information Center' of Mashhad, and the 'Public Relation Department' of Mashhad, ICHTO announced that for the first time in Iran all travel agencies are obliged to ask for a tour code as soon as tourists enter Mashhad.

In order to receive this code, tour managers, tour leaders, hotel's and tourism representatives are required to refer to information centers located in airports to give the needed information before tourists' entrance. "Through this plan, precise statistics and information about tourists will be obtained and ICHTO can make an exact planning for proper organization of them. One of the advantages of this plan is endowing of exporting rewards for travel and tourism agencies (www. chto-khr.ir).

2.6.5. Problems Associated With Tourism in Mashhad

14 million tourists per year bring huge revenue to the city of Mashhad. On the other hand, these tourists also cause several problems to the city and its citizens. Traffic and air pollution are the main problem. As demonstrated in Table 8 most of the tourists prefer to travel to Mashhad by their own cars or bus. Lack of parking space is the other problem caused by tourism.

Most of the pilgrims are from the countryside of Iran; these people do not care about the environment and urban area. Waste material made by tourists is a challenging issue for Mashhad municipality.

Mashhad has limited water resources. In summers, citizens of Mashhad should tolerate the water sanction that is caused by the increase of the tourists` water usage.

2.6.5 Tourism Institutions and Organizations in Mashhad

Iran`s Cultural Heritage, Handicrafts, and Tourism Organization (ICHTO) is the most important organization in Mashhad that operates all touristic operations.

"Mashhad hotel association" is the biggest hotelier association in Iran that has a brilliant role in operating and organizing accommodations in Mashhad.

"Industrial management organization-east branch" is the only college in Mashhad that has tourism school and offers BS degree.

Chapter 3

LITERATURE REVIEW

3.1 Tourism Development: An Overview

Tourism possibly has been started in Roman Empire era due to rich people`s demand to visit their families who were living in different parts of the Roman empire. Roman army built roads in order to have easy access to captured countries. Tourists used the roads and used to stay in small hotels next to these roads. After the end of the Roman Empire, this kind of tourism stopped (Davis, 2003).

In 17th century, "Grand Tour" ideas started by rich young English people who went across the English Channel to France and then to the most important beautiful European cities. They hang around a few weeks or months in each city. The "Grand Tour" was an important part of education but only very rich people could afford the costs (Davis, 2003). Backpack travelling is the modern face of Grand tour.

In 18th century, tourism changed. People started to visit other cities that had natural resources like water springs. In 19th century, travel became easier and faster for people with different income levels. In 1820s and 1830s, railways made travel easier. People started to visit across the countries in holidays and weekends. Cities were bigger and people's tendency to visit the countryside increased (Davies, 2003).

As Davies (2003) stated, some inventions were important to improve the tourism industry. The inventions such as:

- Sewing machine 1830

- Photograph 1847

- Motorcycle 1869

- Train 1881

- Electric engine 1883

- Automobile 1883

- Airplane 1890

- Automobile(petrol)1891

- Bus 1899

In 20th century, people's welfare increased. Until 1908, workers had no holidays in week. By 1951, 66% of English workers had a two-week holiday a year. In 2000, this range increased to 94%. During these years, travel became easier and cheaper. People`s welfare brought them more chances to travel (Davies, 2003).

Vladimir Raitz found a firm in 1949. He invented package holidays and named it "Horizon Holidays". In 1960s, other tourism agencies started to sell package tours and modern tourism industry began (Davies, 2003).

Holloway (1998) believes that industrial revolution, new transportation facilities, income level increase, increase in population and urbanization, and increase in social security are the main factors leading to the expansion of tourism.

3.2 Definition of Tourism

WTO in 1991 has defined tourism: "Tourism comprises the activities of persons travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business and other purposes not related to the exercise of an activity remunerated from within the place visited."

There are differences between tourism and travel. Tourism includes replacement; an individual travel using transportation. It could even happen on foot like pilgrimage or hiking. Not all travels are considered as tourism. Three criteria should be met to characterize a trip as tourism:

- Displacement: Trip must be outside the usual environment. This is the most important character.

- Type of purpose: Trip should be taken for different purposes.

- Duration: The displacement can be with or without overnight stay.

Tourist has been defined as" a person who travels individually or collectively with the purposes pointed out in the definition of the tourism and spends at least one night in the country he/she visits"(Holloway,1998).

Davies (2003) believes that when a person travels at least 100 miles to a place, a trip activity has occurred. He also defines travel as taking trips to places outside of one's residence for any purpose expect daily commuting to and from work.

Tourism industry has been defined as a combination of all activities like transportation, accommodation, food and beverage services and others needed by

tourists during their departure from their home until they come back (Holloway, 1998).

Tourism industry largely depends on labor. Rapid changes have taken place in pleasure, fashion, and touristic consumers' desires, which are forcing the tourism establishments to renew their ownerships before the end of their economic life (Holloway, 1998).

3.3 Types and Forms of Tourism

Tourism can be classified according to the number of tourists, age, travel purpose, chosen time, chosen place, transport vehicle, travel place, and socio-economic power (Holloway, 1998).

Based on the number of tourists, tourism is divided to individual tourism, mass tourism, and group tourism. Youth tourism, middle- age (adult) tourism, and third age (over 65) are the types of tourism according to the age of the tourists (Holloway, 1998).

Social-economic tourism is the kind of tourism that is offered to some people who do not have enough income like farmers, workers, young people, disabled, and retired people (Holloway, 1998).

Winter and summer tourism are the types of time tourism. It can also be divided to high season and low season tourism according to tourism movement density (Holloway, 1998).

According to the purpose of the travel, tourism is divided into health tourism, pilgrimage tourism, urban tourism, business tourism, caravan tourism, sport tourism, cultural tourism, hunting tourism, conferences tourism, sea tourism, and climate tourism (Holloway, 1998).

3.3.1 Pilgrimage Tourism

Pilgrimage tourism or religion tourism is one of the most important and popular types of tourism around the world. Religious tourism is also called spiritual tourism. Religious tourism has grown with a direct relation to people's desire to know and understand the other religions. Spiritual tourism is also considered as the oldest form of tourism. People`s trips to the holy places like settlements, mountains, trees, natural elements, water springs are considered as pilgrimage tourism (Tala and Padurean, 2008).

Today millions of people pilgrimage to the holy places, like Mecca in Saudi Arabia (about 2million) and KumbhaMela, Hindu temple in India (about 70 million). Pilgrimage tourism is also very important due to its economic perspective. Holy places are usually tax-free and most of them are considered as heritage places. Pilgrims and heritage tourists spend their money and this capital is vital for expansion of the religious/heritage sites (Tala and Padurean, 2008).

There are different motivations, which are supported by definite factors in religious tourism such as the quality of infrastructure and the tourism services that are provided, income level and professional tenure, cultural and educational factors, religious membership and training religious faiths, being from the same cultural area, similitude of language, political solidity, inflation, etc. These factors can be classified in to psycho-sociological and socio-economic categories. Psycho-sociological

category includes traditional, fashion, individual mood, and personage factors; and socio-economic factors are economic, technical, and socio-political (Tala and Padurean, 2008).

Cyprus Tourism Organization (CTO, 2006), classified the religious tourism attractions into three groups:

- Religious festivals

- Religious space

- Pilgrimage shrines

Form the economic point of view it is important to know that 18 billion dollar is gained by religious tourism industry per year. Faith is the motivation factor for 300 million trips annually (www.religioustravelassociation.com).

3.3.2 Urban Tourism

The United Nations (1968) defined 'Urban' as an area with the population of 20,000 people. Statistics New Zealand (2006) described six measures to identify the urban boundary: "1) strong economic ties, 2) cultural and recreational interaction, 3) serviced from the core for major business and professional activities; 4) an integrated public transport network, 5) significant workplace commuting to and from the central core, and 6) planned development within the next 20 years, as a dormitory area to, or an extension of, the central core."

Edwards et al.(2008), defined urban as an area with the following elements: " A strong and broad economic base that is serviced from multiple cores for major business and professional activities, a significant public transport network that acts as a gateway to other areas, a significant population with a workforce that commutes to

and from the multiple cores, and long-term planned development." This functional and physical environment is characterized by a perception that the urban landscape is a web in which many individuals and groups have social, cultural, political, and economic relationships.

Edwards et al. (2008) defined urban tourism as one of the social and economic forces in the urban environment. This market presents different motivations, preferences, and cultural perspectives in a wide range that is engaged with the host/local community.

