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# The Study of Development in the Tourism Industry : Iran as a destination with special attributes

Fahimeh Hateftabar

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Discipline: Science de Gestion

## **The Study of Development in the Tourism Industry. Iran as a destination with special attributes**

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# **Chapter 1: Iranian Tourism Management as A system**

## **1. Introduction**

When I was a kid, my family used to travel frequently, due to my father's job. I have been blessed with an ever-strong passion for traveling throughout my life. Despite my natural interest to travel, I resolved to continue my education in mathematics-physics since I had always been an honors student that excelled in academics, and Iran's inadequate education system particularly encouraged the best and remarkably talented students to pursue mathematics and physics in high school. I participated in the Iranian University Entrance Exam, and I was admitted to study atomic physics at the University of Tabriz, One of the best five universities in Iran. I often had this feeling during my undergraduate studies and well after graduation that my choice of university major did not meet my interests and characteristics. In parallel, I strived to make a wiser decision to proceed with my further studies in higher education upon completing my undergraduate degree, and the outcome of my reflections was a decision to study tourism management marketing. I had an arduous time ahead leading with my decision because of particular circumstances in the Iranian graduate-level admission system. Each Iranian university major requires a separate proficiency exam for admission in the graduate-level studies of the subject in mind. The majority of the exam content listed for tourism management were courses utterly different from my educational background (atomic physics). I had not taken a single course relevant to business, marketing or tourism management during my undergraduate years, nor did I have an adequate understanding of macro and microeconomics.

I had to study major curricula items of tourism management marketing all on my own devices and in a short span of time, whereas the majority of my fellow contenders were students that had been instructed by competent university professors during their four years of undergraduate studies in tourism marketing management. Yet, nothing is impossible when there are fair purpose and motivation behind it. I worked with great vigor day and night for roughly eight consecutive months, and during all this time, I studied the material with gusto, and I thoroughly enjoyed learning and knowing more about the subject. The burden of these days led to a happy ending that marked success on my behalf in the graduate-level entrance exam. Earning the 39th place amongst 3449 total participants of the entrance exam and admission to the University of Tehran, the best university in Iran, was indeed an extraordinary success for me, who'd come forth with a completely different academic background and without ever attending one hour of management curricula classes.

My passion for learning and self-betterment in tourism management distinguished me as a standout honors graduate student with a grade point average of 4 out of 4, valedictorian among 79 fellow tourism management graduate students of the same class (freshmen of September and January alike) in the University of Tehran. Moreover, I was the only graduate student who defended his dissertation by the end of the fourth semester with a score of 19.25/20 or A<sup>++</sup> grade. Following graduation, I strived to go further and enroll in a Ph.D. program offered abroad in a prestigious university with an adequate education system. Fortunately, in line with my plans and ambitions, I gained admission to a Ph.D. program at the Sorbonne University in France, and I had the opportunity to study and learn alongside Sorbonne's outstanding professors and students. I did not forget my ambitions or why I was there in the first place despite all the hardships and distress (financial, emotional, etc.) I encountered during this four-year-long



journey. Perhaps the truth is that I could have done much better overall, but I am deeply content that I did all I could to get even one step closer to my ambitions in spite of all the difficulties of living in a foreign country without any emotional or financial support. I will most certainly continue to do so with all that's at my expense to fulfill my high ambitions.

“Resident perception and their willingness to support tourism development” was the first topic I contemplated for my Ph.D. dissertation, and I did present the topic as a proposal to my supervising professor and the Pantheon Sorbonne University's department in charge. This paper is included in the final version of my dissertation, available in the third chapter.

Further, we resolved to conduct my dissertation in the form of three articles upon my supervisor's suggestion and the agreement of the department. This decision and novel approach proved to be a pleasant and thrilling experience for me, although it demanded more work since I had to review the research literature related to three different topics, and collect data three respective times with three distinct statistical and subject populations, and inevitably, I was obliged to examine the three given topics with different methodologies.

Iran was my proposed destination for conducting the research. I cannot deny that Iran being my homeland did impact this decision, but I can assure this choice was not merely because of my patriotic and emotional approach. Iranian tourism is indeed one of the less-studied topics, and has a very limited coverage in the international tourism literature (Seyfi, Hall & Kuhzadi, 2018). Accordingly, the necessity for more studies concerning this issue is quite evident. Furthermore, Iran is contending two ordeals that concern most countries in the world, namely political and financial crises, in addition to being a less-studied destination. Consequently, studying the impacts of these crises on the tourism sector will be valuable for other destinations as well.

I often encountered favorable news and headlines while I still resided in Iran, and the news often read like, “World Tourism Organization introduced Iran as One of the Top Ten Tourist Destinations in the World, “Iran Named the Heart of Middle Eastern History and Civilization,” “Iran Ranked Tenth in Ancient and Historical Attractions, Fifth in Natural Attractions,” “Iran, the Gate of Nations,” “Iran, a four-seasons destination.” Naturally, all these headlines and news were affirmative and welcome for me as an Iranian. Once these headlines are pondered realistically, the question arises that why, in spite of all these titles and the solid potential for tourism growth, Iran fails to claim an adequate place in the world in attracting tourists and expanding the tourism sector and, consequently, monetizing this sector's currency-based revenue. Accordingly, the primary question in my mind (and perhaps many Iranians) is what factors do contribute to Iran's failure in tourism sector?

As I mentioned earlier, my first topic of choice and initial Ph.D. proposal referred to the perceptions of the host community. The local community's hospitality and support for tourism development are among the most remarkable factors in the development and growth of the destination's tourism industry. Accordingly, the development of the tourism industry is inconceivable without the cooperation and support of the local community. As mentioned in preceding studies, the hospitality of the host community is one of the subtle factors of growing the attraction and demand for the tourism sector and consequently increasing the tourism revenue. The impacts of the destination's economic crisis on resident perception and support for tourism are examined for the first time in this study. Studies indicate that the economic crisis alters the behavior, attitudes, and perceptions of individuals. In parallel, it is not far-fetched to examine the impact of this factor on individuals' perceptions of tourism and their compliance to partake in tourism development.

One of the leading reasons for the decline in Iran's tourism revenues is the decrease observed in the tourists' length-of-stay in Iran, according to the statistics of the Iranian Ministry of Cultural Heritage, Handicrafts, and Tourism. Furthermore, this declining trend is still present in most tourist destinations worldwide. Consequently, I attempted to study the factors altering the length-of-stay in tourists traveling to Iran, and for the first time, I deliberated the impact of political and religious factors on this variable since the impact of these two factors has been previously confirmed on the decision-making process of tourists as well as tourist behavior at the destination. Strictly speaking, the impact of these factors on the tourists' length-of-stay is conceivable.

Studying a region (i.e., city/country) merely as a tourism destination is not enough to study the *tourism system* of a region, as I will elaborate in the following sections. Rather, the performance of that destination in terms of generating tourists and the behavior of these tourists must be examined in addition to adequately evaluate the tourism system of that region. I resolved to study the impact of environmental factors (technology) on forming the behavior of Iranian tourists since online shopping has rendered a remarkable impact on the tourism industry, according to prior studies. Contrarily, statistics denote that the growth of online tourism shopping in Iran is much less, compared to its growth worldwide, and the significance of this study is further emphasized given that there are not many studies on the online shopping trends of Iranian tourists.

I could have settled for different topics indeed, and by different, I imply topics different from those three that I've worked on earlier. The reason I chose this topic is that first and foremost, I intended to deliberate the Iranian tourism sector from different perspectives, or rather, those perspectives that have remained idle until this day. Consequently, I endeavored to reflect upon

the Iranian tourism industry in terms of its performance as a tourist destination (first study), the most significant component of a tourism destination \_local community\_ (second study), and as a source and origin of tourism (third study), in accordance with Leiper's statement that a more comprehensive understanding of the tourism sector in a region/country is obtained through the deliberation of that region/country both as a destination and origin of tourism.

## **2. The Definition of Tourism and Different Approaches to Tourism Research**

When thinking of tourism, what is the first thing to come to mind? Typically, we think primarily of persons traveling to and staying in a place outside of their normal residential region for under a year and for any purpose, including business and leisure. However, this standard definition is biased towards just one aspect of tourism—the tourists (EUROSTAT, 2014).

In the twentieth century, the academic and professional community added several new definitions of tourism. These economists observed tourists as temporary consumers at their destinations, meaning that they can be considered valuable sources of profit for the local economy of the hosting destination. This has led economists to view the impacts of tourists' activities as akin to those of industries. This view shaped a new meaning for “tourism” as a sector of the economy (Orwell, 1970), though this meaning described tourism from a single angle instead of aiming for a thorough understanding. Various other technical meanings of “tourism” were identified, including tourism as an industry (Smith, 1989), tourism as a market (Kaul, 1985; Kotler, 1980), tourism as an academic subject (Jafari & Aaser 1988), and tourism as a system (Leiper, 1979). McIntosh, Goeldner, and Ritchie (1995) were pioneers in the field who noted that any attempt to define tourism and identify its scope must consider the many

groups that participate in and are affected by the industry. According to McIntosh et al. (1995)—and this still applies today—a fuller definition of tourism requires a proper understanding of its four interrelated basic facets: tourists, tourism suppliers, host governments, and host communities. The global significance of tourism, as well as the complexity of its interactions with environments and societies, warrants substantial academic attention (Sharpley,2011). Researchers who study tourism have adopted a wide range of approaches; there is little to no agreement on how the subject should be approached. Goeldner and Ritchie (2007) outline the eight basic approaches to the study of tourism, which are detailed below.

### **Institutional Approach**

The institutional approach is a key approach to the study of tourism. It mainly considers the various intermediaries and organizations related to tourism, such as travel agencies, tour operators, hotels, and rental car companies. In short, this approach mainly focuses on the various institutions that engage in any way with the tourism industry. It also entails a detailed investigation of the problems, costs, and functions of all of the involved institutions.

### **Product Approach**

The product approach, also known as the commodity approach, refers to the detailed study of various tourism products. Under this approach, the focus is on tourism products' problems, consumption patterns, and marketing situations. For instance, accommodation (hotel rooms) constitutes a tourism product. This approach entails studying and analyzing the problems associated with hotel rooms, the people engaged in booking and selling them, hotel marketing

and financing, etc. In order to achieve a comprehensive picture of tourism, this method of study is repeated for each tourism product, such as rental cars and airline tickets. In practice, this approach is simple and provides good results. However, its main shortcoming is that it is far too much of a time-consuming and repetitive process.

### **Historical Approach**

The historical approach is a fairly uncommon one in the study of tourism. It involves an analysis of tourism activities and institutions from an evolutionary perspective. It aims to detect the growth or decline of tourism development in a particular area and understand the reasons behind those changes. While tourism has been practiced for centuries, real growth did not start until after World War II. In the 1960s and 1970s, various locations, such as Mallorca and Southern Spain, became destinations that received a massive influx of tourists arriving on package tours. In this era, mass tourism was born, as was the need to study the effects that large numbers of people have on a destination. As mass tourism is a fairly recent phenomenon, this approach is limited in its utility.

### **Managerial Approach**

This approach is firm-oriented, as it concentrates on the activities of. The main focus of this approach to tourism research is on how managers handle various activities, such as planning, research, pricing, and marketing. The managerial approach is dedicated to provide theoretical and practical aspects of the management of the resources related to tourism. This approach provides comprehensive information on the business side of tourism.

### **Economic Approach**

Tourism, especially international tourism, constitutes an important tool for national economic growth; naturally, economists tend to study tourism by considering various economic factors. The economic approach focuses on concepts like cost, revenue, competition, balance of payments, foreign exchange, demand, and supply. This method can help to provide a framework for analyzing tourism and its contributions to a national economy, but it fails to give a clear idea on any other aspect of tourism (e.g. environmental, cultural, psychological, sociological, and anthropological).

### **Sociological Approach**

According to Sharpley (2011), tourism has multi-layer impacts, meaning it cannot be considered purely in terms of its economic contribution. This approach tests the social classes, habits, and customs of hosts and guests. One enduring and popular area of tourism research has centered around tourism's impacts on host communities and the view of tourism as a social activity. Of course, this approach has attracted the attention of sociologists, who have studied the behaviors of individual tourists as well as that of tourist groups.

### **Interdisciplinary Approaches**

Interdisciplinary study entails the combination of two or more academic disciplines into one activity to describe and understand a complex field of study. Tourism knowledge is inherently multifaceted, as are most subjects in social science, meaning tourism research should be interdisciplinary. As such, tourism studies often integrate multiple fields, such as marketing,

sociology, geography, economics, anthropology, political science, and design. The fact is that tourism is so complex and multifaceted that, to gain any kind of comprehensive understanding, it is necessary to adopt a number of different approaches, each geared toward a somewhat different objective. Figure 1 illustrates the reciprocity and mutuality of interdisciplinary tourism studies.

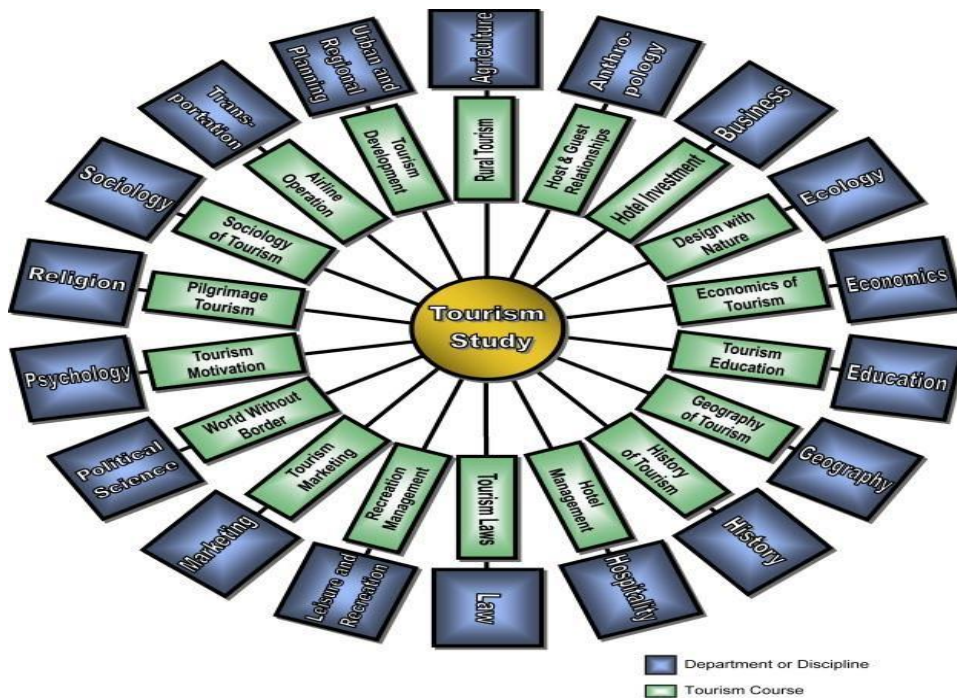


Figure 1. Study of Tourism: Choices of discipline and approach.  
Source: Jafari (1990).

### Systems Approach

The systems approach, which was introduced in the 1950s, can be defined as a set of interconnected components coordinated to form a unified whole and organized to accomplish a set of goals. It integrates various approaches into a comprehensive method that addresses both micro and macro factors. The use of the systems approach in tourism research has been tested



by Mill and Morrisson (1985), Gunn (1980), Leiper (1979, 1990), Hall and Page (2010), and Netto (2009). Goeldner and Ritchie (2007) argue that the most vital part of studying phenomena in the field of tourism is the use of systems theory. Moreover, Hall and Page (2010) assert that one comprehensive systems approach to tourism, which gained momentum from Leiper (1979), is quite influential in tourism and education research. The three core elements of Leiper's model are as follows:

- a person or persons engaging in touristic behavior (i.e. tourists),
- geographical regions,
- tourism industry (i.e., those businesses and organizations involved in the delivery of the tourism product).

Moreover, his model distinguishes between geographical regions that generate travelers (traveler-generating region, TGR), regions that receive tourists (tourist-destination region, TDR), and transit-route regions (TRR). These multiple facets of the tourism system are arranged alongside spatial and functional connections.

Additionally, Leiper's tourism system has the characteristics of an open system. Therefore, the organization of the five components is surrounded by external environments, which are identified as physical, socio-cultural, economic, political, and technological structures that affect the functioning of the whole system.

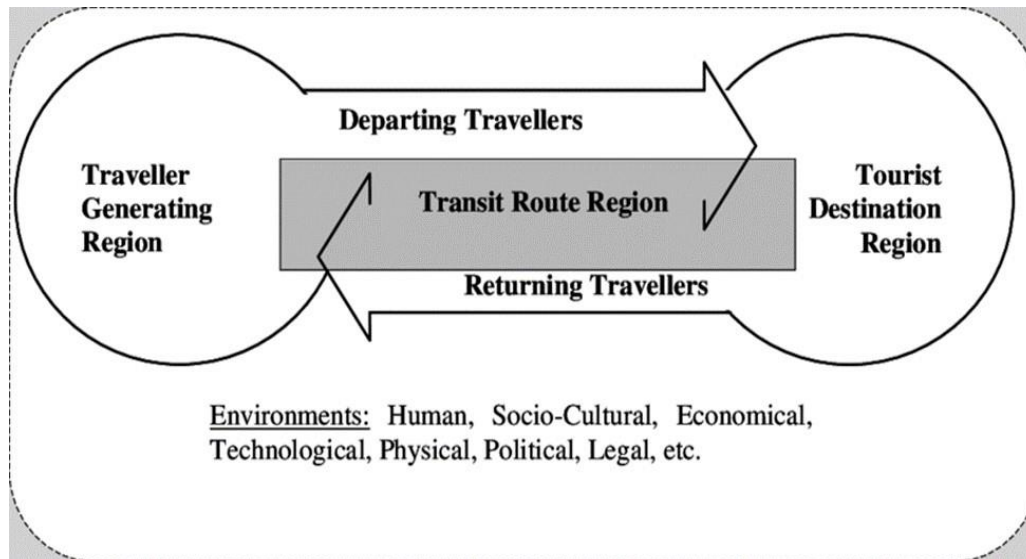


Figure 2. Whole Tourism System Model  
Source: Leiper (1979, 1990).