 Urban tourism gathers different people, places, and consumptions and combines different cultures, expectations, values and experiences (Edwards et al., 2008). Tourists are visiting cities for different objectives. Urban facilities are used by tourists; but there are few cities, which are designed especially for tourists` usage. Tourism can bring economic benefits to the cities. World`s urban population has increased from 14% in 1900 up to 47% in 2000 and it is estimated that it will grow up to 61% by 2030 (Ashworth and Page, 2011).

Urban tourism includes different types of tourism, like cultural tourism, historical tourism, sport tourism, gastronomic tourism, nightlife tourism, congress tourism, and shopping tourism. Cities have been described by density and diversity. Their wide range attractions attract people by different motivations. Urban tourism has an especial concern on interests and activities in duration of holiday (Ashworth and Page, 2011).

As Ashworth and Page (2011) argued, tourists` behavioral conduction in urban areas can be classified into four groups:

- Selectivity: tourists are using very small portion of the cities.

- Rapidity: based on urban life, which is fast, tourists are using the urban tourism products very fast.

- Infrequency: urban tourists do not like to repeat their visit again which is the opposite of non-urban tourists` desires.

- Capriciousness: urban tourists are fickle. They have different desires and these desires are changing during the time.

Law (1996) states that, there are some characteristics, which make urban areas as tourism destination. Huge population of urban areas attracts tourists to visit their families and friends. As urban areas are developed better than the other destinations, they attract more tourists. Urban destinations are more accessible through airport and they have better service schedules. Cities have large amounts of accommodations to attract businesspersons. Cities can appeal different kinds of tourists based on their transportation, services, communications, and facilities.

3.4 The Tourism System

3.4.1 Accommodation Sector

Hotels are the most distinguished form of accommodations. The English Hotel 'Occupancy Survey' defined 'hotel' as an establishment with five or more bedrooms that is not identified as guest house and is listed as bed and breakfast establishment only. Travel and Tourism Intelligence appraised the total supply of beds about 12.6 million around the world with occupancy rate of 44% (Holloway, 1998).

3.4.2 Types of Accommodations

Different tourists prefer different kinds of accommodations. Travelers are interested not only in what facilities different accommodations offer but also in the quality of accommodations and their catering offered. Business tourists prefer accommodations, which are located in large cities. Leisure tourists prefer accommodations in country areas (Holloway, 1998).

Different countries have different standards to classify the accommodation. For example in Islamic countries, casino and alcoholic drinks are forbidden. Some terms are accepted internationally. Categorization refers to type of accommodations, Classification is based on accommodations` physical features, and Grading is based on the provided services (Holloway, 1998).

Each hotel product has five characteristics: Hotel`s location, Hotel`s facilities, hotel`s services, hotel`s image, and hotel`s price. Hotel`s location is the most important factor for tourists to choose the accommodation. For example, businesspersons prefer city center located hotels. These characteristics define a competitive market for accommodations, which divide the market to different segments. Based on the hotels' location and their services, they have different type of tourists. Therefore, hotels are seen more than simply a room to sleep by their customers (Holloway, 1998).

Based on the nature of demand, there are different types of accommodations. World chain hotels, the domestic holiday hotels, the B&B units, farmhouse holiday accommodations, holiday camps, holiday villages, second home and timeshare

ownership, and educational accommodations are different types of tourism accommodations, to name a few.

Chapter 4

Tourism and Environment

4.1 Environmental Impact of Tourism

The fast growth of tourism in recent decades has made problems and opportunities. In 20th century tourism, development brings different kinds of pollution. Mass tourism movement needs mass transportation and the used fuel pollutes the air. Mass tourism also causes sound pollution in residential areas. Water pollution is the other impact of tourism on the wild nature and urban areas. These effects of mass tourism made governments to introduce the concept of sustainable tourism to guarantee that their environment will not be destroyed by mass tourism. Tourism development causes environmental pollution, which is more aesthetic than physical. Visual pollution is another kind of pollution, which is defined as the attribute of insensitivity in tourism establishments` design. Owners intend to make cheaper accommodations, which are not in harmony with the surrounding environment architecture. Lack of master plan and planning control are the main reasons of visual pollution. Now in many countries there are restricting rules that make owners to construct their establishments by local materials or build accommodations in harmony with culture or traditions of the country. For example in Tunisia, it is forbidden to build a hotel higher than the height of the palm trees (Holloway, 1998).

Another problem caused by mass tourism after the second half of the 20th century is congestion. It is a physical and psychological problem. Physical terms of congestion

can be measured through car parks, streets, beaches, etc. Psychological capacity of a site impacts are also important. It means the degree of congestion that tourists are tolerating before the site starts to lose its suit (Holloway, 1998).

Mass tourism is also a danger for flora and fauna of the nature. The development of tourism industry makes natural landscapes sacrifice for tourism facilities. Sport tourism, also, has negative effects on the nature, namely, skiing, hunting, and golf (Holloway, 1998).

The global conference on business and environment in 1992 expresses the steps necessary for tourism industry to learn its impacts on the environment. They argued that tourism standards should be developed and be in harmony with the collaboration of effective regulatory mechanisms. These regulations can be divided in two terms, terms of command and control, and terms of self-regulation. Under the term of command and control, tourism officials are clearly describing the policies and procedure to bring into being an especial outcome. Operators can employ the best methods to obtain the outcomes which is called self-regulation (Herremans et al., 2005).

4.1.1 Environmental Performance (EP):

Worldwide concern for the quality of the environment has been expressed in international agreements and translated into national and local initiatives.

There have been increasing numbers of studies about the environmental conditions of national parks (Warnken et al., 2004) and some of them deal with the environmental performance of tourism accommodations in and nearby the national parks and protected areas. Environmental performance has attracted governments, private

sectors and people since the late 80's. For instance, Dewhurts and Thomas's (2003) study presented an empirically based, qualitative insight into the attitudes and response of a sample of small tourism firms in a UK national park to the challenge of sustainable tourism. Their findings offered some explanation for the limited action taken by such firms to improve their environmental performance and suggested that firms can be categorized according to their attitudes and sustainability. Mensah (2006) studied the environmental management practices among different categories of hotels in the Greater Accra Region of Ghana. Jorge (2004) indicated that the level of environmental monitoring for hotels is higher for hotels located close to national parks, medium for hotels located in the greater metropolitan area of San Jose, and lower for hotels situated close to the beach. Some studies (Buultjensa et al., 2005; Tosun, 2001; Warnken et al., 2004) noted that the desire to derive economic benefits from tourism in protected areas often results in environmental degradation which not only curtails the potential for tourism development, but also development which such environments offered for the future. According to Sasidharan et al. (2002), the scarcity of natural resources faced by most developing countries increases the susceptibility and vulnerability of these resources to tourism development activities in host destinations.

Tourism products can be divided into sectors characterized by being fixed (e.g. accommodation) and moveable (e.g. touring services). Both sectors are obliged to meet minimum standards that affect all businesses (e.g. taxation, company, workplace health and safety, and employment regulations). Sectors that provide fixed infrastructure are also influenced, in the development approval stage, by town planning regulations, nature conservation legislation and general impact

minimization measures that relate to land use and development. The sector that offers moveable services is affected additionally, at the approval stage, by transport regulation and access arrangements, normally associated with protected areas and regulated under nature conservation legislation. Usually, complying with such requirements is not difficult at the development stage of a tourism business and, from the private sector perspective, addressed as part of expected business planning and duty of care responsibilities.

The environmental management literature reveals that, in the absence of regulation, the adoption of environmental performance standards are predominantly the result of one or more of the following (Eden, 1996): Economic benefit, Competitive advantage, Market advantage (Burnup, 1993), Individual environmental ethic, and corporate culture (a quality or environmental ethic) (Hawkins, 1997;Welford, 1997).

Managers and owners of hotels all over the world should increase their understanding, their investment strategies and their routine operations, because EP in service industries not only concerns about ecology but also economy, in long term. Many accommodations have realized that there are competitive advantages in EP and are practicing proactive management in order to increase their profit and save the environment (Karagozoglu, 2000; Leslie,2007). Some managers believe that concern to environmental issues will increase the costs of the hotels (Thornton et al, 2003). Environmental exercises adopted in accommodations can measure EP. This measurement focuses on recycling, water efficiency, waste reduction, education, energy efficiency, environmental planning and management, social responsibility,

and hotel managers' sensitivity and behavior on the way to environmental management (Kattara, 2003; Mayaka, 2007; Ayuso, 2007 and Kasim, 2006).