Systemic thinking has been implemented by several tourism scholars to tackle the complexities of the field. This perspective is now considered to have been a milestone in the maturation of tourism research. Therefore, it is logical to incorporate Leiper’s perspective into this thesis.

### 3. The Importance of Tourism

Over the last few decades, tourism has constituted one of the fastest growing global economic sectors (Sharpley, 2011). At the same time, it has served as an effective driver for accelerated endogenous regional or national growth for all countries at various stages of development (Seyfi & Hall, 2018). According to the World Tourism Organization (UNWTO), the tourism industry generated US\$1.7 trillion in 2018. The number of tourist arrivals is expected to continue to grow and eventually reach 1.488 billion by 2030, constituting an additional \$100 billion in

revenue compared to the previous year (UNWTO, 2018). According to the UNWTO report, various tourism destinations, such as China, Turkey, and Malaysia, have begun to take on a more active role in the tourism industry. In other words, in some destinations where tourism had once failed, tourism has come to be a lucrative industry. On the other hand, some destinations, despite strong potential, have failed to reap the benefits of tourism. One good example of this situation can be seen in the Middle East.

Despite the many factors that would make the region an ideal tourism destination, it accounts for just 4% of global tourist arrivals; it is considered one of the world's least developed tourism regions (Morakabati, 2011, 2013; seyfi & Hall, 2018; Zamani, 2010).

According to Aziz (2001) and Morakabati (2011), the Middle East has the potential to be a massive tourist destination; it features unique historical sites, a diverse climate, exotic food, and hospitable hosts—hospitality is a well-known Middle Eastern lifestyle. However, statistics indicate that this region has failed to attract potential tourists (Cohen & Cohen, 2015; Morakabati, 2011; Seyfi, Hall, & Kuhzadi, 2018). Therefore, it is logical to conclude that attractions alone are insufficient for tourism development. In fact, the Middle East has recently begun to act against the difficulties they face in tourism development—it now boasts an upward trend (UNWTO, 2018). However, it should be noted that this rate is relatively small (less than 60 million and only 4% of global arrivals) and that it is applied to small tourism bases (Figures 3 and 4)

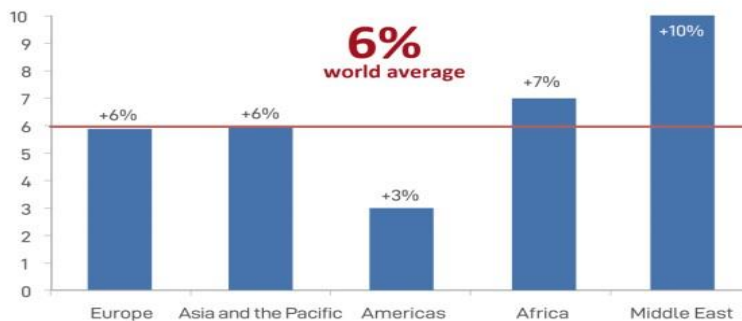


Figure 3. International tourists' arrivals and receipts

Source: UNWTO (2018)

### Middle East, Africa & Asia Pacific lead

International tourist arrivals, growth (in %)



Source: World Tourism Organization (UNWTO), January 2019

Figure 4. Regional growth of international tourism arrivals

Source: UNWTO (2019)

It is also worth mentioning that tourism development is uneven within the Middle East. To accrue the interest on the rate of tourism, some countries in the Middle East, such as Saudi Arabia and the UAE, have made several attempts to develop their tourism sector, including marketing strategies and tourism investments. Tourism has gradually become a flourishing sector in their economies; in fact, Saudi Arabia is now a top religious' tourist destination. In contrast, some parts of the Middle East have incredibly weak tourism development; countries like Iran have failed to live up to their potential in attracting international tourists.

The geographical focus of this research is principally concerned with Iran. This thesis is one of the very few studies that conduct experimental tourism research in the Middle East. Choosing Iran as our case study makes for a particularly suitable frame of reference for a variety of reasons. Iran is currently dealing with both a political crisis and a financial crisis, and most other prominent countries around the world are either directly or indirectly dealing with them. This thesis seeks to study the impacts of these crises on various aspects of Iran's tourism industry. Recently, some scholars have asserted that the global tourism industry is threatened by political and financial uncertainty, meaning that the findings from this thesis could be generalized to help other destinations dealing with stability and uncertainty.

Iran is generally considered to be a country with poor economic conditions that has not yet been able to successfully benefit from its tourism potential. Given the proven ability of tourism to alleviate poverty and boost local economic growth, studying the elements that restrict tourism development is crucial. This study adopts a systems approach; through the use of three-paper design, it will undoubtedly be of interest to researchers who focus on developing tourism destinations.

#### **4. Iran at a Glance**

The WTO considers Iran to be geographically located in South Asia (UNWTO, 2017). However, many around the world view Iran as a Middle Eastern country (Ebadi, 2017). The country is famous for its cultural diversity and ancient heritage that can be traced back to a 10,000-year-old human civilization (O’Gorman, McLellan, & Baum, 2007). Iran is located at a critical junction that makes it a route between countries to its east and the Middle East and Europe. This location facilitates trade and has fostered a diverse culture and history. It occupies an area of 1,648,195 Km<sup>2</sup> (636,372 m<sup>2</sup>), making it the second-largest country in the Middle East and the 17<sup>th</sup>-largest in the world (Word Bank, 2018). With over 81 million people, it is the world’s 18<sup>th</sup>-most populous country (Statistical Center of Iran, 2018).

Iran is surrounded by the Alborz and Zagros mountain ranges and embraces two vast deserts namely Dasht-e Kavir and Dasht-e Lut (Mirzaei, 2013; Ghaderi, 2017). Hall (2019) points out Iran’s environmental resources and references its intangible cultural heritage and ethnolinguistic diversity. He adds that this country is rich in diverse climate and heritage; its youth (with a median age of 30.1) prepares fair ground for a new and active tourism industry (Alavi & Yassin, 2000; Butler & Suntikul, 2017; Morakabati, 2011; Seyfi & Hall, 2018). As Figure 5 illustrates, UNESCO World Heritage officially named 21 Iranian historical sites and one Iranian natural site in 2018. This list includes about 56 other Iranian sites from other years. In addition, Iran has 13 elements on the list of World Intangible Cultural Heritage (UNESCO, 2018); symbols of this rich cultural and historical heritage are scattered throughout the vast country in a variety of landscapes and climates.

Evidently, Iran is a rich country in terms of historical sites. However, based on data from UNWTO, Iran had just 2.1% of global tourist arrivals in 2018 (UNWTO, 2018). It is fair to

conclude that the tourism development of these sites is insufficient and must be enhanced. (Zamani, 2010).



Figure 5. Iran’s properties inscribed on the World Heritage List

Source: UNESCO (2018).

Apart from its rich cultural heritage, Iran boasts a variety of natural elements that are attractive to tourists. The country has set aside a wide range of protected areas, including 48 nature reserves, 285 forest parks, 33 wetlands, 35 natural national monuments, and 28 national parks.

The most prominent of these sites are Mian Koleh Wildlife Refuge, the Salt Lake of Namak, and Golestan National Park, all of which contain unique, internationally recognized habitats (Mirzaei, 2013; Seyfi & Hall, 2018).

Moreover, Iran can be considered a desirable destination for those interested in history and archeology (Baum & O’Gorman, 2010). As shown in Figure 6, Iran is a top-ten country with regard to the concentration of world heritage sites. It is the target of pilgrimages and cultural tourism from both the West as well as other Islamic states with beliefs similar to those of Iran (Butler & Suntikul, 2017). However, it’s important to note that Iran has potential for more than just cultural and religious tourism. For instance, medical tourism and tourism aimed at mineral water springs are also plausible (Moghimehfar & Nasr-Esfahani, 2011). The Iranian government has tried to create an axis of economic development by promoting Iran as a medical destination. As part of this promotion, the government has worked to create cost discrepancies and offer lower prices for surgical operations, such as organ transplants and plastic surgery. These efforts have led to a host of visitors aiming to take advantage of the country’s medical advantages. Iran’s medical tourism has an upward rate of 20–25% (ICHTO, 2018). Iran’s Fifth Economic Development Plan (2017–2022) set out a goal to increase the annual number of medical visitors to 600,000. While Iran plans to gain US\$2.5 billion in revenue from health tourism, some challenges persist. These challenges, according to Bizaer (2016), are as follows: a lack of integrated management, insufficient advertising, and an insufficient number of approved travel agencies, hospitals, and medical centers.



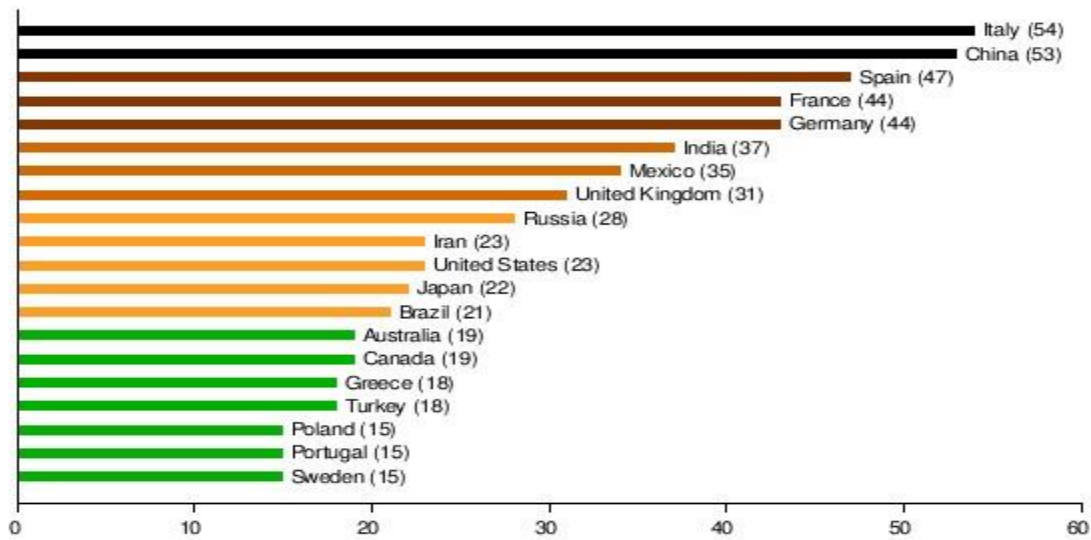


Figure 6. World Heritage Sites (Top 20 countries)

## 5. Tourism Development in Iran

Due to its exceptional geographical location, Iran has always been recognized as a major regional power. The history of tourism pedigree dates back to the time of Marco Polo. Iran’s geographical location between Asia Minor and Asia established transportation for business, religious purposes, or entertainment. As explained above, this country is rich in natural and environmental attractions, cultural heritages, and climactic diversity—it has the potential for a strong and varied tourism industry. During the winter, tourists can engage in either winter sports or water sports thanks to the substantial climactic diversity. The contemporary history of Iranian tourism development dates back to the 1930s, when the first tourism facilities, including some guesthouses and hotels, were constructed (Mirzaei, 2013). In accordance with tourism activities

across different historical periods and juxtaposed with Butler’s (1980) tourism area life cycle (TALC), contemporary Iranian tourism development can be classified into four phases;

Phase 1 (1930–1967): Exploration & involvement

Phase 2 (1967–1977): Development & consolidation

Phase 3 (1977–1988): Depression & decline

Phase 4 (1998–2018): Unsteady rejuvenation

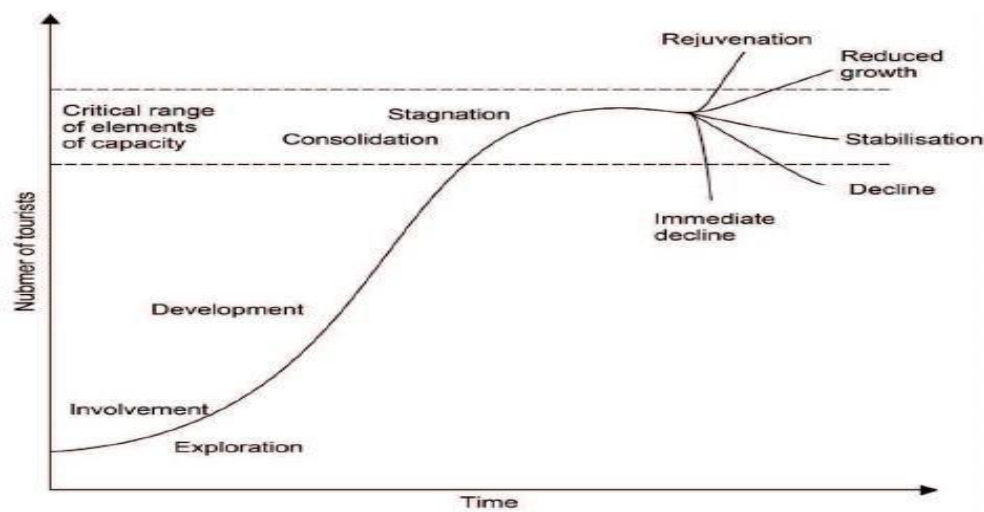


Figure 7. Butler’s tourism area life cycle (TALC)

Source: Butler (1980)

From 1967 to 1977, Iran performed well with regard to tourism; it was known as one of the Middle East’s most successful tourist destinations. At the time, Egypt was ranked 14<sup>th</sup> in the region—now it holds one of the world’s “seven wonders.” In 1977, Iran hosted over 700,000 international visitors, primarily from the US, UK, West Germany, Turkey, and Saudi Arabia—that is compared to the 800 visitors it hosted in 1995 (Figure 9).

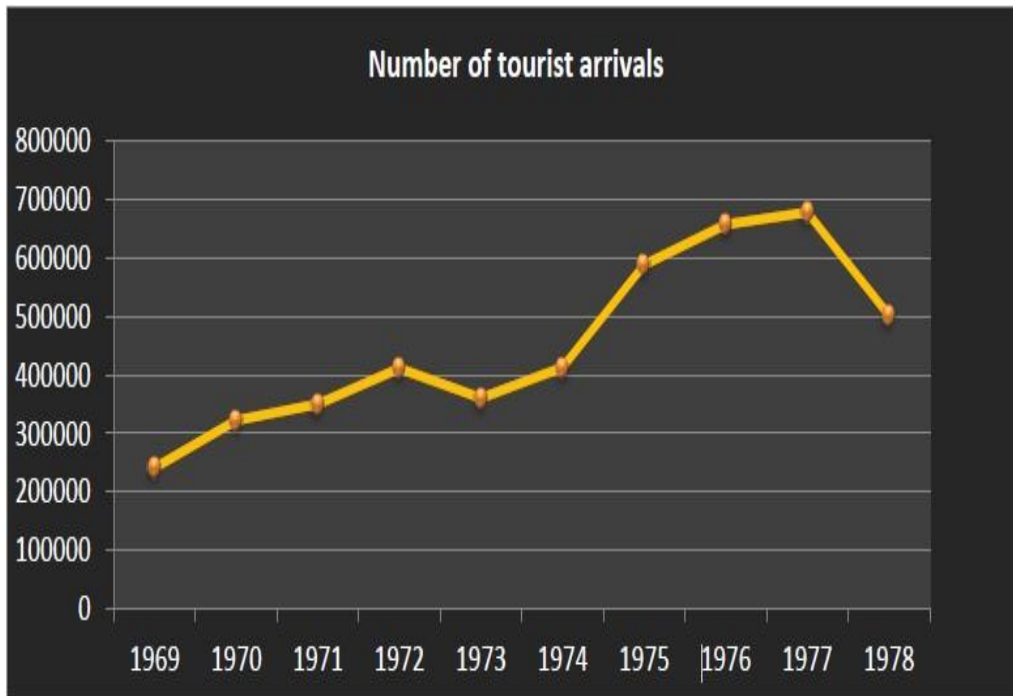


Figure 8. Number of tourist arrivals in Iran.

Source: Bureau of statistics and marketing (1978); Mirazei (2013).

This trend is also noticeable in other parts of Iran's tourism industry. For example, during the 1970s, Iran introduced its fastest-growing and most profitable airline, Iran Air (Iran Chamber Society, 2008). By 1976, Iran Air was ranked second only to Qantas as the world's safest airline. Today, Iran Air is not even in the top 30 (Figure 10). Economic sanctions have brought about insufficient maintenance activity and a lack of spare parts (Morakabati, 2011; 2013). Concerning the GDP by the export of goods and services, Iran has performed faintly. This is in stark contrast to the 1970s, when Iran had the top GDP from the export of goods and services among countries such as Turkey, Egypt, and the UAE.