4.1.2 Ecotourism

Ecotourism is defined as the responsible tourism trip to natural areas, which preserves the environment and sustains the wealth and health of the local community. Ecotourism has been recognized as a viable factor for tourism industry`s development. The definition refers to natural areas, green spaces, cultural and heritage sites, and then it can be expanded to urban areas simply (Dodds and Joppe, 2001).

Boo (1992) defines ecotourism as "nature tourism that promotes conservation and sustainable development, introducing the element of pro-active conservation and economic development."

In 1999, Honey presented an expanded definition that included the financial benefits for retention and for a local community to support the human rights and democratic movements.

4.1.3 Sustainable Tourism

Tourism has broad economic, social, cultural, and environmental impacts with a socio-cultural and economic nature. Sustainable tourism has the same dimensions but in a sustainable way. Efficient development in economy, with consideration of the resources, in the way to support the future generation is called economic sustainability. Appropriate development in ecological processes and biological resources is mentioned as ecological sustainability. Increasing peoples` control over their lives makes the development compatible with people`s values and cultures, and

it will increase the society`s identity strongly. These are the results of social and cultural sustainability (WTTC E et al., 1995).

WTO, (1993) associated three partners for sustainable tourism development as follows: tourism industry, environmental supporters, and local and community authority. Tourism industry creates jobs, income and foreign exchange by providing facilities and services. Tourism needs profitable growth in long-term. Based on the available natural and cultural resources, environmental supporters push their balanced efforts to attract the tourists. Residents and local government are concerned to create jobs and facilities in the way to protect the resources (Timur and Getz, 2009). These groups have some goals in common. To name a few, resource and economic sustainability, socio-cultural and economic sustainability, and sustainable resource usage and resource protection (WTO, 1993).

As Timur and Getz(2009) stated, lack of coordination, lack of governmental support, lack of leadership, large number of agencies involved in decision making process, lack of local people's and tourists' awareness, different interests of stake holders, and the diversity between the tourism industry and its huge actors are the main problems among the sustainable urban tourism.

4.2 Resource-based Theory

In 1995, Hart expressed the relevance of internal factors, like competitive advantages and financial considerations, which are motivational reasons for improvement of a firm. Based on this theory each firm has two types of resources. Heterogeneity resources that refer to human, physical and intangible resources are different among competitors. Immobility resources refer to the lack of ability of a company to

compete with mimic or buy the resources from the other companies (Rivera, 2002). "Brand names, in-house knowledge of technology, employment of skilled personnel, trade contacts, capital, and efficient procedures are the examples" (Hart, 1995). Resource based theory focuses on internally driven and cost saving procedures, materials, avoidance of fines, and law driven interference (Bansal and Roth, 2000). In hospitality industry, cost reduction is the prior motive via operational efficiency behind the environmental measures (Gonzalez and Leon, 2001).

Resource based theory is internally driven as a result of productivity concentration and resource efficiency by motivating the employees, increasing the legal certainty and improving the internal organization, minimizing the environmental risks and decreasing the environmental impacts . What all these characteristics have in common is to make the firm internally strong (Morrow and Rondinelli, 2002). It is suggested that hotels should move from internal approach to external approach in order to manage their environmental resources and environmental impacts. Accommodations with long experience in environmental management accept environmental protection as a competitive advantage and as an eco-efficiency tool (Carmona-Moreno et al., 2004).

4.3 Research Hypotheses

Based on the literature review the research hypotheses of the study are given. Hypothesized categories analyzed in relation to the environmental performance (EP) as dependent variable and the intensity of correlation either positive or negative determined the level of factor loading in the hypothesized categories. The following hypothesized components were designed to achieve an inferential outcome.

H1: Architecture and Landscape Design is positively improving EP.

H2: Energy Efficiency positively improves the EP.

H3: Waste Reduction positively improves EP.

H4: Water Efficiency positively improves EP.

H5: Educational Training for Environmental Awareness positively improves EP.

H6: Communication for Environmental Awareness positively improves EP.

H7: Managerial Practice/Knowledge on the Environmental Protection positively improves EP. (See Figure12)

Based on literature and the research hypotheses a model designed for the research. In this model effects of seven EP categories will be assessed on EP.
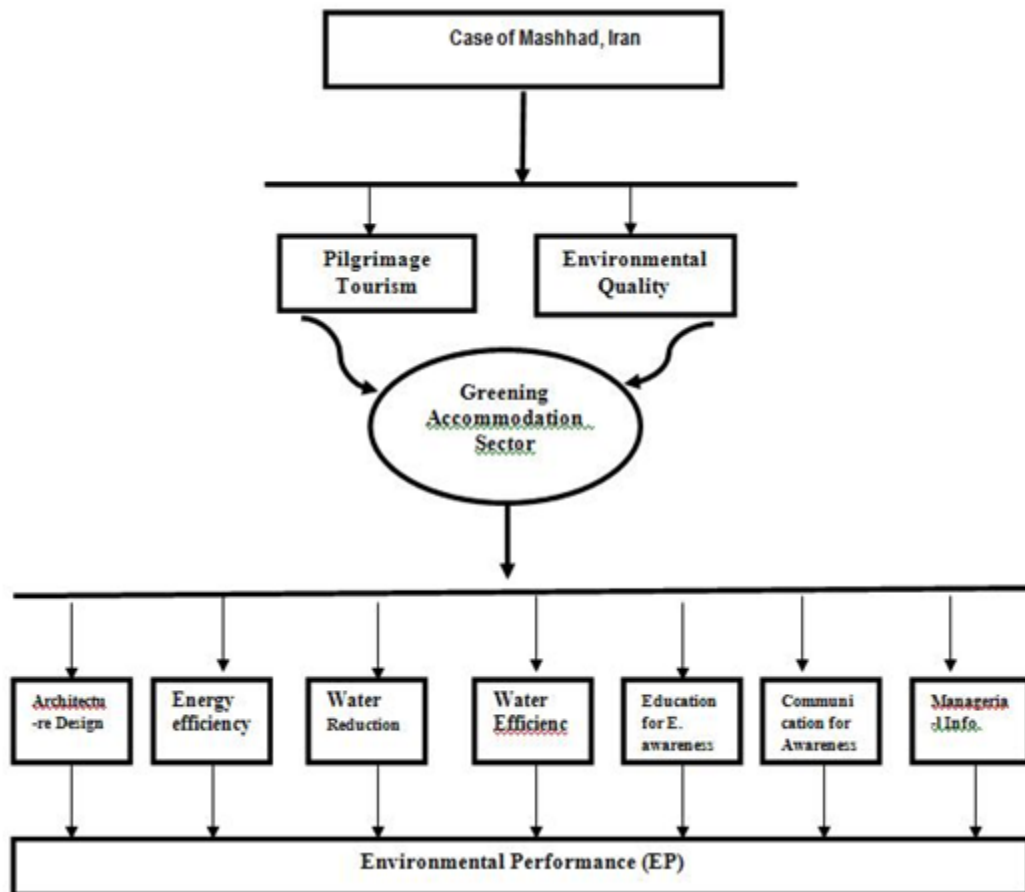
Figure 12: Model of the study

Chapter 5

RESEARCH METHODOLOGY AND DATA ANALYSIS

There are two types of research methods: Qualitative and Quantitative. This study has applied a quantitative research strategy, which is highly conducive to this particular form of research. The key difference between quantitative and qualitative methods is their flexibility. Generally, quantitative methods are fairly inflexible. With quantitative methods such as surveys and questionnaires, for example, researchers ask all participants identical questions in the same order. The response categories from which participants may choose are "close-ended" or fixed. The advantage of this inflexibility is that it allows for meaningful comparison of responses across participants and study sites (Mack et al, 2005).

Qualitative researches are those studies, which are holistic, and process- oriented and focuses on details as much as possible. Small-scale samples can serve the purposes of qualitative studies. The research techniques are a mixture of observation and interviews. The available literature for these studies is limited (Hoskara, 2004).

Quantitative researches are based on data collection and analysis in numerical form. Questionnaires with or without interviews are the instruments used for collecting data. Questions' format is close-ended and the study is designed in a stable form from start to the end. The answers will not have any effect on the next questions that the researcher is asking. Quantitative methods are inflexible, a feature which is

considered an advantage for a meaningful comparison among answers. Samples are in large scale and their results are presented by percentages, graphs, etc. Quantitative researches are outcome –oriented and used to test the theories and hypotheses. Quantitative data are more efficient and they can test hypotheses, but may miss the context details. The aspects of studies should be carefully designed before data collection. Whereas, the aim of a qualitative research is classifying the features, counting and constructing statistical models to express what is observed (Hoskara, 2004).

5.1 Study Site

The city of Mashhad, the main focus of this study, is the second biggest city of Iran. Hotels, Hotel apartments, and INN of Mashhad chose for measuring the Environmental Performance of accommodations. The highest percentage of accommodation facilities are located in Mashhad (www.chto-khr.ir) with extensive variation to cater to different income level. There are 113 hotels, 488 Inns, 255 hotel apartments, and one motel in Mashhad. The major Hoteliers Association in Iran belongs to Mashhad, which represents a powerful sector in tourism industry. According to the recent data, the city houses 2.5 million people and accommodates over 14 million tourists annually (www.chto-khr.ir).Mashhad is a traditional pilgrimage destination as well as a metropolitan area with overwhelming VFR tourism. Mashhad metropolitan area has gained even more significance with the onset of Islamic Revolution in 1979. The main factor attributing to the city is the shrine of Imam Reza, a revered religious figure in Islam, especially among the Shiite sect. Mashhad is the second biggest city in Iran, and it ranks among the top 3 destinations for domestic and international tourists.

Due to tourism and population growth, the city has experienced an intensive sprawl, which has not been guided by a formidable urban planning (i.e. lack of a deliberate master plan). As a consequence, various environmental problems and uncertain sustainable urban system is warranting. Some of the alarming environmental problems are the water shortage, air pollution, haphazard physical development, waste problem, to name a few. The tourism sector is intensifying the present problems and the situation demands an immediate attention. The accommodation sector in the city is by far a contributing factor to the environmental challenges presently and in the future.

The objectives of this study are:

- Assess the extent of environmental commitment of accommodations (hotels, inns, and hotel apartments) in the city of Mashhad, Iran.

- Gauge the environmental impact of accommodations sector (hotels, inns, and hotel apartments) in the city of Mashhad, Iran sector.

- Assess the environmental performance of the accommodations (hotels, inns, and hotel apartments) in the city of Mashhad, Iran.

- Identify the practical application of environmentally approached measures.

- Explore the business success of accommodations (hotels, inns, and hotel apartments) in the city of Mashhad as an attribute of their environmental practices/performances.

5.2 Study method and data analysis

In order to design the research instrument (questionnaire) and establish a construct/concurrent validity, an extensive reference was made to the literature on the environmental performance indicators-especially in accommodation sector (Graci

and Dodds, 2008; Dodds, 2007; http://www.daa.com.au/analytical-ideas/questionnaire-validity/; Erdogan and Tosun, 2009), as well as, sustainability indicators (Choi and Sirakaya, 2006; ESI, 2005).

To make sure of the survey quality in terms of reliability and validity which are highly essential; it should be guaranteed if the survey is measuring things consistently and the survey is measuring what it says it is measuring. Further validity test was done prior to the main field study where the questionnaire was tested in a pilot study by means of face-to- face semi-structured interviews with 20 managers and owners of various accommodations in order to establish the clarity and suitability for the tourism industry. This is also helpful in clarifications of terminologies and concepts that are important to be in the development of the questions. This paved the way for designing and finalizing the final questionnaire. This allowed a further shape up of the instrument in terms of construct validity. The respondents were asked to state their answers on 5-point Likert scale, ranging from 1 =strongly agree to 5=strongly disagree. A reliability coefficient/consistency showed an internal consistency (Cronbach α =0.70). (See table 10).

Demographic features of the participants are given in Table 9. As illustrated in table 3, all the respondents were male. This is not unusual as most of the accommodation sectors are operated and managed by males. Traditionally, the Iranian culture has not been conducive to women employment in accommodation sectors. This is also the case today notwithstanding the gradual growth of tourism sector which provides employment opportunities for women. However, it will take time to see women in management positions, especially in accommodation sector. The predominance of married individuals shows the importance of private family units once again. The

distribution among age groups shows that middle- aged group makes up the majority (50.72%). The inspection of occupations shows that the owner/manager makes up the whole population sampled (100%). Educational levels of the participants show that 43.4% of the participants are university graduates and 21.7% have post-graduate studies degree. Again this is a cultural characteristic of urban residents who are running and managing their own firms. Acquiring university degrees is highly desirable among urban population in Iran (Baldwin, 1963).

Table 9: Demographic characteristics of the Participants

Variable	**levels**	**N**	**% percentage**
Sex	Male Female	69 0	100 0
Marital Status	Married Single	69 0	100 0
Age	-24 25-34 35-44 45-54 55-64 65 and over	0 6 10 13 35 5	0 8.6 14.5 18.64 50.72 7.2
Occupation	Manager Or Owner	69	100
Education	Primary Secondary Associate Undergraduate Graduate Other	0 24 0 30 15 0	0 34.7 0 43.4 21.7 0

Table 10: Reliability Tests

	Cronbach's Alpha	Number of Cases	Deleted Cases
Architecture and landscape design	.434	6	1 (qa3)
Energy efficiency	.711	8	-
Waste Reduction	.694	8	2 (qc6, qc8)
Water efficiency	.823	5	-
Educational training for environmental awareness	.701	4	-
Communication for environmental awareness	.701	5	-
Managerial practice/knowledge on the environmental protection	.849	15	-

The reliability scores are obtained through item-to-item and total item correlations are presented above. In order to increase the reliability scores and conduct further analyses, 1 question from Architecture and landscape design and 2 questions from Waste reduction have been eliminated. The previous reliability score of Architecture and landscape design was .237, which increased to .434. In addition, the score of Waste reduction increased from .602 to .694. All the reliability scores are deemed acceptable in relation to the benchmark point of .70 reliability score (an acceptable internal consistency in most social science research). Architecture and landscape design construct seems lower than usual benchmark score (0.434). At any rate, the low alpha value for architecture and landscape design in terms of inter-item correlation is an understandable issue. Architectural design has always captured a low priority factor in environmental performance studies. Nonetheless, this should not be confused with material use that has much higher alpha value in this kind of studies. However, this is about to change as architectural environment is becoming

an important factor, especially in reduction of sound to achieve productivity (Egan, 2007). For the waste reduction item, an alpha value of 0.602 is not considered a low value as some researchers accept this value as a reasonable internal consistency in measurement (http://faculty.chass.ncsu.edu/garson/PA765/standard.htm).

The survey questionnaires were applied to 200 managers and owners in the city of Mashhad. Different categories of accommodations were targeted which included Hotels, Hotel Apartments, Inns, and Pensions. Out of 200 distributed questions, 69 were returned (a return rate of 34.5%). 23 questionnaires applied to hotels` owners(20.35%), 23 applied to hotel apartments` owners(9.01%), and 23 distributed to inns` owners(4.71%) (See table 11).

Table 11: Distribution of respondents

Type	Total	Returned	Percentage
Hotel	113	23	20.35
Inn	488	23	4.71
Hotel apartment	255	23	9.01

It is important to mention that all respondents were male; therefore, the gender issue is not applicable in this study. Most of the hotels in Mashhad are operated and managed by owners; thus they are considered private sector firms. Most of the accommodations are clustered and concentrated around the shrine of Imam Reza who is the revered Shiite saint and the main attraction for the pilgrims. This spatial characteristic raises several planning questions regarding the environmental pressure

of accommodation sector in a clustered situation, particularly in terms of the release of emissions and waste (Alberti, 1999).

Sampling method employed in this study is considered convenience sampling, which refers to the collection of information from members of the population who are conveniently available to provide it. The size of the population in question is almost included in the sample as it was convenience to be surveyed. In a way, the size dictates the sampling method as the issue of representation is out of question (Miller et al, 1998).