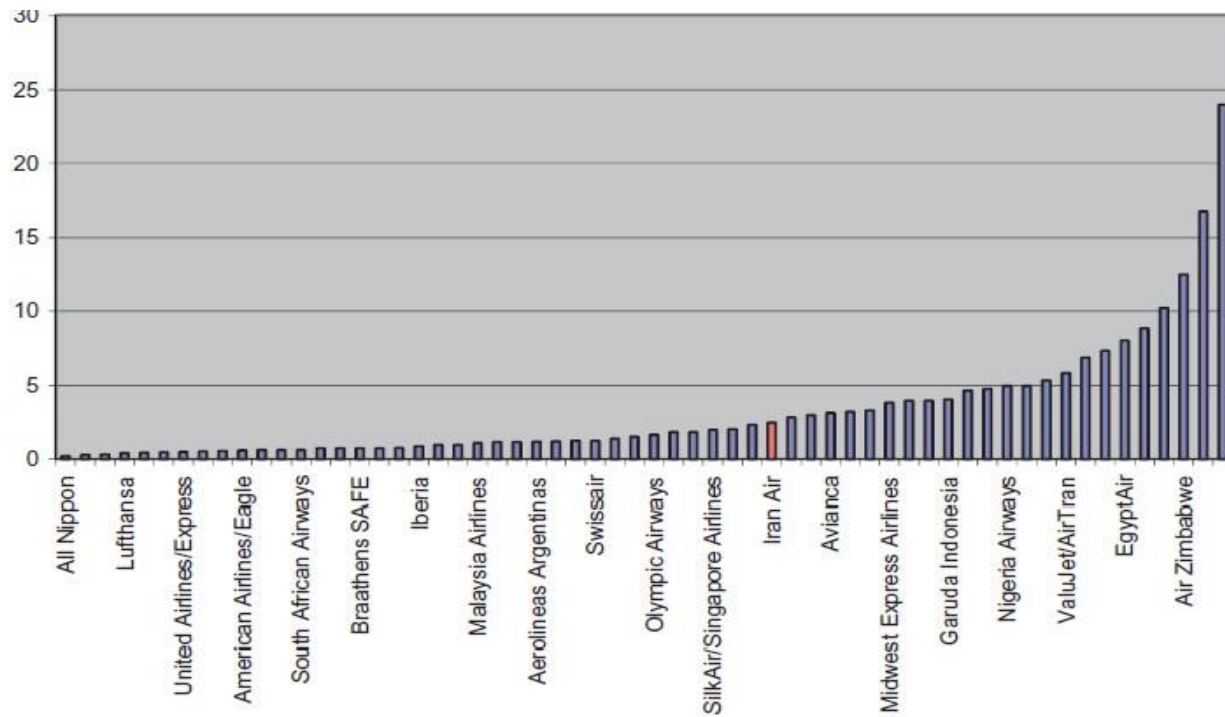


Figure 9. Air accident rate by some selected airline.  
 Source: www.airdisaster.com

However, things changed in 1979 following the revolution. While Iran succeeded in its oil exports, competing countries like Turkey, Egypt, and the UAE overtook Iran in the value of its exports of goods and services—as tourism is included in this measurement. The eight-year-long war between Iran and Iraq (1980–1988) only one year after the revolution exacerbated the difficulties faced by Iran’s tourism industry. Based on a 2009 Iran Daily Newspaper report, Iran has attracted only 5% of the US\$80 billion in the overall Islamic tourism market over the last 30 years. Regarding arrivals, Iran hosts fewer than two million people per year; it has had a setback in comparison to Syria and Jordan. The political changes in 1979 and the Iran–Iraq War during the 1980s put Iran’s tourism industry on a downward spiral, prompting tourism to be redirected to countries like Turkey.

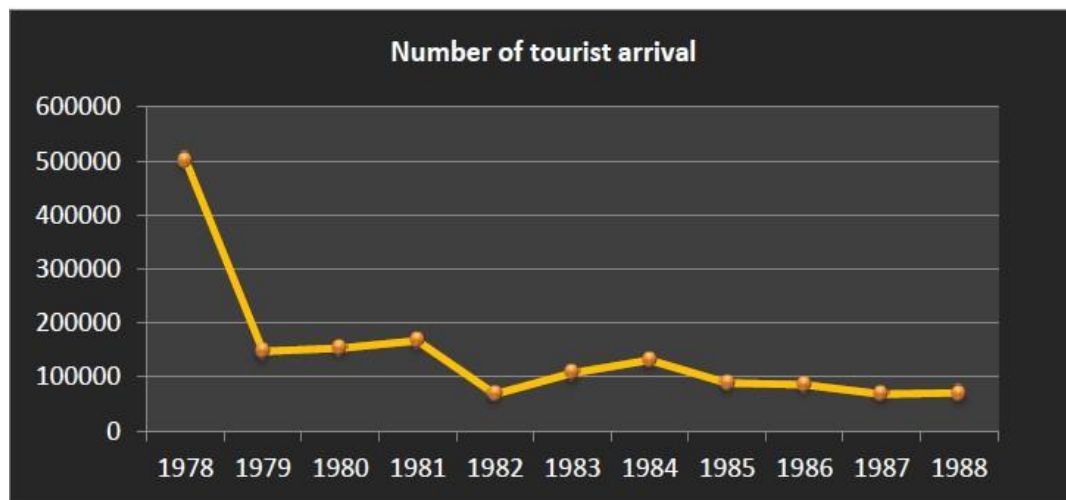


Figure 10. Number of tourist arrivals in Iran  
 Source: Bureau of statistics and marketing (1978); Mirazei (2013).

The country's tourism industry after the Iran–Iraq War (1988) has experienced some growth. The government has played a central role in tourism policy (Mozaffari, Karimian, & Mousavi, 2017). In line with the 2002 tourism master plan, the government attempted to focus on tourism development, considering it to be a catalyst for regional and national development. Since then, the country has seen steady growth in the number of inbound tourists. However, Iran's political strategies have increased tensions between Iran and other international actors. These tensions have led to economic sanctions being imposed on Iran, making it a relatively high-risk travel destination. As a result, the country has experienced a significant decline in tourism development (Seyfi & Hall, 2018). Kaper (2008) argues that the challenges facing Iran's economic stability largely stem from external forces. Iran heavily depends on petroleum (crude oil) as the lone driver of the economy, government budget, and foreign currency reserves. This dependency is unstable and ignores other viable sources of income. One of these neglected

sources of income is tourism, which constitutes a valuable source of profit for the economy (Mozaffari et al., 2017; Seyfi et al., 2018).

In 2015, following an agreement on Iran's nuclear program (between Iran and six world powers), Iran eased visa requirements and created on-arrival visas for travelers from a majority of countries. Due to these changes, Iran saw a significant increase in the level of tourism activity (Khodadadi, 2016). The number of international tourists increased to about five million—though it should be noted that this number is minuscule compared to the country's true potential. However, it is clear that tourism still has a largely negligible effect on Iran's overall economic development. The country was ranked 34<sup>th</sup> in terms of tourism's direct contribution to GDP in 2016, lower than some of its regional neighbors, such as the UAE (ranked 21<sup>st</sup>) and Turkey (ranked 14<sup>th</sup>).

Khodadadi (2016) claims that the decline in tourism stems from hypocritical propaganda about Iran. A Financial Times (2016) article reports that Iranian policymakers and officials have failed to embrace economic opportunities created by the country's tourism industry. Of course, this is despite the fact that Iran is a top-ten country in terms of archaic and historical sites; its natural attractions, including coastal areas, mountains, deserts, and rivers, are still intact but have received little notice. This demonstrates that Iran has either ignored or given far too little attention to the tourism industry (Morakabatti, 2011).

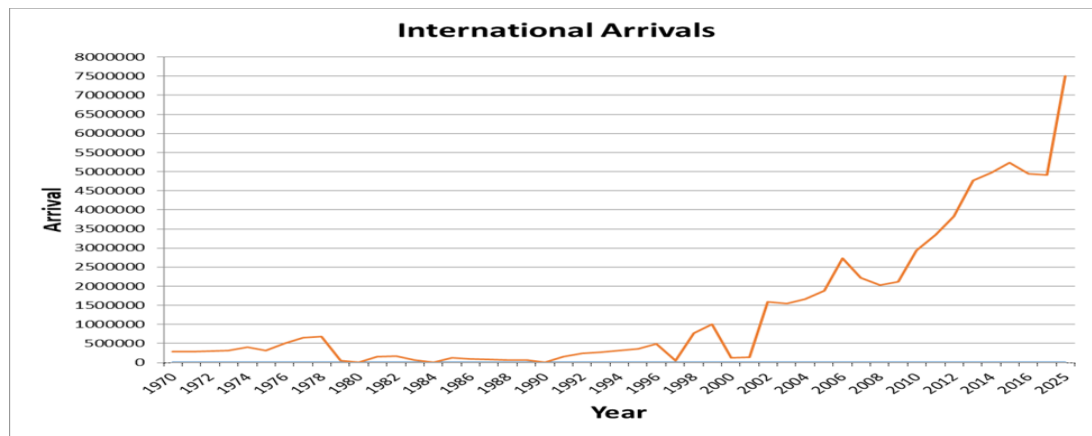


Figure 1. Inbound tourists in Iran.  
Source: UNWTO, 2017; Seyfi & Hall, 2018

Given the proven ability of tourism to alleviate poverty, the Iranian government has recently given more weight to tourism development. Of course, it would be difficult to overcome the wide variety of issues—such as conflict, political turmoil, international sanctions, and economic crises—that hinder the country’s tourism industry (Mozaffari et al., 2017; khodadadi, 2016). As already mentioned, tourism can be an effective driver of economic development, and this sector is not categorized as a distinct sector in many countries’ national account systems. Therefore, evaluating the miscellaneous aspects and scopes of the tourism sector can be a daunting task. As established in Section 1.1, the most complete and comprehensive approach to study tourism was suggested by Leiper (Backer & Hing, 2017; Hall & page, 2010; Morakabati, 2011; Netto, 2009). However, most case studies that have adopted the systems approach have been conducted in developed countries, especially those in North America; few have been conducted in the developing world. There have been major calls for studies in different tourism destinations to analyze tourism from a systemic perspective. Moreover, in the

case of Iran (as shown by Seyfi et al., 2018), studies on tourism are still lacking, and there is a strong need to study various aspects of this tourism destination.

## **6. Outline of the Dissertation**

Tourism is widely known as a dynamic, complex system of interrelated components that are constantly evolving and emerging (Farrell & Twining-Ward, 2004; Rodriguez-Giron et al., 2019). A comprehensive systems approach to tourism was suggested by Leiper (Backer & Hing, 2017; Hall & page, 2010; Morakabati, 2011). As already mentioned, Leiper (1970) isolated five elements of the tourism system: tourists, generating region, transit route, destination region, and tourist(tourism) industry. A closer look at Leiper's (1970) model reveals that geographical elements of tourism are made up of a tri-component (TGR, TDR, TRR) geographical sub-system within the environment of industry, in which tourists are considered the agents of the system (Leiper, 1979). Destination experience is the fundamental product of tourism (Ritchie & Crouch, 2000), and destination region, arguably, is the most critical component of the tourism system (Dredge, 1999). The generating region is another critical spatial component in geographic systems, as it forms the main market for tourism products (Backer & Hing, 2017; Leiper, 1979). The transit route, however, is the most external component of the system from the distribution systems perspective (Cooper, Fletcher, Gilbert, Fyall, & Wanhill, 2011). From an epistemological viewpoint, studying systems requires a holistic approach and a systemic perspective (Farrell & Twining-Ward, 2004; Štrukelj & Šuligoj, 2014). While methodological and technical advancements enable us to model complex adaptive systems using techniques such as network analysis (Regan, 2009), the toolbox that has been developed to investigate systems from a holistic standpoint is extremely limited and incredibly complicated. To best of



my knowledge, no study has yet to empirically and holistically examine Leiper's (1979) model, and this thesis is no exception. Due to methodological limitations, we have adapted traditional reductionism—as the most common approach in scientific inquiry—to study geographical aspects of the tourism system model (Farrell & Twining-Ward, 2004; Regan, 2009; Verschuren, 2001).

To study these geographical aspects, the system must be broken down into its most basic components (Verschuren, 2001). As a result, the first and second studies investigate the effects of the environmental factors of tourist-destination region (TDR) on tourist behavior and local resident behavior, respectively. The third study evaluates the Iranian tourism system as a tourist-generator region (TGR). This study is dedicated to understanding the environmental factors (the technological aspect of Leiper's external environment) in Iran that shape Iranian tourists' behavior.

## **7. Main Chapters in the Dissertation**

The core of this thesis is divided into three studies, each of which covers one or more elements of the whole tourism system. Chapter 2, "Tourists' Length of Stay (LOS)," investigates the determinants of LOS in tourist destinations. A tourist's LOS, also known as trip duration, is a critical factor in the financial success of the tourism industry. Evidence has shown that increases in LOS are associated with higher levels of tourism expenditure (Barros & Machado, 2010); this means that LOS has an effect on tourism-generated income (Barros & Machado, 2010; Barros, Correia, & Crouch, 2008; Martinez-Garcia & Raya, 2008). The average tourist's LOS is in a global decline. This downward trend underscores the need to study the factors that affect this variable in order to enable more effective management and marketing. Given the

importance of the duration of visits for the industry, it is crucial to determine the factors that influence LOS.

This paper moves beyond the literature by investigating the determinants of international tourists' LOS in a Muslim destination amid political crisis. This study, to the best of our knowledge, is the first to evaluate the effect of Islamic regulations and political unrest on tourists' LOS in Muslim destinations. It provides new insights to marketers and managers that can help them formulate operational strategies aimed at increasing LOS. A comprehensive understanding of its determinants would provide planners and managers with the proper tools to design effective marketing strategies and lure in visitors who show a greater predisposition to prolonged stays. The determinant factors of LOS are integral to efficient planning for the sustainable development of tourist destinations.

In the next chapter, a discussion entitled "Residents' Perception of Tourism" is presented. Residents are one of the most valuable assets for a tourist destination, meaning their perceptions of tourism constitute a crucial pillar for designing tourism-development strategies that promote sustainable development. A close look at the literature on resident perception reveals a number of gaps. For example, despite the well-established fact that economic uncertainty influences perceptions (Garau-Vadell, Diaz-Armas, & Gutierrez-Tano, 2014; Voon & Voon, 2012), no previous studies have investigated the effect of economic crises in host destinations on local attitudes toward tourism. Recently, an economic crisis has engulfed many countries, developing ones in particular. Researchers believe that the individual decision-making process is subject to various types of economic and psychological influences (Giesen & Pieters, 2019; Thaler, 1994); when individuals are financially strained, they change their behaviors and perceptions (Graham, Chattopadhyay, & Picon, 2010; Voon & Voon, 2012). Thus, it is reasonable to assume that bleak

economic environments can influence residents' attitudes toward tourism. Ignoring this relationship can bias residents' perceptions in an unknown direction. With these research gaps in mind, this study aims to breathe new air into the literature on resident perceptions of tourism and explore how economic difficulties affect these perceptions. The chapter highlights how the environmental elements (economic environment) of Leiper's model in TDR impact resident perceptions.

Returning to Leiper's systems model, chapters 2 and 3 were employed to investigate the TDR function of Iran. According to Leiper (1979, 1995), TDR provides pull factors and fosters the demand to travel to a specific destination. The first study provides an understanding of the impacts of destination (TDR) attributes on one of the most important components of tourism demand—LOS. More precisely, it focuses on human elements (people in the role of tourist) and TDR environmental conditions (theocratic rule and political turmoil in destination) while the third chapter focuses on the impact of environmental elements (economic environment) on resident perceptions of local tourism. More precisely, local hospitality is considered to be one of the most valuable pull factors to lure in visitors; given the importance of resident perceptions of tourism for TDR in this respect, the second study (third chapter) examines how TDR's economic environment affects local attitudes toward tourism.

As mentioned in the previous sections, one of the elements in the model of tourism systems is TGR. The third study (chapter 4) follows the two previous ones by evaluating Iran's performance as a TGR based on ideas from Leiper (1990) and Goeldner and Ritchie (2007), who assert that, in order to attain a thorough understanding of a specific region's tourism system, it is crucial to first understand how that region performs as a TGR. This study describes Iran as a generating country and considers Iranians as tourists. In short, it investigates how Iran

performs as a TGR in a tourism system and shows that there is a range of factors in TGR that influence tourist behaviors. More specifically, the objective is to provide an integrated model that examines the adoption of Iranian tourists' online purchases. IT and online shopping have become important parts of daily life; the widespread use of the internet is an unprecedented opportunity to develop the tourism industry and change tourist behavior. Hence, we try to attain a comprehensive understanding of the tourism system in the Middle East region and the role of Iran as a TGR in that system. It is worth noting that, based on previous studies (e.g. Goeldner & Ritchie, 2007), technology is one of the most powerful environmental elements in the context of tourism products and travel experiences. Given the proven importance of technology in tourism, it is reasonable to study this dimension of Leiper's environmental factors.

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# **Chapter 2: The Influence of Theocratic Rule and Political Turmoil on Length of Stay**

## **Abstract**

The average tourist's length of stay (LOS) is in a global decline. This downward trend underscores the need to study the factors that affect this variable in order to enable more effective management and marketing. This paper moves beyond the literature by investigating the determinants of international tourists' LOS in a Muslim destination amid political crisis. LOS was evaluated using a survival analysis approach with data from 726 international tourists in Tabriz, Iran to ascertain the significant factors influencing trip length. The results reveal that the determinant factors are as follows: socio-demographic profiles, trip characteristics, and destination attributes. In addition, political turmoil and religious regulations are pivotal factors in LOS. The empirical findings provide valuable theoretical contributions to researchers and actionable guidance to tourism managers and marketers.

**Key words:** Duration Model; Length of stay; Socio-demographic profiles; Trip attributes; Destination image; Islamic destination; Political turmoil; Tabriz.