Table 12: Environmental Performance Categories and Distribution of the Indicators

Cat. No.	Performance Categories	No. of Indicators
1	Architecture and Landscape Design	6
2	Energy Efficiency	8
3	Waste Reduction	8
4	Water Efficiency	5
5	Educational Training for Environmental Awareness	4
6	Communication for Environmental Awareness	5
7	Managerial Practice/Knowledge on the Environmental Protection	15

Environmental performance practices were surveyed using self-completion questionnaires that contained 51questions.The questionnaire contains 7 categories (components) and each category is divided into a number of indicators. 51 indicators were assessed in total to determine the environmental performance (EP) of accommodation sector (See Table 12). The categories were translated into hypotheses and the degree of correlation between those categories in relation to EP was also analyzed using the recent version of SPSS 17.
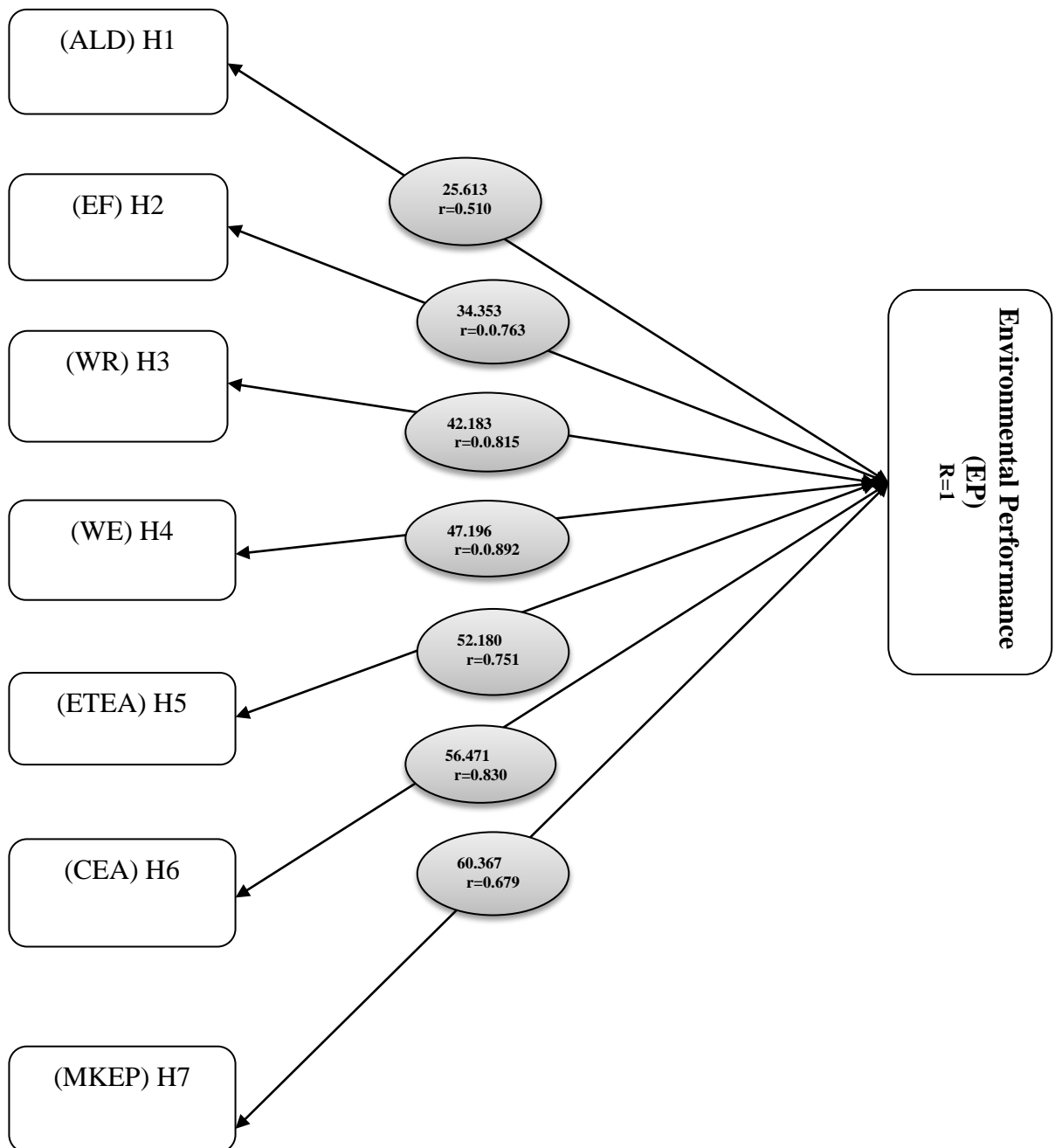
Figure 13: Hypothesized categories

As illustrated in Figure 13, Pearson's 'r' was applied to investigate the correlation between components and EP. Pearson's 'r'was investigated to reveal the correlation coefficient between 7 quantitative continuous variables and are lining towards upper level of value 1 as a perfect positive linear correlation. This is an indication of the strength of the association between the. The result indicates that the strength of association between the variables is high, and that the correlation coefficient is significantly different from zero (P < 0.001).Therefore the probability of an observed result happening by chance under the null hypothesis is rejected.

Hypothesized categories analyzed in relation to the environmental performance (EP) as dependent variable and the intensity of correlation either positive or negative determined the level of factor loading in the hypothesized categories. As indicated in factor analysis-total variance, the factor loading accounts for a high level of cumulative Eigen value. Architectural design captures a loading of (25.613) and the highest loading is in reference to environmental performance that the respondents believed they were performing according to the cannons of environmental quality (60.367). Each component's Eigen value is also the amount of the variance in reference to communalities tables showing the proportion of variance that each item has in common with other items. The only low extraction from the initial communalities table is the design of the hotel (0.330) and environmental quality resulting in sustainability (0.320). For the rest of the indicators communalities have shared proportion that is due to the common factors and shared by several items. In the language of factor analysis, the proportion of variance of a particular item is due to common factors. It was determined that all of the loadings of the model are statistically significant. The loadings on 'architecture and landscape design', 'energy efficiency', 'waste reduction', 'water efficiency', 'education training for

environmental awareness', 'communication for environmental awareness', and ' managerial practice/knowledge on the environmental protection 'have been reported statistically significant at p< 0.01and p<0.05. This result confirms that the EP of the accommodation sector, as an important dimension of tourism sector, is highly important for branding to achieve commercial success and to achieve quality environment.

The statistical analysis employed was to compute a regression analysis. Regression analysis can be find as the technique used to drive an equation that reveals the criterion variables to one or more predictor variables; it considers the frequency distribution of the criterion variable, when one or more predictor variable are held fixed at various levels.

Multiple regression analysis was carried out by taking 7 EP categories as the independent variables and EP as the dependent variable. The result results demonstrate that regression analysis was first confirmed by testing the assumptions of normality, linearity, homoscedasticity, and independence of residuals, revealing that the residuals are normally distributed about the predictor dependent variable scores, the variance of residuals about predicted dependent variable scores is the same for all predicted scores. In addition, there is no evidence of multicollinearity problem, meaning that each conditioning index is lower than 30, and at least two variance proportions are lower than 0.50.

By viewing the factor analysis results in a generic term, Table 14 illustrates the principal components and exploratory factor analysis. Results of the analysis in Table 14 demonstrate the highly unified and strong correlation amongst the

indicators themselves, as well as, among the indicators and components (in this case, only 7 components are involved).

Each observed variable communalities estimates a correlation. In this study, the least communality extracted is (0.320) which is an indication of environmental quality index towards sustainability, and low communality score of (0.330) which concerns with compatibility of design with the surrounding environment. If this is low, it is evidence that data fails to fit the hypothesis. However, this is not surprising, as the concept of sustainability is not clarified for the respondents. A degree of vagueness of the concept is not an unusual scenario as the concept still remains to be very vague (Hanna, 2005). In addition, the compatibility of design is always at the end of the list for the developers as the cost cutting of the construction is always an impediment for such precautions (Gunn and Var, 2002). Other than that, EFA reveals that each variable's communality, as the squared multiple correlation between that variable and the other variables, demonstrates proportion of variance in that variable that is explained by the common factor in the analysis. In this case, communality scores are generally leaning to a higher level of extraction and estimation.

In addition, total variance explained by initial Eigen values of the components (1-14), indicates the plausibility of Kaiser Rule based on PCA-principles of component analysis- with the total values of 12.294-0.966.This means that the amount of variance is explained by more than one factor and there is no need to add more variances. The correlation between hypothesized categories highly harmonizes with the EP. However, it also turns out that the actual variance of the component scores equals the Eigen value. Thus in PCA the 'factor variance' and the 'amount of variance the factor explains' are always equal. Therefore, the two phrases are often

used interchangeably, even though conceptually they stand for very different quantities. This is also indicated by cumulative squared loadings in both extraction loadings and rotation loadings (60.367).

Another caveat in the interpretation of factor analysis is illustrated through component matrix table. This is a technique to explore the indicator's role in explaining the components or categorized hypothesis. This shows how the correlation matrix for items pertaining to EP in accommodation sector and items pertaining to EP in tourism sector can be discussed based on the results. Data on component matrix and rotated matrix reveals that it seems that there are 7 relatively independent factors reflected in the correlation matrix, one related to EP in the relationship between indicators and components.