## 1. Introduction

A tourist's length of stay (LOS), also known as trip duration, is a critical factor in the financial success of the tourism industry. Evidence has shown that increases in LOS are associated with higher levels of tourism expenditure (Barros & Machado, 2010); this means that LOS has an effect on tourism-generated income (Barros & Machado, 2010; Barros, Correia, & Crouch, 2008; Martinez-Garcia & Raya, 2008). For instance, when the duration of stay at a hotel (or other types of accommodations) rises, the fixed costs of the hotel drop relative to revenue while employment rates increase, meaning that hotels are able to increase their profits (Barros & Machado, 2010; Jacobsen, Gossling, Dybedal, & Skogheim, 2018; Peypoch, Randriamboarison, Rasoamananjara, & Solonandrasana, 2012). Additionally, LOS affects tourists' activities and behavior. Davies and Mangan (1992) demonstrated that prolonged stays not only increase the participation of tourists in various activities but also lead to greater feelings of satisfaction.

In recent years, the tourism industry has faced a global decline in LOS—travelers now prefer to travel more but stay for shorter periods of time (Adongo, Badu-Baydan, & Boakye, 2017; Aguiló, Rosselló, & Vila, 2017; Barros & Machado, 2010; Gokovali, Bahar, & Kozak, 2007; Jacobsen et al., 2018; Salmasi, Celidoni, & Procidano, 2012). The increased prominence of business trips and the emergence of low-cost airlines have exacerbated the trend of short-term stays (Barros & Machado, 2010). These shifts in the industry have resulted in a considerable decline in tourism revenue (Alén, Nicolau, Losada, & Domínguez, 2014); despite an increased number of incoming tourists, tourism-generated income has diminished, largely due to reductions in LOS (Ferrer-Rosell, Martinez-Garcia, & Coenders, 2014).

LOS is considered a crucial factor in tourism research and both destination (Barros, Butler, & Correia, 2010; Martínez-García & Raya, 2008; Gokovali et al., 2007) and hospitality management (Barros & Machado, 2010; Peypoch et al., 2012). The significance of this factor in tourism research is merited since LOS is one of the most important variables in visitors' decision-making processes (Decrop & Snelders, 2004). Given the importance of the duration of visits for the industry, it is crucial to determine the factors that influence LOS. A comprehensive understanding of its determinants would provide planners and managers with the proper tools to design effective marketing strategies and lure in visitors who show a greater predisposition to prolonged stays. The determinant factors of LOS are integral to efficient planning for the sustainable development of tourist destinations.

The significance of LOS has recently become a central focus in tourism economics research. The steady growth of publications on this topic began in 2008 (Alegre, Mateo, & Pou, 2011; Ferrer-Rosell et al., 2014; Jackman, Lorde, Naitram, & Greenway, 2020; Martinez-Garcia & Raya, 2008; Peypoch et al., 2012; Rodrígueza, Martínez-Roget, & González-Muriasa, 2018). The literature on tourist LOS suggests that various factors, such as tourist profile, trip characteristics, and destination attributes, can be influential (Gössling, Scott, & Michael, 2018; Rodrígueza et al., 2018). Nonetheless, a deeper look at previous studies indicates a number of gaps in the extant research. Despite the great importance of this variable for destinations, less work has been conducted in less developed countries. As far as we know, up until now, no previous research has investigated tourists' LOS in Islamic destinations. This disparity has prompted calls for more studies in tourist destinations throughout the Muslim world to analyze different antecedents of tourists' behavior from the length-of-stay perspective.

According to Alén et al. (2014) and Rodríguez et al. (2018), different destinations often see different behavior; LOS appears to vary by geographical area and/or tourist segment (Aguilar & Díaz, 2019). Therefore, any information provided by studies conducted in non-Muslim destinations may lead to inappropriate or suboptimal decisions by tourism managers and marketers in Muslim destinations.

A tourist's destination choice and level of engagement with the host community are often affected by cultural norms (Brown & Osman, 2017). Religion, as a significant component of culture, tends to influence local hospitality and legal guidelines; its many ramifications for various aspects of tourism have garnered interest from researchers. However, there is a dearth of research on how theocratic rule or religious regulations affect tourist behavior. It is perceptible that the laws and regulations in Islamic destinations can influence tourists' LOS, which is an important dimension of tourist behavior—ignoring this relationship could bias parameter estimates in an unknown direction.

Moreover, despite the well-established fact that political turmoil and instability influence tourism demand and tourist behavior (Lanouar & Goaid, 2019), no previous studies have investigated their effect on LOS, one of the most fundamental components of tourism demand. There is evidence that sociopolitical unrest disrupts tourists' decision-making process (Seddighi, Nuttall, & Theocharous, 2001); thus, it is reasonable to consider the fact that it could influence their LOS. This study incorporates variables that have previously been identified in research as predictors of tourist behavior. With the aforementioned research gap in mind, this study aims to breathe new air into the literature by exploring how political turmoil and theocratic rule in Muslim destinations affect tourists' LOS.

This hypothesized relationship is examined in Tabriz, Iran. Our choice of Tabriz as a case study was motivated by Alén et al. (2014), who called for greater emphasis on diverse destinations. Additionally, it pairs well with our hypothesis. Tabriz was chosen as the “2018 Capital of Islamic Tourism” by the Organization of Islamic Cooperation, an intergovernmental organization of 56 Islamic nations. However, the sanctions imposed on Iran by the US have seriously hindered the country; its oil-oriented economy has been harshly affected by sanctions against crude oil exports. As a result, public dissatisfaction has dramatically increased. This country has been swept by social upheaval and domestic instability on account of popular street protests in dozens of cities, including Tehran, Mashhad, and Tabriz (Takeyh & Maloney, 2011).

Tabriz is located in northeastern Iran, in the East-Azerbaijan Province. It is home to many heritage assets, some of which are thought to date back more than 2,500 years (Gannon, Rasoolimanesh, & Taheri, 2020). The city also has a long history of traditional manufacturing and cottage industries—most notably, its internally respected carpet and craft industry—which are often considered to be protected intangible heritage assets (Light, Rezaei, & Dana, 2013). According to the Iranian Tourism organization’s report (2017), the average LOS of inbound tourists in Tabriz was decreased to 8.7 days in 2016 from 9.2 days in 2000. The short LOS is certainly a negative sign regarding the tourism-generated income (Barros & Machado, 2010), which considers a main concern for local government, destination and hospitality management. This Muslim destination, given its international appeal and simultaneous political unrest, provides an excellent opportunity to explore the effects of Islamic regulations and political unrest on tourist behavior, especially in terms of LOS.

This study, to the best of our knowledge, is the first to evaluate the effect of Islamic regulations and political unrest on tourists' LOS in Muslim destinations. It provides new insights to marketers and managers that can help them formulate operational strategies aimed at increasing LOS.

The remainder of this article is organized as follows. The second section reviews previous studies on tourists' LOS. The third section details our theoretical lens and research method. The fourth section presents the experimental results of our research. Finally, the last section reviews our key findings, discusses their policy implications, examines the limitations of this study, and comments on the potential for future research.

### **Roadmap of the Study**

The research is divided into five sections. First section is an introductory chapter. It presents the topic of study, the research aims and a general depiction of research gap in tourists' LOS literature and study mission was tackled. After this first section we will present an overview of relevant literature for this study (section 2), including survival analysis background, survival analysis in tourism literature. Research will also systematically compare previous studies in length of stay filed and finally develops hypotheses to propose a conceptual framework for the empirical study. In a given chapter three, the author will explain why she has chosen survival analysis modeling and then will explains the study method, the survival analysis modeling and related methods and techniques used for analyzing data.

Chapter four presents the results of this study and consequently sits at the heart of this paper. It commences from the results of hypothesis testing and expands broader to discuss the theoretical and empirical implications of the study findings. The addressed recommendations fall in

harmony with the study's model. Consistent with common standards, this study will conclude with a discussion of the results and their theoretical and practical implications in section five. This section encapsulates the research limitation and suggestion for future researches.

## **2. Literature Review**

### **2.1. Tourism Demand**

One of the components in tourism development is tourism demand which is a perplexed notion (Song and Witt, 2000) since there are various motivations in tourism and influential factors are hardly distinguishable. What is demand and tourism demand?

In neoclassical point of view towards consumer choice, both what consumers prefer and how much they budgetary restrictions, which optimize utility, shape the overall demand. Based on the definition, demand refers to a commodity's price and specific time depending on the stability of other elements like intention, purchasing power, etc. In tourism context, demand, which is a part of consumer theory, is a fundamental notion to track economic bases. The general tourism demand consists of demands from different groups of people who own a variety of preferences and tastes, as well as purchasing power (Candela and Figini, 2012; Song, Wong, & Chon, 2003). Significantly, tourism demand highlights the amount of tourism-related goods/services that a tourist is willing and able to buy at a certain time and under certain conditions (Alegre and Pou, 2006; Song and Witt, 2000). Thus, what saves the inverse relation between quantity and price is the concept of law of demand and this concept is in agreement with tourism phenomenon (Candela and Figini, 2012).



Tourism demand function demonstrates the relation between tourism demand and influential factors on demand. When the pattern of demand is estimated, it would be possible to recognize and distinguish the impact of these factors on tourism demand.

They are travelers who are responsible to make decisions, which are made after analyzing benefits and costs of various options (i.e. various destination alternatives). These decisions are made based on financial and temporal restrictions. On the other hand, it is essential for suppliers of tourism demand to allocate the amount of necessary investments (Alegre and Pou, 2006; Candela and Figini, 2012). If businesses and governments be informed about the influence of tourism demand, they will make better decisions and policies in marketing, financial planning and either short, medium, or long-run investments that it ultimately covers the shortcomings of tourism-related products.

In the last decade of 1960, there has been an extensive empirical studies on tourism demand to highlight the cooperating factors. Tourism demand studies and techniques began to develop in journals and research centers by the second half of 1980s. The first step to approach tourism demand is the number of tourists' arrivals and departures of a country. For this purpose, data collection happens through surveys to gain valuable information from visitors.

Based on the prior studies, factors that influence on tourism demand can be categorized into three groups: exterior factors, social, psychological and economical ones (Candela and Figini, 2012; Song and Witt, 2000).

Exterior factors in tourism demand are usually related to destination attributes (i.e. climate, landscape and scenery), commercial affairs, technological developments, changes in the market, economic growth, political and social characteristics in the destination and utilization of abilities in estimation of sources. Social and psychological factors are not easy to measure

and cannot be included in economic models. These factors are taken into account with regard to decision about the vacation, and choosing destinations. In addition, the mentioned factors are essential to understand the market and tourism demand. Economic factors in tourism demand are easily measurable and are usually applied to tourism demand studies.

Based on some other scholars (Dritsakis, 2004; Ishak, 2006; Song et al., 2003) tourism demand has caused a big controversy in terms of variables like sociodemographic characteristics (i.e. gender, age), travel characteristics (i.e. main purpose of travel, type of accommodation, type of board, season, party composition), destination characteristics (i.e. price, climate, attractions) and other variables on restrictions, including income and amount of disposable time.

A co-integration study conducted by Dritsakis (2004) shows that there are some factors like real income per capita, tourism prices, transportation cost and exchange that affect German and British tourists' demand in Greece. However, another study done by Song et al. (2003) refers to tourism demand in Hong Kong. Some of the determinants are as income of tourist's country of origin, the cost of tourism in competing destinations, and the impact of "word of mouth".

Narayan (2003), on the other hand, employs a co-integration analysis and error correction in examining tourist expenditure in Fiji, and this study succeeded in withdrawing factors that leave impacts on tourism expenditure on the mentioned country. Moreover, this research mentioned that in a short time factors like coup d'etat had a negative effect. Simultaneously, in observations from Japanese and Korean tourists to Malaysia that were completed by Ishak (2006), it was concluded that elements such as income of the origin country, the cost of tourism (i.e. tourism-related goods and services) in Malaysia and exchange rates manifest the tourism demand in Malaysia. Additionally, one of the other factors that directly leave impacts on tourism demand is the significance of policies and decisions made by the government. In

International tourism, however, this factor is considered as a dummy variable so as to consider the influence of "one-off" events, suggested by Witt and Witt 1995. On the other hand, Crouch (1994) has addressed dummy variables to mention that previous studies considered those variables to explain causes of biased estimated parameters. These unquantifiable causes are instances like political factors and social conflict, terrorism, travel restrictions, exchange restrictions, changes in duty-free allowances, economic recessions, special events, oil crises, etc. Moreover, in an international research on tourism flows to Spain which was conducted by Garin-Munoz and Amaral (2000), the 1991 Gulf War was considered a dummy variable. Findings of this study demonstrates the negative effect of Gulf War on international tourism flow to the before mentioned country.

Factors including coups and major cyclones have been considered as dummy variables in a research by Katafona and Gounder (2004). The target country of this study was Fiji and the main crux of this study was modeling tourism demand there. Findings of this study indicate that although coups are an impediment to tourism demand, cyclones are not a considerable factor in the mentioned destination.

Tourism demand is a generally defined subject that includes various objects; tourist flows, tourist expenditure, nights spend in tourist accommodations, and length of stay. Length of stay (LOS) has been addressed by several scholars as one of the most practical dimensions employed to describe tourism demand (among others, Alegre and Pou, 2006; Gokovali et al., 2007; Song and Witt, 2000). Alegre and Pou (2006) assert that in spite of rich and comprehensive academic work on tourism demand, the majority of research on this subject ignored the importance of LOS, at least at a micro econometric level. In addition, the scant studies in this stream of

research are mainly descriptive (Alén et al., 2014; Barros & Machado, 2010; Jacobsen, Gossling, Dybedal, & Skogheim, 2018; Gokovali, et al., 2007).

## 2.2. Survival Analysis Background

In this study, tourists' LOS in destination is analyzed with survival models. Survival models, also known as duration models, are statistical method for analyzing longitudinal data on event occurrence. The term survival model refers to a family of statistical models used to explain and predict the time length of spells. Using this model has a long history in medical science (such as modeled death, onset of illness, recovery from illness, test drug efficacy for patient treatments, etc.). Also, it is a relative newcomer to economic literature. Economists use this technique to find strike duration, stock market crashes, unemployment periods, remaining time to come to commercial bankruptcy, agricultural insurance claims, etc. (Greene, 2000; Kiefer, 1988). Appropriately, survival model is a useful tool to understand how a set of explanatory variables can cause variations in the time at which an event may occur. In current study the event is the time that a tourist takes to leave the destination city and returns home.

The adequacy of survival models to explain and predicts tourists' LOS could be compared to other methodological approaches for continues dependent variables, such as ordinary least squares (OLS) and its derivations. Firstly, the dependent variable (time) is not normally distributed. Therefore, the OLS models, which assume that the error term is normally distributed, would not be suitable, whereas survival analysis offers a variety of destitutions and this feature is the strongest argument in favor of using survival analysis. The variety of distributions can provide better parameter estimates. Moreover, we are not interested in

estimating binominal or multinomial distributions, since our dependent variable (the LOS that elapses between a tourists' arrival at a given destination and his/her departure) is continuous and may vary between 1 night and 31 nights.

Another feature has favored the application of the survival analysis is "inherent aging process" when a tourist stays at a given destination (Gokovali, Bahar, & Kozak, 2007). Kiefer (1988) coined out the term "inherent aging process" to refer to the dependent variable under consideration which should be assigned positive values (for more detailed information see Kiefer, 1988). In current study, the dependent variable (length of stay) has positive nature and it forces researchers to choose a model in which the systematic component of model has yield predicted value that are strictly positive. By using linear regression model some problems may arise. Since, linear regression models don't take full account of data positives and they can yield negative fitted values, particularly for subjects with short survival times (in current study, short-term holidays). This problem can be handled by conducting a survival analysis. Additionally, when LOS is used as a dependent variable, there are certain aspects that may confound data analysis using traditional statistical models, while survival analysis is quite convenient to deal with those aspects. For example, if the values of covariates change along the duration of spell, it leads conceptual problems in standard regression analysis and traditional models are not able to provide correct estimates (Kiefer, 1988; Gokovali et al., 2007) and makes those models unsuitable for this kind of data.

In tourism literature, the first attempt to investigate tourists' LOS was carried out in 2007 by Gokovali, Bahar, & Kozak. In this study, researchers analyzed the determinants of tourists' LOS at Bodrum using Survival models. They analyzed how a number of trip characteristics (type of package, number of previous visits), supply side factors (quality, hospitality, nightly

attractions, type of accommodation, image, promotion and advertisement) and socio-demographic (nationality, occupation, age, socio-economic characteristics) variables affected tourists' LOS. The result of this study unveiled valuable information and indicated that nationality, education, income, experience, familiarity and daily spending are among those as the major determinants of the LOS.

Barros, Correia, & Crouch (2008) conducted a research of Portuguese tourists' LOS in Latin America with survival models. They employed several survival models; the cox model, the weibull model, the log-logistic model, and the weibull with heterogeneity in order comparative purpose. Used variables were budget, destination attributes, socio demographic characteristics, previous visits, temporal constraints and the frequency of travel. The results of the four models are qualitatively equivalent. The main conclusion is that tourists with high budget tend to stay longer.

Also age, security, ethnicity, and exotic variables affected on Portuguese tourists' LOS in Latin America. So, the most affluent younger tourists, who are motivated by culture, climate and security, have the longest stays in Latin America.

Martinez-Garcia & Raya (2008) conducted a very similar research of low-cost tourists' LOS in Spain with two survival models; the log-logistics and cox models. The covariates used were sociodemographic factors (age, gender, level of education and occupation), nationality, trip main reason, type of accommodation, organized travel, trip accompanies, trip season, and geographical area of destination. The main conclusion was that the hypothesis of proportionality was not fulfilled and therefore, an accelerated survival model was employed. The results of the model estimation have indicated that, tourists' nationality, age, education

level, type of occupation, type of accommodation, the season of trip and the geographical area of destination (urban or “sun and sand” destination) affected on low-cost tourists’ LOS.

Menezes, Moniz, & Viera (2008) analyzed tourists’ LOS in Azores Island with cox model. The covariates used were socio-demographic characteristics (such as age, nationality, marital status, education level), trip attributes (such as trip motives, type of flight, travel parties, travel seasons, previous visits), sustainable practices (such as waste management, water saving, and quality of environmental management) and destination factors/images (quality and price, safety, nature, etc.). The general conclusion was that quantitative variables play a highly significant role in tourists’ LOS, which include tourists’ nationality, age and education level of the tourists, type of flight, geographical region of destination and the number of visited islands. In addition, visitors who repeat their journey are important in this field.

Barros, Butler, & Correia (2010) examined the factors affecting golf tourists’ LOS in Algarve, Portugal. Data are collected through questionnaire and several survival models were employed for comparative aims; cox proportional hazard model, parametric weibull model, weibull model with heterogeneity, and finally weibull model with sample selection. The results indicate that most important factors affecting travel duration including age, tourist education level, weather, events in the destination, and hospitality. Tourists whose nationalities were German, UK, French and Swedish had prolonged trip duration. In addition, researchers concluded that other variables such as time of the day, in which tourists start their sport activities (golf), tourists’ motivation, type of accommodation, and destination characteristics (i.e., climate, event, and hospitality) have positive relationship with LOS. On the other hand, factors such as experience and information about destination characteristics were not effective in Portugal tourists’ LOS.

Peypoch, Randriamboarison, Rasoamananjara, & Solonandrasana (2012) in a study entitled "The length of stay of tourists in Madagascar" applied survival analysis to model the LOS of tourists in Madagascar, Africa and concluded that male tourists with higher income, education level and age stayed longer in Madagascar. In addition, factors such as characteristics of destination (Eclectic and desirable foods, destination sea and nature, weather, safety and appearance characteristics of destination) prolong tourists' stay in Madagascar. In this study, there was no significant relationship between travel costs and LOS.

Wang, Little, & Delhomme-Little (2012) in a study entitled "determining factors of tourists' residence duration in Dalian, North East of China" estimated a parametric model using survival models and in this process some socio-demographic factors (such as age, education level, nationality), repeat visitors, and expenditure per tourist per day can be effective in LOS. Thrane (2016), in a study entitled "Students' summer tourism: Determinants of length of stay", employed three estimation methods \_ an OLS regression model, a weibull survival model and a zero truncated negative binomial regression model in order to investigate what factors extends or shortens Norwegian students' LOS at summer vacation destinations. In particular, in all three models, the results are quite similar in their main effects and show that daily trip costs, booking time, trip motives, trip month, and gender explain much of the variation in students' LOS. Of special interest is the comparison of two segments differing on when trip duration is determined: the "pre-fixed" returners (75% of the sample) and the "open" returners (25%). In this regard, the results suggest that the "open" returners stay longer on their trips than the "pre-fixed" ones.

Despite the differences between these studies (in tourist's classification and regions) all these studies are common in:



1. In all studies, one of the survival models is used to examine the relationship between tourists' LOS and its determinants.
2. In all studies, there are three independent variables: a. Trip-characteristics, b. Destination attributes, and c. Socio-demographic factors.
3. More surprisingly, the results derived from these studies are somewhat different, in other words, there is little similarity in effect of three mentioned variables on tourists' LOS. Thus, it is difficult to extract and provide accurate hypotheses about factors affecting LOS.

Although we can trace studies on the general concept of LOS to the 1970s (Archer & Shea, 1975; Mak & Moncur, 1979; Mak, Moncur, & Yonamine, 1977), there was little research on tourism-related LOS before 2006 (Rodríguez et al., 2018). The number of publications in this area has steadily increased since 2008, and scholars have identified various factors that influence LOS in a destination.

Factors influencing LOS have received extensive attention from academics (Aguilar & Díaz, 2019). Previous studies have been heterogeneous in scope (i.e., different geographic areas and tourist segments) and in their variables and methodology. For example, regarding the different geographical regions, we can find articles evaluating LOS in various destinations, such as Latin America (Barros et al., 2008), the Azores (Menezes, Moniz, & Vieira, 2008), Madeira (Barros & Machado, 2010; Machado, 2010), Madagascar (Peypoch et al., 2012), Brazil (De Oliveira Santos, Ramos, & Rey-Maquiera, 2015), Santiago de Compostela (Rodríguez et al., 2018), Spain (Aguilar & Díaz, 2019) or Barbados, North America (Jackman et al., 2020).

In respect to the tourist segment researchers focus on low-cost tourism (Martínez-García & Raya, 2008), golf tourism (Barros et al., 2010), inbound tourism (De Oliveira Santos et al., 2015; Ferrer-Rosell et al., 2014), cultural tourism (Brida, Meleddu, & Pulina, 2013), senior tourism (Alén et al., 2014; Fleischer & Pizam, 2002), student tourism (Thrane, 2016), leisure tourism (Jackman et al., 2020), or international tourist (Aguilar & Díaz, 2019).

In addition, we can find various methodological approaches within extant literature, for example, Tobit model (Fleischer & Pizam, 2002), OLS regression model (Thrane, 2016); Binomial logit model (Alegre & Pou, 2006), Ordered logit model (Ferrer-Rosell et al., 2014; Yang, Wong, & Zhang, 2011), Count quantile regression (Salmasi et al., 2012), Negative binomial model (Alén et al., 2014), a truncated OLS regression, framed in a Heckman selection model (Rodríguez et al., 2018), or Survival analysis (Aguilar & Díaz, 2019; Barros et al., 2010; Gokovali et al., 2007; Wang, Little, & DelHomme-Little, 2012).

Finally, in a review of factors that directly or indirectly impact LOS, Rodríguez et al., (2018) indicated that, in terms of the choice of variables included in the analysis, the variation is substantial and we can classify these independent variables in three main categories: Tourist profile (age, gender, education, and income), trip characteristics (travel purpose, travel cost, means of transport, repeat visitation, physical distance), and destination attributes variables (quality of the services of the destination, type of accommodation, climate, price).

In Table 1 we present a summary of some recent studies from 2006 to 2020. The table provides a brief description of these papers in terms of region of focus, methodological approach, and principal variables. Table 2 presents the characteristics of the variables used previous studies.

**Table 1. Studies on tourists' LOS.**

<b>Reference</b>	<b>Geographic area/ tourist segment</b>	<b>Methodology</b>	<b>Conclusions: LOS determinants</b>
<b>Alegre &amp; Pou (2006)</b>	Balearic Islands (Spain) / British and German sun and sand tourists	Logit model	labor status, nationality, accommodation type, number of yearly trips, and repeat visitation rate
<b>Gokovali et al., (2007)</b>	Bodrum (Turkey)/ No specific segment	Duration models or Survival analysis	Nationality, education, income, previous experience, party size, familiarity and daily spending.
<b>Barros et al. (2008)</b>	Latin America/ Portuguese tourists (charter flights)	Duration models or Survival analysis	Economic budget, age, destination attributes (culture, climate and security), destination image.
<b>Martinez-Garcia &amp; Raya (2008)</b>	Catalonia (Spain)/ Low-cost travelers	Duration models or Survival analysis	Nationality, age, education, type of accommodation, the season of trip and the geographical area of destination.
<b>Menezes et al. (2008)</b>	Azores (Portugal)/ sun-and-sand tourism	Duration models or Survival analysis	Nationality (geographical distance), gender, age, education, type of flight, previous experience, geographical region of destination (or destination ascendancy), destination image, and number of islands visited.
<b>Barros &amp; Machado (2010)</b>	Madeira Island (Portugal)/ Sun and sea tourism	Duration models or Survival analysis	Age, nationality, gender, education, hotel quality, and expenditure.

<b>Barros et al. (2010)</b>	Algarve (Portugal)/ golf tourism	Duration models or Survival analysis	Age, education level, nationality, trip main reason, type of hotel, and destination characteristics (climate, event and hospitality).
<b>Menezes &amp; Moniz (2011)</b>	Azores (Portugal)/ no specific segment	Duration models or Survival analysis	repeat visitors, trip main reason, type of flights.
<b>Peypoch et al. (2012)</b>	Madagascar (Africa)/ no specific segment	Duration models or Survival analysis	Gender, age, income, characteristics of destination (desirable foods, destination sea and nature, weather, security, life style and appearance characteristics of destination)
<b>Thrane (2012)</b>	No specific destination/ Scandinavian students	OLS and duration models	Internet booking, trip season, daily expenditure, and planned trip.
<b>Wang et al. (2012)</b>	Dalian (China)/ no specific segment	Duration models or Survival analysis	Age, education level, nationality, repeat visitors, and expenditure per tourist per day.
<b>Brida et al. (2013)</b>	Bolzano (Italy)/ Cultural tourism	Count data (zero truncated negative binomial model)	Nationality, age, income, travel costs, and destination weather.
<b>Alén et al. (2014)</b>	Spain/ senior tourism	Count data (zero truncated negative binomial model)	Age, VFR motivation, climate, activities (such as shopping and sports activities), type of accommodation, and traveling alone.
<b>Ferrer-Rosell et al. (2014)</b>	Spain/ no specific segment	Ordered logit model	Age, nationality, education, income, trip characteristics (season of the trip, climate, travel accompany), type of accommodation, and type of destination.

<b>De Oliveira-Santos et al. (2015)</b>	Brazil/ no specific segment	Duration models or Survival analysis	Gender, age, education level, nationality, multi-destination trip, motivations, type of accommodation, trips by air, party size, previous visits, travel season, expenditure, and type of destination.
<b>Thrane (2016)</b>	No specific destination/ Norwegian student tourists	Survival analysis, OLS, and zero truncated negative binomial models	Daily travel costs, booking time, tourism and trip motives, trip month, and gender.
<b>Jacobsen et al. (2018)</b>	Norway/ no specific segment	Binary logistic regression	Time for desired activities, number of vacation days, overall trip budget, accommodation.
<b>Rodrígueza et al. (2018)</b>	Santiago de Compostela (Spain)/ no specific segment	Heckman selection model and separate probit and zero-truncated OLS regression	Age, travel main motivation.
<b>Soler, Gemar, &amp; Correia (2018)</b>	Malaga (Spain)/ no specific segment	Negative binomial model	Domestic tourists' LOS determinants: trip main reason, marital status, type of accommodation, mode of transport, travel party.  International tourists' LOS determinants: Satisfaction, marital status, employment status, destination loyalty programs, type of accommodation, mode of transport.
<b>Aguilar &amp; Díaz (2019)</b>	Spain/ no specific segment	Duration models or Survival analysis	Trip main motivation, destination, age, travel season, type of accommodation, time and budgetary constraints, travel distance, Party size and composition.

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<b>Jackman et al. (2020)</b>	Barbados (North America)/ Leisure tourism	Poisson model (count data model)	geographic distance, cultural distance, climatic distance, and economic distance.
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The models analyzing LOS determinants are based on the consumer-behavior theory (Rodríguez et al., 2018). According to this theory, consumers (in this case, tourists) must estimate the type of vacation and the LOS they both prefer and can afford when they plan a vacation (Brida et al., 2013; Rodríguez et al., 2018). In the estimated models, the demand function of LOS is primarily determined by personal characteristics (Martínez-García & Raya, 2008) alongside the vacation type and destination (Aguilar & Díaz, 2019; Rodríguez et al., 2018). From an empirical perspective, there is no theoretical guidance for selecting the specific factors for each case. Consequently, the covariates used to explain LOS in this study are based upon the literature specified above and were categorized into three groups: personal factors, such as age (e.g. Barros & Machado, 2010; De Oliveira Santos et al., 2015; Salmasi et al., 2012; Yang et al., 2011), gender (e.g. Martínez-García & Raya, 2008; Peypoch et al., 2012), educational level (e.g. Barros & Machado, 2010; Barros et al., 2010; De Oliveira Santos et al., 2015), and income (e.g. Barros & Machado, 2010; Ferrer-Rosell et al., 2014; Gokovali et al., 2007); trip attributes, such as purpose of travel (e.g. Adongo et al., 2017; Correia, Serra, & Artal-Tur, 2017; De Oliveira Santos et al., 2015), frequency of travel (e.g. Alegre et al., 2011; Alegre & Pou 2006; Gokovali et al., 2007; Thrane & Farstad 2012), geographic distance (e.g. Jackman et al., 2020; Yang et al., 2011), and size of travel party (e.g. Alegre & Pou, 2006; Gokovali et al., 2007; salmasi et al., 2012; Correia et al., 2017); destination attributes, such as daily spending in destination (e.g. Alegre et al., 2011; Alegre & Pou 2006; Thrane, 2016), type

of accommodation (e.g. Aguilar & Díaz, 2019; Salmasi et al., 2012; Soler et al., 2018), number of attractions (e.g. Adongo et al., 2017; Ferrer-Rosell et al., 2014; Rodríguez et al., 2018), destination image (e.g. Jacobsen et al., 2018; Machado, 2010; Menezes & Moniz, 2013).

Based on the preceding discussion, the following hypotheses are proposed:

H<sub>1</sub>. Tourists' socio-demographic characteristics determine LOS.

H<sub>2</sub>. Trip attributes determine LOS.

H<sub>3</sub>. Destination attributes determine LOS.

A priori, two additional factors could affect tourist behavior in our selected case study: Islamic regulations and political unrest. Both of these have been recognized in the literature as predictors of tourist behavior. Therefore, our study moves beyond the extant literature and can be considered an advancement in the literature on LOS and Islamic destinations.

As mentioned in the introduction, religion is a staple component of culture. Previous research indicates that the cultural norms of a destination significantly influence tourist behaviors, as travel is uniquely linked to social context (Battour, Ismail, & Battor, 2011). This relationship has gained a degree of momentum in the tourism literature. In this stream of research, several scholars have attempted to thoroughly investigate the link between Islam, the world's second-largest religion, and tourism (e.g. Brown & Osman, 2017; Hino, 2011). However, some aspects of this relationship have been relatively neglected (Battour et al., 2011; Zamani-Farahani & Henderson, 2010); various aspects of Islamic tourism have yet to receive the same level of attention. Some authors focus on the definition of Islamic tourism (e.g. Henderson, 2009; Zamani-Farahani & Henderson, 2010), Muslim tourists' needs (e.g. Henderson, 2009), and tourists' motivations (e.g. Weidenfeld, 2006). However, there is a clear shortage of work on the

impact of a destination's religion on tourism demand. Undoubtedly, the rules in some Islamic destination (e.g. dietary laws, strict dress codes, hotel restrictions for unmarried couples), which impose severe restrictions on tourists' activities, can influence various aspects of their behavior and travel decisions, such as their LOS. Consequently, we propose the following hypothesis:

H<sub>4</sub>. Islamic regulations and laws determine LOS.

Several scholars point out that tourism is a highly vulnerable industry that is susceptible to exogenous factors (Seddighi et al., 2001; Sonmez, 1998; Sonmez & Graefe, 1998). One major exogenous factor that can have lingering effects on the industry is political instability—it can jeopardize a destination's entire tourism sector. Recently, political instability and social unrest have engulfed many countries, developing countries in particular; this has reignited scholars' interest in the impact of political upheaval on tourists' decision-making process (Farmaki, Khalilzadeh, & Altinay, 2019). This stream of research has uncovered many examples of places where political instability led to a decline in the tourism industry or a complete disappearance from the tourism map (e.g. Butler & Suntikul, 2017; Hall, 2010; Sonmez, 1998). Such instability can disrupt tourists' decision-making process and deter them from traveling to specific destinations (Seddighi et al., 2001).

The argument that political unrest always has negative effects on tourism demand, however, is not universally valid. For instance, despite high levels of corruption and terrorism in Uganda, the number of tourists in the country has risen annually by about 17% between 1999 and 2009 (Yap & Saha, 2013). Iran is a good example of this kind of destination; despite its conflict-ridden regional context, this country became a booming tourist destination (Khodadadi, 2016). One potential reason for this dissimilar trend may be that some political problems simply cannot negatively impact tourism demand, especially in countries with historical and natural heritage



sites (Yap & Saha, 2013). Thus, while political turmoil may not drive tourists away completely, it may alter tourist behavior. This study aims to understand the effect that political unrest has on tourists' LOS.

H<sub>5</sub>. Destination's political situation determines LOS.

Table 2. variables used in previous studies

Variable	Researcher(year)	Results
<b>1.socio-demographic</b>		
1.1.Age	Alen et al., 2014; Alegre & Pou, 2006; Barros & Machado, 2010; Barros et al., 2010; Correia, Serra & Artal-Tur, 2017; Machado, 2010; Meng & Uysal, 2008; Martinez-Garcia &Raya, 2008; Menezes et al., 2008; Peypoch et al., 2011; Salmasi et al., 2012; Wang & Little, 2012.	there is a positive relationship between tourists' age and their LOS
	Yang, et al., 2011; Santos et al., 2015.	The effect of age on LOS is given by Convex function
	Fleischer & Pizam, 2002.	The effect of age on LOS is given by concave function.
1.2. Gender	Alen et al., 2014 ; Barros et al., 2010 ; Fleischer & Pizam, 2002 ; Martinez-Garcia & Raya, 2008 ; Raya-Vilchez & Martinez-Garcia, 2011 ; Saayman & Saayman, 2012 ; Wang & Little, 2012.	gender is not a significant explanatory variable of tourists' LOS.
	Thrane, 2002; Barros & Machado, 2010; Peypoch et al., 2012; Menezes & Moniz, 2013; Rodríguez et al., 2018.	male tourists have higher LOS.
	Menezes et al., 2008 ; Santos et al., 2015.	female tourists tend to take longer trips
1.3. Education	Martinez-Garcia & Raya, 2008; Menezes et al., 2008; Menezes & Moniz, 2013; Santos et al, 2015; Jacobsen et al., 2018; Rodríguez et al., 2018	Tourists' with higher level of education have lower odds for a longer stay.
	Barros et al., 2010; Barros & Machado, 2010; Ferrer-Rosell et al.,	higher levels of education are associated with longer stays.