5.3 Descriptive statistics:

Considering the means, shows that most of the hotels in Mashhad are following the local government's planning regulations about environment. On the other hand, most of owners announced that they used local materials in the construction of their establishments. Meanwhile, managers believed that their hotels' locations are not the cause of the traffic congestion. Most of the hotels in Mashhad have no Open/Green spaces and this is the result of the high price of the land near the holy shrine in one hand, and lack of restricting laws in municipalities' and ICTHO's constructional regulations, on the other hand.

Because of cheap and available resources of gas and oil, most of the hotels in Mashhad use fossil fuel. Most of the owners stated that they are buying/using low energy consuming materials. Managers said that they are applying key-card control system and energy-saver control system in the hotels' rooms. Most of the hotels are

using energy-saving light bulbs in their rooms considering that the price of electricity is cheap in Iran, which shows that owners and managers care about the electricity source of energy.

Managers stated that pollution in general and air pollution in particular have increased in Mashhad. They also mentioned that they buy environmentally friendly materials. Results show that hotels in Mashhad are cooperating with recycling firms and recycling programs of the local government. It is also appearing that, hotels are not using recycled materials. Managers and owners of Mashhad hotels care about waste reduction.

Results explain that managers inform their guests to cooperate with them to save the water and increase the efficiency of water use. This is a good sign, because Mashhad has limited water resources. On the other hand, hotels do not use photocell water tap, which is not suitable to save the water. The owners do not apply recycling water and reusing it in hotels.

Results express that most of the hotels are participating in environmental meetings and workshops. Managers of hotels provide education sensitively training for their personnel. They also provide useful information about the environment for their guests but it is not done in a large number of hotels. It is also appeared that managers and owners of the hotels in Mashhad are aware of the importance of educational training for environmental awareness but they do not apply it in their hotels.

It is appearing that the majority of hotels in Mashhad using mass transportation for their guest and personnel. This is helps to decrease the air pollution in one hand and

reduce the traffic on the other hand. Guests' opinions are taken in order to be used in hotels' environmental activities. Results show that owners and managers are communicating with their guests and personnel for environmental awareness.

Majority of managers believe that their hotels' environmental quality affect the competitiveness positively. Managers believe that environmental quality will result in long-term sustainability and some of them think that investment strategies conform to the goals of sustainability. However, owners have no information about the international environmental awards. Managers/owners of hotels in general are not aware of environmental protection issues and they are not familiar with the topic of sustainability. See also Table 10 for descriptive statistics.

Table 13: Descriptive Statistics

	Mean	Std. Deviation	N
Architecture	2.2609	.61768	69
Energy Efficiency	2.5960	.72290	69
Waste Reduction	2.5773	.75385	69
Water Efficiency	2.8493	.99847	69
Education	2.4058	.77067	69
Communication	2.6348	.83733	69
Managerial	2.6541	.63978	69
Environmental Performance	2.5683	.58282	69

5.4 Architecture and Landscape Design

By t values=-1.561>2, the first hypothesis of the research rejected by the owners and managers answers (See table.11). It means that owners of accommodations in Mashhad think that architecture and landscape design is not affecting the EP. Analyzed show that most of the hotels in Mashhad are strongly following the local

government's planning regulation about environment Moreover, most of owners strongly stated that they used local materials in the construction of their hotels. Most of the hotels in Mashhad have no open/green spaces and this is the result of the high price of land near the holy shrine in one hand, and lack of restrict laws in municipalities' and ICTHO's constructional regulations on the other hand.

Only 36.2% managers believed that the location of their hotels has caused traffic congestion. Parking lot is a critical problem for hotels because Mashhad municipality allowed owners to build their accommodations without considering enough parking area in the first decades after the Islamic revolution. Owners strongly argue that urban sprawl has intensified the uncontrolled spread of the city to the surrounding environment. Owners believe that the design of their hotels is in harmony with the surrounding environment. It is understood that managers/owners of Mashhad hotels do not build their hotels based on environmental issues and they are not aware of EP.

5.5 Energy Efficiency

Findings show that the second hypothesis of the research is not supported (t values=0.256<2) (See table.11). Hotels are strongly using/purchasing low energy consuming materials (88%). 78.5% of accommodations use fossil fuel. More than 60% of hotels applied energy-saver control system in their guest rooms. In Mashhad, using solar, wind, and biomass, and nuclear sources of energy are not common. Answers show that half of hotels are using phosphorus lighting in lighting outside. The price of electricity in Iran is relatively low but the results show that managers are aware of energy efficiency for electricity but on the other hand they don't have any idea to use the natural sources of energy and decrease the use of fossil energy. Hotels

apply key-card control system in their guest rooms and most of them do not use photocell lighting in washrooms.

In general, owners and managers of accommodations in Mashhad are not aware of the importance of energy efficiency.

5.6 Waste Reduction

By t values=5.536>2, third hypothesis of the study supported by the managers/owners responses (See table.11) . More than 70% of managers mentioned that they apply solid waste separation and establishments are cooperating with recycling firms and collaborating with recycling programs of the local government. It is clear that (87%) accommodations purchase environmental friendly materials and two third (72.5%) of them are buying materials with recycle- able features. Hotels are not using recycled materials and only one fourth of hotels compost the organics and food waste. More than 90% of owners strongly believe that pollution in general and air pollution particularly has increased in Mashhad.

Mashhad's municipality has established some stations around the city in order to get dry waste materials, and in return, give hygienic materials (See figure 14, 15, 16). The recycling organization of the municipality of Mashhad has built an Electricity Manufacturing Company beside the Compost Company to change the Methane gas to Electricity.

Figures 14, 15, 16: Recycle change stations, Mashhad

Managers of Mashhad accommodations are strongly aware of waste reduction issues and their effect on EP.

5.7 Water Efficiency

The forth hypothesis of the study supported by the findings (t values=-2.895>2) (See table.11). Accommodations in Mashhad are not cooperating in water efficiency programs. One fourth of hotels, use photocell taps. It seems that the majority of managers and owners are aware of water-saving system measures on linen and towels and they inform guests to cooperate with these measures. Only 40% of managers stated that they apply wastewater treatment system in their accommodations. In Mashhad's hotels, using treated water in garden irrigation is not common.

By considering the results, it is obvious that managers of Mashhad accommodations have concerns about water efficiency matters. This is very important because Mashhad has limited water resources and the local government confirms water sanctions in summers.

5.8 Educational Training for Environmental Awareness

Responses are not supporting the H5 of the study (t values=1.172<2) (See table.11). 80% of accommodations provide education sensitive training to their personnel but it seems that they do not provide any education to guests. Majority of managers and owners stated that they are participating in environmental meetings and workshops. Based on ICHTO`s laws, all hotel personnel must have ICHTO certificate related to their duties. It seems that manager and owners of Mashhad establishments are not sensitive to educational training in general and especially in environmental issues.

5.9 Communication for Environmental Awareness

H6 is supported by the research findings (t values=4.147>2) (See table.11). Data analysis explains that hotels in Mashhad are neither involved in nor provide information on environmental protection. They do not obtain guest opinions on environmental activities of hotels either. On the other hand, hotels do not reflect their guests' opinion about environment to hotel activities effectively. Managers stated that they use mass transportation for their guests and personnel to help to decrease both the city's traffic and air pollution.

Some managers said that their establishments post educational posters to their guests. It appears that hotels activities in communicational awareness of environmental issues are not too sufficient and the owners and managers of accommodations in Mashhad should increase their knowledge about environmental issues.

5.10 Managerial Practice/Knowledge on the Environmental Protection

H7 supported by the research findings (t values=17.570>2) (See table.11). Managers of accommodations are enforcing environmental auditing procedure. They are not aware of ISO 14001, Pine Awards and Blue Flag Project. This shows that managers are not aware of environmental standards and awards.

Hotels do not have any contract with farmers who produce organic products. It is not only because of the high price of these products but also lack of managers/owners' information about the environmental issues.

Managers' awareness of the concept of sustainability is not high and they are not doing any proactive environmental management. Managers believe that hotels' environmental quality affect the competitiveness positively. In owners' opinion hotels' investment, strategies do not conform to the goal of sustainability. Generally, there is no effective strategic plan in Iran's tourism sector. Most of the plans are short-term and are not in harmony with each other.

Managers believe that Environmental quality will result in long-term sustainability but it is not common among them. Managers' opinion about quality of waste management, wetland destruction and exposure to heavy metals such as lead and mercury shows that they have no clear idea about the concept of sustainability and that do not care about environment.