	2014; Peypoch et al., 2012; Saayman & Saayman, 2012.	
1.4. Income	Barros & Machado, 2010; Ferrer-Rosell et al., 2014; Fleischer & Pizam, 2002; Gokovali et al., 2007; Machado, 2010.	higher income leads to longer stays, According to the rule of basic economics theory, LOS is most frequently found to be a normal good, that is, as income rises demand for normal goods is expected to increase.
	Blaine, Mohammad, & Var 1993 ; Mak & Nishimura, 1979.	a higher income earner tends to stay shorter than a lower income earner.
<b>2. Trip attributes</b>		
2.1. Main motive	Hellstrom, 2006; Menezes, Moniz, & Vieira, 2008.	leisure tourism movement travelers prefer to stay longer.
	Jang et al., 2003; Wang, 2005; Wang et al., 2008; Yang et al., 2011; Alen et al., 2014.	VFR tourists prefer to stay more time.
	Menezes & Moniz, 2013; Rodríguez et al., 2018.	business/congress tourists' the ones who stay the longest
2.2.Repeat visitation	Alegre et al., 2011; Alegre & Pou, 2006; Barros & Machado, 2010; Gokovali et al., 2007; Thrane & Farstad, 2012; Yang et al., 2011.	repeat visitors stay longer in a destination than do first-time visitors
	Paul & Rimmawi, 1992; Silberman, 1985.	first-timer tourists would stay longer than return tourists.
2.3. Distance	Blaine et al., 1993; Correia et al., 2017; Paul & Rimmawi, 1992; Silberman 1985; Yang et al., 2011; Wang et al., 2012.	tourists who live far away from destination would experience longer stays, to make up for the increase overall travel cost.
2.4. Travel group	Alegre & Pou, 2006; Gokovali et al., 2007; salmasi et al., 2012; Correia et al., 2017.	Tourists who travelled alone and independently show a greater tendency to make more prolonged stay, compared with those who travelled with a group or particular organized tour. probably due to economic restrictions.
	Barros et al., 2008; Mak & Nishimura, 1979.	travel party size has positive effect on tourists' LOS.
	Santos et al., 2015	length of stay follows a convex function of party size, with a minimum value at 6 people
<b>3. Destination attribute</b>		

3.1. accommodation	Alegre et al, 2011; Jacobsen et al., 2018; Martinez-Garcia & Raya, 2008; Salmasi et al., 2012.	free accommodation such as family/friends' houses, or second residence are reasonable for long time staying of tourists and high prices for accommodation was negatively associated with LOS.
	Alegre & Pou, 2006.	Higher quality hotels were estimated to be associated with shorter stays.
	Ferrer-Rosell et al., 2014; Martinez-Garcia & Raya, 2008	Higher quality hotels were found to be more associated with LOS than lower quality hotels.
3.2. Price	Alegre et al., 2011; Alegre & Pou, 2006; Hellstrom, 2006; Machado, 2010; Mak & Nishimura, 1979; Thrane & Farstad, 2012.	Tourists' larger daily expenditures in destination are associated with shorter stays.
3.3. Attractions and activities	Adongo et al., 2017; Botti, Peypoch, & Solonandrasana, 2008; Ferrer-Rosell et al., 2014; Rodríguez et al., 2018.	the greater number of activities performed and destination attractions the longer the stay at the destination .
4. Destination image	Jacobsen et al., 2018; Machado, 2010; Menezes & Moniz, 2013.	the more positive the ex-ante image, the longer the LOS.

### **3. Methodology**

Several methodological approaches endeavor to attain different studies aims. In this context, classical data analysis was adopted as the methodology of the research. This approach includes six main sequential steps; selection of research area, formulation of research topic/problem, selection of research methodology, selection of data collection methods, selection of data analysis methods, and finally conclusion and recommendation. Figure 2 illustrates the structure of this approach:

In view of aforementioned, the selection of topic and recognition of research problem are fully explained in introduction section, which can be encapsulated in one sentence as the need for more comprehensive and precise tools to understand LOS at Islamic destination. In section 2, the extant literature in this topic carefully investigate, and based on this investigation the current study identifies a gap in this stream of research with regards to the impacts of destination's political and cultural (i.e., Islamic religious) on tourists' LOS. To be more specific, this review of prior studies dignifies the absence of these two important factors in LOS work. Accordingly, the quest is to attain a comprehensive evaluating of these relationships.

The next steps of the methodology (Selection of data collection method and data analysis method) are explained on the oncoming sections.

### 3.1. Data Collection and Sampling

The pilot study questionnaire was completed by 40 tourists visiting Tabriz. The validity of the questionnaire was tested and confirmed. Moreover, the reliability coefficient was confirmed by its Cronbach alpha (0.725) after a pilot test, meaning it is both reliable and valid. It is worth noting that the Persian questionnaire was translated into English, Turkish, and Arabic, as all respondents could speak and understand at least one of these three languages.

Taking cue from previous researches (Adongo et al., 2017; Alén et al., 2014; Barros et al., 2010) the questionnaire was used to collect data. The data was collected during the summer of 2017 using a structured self-administered questionnaire that was hand-delivered to 1,023 international travelers by a researcher. Only one individual from each travel party was invited to take part because travel party members typically have similar opinions to each other. Finally, 78.98% of questionnaires (808) were completed and returned. This rate of return, according to Dillman (1978), was acceptable. After initial cleaning and data screening, 726 responses were used for analysis and entered into SPSS (82 questionnaires were omitted, due to incomplete answers). Table 3 illustrates the names and descriptions of the variables found in questionnaire. It is important to note that, since the survey was carried out in city's departure terminals, all interviewees reported their LOS, so censored data was not included in the analysis (i.e., censoring occurs when we have some information about individual survival time, but we do not know the survival time exactly). Moreover, due to the sensitive religion and politics investigation involved in the questionnaire items, and following recommendations from Podsakoff, MacKenzie, & Lee (2003), respondents were assured that their involvement would be voluntary and anonymous, and there are no correct or wrong answers, so that they would

express their personal views as honestly despite the potential bias brought about by the interviewer-participant interaction.

The demographic makeup of the participants was as follows: The average LOS was around 8.6 days and the composition of the sample is not balanced in terms of gender (58.4% men), tourists with a university level of education represent 61.5% of the sample; the largest share of the trips take place for medical purposes (31.8%), followed by VFR (29.1%) and leisure (27.6%) purpose and the majority of tourists stayed in paid accommodation for the duration of their visit (58%).

It is worth mentioning that the characteristics of the sample in our study are similar to those of the national profile, according to recent data from the Tabriz tourism organization report (2017).

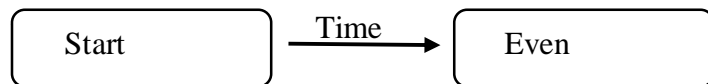
Table 3. research constructs and descriptions

<b>Variables</b>	<b>Descriptions</b>
Age	Age of the visitor
Gender	Gender of the visitor
Education	Visitor's level of formal education
Economic status	Visitor's monthly income
Travel motivation	The main travel purpose to Tabriz
Previous visits	Number of previous travel to Tabriz
Distance	physical distance between Tabriz and visitor's' origin
Group size	Total number of trip accompanies
Accommodation	Type of accommodation (free/paid)
Price	total travel expenditure (daily)
Attractions/ activities	Number of visited attractions
Destination image	Overall image of Tabriz (positive/negative)
Detailed destination image	Image of Tabriz (cultural/medical/touristic)
political situations	Perception about political environment of Tabriz
Islamic regulations	Perception about religious restrictions
Length of stay	Number of nights spent at Tabriz

### 3.2. Econometric methodology (An overview of survival analysis)

The time-varying LOS variable (Ferrer-Rosell et al., 2014) has some characteristics that are difficult to deal with using conventional statistical methods, and extensive discussion about which may be the best (see the section 3.3 below for a more detailed explanation).

Duration, defined as the time elapsed until a certain event occurs, was analyzed using survival models (Allison, 1984; Gokovali et al., 2007). Survival analysis is a branch of statistics used to analyzing the predicted time until certain events or actions occur. It is widely employed for analyzing various kinds of event in social and natural sciences, such as death in biological organisms, drug efficacy for patient treatment, remaining time to come to commercial bankruptcy, marriages and divorces, etc. For the purpose of this study, the event of interest is the tourist's departure from Tabriz.



Two concepts are key in survival analysis: the survival function and the hazard function. The survival function is the probability of observing a survival time greater than or equal to some stated value (Kiefer, 1988). The hazard function is the rate at which the spell will be completed by duration  $t$ , conditional upon the spell lasting until  $t$  (Kiefer, 1988, p. 651). Put formally, the approach may be described as follows: let spell length be represented by a random variable  $T$  (in this study, LOS measured in days), and  $t$  for its realizations.

In current study, time refers the number of nights that tourists spent in Tabriz, from the beginning of follow-up (i.e. arriving to Tabriz) until an event occurs (i.e. leaving Tabriz).

In a survival analysis context, researchers mention to the time variable as survival function, since it gives the time that an individual has “survived” over some follow-up period. In addition, they mention to the event as a failure, since the event of interest usually is death, disease incidence, or some other negative individual experience.



$$\left\{ \begin{array}{l} \text{Time} = \text{survival time} \\ \text{Event} = \text{failure} \end{array} \right.$$

Analyzing tourists to see how long they stay in a destination is a good example of survival analysis since the outcome variable is time until occurrence of their departure. The event of this study (i.e., failure) is “leaving destination” and the outcome is “time in days until a visitor leaves the destination”.

Let suppose  $T$  is a random variable for a spell length (i.e., in current study, it is a visitor’s survival time in a destination and measured by day). because  $T$  indicates time, it is a non-negative continuous variable.

$$T = \text{survival time } (T \geq 0).$$

Then we indicate the realizations of  $T$  by  $t$  (from  $T=0$  to  $T=t$ ). For instance, if we are interested in assessing whether a visitor survives (i.e., stays) for more than 3 days after arriving the destination ( $t=3$ ); we then ask whether  $T$  exceeds 3 days.

Next, we introduce and describe two concepts which have the key role in survival analysis: survival function, denoted by  $S(t)$ , and the hazard function, denoted by  $h(t)$ .

$$\left\{ \begin{array}{l} S(t) = \text{survivor function} \\ h(t) = \text{hazard function} \end{array} \right.$$

The survival function is the probability of observing a survival time (i.e.,  $T$ ) greater than or equal to a specified value (i.e.,  $t$ ) (Hosmer & Lemeshow, 1999; Kiefer, 1988). This function is

crucial to a survival analysis, since attaining survival probabilities for various values of  $t$  provides vital summary information from survival data. More formally;

$$S(t) = P(T > t)$$

$t$	$S(t)$
1	$S(t) = P(T > 1)$
2	$S(t) = P(T > 2)$
3	$S(t) = P(T > 3)$
.	
.	

whereas the hazard function  $h(t)$  is the rate at which the spell will be completed at duration “ $t$ ”, conditional upon that they last until “ $t$ ” (Kiefer, 1988, p. 651). In essence, in contrast to the  $S(t)$ , which focuses on not failing, the  $h(t)$  focuses on failing (i.e., event occurrence). In other words, estimating the hazard function which depicts the failure rate of an item under risk. Therefore, in a certain way, the  $h(t)$  can be considered as providing the opposite side of the information provided by the  $S(t)$ . In current study hazard function gives the probability that a tourist leaves Tabriz at time  $t$ , given that he/she has been staying from time 0 until time  $t$ . In other words, hazard rate answers the following question: ‘Given that the spell has lasted until time  $t$ , what is the probability that it will end in the next short interval of time  $\Delta$ ?’ (Menezes, et al. 2008).

$$\left\{ \begin{array}{l} S(t): \text{not failing} \\ h(t): \text{failing} \end{array} \right.$$

Assembling the above discussion, the following section will discuss the components mentioned more in mathematical terms;

The cumulative distribution function of  $T$ ,  $F(t)$ , is the probability that a random variable will have a survival time less than some stated value  $t$ ; it can be formulated as:

$$F(t) = P_r(T \leq t) = \int_0^t f(s)ds.$$

In this study,  $F(t)$  denotes the probability that an international tourist leaves Tabriz before time  $t$ , whereas the survival function of  $T$ ,  $S(t)$  indicates the probability that an international tourist stays in Tabriz longer than the specified time  $t$ . Thus, it can be written as:

$$S(t) = 1 - F(t) = P_r(T \geq t) = \int_t^{\infty} f(s)ds$$

In other words,  $S(t)$  gives the probability that an event of interest (i.e. failure) has not occurred by duration  $t$ . When  $t = 0$ , the survival function is equal to 1. As time increases toward infinity survival function reaches to zero. Therefore,  $S(t)$  is non-increasing function of  $t$  and the survivor curve must eventually fall to zero (Figure 3).

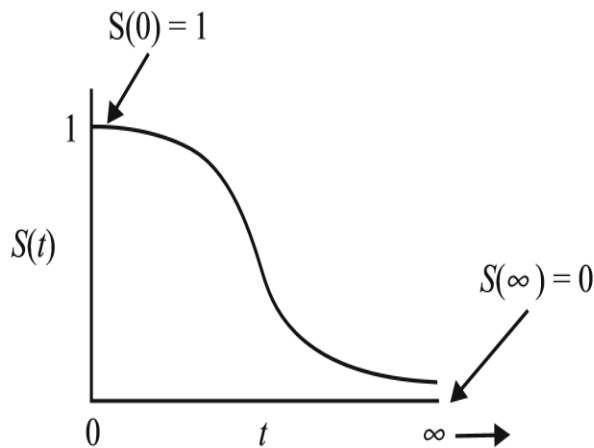


Figure 1. Survival function graph

The hazard function or hazard rate,  $h(t)$ , is another fundamental concept in survival analysis.  $h(t)$  refers to the probability that the subject changes its current status at time  $t$ , given that it has been staying in that status up to time  $t$  (Allison, 2010; Hosmer & Lemeshow, 1999; Kiefer, 1988).

In this context, the hazard function gives the probability that an international tourist leaves Tabriz at time  $t$ , given that they have been staying from time 0 until time  $t$ . In other words, the hazard rate answers the following question: “Given that the spell has lasted until time  $t$ , what is the probability that it will end in the next short interval of time  $\Delta t$ ?” (Menezes et al., 2008), where  $\Delta t$  indicates a small interval of time. More formally:

$$h(t) = \lim_{\Delta \rightarrow 0} Pr (t \leq T \leq t + \Delta | T \geq t) / \Delta$$

It is also worth mentioning that the hazard function is also known as the conditional failure rate; the conditional probability is the likelihood that a tourist’s LOS time,  $T$ , will lie in the time interval between  $t$  and  $t + \Delta t$ , given that the survival time is greater than or equal to  $t$ .

The hazard rate can be rewritten as  $h(t) = \frac{f(t)}{[1-F(t)]} = f(t)/S(t)$ ,

and the cumulative hazard function formulated as

$$H(t) = \int_0^t h(u) du = \int_0^t \frac{f(u)}{S(u)} du = \int_0^t \frac{d[1-S(u)]}{S(u)} = -\log[S(t)].$$

Therefore, we can develop the survival function;

$$S(t) = e^{-H(t)} = \exp[-\int_0^t h(u) du]$$

Finally, by introducing this relationship into hazard rate equation, we have

$$S(t) = e^{-H(t)} = \exp[-\int_0^t h(u) du].$$

The advantage of the hazard function is that it permits to address specific questions such as how tourist's LOS is related to economic variables as well as other tourist or trip characteristics. The hazard function value can vary between zero and infinity. When hazard function is zero that means there is no risk at all. In contrast, when hazard function approaches infinity the failure is certain at that time. Over time, hazard rates can take different trends such as increasing, decreasing or even constant.

In our case, in the concept of LOS day as a criterion can be measured, the survival function could be thought of as the probability of observing a tourist staying more than or equal three days ( $t=3$ ) at the destination. The related hazard function denotes to the rate at which the stay will end on, stay, the fourth day (i.e.  $t=3+1$ ), conditional upon that it did not end on the third day ( $t=3$ ). If the nature of the research question is an interest in the probability of staying more than  $x$  days at the destination, the survival function is utilized. By contrast, if one is interested in the conditional risk or probability that the stay would end on anymore "next day," the hazard function is utilized (Gokovali et al, 2007). As one intuitively might suspect, these concepts are statistically related to each other: a positive effect of an independent variable on staying longer at a destination (i.e. "survival") is necessarily negative effect on leaving on the next day (i.e. "hazard").

Table 4 contains the terminology of survival analysis that we adopt in this study.

Table 4. Survival analysis constructs.

<b>Terminology in survival analysis</b>	<b>Terminology in tourism demand</b>	<b>Description</b>
Event	Event	The event of interest is leaving Tabriz
survivor notion	survivor notion	The notion denoting to staying in Tabriz
Failed notion	Leave notion	The notion referring to leaving Tabriz.
Time-to-failure (survival time)	Time-to-leave (staying time)	The length of time (days) which an international visitor stays in Tabriz.
Survival probability	Staying probability	The probability that an international tourist stays in Tabriz, for a specific time (i.e. X days)
Failure probability	Leaving probability	The probability that an international tourist leaves Tabriz before a specific time (i.e. before X days)
Hazard or risk rate	Leaving rate or risk of leaving	The probability that an international tourist leaves Tabriz slightly after the time he/she has spent in Tabriz. In essence, the probability that a tourist leaves Tabriz before time $t_1$ on the condition that he/she has stayed in Tabriz for the time $t_0$ in such a way that $\lim (t_1-t_0) \rightarrow 0$
Mean time to failure	Mean time to leave	The average time that an international tourist stays in Tabriz, also referred to mean survival time.

### 3.3. The Advantages of Survival Analysis

The particular nature of LOS (Ferrer-Rosell et al., 2014) has some characteristics that are difficult to deal with using conventional statistical methods. One of the main challenges is that LOS has a non-negative nature—time can be any number equal to or greater than zero. This characteristic of time-varying variables was introduced by Kiefer (1988) as an “inherent aging process” and echoed in subsequent works (Gokovali et al., 2007; Greene, 2000). Kiefer defined it as “the dependent variable under consideration which should be assigned positive values.” This feature of LOS forces the use of a model in which the systematic component must yield fitted values that are strictly positive. Linear regression approaches, such as ordinary least square (OLS) and its derivations, can yield negative fitted values, particularly for subjects with short survival times. In summary, linear regression approaches are unable to deal with this feature of the LOS variable.

Additionally, the LOS variable is not normally distributed, meaning that OLS, which is based on the assumption of normality, is inadequate for a LOS study because the normality of errors is dramatically changed by the presence of extreme values and skewness. There are some remedial actions that can be taken to transform non-normal data into normal data, but no methods are reliably sufficient. One of the most common of these methods is to employ a transformation (i.e., change the distribution by applying a mathematical operation to each observation/data value). However, this normalization process has been criticized by several scholars, as the transformed LOS has little meaning for decision-making processes (Greene, 2000). The issue can instead be handled by conducting a survival analysis, which offers a variety of outcomes.

Furthermore, despite its usual measurement in discrete units (e.g., nights), LOS is ultimately a continuous variable (Aguilar & Diaz, 2019). The discreteness of duration data is a collection issue, not a fundamental characteristic of this variable. While *measuring* LOS on a continuous scale is typically impractical, using continuous *estimates* of LOS are perfectly sensible (Aguilar & Diaz, 2019; De Oliveira Santos et al., 2015). As such, we are not interested in estimating binominal or multinomial distributions. Some researchers have attempted to address the time-varying characteristic of variables using methodological approaches. Alegre & Pou (2006), based on the McFadden's (1974) discrete choice random utility model, employed binary logit to model the LOS of tourists in the Balearic Islands, Spain. They considered LOS a binary variable and coded it as 0 if shorter than seven days and 1 if seven days or longer. Of course, this process ignores exact information on trip length, meaning the research loses precision and relevance (i.e., one-day stay is the same as six days stay). When the LOS is distributed evenly, however, researchers may have no obvious cut-off point, leading to the arbitrary partition of the LOS.

As already mentioned, additional concerns arise when using survival analysis from left or right data censoring issues. However, censoring does not occur at all in our data, as the survey was carried out in airport departure with all interviewees directly reporting their LOS. In short, when LOS is used as a dependent variable, certain aspects can cause problems for data analysis using traditional statistical models—survival analysis is a solution to those problems.



Table 5. Characteristics of different approaches for modelling time-varying data.

Techniques	Predictor variables	Outcome variable allowed?	Censoring
Linear regression	Categorical or continues	Normally distributed	No
Logistic regression	Categorical or continues	Binary distributed	No
Survival analysis	Time and Categorical or continues	Variety	Yes

### 3.4. Model Specification

Two frequently used parametric models for adjusting survival functions for the explanatory variable effects on survival probability are the accelerated failure time (AFT) model and the proportional hazard (PH) ratio model.

In PH models, the covariates are assumed to be time-independent and they have a multiplicative effect on the hazard function. In other words, hazard function ( $h(t)$ ) is defined as the multiplication of a base hazard rate  $h_0(t)$  and a term describing the effects of explanatory variables, which is often given using an exponential function,  $\exp(\beta x)$ . More formally:

$$h(t, x_i) = h_0(t) \exp(x_i \beta)$$

$$h(t_j) = h_0(t) \exp(\beta x_i) = h_0(t) \exp(\beta x_1 + \beta x_2 + \dots + \beta x_j)$$

In the hazard rate formulation,  $\beta$  represents the effects of increases in  $x$  on the conditional probability of a termination of a stay, whereas in the standard regression analysis  $\beta$  measures the effect of increases in  $x$  on the LOS (Kiefer, 1988, p. 67). In other words, if  $\beta$  is positive, an increase in  $x_i$  rises the hazard rate and thus reduces the survival probability. Similarly, for a negative  $\beta$  an increase in  $x_i$  reduces the hazard rate and thus increases the survival probability.

In order to analyze the effects of the covariates on the hazard function and survival probability, we need to estimate the set of coefficients  $\beta$ . In estimating coefficients, PH models can be divided into parametric, nonparametric, and semiparametric techniques. The nonparametric approach is a suitable selection when the researcher doesn't have the information of the accurate underlying model. On the contrary, when the researcher has specific knowledge of the underlying model the parametric approach is a perfect selection to data analysis. Nevertheless, in practice, typically research has partial knowledge about the underlying model (i.e. research is not certain about the accurate model). If so, neither approach (i.e. parametric or nonparametric) works well, and a new approach titled as semiparametric has been suggested in the literature. This approach is a mixed of the two previous approaches. The most commonly used semiparametric model for time-to-event data is Cox PH model that estimates the coefficient  $\beta$  (for more detailed information, see Kiefer, 1988; Lindeboom & van der Klaauw, 2014).

Besides, the most frequently used distributions in parametric approach are Exponential, Weibull, and Log-logistic distributions. In exponential distribution, the hazard rate is constant  $h_0(t) = h$ . The constant hazard rate implies the probability of termination of a specific state is always same, regardless how long the spell has been observed (Hosmer & Lemeshow, 1999). In current subject, when the leaving destination probability in the next short interval of times

doesn't associate with LOS, this approach is appropriate for modeling LOS. In Weibull distribution, in turn, the hazard rate can either increase or decrease monotonically with time. Log-logistic distribution is one of the most frequently employed model to explain human mortality and survival rate by medical researchers. In Log-logistic distribution, like Weibull, the monotonic hazard rate can either increase or decrease with time.

Table 6 shows the survival function,  $S(t)$ , and the hazard function,  $h(t)$ , for these three parametric distributions.

Table 6. Survival and hazard functions for selected parametric distributions

Distribution	Survival function	Hazard function
Exponential	$\exp(-ht)$	$h$
Weibull	$\exp(-ht^p)$	$hpt^{p-1}$
Log-logistic	$\frac{1}{1 + ht^p}$	$\frac{hp t^{p-1}}{1 + ht^p}$

\* Note that the Weibull distribution collapses to the exponential when  $p=1$ .

Figure 2 depicts hazard rates of these three parametric distribution for various values of their parameters. As shown Weibull and Log-logistic distributions can model decreasing, increasing and constant hazard rates.

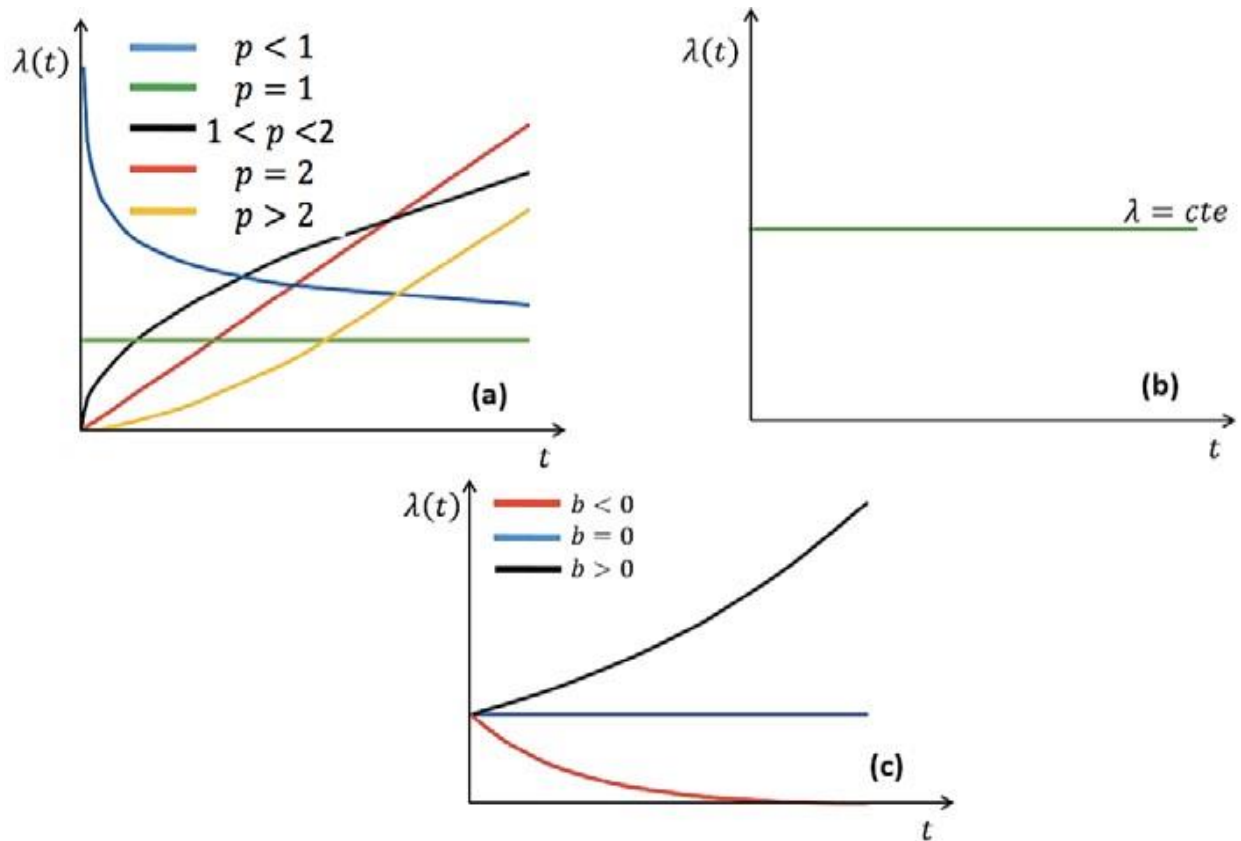


Figure 2. Hazard rates of (a) Weibull, (b) Exponential, and (c) Log-logistic distribution for different values of parameters

Additionally, based on the Cox's semiparametric model estimation, according to the Schoenfeld residuals test, we notice the PH assumption holds, therefore, we estimate the most common PH models; exponential, Weibull, and Gompertz distributions. Among the three parametric survival models the calculated likelihood ratios and Akaike information criterion (AIC) were used to assess the best fitting model. It should be noted that when parametric models are nested, the likelihood-ratio can be used to differentiate among them. Indeed, this estimation is done in the case of Weibull versus exponential, or Weibull versus lognormal (Wang et al.,

2012). In this study, the model selection is performed using AIC values. AIC penalizes the log likelihood to consider the number of parameters being measured in a specific model and then comparing them.

The AIC relationship for parametric models is given by:

$$AIC = -2 (\log \text{likelihood}) + 2 (c+p+1)$$

Where;  $c$  respectively denotes the number of model covariates excluding constant, and  $p$  is the number of specific ancillary parameters. It is zero for exponential distribution and equals to one for Weibull's and Log-logistic distributions.

The decision rule in comparing several models is such that the one with the smaller AIC fits the data better than those with larger AIC. According to Akaike information criteria (AIC), Weibull distribution is the best-fitting model (see Table 2-7). Therefore, the exponential and Gompertz models were eliminated by this criterion and the results of the exponential and Gompertz specifications are not reported here.

Moreover, according to prior studies, the Cox PH model is a “robust” model, so that the results from using the Cox model will closely approximate the results for the correct parametric model (Kiefer, 1988; Menezes et al., 2008). In other words, the Cox model results will provide credible results so that is a correct model selection (if Cox results will closely approximate our chosen parametric model, we can conclude that we selected the “safe” and correct model). In short, in current research, the Weibull distribution outperformed the Exponential and Log-logistic distributions, therefore, we employed Weibull as our parametric distribution, and Cox model for comparison purpose.

Table 7. Akaike information of PH parametric models.

	Exponential	Weibull	Gompertz
Log-likelihood values	-153.87	-148.05	-159.31
AIC values	352.06	325.30	367.8

The results of both Cox's and Weibull's regressions are shown in Table 8. These regressions generate almost identical results. Therefore, we will center our comments around the variables that are significant in both models and around the values obtained in the Weibull model.

It should be noted that quantitative variables and their squared forms are indicated in Table 8 to show quadratic relationships between independent variables and LOS. For nominal variables, after setting one as the reference, the others are coded into dummy variables. The first line of each multinomial variable shows the p-values for the Wald test of the hypothesis that all coefficients are fixed to be zero.

Table 8. Estimation results of Cox's and Weibull's regressions

variable	Weibull regression(P-value)	Cox regression(P-value)
Age	+0.023 (0.00)	+0.013 (0.003)
(Age) <sup>2</sup>	-0.000226 (0.00)	-0.00126 (0.015)
Gender		
Male*	0.00	0.00
female	-0.093 (0.00)	-0.058(0.00)
Education level		
Primary*	0.00	0.00
High educated	-0.078 (0.60)	-0.009(0.00)
Economic status		
Income	-0.00165 (0.73)	-0.0135(0.51)
(Income) <sup>2</sup>	0.0066 (0.67)	-0.001(0.48)
Travel purpose**		
Leisure*	0.00	0.00
VFR	0.11(0.00)	0.29(0.00)
Business	-0.36(0.00)	0.008(0.00)
Medical	0.083(0.003)	0.046(0.00)
Other	0.022(0.00)	0.033(0.00)
Frequency of traveling		
(frequency of traveling) <sup>2</sup>	-0.10(0.00)	-0.23(0.00)
First visit	0.004(0.00)	0.012(0.00)
First visit		
No*	0.00	0.00
Yes	-0.22(0.001)	-0.29(0.00)
Distance		
less than 300km*	0.00	0.00

300-800 km	+0.011(0.00)	0.006(0.00)
800-1300 km	+0.18(0.001)	0.013(0.00)
More than 1300 Km	+0.27(0.00)	0.17(0.00)
Group size		
group size	-0.019(0.87)	0.001(0.72)
(group size) <sup>2</sup>	-0.13(0.63)	-0.01(0.76)
Accommodation		
free dwelling*	0.00	0.00
paid accommodation		
high price hotels	-0.37(0.00)	-0.201(0.001)
low price hotels/app	-0.21(0.00)	-0.09(0.00)
daily spending		
daily spending	-0.21(0.00)	-0.08(0.00)
(daily spending) <sup>2</sup>	+0.01(0.72)	-0.03(0.62)
Number of visited attractions		
Number of visited attractions	+0.32(0.00)	0.09(0.00)
Overall image of		
Tabriz		
Tabriz	0.00	0.00
Positive*		
Positive*	-0.47(0.00)	-0.29(0.00)
Negative		
<b>Destination image**</b>		
Destination image**	0.00	0.00
cultural destination*		
cultural destination*	+0.201(0.00)	0.1419(0.00)
medical destination		
medical destination	-0.01(0.00)	-0.13(0.00)
touristic activities		
Other dummy		
Other dummy		
variables**	-0.43(0.00)	-0.27(0.00)
Islamic regulations		
Islamic regulations	-0.39(0.00)	-0.19(0.00)
Political turmoil		

\* indicates the reference category in a group of dummy variables



#### 4. Results and Conclusion

In line with our a priori expectations and the previous literature (Aguilar & Díaz, 2019; Alen et al., 2014; Barros & Machado, 2010; De Oliveira Santos et al., 2015; Gokovali et al., 2007; Martínez-García & Raya, 2008; Yang et al., 2011), the econometric analysis indicates that LOS is predicted by demographic variables.

The results suggest that age has a non-linear effect on tourists' LOS. Based on the existing coefficient, tourists' LOS in Tabriz follows a significant concave function of their age. LOS increases alongside age until age 51 ( $-b/2a = 0.023 / (2 * 0.000226) = 50.88$ ), at which point LOS decreases as age rises. This relationship may stem from the higher purchasing power of older tourists; this is in line with the macroeconomic income-consumption theory, which asserts that wealth, and, in turn, expenditure, increase alongside age and then it has a descending trend which is approved by the results of regression for this theory about tourism (Fleischer & Pizam, 2002; Salmasi et al., 2012). According to Fleischer & Pizam (2002), the decrease in income after retirement and the deterioration of health after age 65+ likely causes a decline in LOS.

Our results indicate that male tourists generally spent more time in Tabriz—females stayed, on average, 8.9% ( $1 - \exp(-0.093)$ ) shorter than males.<sup>1</sup> This is in line with the results of several previous studies (Barros & Machado, 2010; Menezes & Moniz, 2013; Peypoch et al., 2012; Rodríguez et al., 2018). One reason for this outcome may be the strict Islamic dress code, which mandates a hijab for female tourists, and several other challenges and restrictions.