Table 9 Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,161	,109		1,473	,146
	arhiland	-,057	,036	-,056	-1,561	,124
	energy	,009	,034	,012	,256	,799
	waste	,264	,048	,287	5,536	,000
	water	-,098	,034	-,184	-2,895	,005
	educat	,037	,031	,054	1,172	,246
	communication	,144	,035	,227	4,147	,000
	manager	,626	,036	,757	17,570	,000

a. Dependent Variable: EPO

In summary, results show that managers and owners of Mashhad's hotels are not aware of the EP and sustainability. Lack of information and meetings, conferences, academic education, etc. are the main important reasons of this ignorance. Lack of master plan is the main problem among Mashhad's hotels. Lack of using solar, wind, and biomass, and nuclear sources of energy and increasing in usage of fossil fuels are the other critical points. Mashhad has limited resources of water and in summer local government uses water sanction in order to manage the water consumption. However, the local government has no training programs even to teach and to inform people on how to cooperate.

Chapter 6

DISCUSSION AND CONCLUSION

This research explored the Environmental Performance (EP) of accommodation sector in the city of Mashhad, Iran. Worldwide environmental concerns and the significance of environmental protection and quality demand an exclusive attention by tourism in general and accommodation sector in particular. Such concern is coupled with the issue of sustainability, which has become one of the main goals of tourism practices and mode of operation. Therefore, "concepts imbedded in such terms as 'ecotourism', 'sustainable tourism', 'responsible tourism' and 'ethical tourism' aim to address cultural, social and environmental impacts, largely through non-mandatory initiatives of individual operations" (Carter et al, 2004, p. 46). However, the environmental concerns and various means to protect the environment are not just the obligation of certain type of tourism; rather they have been the major issues for international organizations including World Tourism Organization (WTO), World Travel and Tourism Council (WTTC), and government institutions. To achieve it, a proactive response, besides mandatory regulations, is required for individual and corporate firms on ethical ground and for the efficient operation, as well as, benefit for the business (Carter et al, 2004). Although, the focus has been on a specific segment of general tourism industry such as accommodation sector; however, the research has revealed the legitimacy of concerns and related challenges for the future of tourism sector generally. The research findings proved one more time that accommodation sector can play a significant role in upholding the

environmental responsibility to achieve commercial success through competitiveness, increase in organizational performance, sustainability and satisfying demands (i.e. which is going green) contributing to local and global environmental cause. The research has also revealed that despite the existence of environmental regulations, upholding and practicing a sustainable approach through operation can remain problematic, as the individual manager/owner of an accommodation or firm may not have awareness of and commitment to incorporating environmentally required practices.

Most of the hotels in Mashhad are supportive and try to follow the local government's planning regulations about environment. The majority of owners strongly stated that they used local materials in the construction of their hotels. However, the lack of planning enforcement in the past has resulted in lack of attention to allocating green spaces and quality environment to the surroundings of the accommodations. Therefore, this has affected the degree of urban amenities in and around the main visiting point that is the shrine of Shiite's eighth Imam. This form of tourism development is associated with situations where destinations have emphasized economic benefits from accommodating considerable number of visitors (mainly pilgrims) to the detriment of environmental quality (Dodds, 2007; Jim, 2000). This has also generated an overdevelopment problem, which is intensified by higher land prices and lack of regulations. As a consequence, traffic congestion and air pollution, lack of parking space, and unpleasant crowed negatively affect the urban attraction.

 The research revealed that accommodation sectors are not necessarily in tantamount with the surrounding environment, as this type of requirement is not enforced

through building code or design regulations. Lack of a city master plan is also another hindrance to the enforcement of regulations. The majority of hotels in Mashhad are applying energy-saver control system in their guest rooms. However, an environmentally useful practice this might be, the major sources of energy in the accommodation sector depend on the use of fossil fuels. This is also associated with the country's abundant source of inexpensive petroleum. Lack of alternative energy policy of the government intensifies this situation. Overall, the application of renewable energy (solar, wind, biofuel …etc.) systems in the accommodation sectors is either non-existent or very minimal. Answers show that half of the hotels are using phosphorus lighting in lighting outside. Despite the minor and limited environmental approaches to energy saving practices and to some extent the awareness of the managers, the lack of enforced regulations and the government's proactive involvement in this process, the result remains ineffective.

Regarding the waste management and recycling, efforts are made by the municipality and hotel managers to practice waste separation and recycling. However, this is not done systematically and it is difficult to assess the real impact. Assumption is that if there were a mechanism to grade the hotels based on their environmental performance, most likely the majority of these units would fail the test of environmental quality control in a measurable sense. Most of the managers agreed that pollution in general and air pollution in particular have been increased in Mashhad. The study has also revealed that despite water shortage, water saving practices is not adequate. Nonetheless, educational workshops to disseminate environmental awareness are taking place every now and then. This might become an important step towards further EP. What is needed is the change in attitudes of the

managers/owners regarding the whole issue of tourism and sustainability. Therefore, the missing link in this case is what Carter et al. (2010) elaborated:

> "While existing environmental legislation adequately addresses the development aspects of tourism, it rarely affects operational aspects. Tourism has responded by developing ethically based principles to guide operations within the sustainability framework, with moves towards codification in the form of industry-based accreditation schemes. However, these tend to be insensitive to the scale and nature of the tourist operation as well as to the receiving environment. Hence, despite consensus on the ideal that tourism should be achieving environmentally, no clear operational standards exist that address the peculiar nature of tourism products." (2010, p. 64-65)

At any rate, in order to realize a real EP in the accommodation sector, a closer cooperation with the public institutions and certain environmental regulations must be in place. This should be coupled with an acculturation of managers to create sensitivity and commitment to the tourism sector in general and their private firm in particular. Based on the findings, for the time being, accommodation sectors do not feel the brunt of lack of customers. This is due to the peculiar situation in the city, which attracts millions of pilgrims. However, the quality of the environment for the residents and non-pilgrims remain uncertain in the long run. There was no sign of assessing the guests' opinion about the issue by the managers at this point. However, some hotels began to solicit guests' sympathy in terms of saving water and energy by posting relevant signs.

Study shows that accommodation sector needs to enhance the sensitivity among the managers and employees by disseminating information and knowledge through workshops and other means. "Education and training courses should be developed and participation of accommodation personnel should be encouraged. There is an urgent need to create and enhance the environmental knowledge and sensitivity of managers" (Erdogan and Tosun, 2009, p. 413).

In the case of Mashhad, initiatives needed to be established regarding accreditation measures such as ISO 14001, Pine Awards, and Blue Flag Project, which are useful in encouraging a competition to strive for environmental quality. For example, going organic in the hotel's food outlets can become an effective marketing tool as well as beneficial to the environment. Managers' awareness of the concept of sustainability is inadequate. "The principles and practice of sustainable tourism need to be nurtured to conserve its resource base." (cf. Jim, 2000, p. 233)

This issue needs to be addressed by the public sector institutions and the hoteliers' association in an integrative manner. Otherwise, there will not be any investment and measures towards sustainable approach.

Findings have added one more endorsement to the resource- based theory, which has been instrumental in explaining accommodation sectors environmental initiatives as a means to achieve competitiveness and organizational improvement (Hart, 1995; Rivera, 2002; Grant, 1996; Garcia, 2008).

EP as an internal factor in the organization can be added to what Ritchie et al. (1978) called competitive positioning of a firm or a destination by focusing on tangible and intangible resources potentially available for the destinations. Grant (1991) applies this concept as resource-based approach to strategic analysis claiming that "a firm's ability to earn a rate of profit in excess of its cost of capital depends upon two factors: the attractiveness of the industry in which it is located, and the establishment of competitiveness advantage over rivals." (1991: 117)

EP can be very well an internal factor potentially available for the accommodation sector to achieve macro and micro level competitiveness in the age of greening and green industrialization (Dodds, 2007).

Finally, as Jim (2000, p. 245) stressed:

> "With tourism mainly in the private sector, it is not realistic to expect market mechanisms alone to initiate actions against environmental damage. The incipient interest in the local hotel industry to adopt sustainable tourism in its operation could be echoed by coordination efforts from the government. In addition, the tourists' rising environmental expectations should be matched by their own adoption of ecologically responsible behavior so that the environment can be protected for and from the tourists in the long term to achieve a truly symbiotic association."

6.1 Summary of Findings

Results show that most of the hotels in Mashhad are supportive and try to follow the local government's planning regulations about environment. The research findings proved one more time that accommodation sector can play a significant role in upholding the environmental responsibility to achieve commercial success through competitiveness, increasing organizational performance, sustainability and satisfying demands (i.e., which is going green) contributing to local and global environmental cause. The application of renewable energy (solar, wind, biofuel …etc.) systems in the accommodation sector is either non-existent or very minimal. Most of the managers agreed that pollution in general and air pollution in particular has been increased in Mashhad. Study shows that accommodation sector needs to enhance the sensitivity among the managers and employees by disseminating information and knowledge through workshops and other means. Managers' awareness of the concept of sustainability is inadequate. The study has also revealed that despite water shortage, water saving practices is not adequate.

6.2 Limitations of the study and further research propositions

The main limitation of this study was to solicit the cooperation of managers/owners of accommodation sector in the city of Mashhad. As this type of research in Iran is not a common practice, managers tend to have a certain degree of sensitivity and suspicion when a researcher approaches them and administer questionnaires. The environmental commitment and involvement are not necessarily high among accommodation managers. This results in low level of cooperation as well. It was also a limitation of this type of study when there is no opportunity to check whether responses are, indeed, practiced in those areas where measures were declared to have been taken. Perhaps a different study can focus on real measurement of what has been done and practiced, which eventually are supposed to achieve prudence results. Lack of routine auditing measures by the public sector exacerbates the situation. Another limitation that can be argued is the lack of environmental awareness among the managers. This can undermine the credibility of responses. It would also help if the hotels were categorized to demonstrate which ones, according to the star ranking, are more prone to environmental practices. Further research can focus on these issues including environmental impact assessment and accommodation sector's commitment towards the findings.

6.3 Policy implications

Iran's tourism institutions at the national level and local scale can benefit from the findings and come up with a unified countrywide environmental policy in this particular sub-sector of tourism industry. The study can shed some light on and redirect the public/private sector cooperation in this issue. Because environment is everyone's business and it is the only way to move towards sustainable tourism development. This can be initiated by market mechanism and various other schemes

in terms of increasing awareness and involvement in EP. As Campbell (1996: 300) noted, "Though I use the image of the triangle to emphasize the strong conflicts among economic growth, environmental protection, and social justice, no point can exist alone. The nature of the three axial conflicts is mutual dependence based not only on opposition, but also on collaboration."

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APPENDICES

Appendix A:

A: Architecture and landscape design

1-Local materials have been used in the construction of this establishment.

2-The design of this hotel is in harmony with surrounding environment.

3-This hotel had caused traffic congestion because of the location.

4- Urban sprawl has been intensified undersigned and uncontrolled spread of a city to the surrounding environment.

5- This hotel contains open/green space.

6-This hotel has followed local government`s planning regulation.

B: Energy efficiency

1-   This hotel applies key-card control system in its guest rooms.

2-   This hotel applies energy-saver control system in its guest rooms.

3-   This hotel uses solar, wind, biomass, and nuclear sources of energy.

4-   This hotel uses photocell lighting in washrooms.

5-   This hotel uses phosphorus lighting in lighting outside.

6-   This hotel uses conventional sources of energy (fossil fuel)

7-   This hotel uses energy-saving light bulbs in its rooms.

8-   This hotel uses/purchases low energy consuming materials.

C: Waste reduction

1-   This hotel applies solid waste separation.

2-   This hotel uses recycled materials.

3-   This hotel is composting the organic and food waste.

4-   This hotel is in cooperation with recycling firms.

5-   This hotel is in cooperating with recycling programs of local government.

6-   This hotel is purchasing environmentally friendly materials (example: detergent for laundry)

7-   This hotel is purchases materials with recycle able features.

8-   Pollution in general and air pollution particular has increased in the city of Mashhad.

D: Water efficiency

1-   This hotel uses treated water in garden irrigation.

2-   This hotel applies waste water treatment system.

3-   This hotel uses photocell water armatures.

4-   This hotel uses water-saver measures on linen and towel change.

5-   Hotel informs the guests to cooperate with these measures.

E: Educational training for environmental awareness

1-   This hotel has established environmental auditing process.

2-   This hotel provides education sensitively training personnel.

3-   This hotel provides education to guests.

4-   This hotel participates in environmental meetings and workshops.

F: Communication for environmental awareness

1-   This hotel provides information on environmental protection.

2-   This hotel obtains guest opinion on environmental activities of hotel.

3-   This hotel reflects guest opinion about environment to hotel activities.

4-   This hotel encourages the use of mass transportation by the guest and personnel.

5-   This hotel posts educational posters for customers.

G: Managerial practice/knowledge on the environmental protection

1-   Manager of this hotel is enforcing environmental auditing procedure.

2-   Knowledge on ISO 14001

3-   Knowledge on the Pine Awards

4-   Knowledge Blue flag project

5-   Environmental auditing

6-   Contract with local farmers on purchasing organic products

7-   Awareness of the concept of sustainability

8-   Proactive environmental management

9-   Investment strategies conform to the goals of sustainability

10-   This hotel`s environmental quality affects the competitiveness positively.

11-   This hotel`s environmental quality affects the competitiveness negatively.

12-   Environmental quality will result in long-term sustainability.

13-   Quality of waste management

14-   Wet lands destruction

15-   Exposure to heavy metals such as Lead and Mercury

Table 15: Environmental Performance Index 2010 (YALE Center for Environmental Law & Policy, 2010)

SCORES AND RAW DATA (IRAN)	Score (% proximity to target)	Raw value	Raw value target and unit
ENVIRONMENTAL HEALTH	**70.21**		
Water (effects on humans)	**85.29**		
Access to Sanitation	80.9203	83.0	100.0% of population with access
Access to Water	89.6552	94.0	100.0% of population with access
Air Pollution (effects on humans)	**72.9**		
Indoor Air Pollution	94.7368	5.0	0.0% of population exposed
Outdoor Air Pollution	51.0661	50.6068	20.0 ug/m3
Environmental Burden of Disease	**61.32**		
Environmental Burden of Disease	61.32	33.0	10.0 Disability Adjusted Life Years per 1,000 population
ECOSYSTEM VITALITY	**49.72**		
Forestry	**100.0**		
Forest Cover Change	100.0	0.0	0.0 decline in forest cover
Growing Stock Change	100.0	1.01934	1.0 ratio of growing stock in time2 to time1
Fisheries	**57.33**		
Marine Trophic Index	100.0	0.014931	0.0 decline
Trawling Intensity	14.6673	85.3327	0.0% of exclusive economic zone trawled
Agriculture	**82.38**		
Agricultural Water Intensity	23.2695	62.54	10.0% of all water resources
Agricultural Subsidies	100.0	0.0	0.0 subsidies
Pesticide Regulation	95.4545	21.0	22.0 points
Climate Change	**52.56**		
Greenhouse Gas Emissions Per Capita	61.6258	8.34382	2.5 Mt CO2 eq. (Estimated value associated with 50% reduction in global GHG emissions by 2050, against 1990 levels)
CO2 Emissions Per Electricity Generation	12.073	535.604	0.0 g CO2 per kWh
Industrial Greenhouse Gas Emissions Intensity	74.9345	61.5238	36.3 tons of CO2 per $mill (USD, 2005, PPP) of industrial GDP (Estimated value associated with 50% reduction in global GHGemissions by 2050, against 1990 levels)

Table 16: Environmental Performance Index 2010 (YALE Center for Environmental Law & Policy, 2010)

SCORES AND RAW DATA (IRAN)	Score (% proximity to target)	Raw value	Raw value target and unit
Air Pollution (effects on ecosystem)	**47.3**		
Nitrogen Oxides Emissions	52.3775	0.917649	0.01 Gg/sq km populated land area
Ecosystem Ozone	33.4076	544369.0	3000.0 AOT40
Sulfur Dioxide Emissions	52.16	0.995822	0.01 Gg/sq km populated land area
Non-Methane Volatile Organic Compound Emissions	41.5146	2.0179	0.01 Gg/sq km populated land area
Water (effects on ecosystem)	**45.92**		
Water Quality Index	49.78		100.0 score
Water Stress Index	21.9716	25.34	0.0% territory under water stress
Water Scarcity Index	62.1553	0.276497	0.0% water overuse
Biodiversity & Habitat	**42.32**		
Biome Protection	68.518	6.8518	10.0% weighted average of biomes protected
Critical Habitat Protection	0.0	0.0	100.0% of critical habitats protected
Marine Protection	32.2458	1.16673	10.0% of country's exclussive economic zone protected

Table 10: IRAN EPI (YALE Center for Environmental Law & Policy, 2010)

IRAN EPI	
EPI RANK	78
EPI SCORE	60
Average EPI score for Middle East and North Africa:	54.1
Average EPI score for income peer group (4th decile):	63.2
GDP per capita:	$9,721
Population	71,021,000