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<sup>1</sup> All analytical calculations of the effects of non-continuous covariates were considered discrete differences instead of derivatives. In the case of dichotomous covariates, for instance, the discrete effect is calculated as  $1 - T(x=1) / T(x=0) = 1 - \exp(\beta \times 1) / \exp(\beta \times 0) = 1 - \exp(\beta)$ , where  $T$  is the expected survival time and  $\beta$  is the coefficient).

The income variable was expected, based on primary assumptions and the extant literature, to significantly influence tourists' LOS. In general, according to basic economic theory, tourism is a normal product with a positive income elasticity of demand; in other words, higher income leads to lengthier stays (Barros & Machado, 2010; Ferrer-Rosell et al., 2014; Gokovali et al., 2007; Salmasi et al., 2012). This argument that income always has positive effects on LOS, however, is not universally valid. Another strand of research suggests that a higher income actually results in shorter stays (Blaine, Mohammad, & Var, 1993; Mak & Nishimura, 1979). However, in this study, both the squared and non-squared forms of income were found to be non-significant. The results show Tabriz tourism as a normal necessity commodity. This result is in line with those of De Oliveira Santos et al. (2015) and Rodríguez et al. (2018). One can point to travel purpose to justify this result, meaning that, as most participants traveled for non-leisure purposes (e.g. VFR and medical), it constitutes a necessary commodity.

The relationship between level of education and LOS was not found to be statistically significant, which is in line with Gokovali et al. (2007).

The results indicate that there is a significant relationship between trip attributes and tourists' LOS. In terms of motive, travel purpose was found to be a significant determinant of tourists' LOS ( $p < 0.01$ ). The results indicate that the trips taken to Tabriz for VFR lasted 11.6% ( $1 - T(\text{purpose}=\text{VFR}) / T(\text{purpose}=\text{leisure}) = 1 - \exp(0.11) = -0.116$ ), longer than leisure trips. Type of accommodation used may effect on longer duration of such trips. Those traveling for VFR reason often spend at least a night at a family member's or friend's house, which would save them money and, in turn, allow for a longer trip. These results are in line with previous findings (e.g. Alén et al., 2014; De Oliveira Santos et al., 2015; Wang et al., 2012), though they contrast with Hellstrom (2006) and Menezes et al. (2008). Additionally, the results indicate that medical-

purpose trips tended to have medium LOS while business tourists stayed for the least amount of time—roughly 37% less than VFR tourists.

The second trip attribute variable, frequency of traveling to Tabriz, was found to have a negative effect on tourists' LOS and increase the destination-leaving risk by about 9.9%. Based on the cardinal utility theory, we conclude that visiting Tabriz is a composite commodity; frequent use reduces its utility and, thus, leads to a decrease in demand. This is in line with the findings of Paul & Rimmawi (1992) and De Oliveira Santos et al. (2015). However, this outcome is in contrast with the findings of several researchers (Alegre et al., 2011; Alegre & Pou, 2006; Barros, & Machado, 2010; Gokovali et al., 2007; Jacobsen et al., 2018; Thrane & Farstad 2012; Yang et al., 2011) who claimed that repeat visitors tend to stay longer. Note that, based on our results, first-time visitors stay for 19.7% shorter periods than do repeat visitors. Moreover, previous scholars, aside from De Oliveira Santos et al. (2015), have not considered the differences between first-time visitors and frequent visitors.

With respect to the distance variable, our results indicate a robust positive relationship between physical distance—meaning the distance between Tabriz and the tourists' place of origin—and LOS ( $p < 0.01$ ). Tourists from over 1000 km away, on average, stay 31% longer than the rest. This outcome is in line with most previous studies. According to (De Oliveira Santos et al., 2015; Jackman et al., 2020; Menezes et al., 2008; Paul & Rimmawi, 1992; Rodríguez et al., 2018; Wang et al., 2012; Yang et al., 2011), tourists who live far away from their destination tend to stay longer to make up for the higher overall travel cost and time; in other words, they spread the journey's fixed costs over a longer period). Moreover, this result is in accordance with the first law of geography that “everything is related to everything else, but near things are more related than distant things” (Tobler, 1970). In the context of tourism, this law generally

refers to the negative impact of distance (McKercher, Chan, & Lam, 2008)—the association between two locations becomes weaker as the distance between them grows (Jackman et al., 2020).

Based on the results, we have confirmed that cost has a negative effect on LOS. This is in line with the findings of earlier works (Alegre & Pou, 2006; Alegre et al., 2011; Hellstrom, 2006; Peypoch et al., 2012; Thrane & Farstad, 2012). The depreciation of Iran's national currency is associated with an increase in the purchasing power of international tourists. Therefore, this depreciation has made it easier for Iran to attract international tourists and increase their LOS. Moreover, the results indicate that an increase in the number of attractions visited leads to a statistically significant increase in LOS. This finding is in line with several previous empirical studies (Adongo et al., 2017; Ferrer-Rosell et al., 2014; Rodríguez et al., 2018). As Botti, Peypoch, & Solonandrasana (2008) claim, tourists formulate their expectations by ranking a destination's attractions and potential activities before making decisions. For each attraction and activity, they evaluate the time they wish to spend on it.

Shorter LOS in Tabriz is associated with negative images held by tourists. Those with a negative image of Tabriz are expected to stay for 37.5%,  $(1 - T(\text{Positive image}) / T(\text{negative image})) = 1 - \exp(-0.47) = 0.375$ , less time than those with a positive image. This is likely because tourism products are intangible and potential tourists, or at least first-time visitors, cannot directly experience them; their decisions and behaviors are based on perception rather than objective reality (Jacobsen et al., 2018; Machado, 2010; Menezes & Moniz, 2013). Additionally, tourists who choose Tabriz for its affordable and high-quality healthcare services generally stay the longest—22% longer than those who visit for historical reasons. Tourists who choose Tabriz for its touristic activities tend to experience the shortest stays.

Results indicate that Islamic regulations and political turmoil have a negative and significant effect on tourists' LOS ( $p < 0.01$ ). A negative sign means that as the value of a variable increases, the survival of tourists' duration decreases. More precisely, tourists who consider "Islamic regulations" as limitations and "political turmoil" as an important risk tend to take shorter journeys. Evidently, these variables can hinder long stays in Tabriz. The results indicate that female tourists do not stay as long as male tourists, likely due to religious restrictions and feelings of insecurity in conservative Islamic destinations (Brown & Osman, 2017). Considering the positive effects of tourism on economic development, authorities should take substantive steps to reduce religious restrictions—at least for tourists—and educate locals on this matter so that tourism can thrive in Islamic destinations.

## **5. Policy Implications and Limitation**

The results obtained from this analysis allow us to accept the majority of the proposed hypotheses. The general conclusion is that middle-aged men who traveled a long distance generally stay the longest in Tabriz. Moreover, LOS in Tabriz is positively associated with medical and VFR motivations, positive destination images, free/cheap dwellings, and tourist attraction visits. Additionally, this study has confirmed that travelers who consider Islamic regulations and political turmoil as significant restrictions generally stayed for less time than those who regard them as unimportant.

These findings show that policymakers and those who are invested in the tourism industry must develop efficient marketing strategies to increase LOS and attract the market segments that are more likely to stay for long periods of time. They must consider the impact of influential factors on international tourists' LOS; while it is not possible to control all of the explanatory variables

of LOS in a destination, it is possible to concentrate on several of the identified factors (Peypoch et al., 2012).

This study revealed that a primary goal of government should be to maintain political stability, as political turbulence tends to reduce LOS. Additionally, instability fosters a negative image of the country in tourists' minds (Butler & Suntikul, 2017; Seddighi et al., 2001). Authorities should conduct recovery marketing, and advertising efforts should be integrated with crisis-management activities. As suggested by Sonmez and Graefe (1998), airlines should conduct promotional campaigns and generous incentive schemes, such as 2-for-1 ticket offers, free companion tickets, and free car rentals. Furthermore, hotels can advertise significant price cuts for long-term guests. Authorities in tumultuous areas should issue regular reports on the level of security and assist with travel plans in order to reassure potential tourists (Issa, 2006). The more sensitive potential tourists are to political instability, the more aggressive the marketing and promotional strategies of a tourist destination should (Seddighi et al., 2001). Furthermore, governments need to maintain stability and security and portray themselves through the media in a way that is comforting to tourists.

Importantly, the results indicate that Islamic regulations have a negative effect on LOS, particularly for female tourists; such religious restrictions can be serious barriers to attract new tourists (Zamani- Farahani & Henderson, 2010). Although cultural changes need long-term planning, considering the positive effects of tourism on economic development, authorities must swiftly take substantive steps to reduce religious restrictions, at least for tourists. one of the programs in the field of culture is through educational programs. Local and national media presentations can support appropriate interactions with tourists. So, they could take advantage of tourism opportunities in Islamic destinations, like Tabriz.

Medical tourism appears to be a good opportunity for Tabriz's tourism industry. Medical trips tend to involve long stays, so special attention should be paid to the needs of these tourists. This outcome is particularly valuable for authorities and marketers in Tabriz, as they can shift their priorities toward medical and health tourism to increase LOS and enhance the economic benefits of tourism.

In consideration of extant studies that concluded cost benefit is one of the initial factors which encourages medical tourists to travel abroad for treatment (Christine, 2007; Momeni, Janati, Imani, & Khodayari-Zarnaq, 2018). The depreciation of Iran's currency and its resultant tourism price competitiveness constitutes an opportunity for the Iranian government to establish a promotional strategy that depicts Tabriz as a destination for high-quality but affordable medical tourism. Therefore, the low prices for surgical operations is a major driver of medical tourism in the city, and the government should take advantage of that. Importantly, the maintenance and enhancement of medical programs should be a main priority of the Tabriz public sector (Momeni et al., 2018). Moreover, another marketing strategy is the establishment of agents of companies for medical tourism in cities of neighboring countries (Momeni et al., 2018) and lowering waiting times (Yu & Ko, 2012). For example, in Thailand, medical tourism facilities have contracts with airlines to offer reduced ticket rates designed for foreign patients requiring follow-up medical trip and lure in medical tourists (Buzinde & Yarnal, 2012).

We also found that the number of tourist attractions has a positive impact on LOS and a negative impact on the risk of leaving the destination. In other words, the more attractions a tourist visits, the longer they stay. According to Botti et al. (2008), LOS is one of the questions that is generally decided during the planning phase, when tourists are deciding what they want to do. Therefore, it is necessary for DMOs to create strategies to introduce and promote natural,

cultural, and historical attractions. Additionally, they could increase tourists' LOS by developing new attractions and activities, such as man-made attractions, festivals or events (Alén et al., 2014; Ferrer-Rosell et al., 2014; Rodríguez et al., 2018), that would increase the amount of time necessary for tourists to see everything they want to see. Importantly, Yap and Saha (2013) have found that while terrorism and political unrest are decisive factors in tourism demand, the negative effect is significantly smaller in countries with historical and natural attractions. Tabriz fits into this category, as it is an attractive tourist destination that is home to both tangible and intangible heritage assets (Gannon et al., 2020). The city must reevaluate its existing policies and design suitable strategies to introduce, promote, and advertise its historical and cultural attractiveness.

In summary, uncovering the determinants of LOS is critical to the design of marketing policies that promote longer stays and, in turn, result in higher revenue. From a marketing perspective, these findings can be used to develop successful marketing strategies that target the tourist groups that are most likely to stay for long periods of time. They also allow for destinations to cater to the needs and desires of these high-LOS tourists. As already stated, the results of this study indicate that theocratic rule and political instability seriously hinder tourists' LOS lengthier stays. However, since this is a novel finding, more research is necessary to confirm it. One interesting direction for future research would be to develop a detailed analysis of the effects of these elements on tourists' LOS. It would be beneficial to focus on other Islamic and politically unstable destinations to determine whether the effects of the analyzed variables on the LOS vary by destination. Another limitation of this study is the use of the following statement " Islamic laws and regulations/ political situation negatively affect my trip's LOS" in the questionnaire. The reason is that this statement could be suggestive and leading due to the



sensitive context of this study (i.e., religion and political). Therefore, it is imperative for future studies to take the sensitivity of the subject into consideration when using such statements. Importantly, since our study only considered one destination, we could not claim any causal relationship between LOS and destination characteristics. In order to establish causality, an experimental design that considers multiple destinations would be optimal. Nevertheless, it is possible to partially investigate the relationship mentioned above by surveying multiple destinations with different attributes (e.g. different number of attractions, different destination's image) and comparing the LOS among these destinations. Finally, future work could also directly expand on this study. For example, one could evaluate whether a tourist's religion influences their LOS in Islamic destinations.

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Appendix

1	<p><b>How old are you?</b></p> <p>Age -----</p>
2	<p><b>What is your gender?</b></p> <p>Male</p> <p>Female</p>
3	<p><b>What is your level of formal education?</b></p> <p>Elementary</p> <p>high educated</p>
4	<p><b>What is your monthly income?</b></p> <p>----- US dollar</p>
5	<p><b>What was the MAIN reason of this trip to Tabriz?</b></p> <p>Leisure</p> <p>Visit friends and relatives</p> <p>Business or work</p> <p>Health reasons</p> <p>Others: _____</p>
6	<p><b>Is this your first trip to Tabriz?</b></p> <p>Yes</p> <p>No</p>
7	<p><b>BEFORE THIS TRIP, how many times have you visited?_____</b></p>



8	<p><b>How far is your travel origin to destination(Tabriz)?</b></p> <p>less than 300 Km</p> <p>300-800 km</p> <p>800-1300 km</p> <p>More than 1300 Km</p>
9	<p><b>INCLUDING YOURSELF, how many people came up with you in this trip?</b></p> <p>----- people</p>
10	<p><b>What main kind of accommodation was used in the city you spent most time?</b></p> <p>free dwelling</p> <p>House of friends and relatives</p> <p>Own house / apartment</p> <p>paid accommodation</p> <p>high price hotels</p> <p>low price hotels/app</p>
11	<p><b>Specify the amount spent on this trip</b></p> <p>----- US Dollar</p>
12	<p><b>Specify the number of visited attractions in Tabriz?</b> ----- attractions</p>
13	<p><b>Indicate your Overall image of Tabriz?</b></p> <p>Positive</p> <p>Negative</p>
14	<p><b>You know Tabriz as:</b></p> <p>a Cultural destination</p> <p>a medical destination</p> <p>a leisure and touristic destination</p>

15	<p><b>Tabriz's political situations negatively effect on my trip's length of stay</b></p> <p>Strongly agree <span style="float: right;">strongly disagree</span></p> <table border="1" style="width: 100%; height: 30px;"> <tr> <td style="width: 20%;"></td> <td style="width: 20%;"></td> <td style="width: 20%;"></td> <td style="width: 20%;"></td> <td style="width: 20%;"></td> </tr> </table>					
16	<p><b>Islamic laws and regulation negatively effect on my trip's length of stay</b></p> <p>Strongly agree <span style="float: right;">strongly disagree</span></p> <table border="1" style="width: 100%; height: 30px;"> <tr> <td style="width: 20%;"></td> <td style="width: 20%;"></td> <td style="width: 20%;"></td> <td style="width: 20%;"></td> <td style="width: 20%;"></td> </tr> </table>					
17	<p><b>How many nights have you spent in Tabriz for this trip?</b></p> <p>Overnights: -----</p>					

## **Chapter 3: How resident perception of economic crisis influences their perception of tourism**

Residents are one of the most valuable assets for a tourist destination, so their perceptions of tourism constitute a crucial pillar for designing tourism development strategies that promote sustainable development. This paper investigates the determinants of both resident perception and willingness to support tourism development. The proposed model, which combines the social exchange theory (SET) and place attachment theory (PAT), was tested via structural equation modeling (SEM) using data collected from 409 residents of Isfahan. In addition, as the global economy has been suffering from a severe downturn, which likely influences perceptions and attitudes, this article tests the impact of resident perception of economic crisis on their perception of tourism and their willingness to support its development. Results indicate that those who perceive a higher level of economic crisis are more likely to view the impacts of tourism positively and support its development. Results also show that higher level of place attachment among residents is associated with a higher level of tourism development support. These empirical findings provide valuable theoretical contributions to researchers and have practical implications for local authorities.

**Keywords:** residents' perceptions, support for tourism development, place attachment, economic crisis, social exchange theory, place attachment theory, Iran.

## 1. Introduction

While tourism development requires resources and well-developed infrastructure, the hospitality of locals is also considered a crucial factor in the sustainable development of tourism (Rasoolimanesh, Jaafar, Kock, & Ramayah, 2015; Zamani-Farahani & Musa, 2012). A lack of community dedication to tourism development or hostile resident behavior toward tourists often leads to the tourists traveling somewhere else (Fridgen, 1991; Rasoolimanesh et al., 2015). Residents' satisfaction with tourists in their living area is a significant factor in the decision-making process of managers, researchers, and tourism planners because the success of any development depends on local community's active support (Almeida-Garcia, Pelaez-Fernandez, Balbuena-Vazquez, & Cortes-Macias, 2016; Lee & Jan, 2019), as dissatisfaction results in a decrease in or elimination of tourism in the host community (Diedrich & García-Budas, 2009; Gannon, Rasoolinaesh, & Taheri, 2020; Sirakaya, Teye, & Somez, 2002). Furthermore, researchers believe that sustainable tourism development is impossible without the local community's support (Lee & Jan, 2019; Nunkoo, Smith, & Ramkissoon, 2013). As a result, recognizing residents' perception of tourism and understanding the foundation of this perception is considered vital (Sharpley, 2014).

Residents perception of tourism has become a focal issue in tourism research and one of "the most systematic and well-studied areas of tourism" (Gannon et al., 2020; McGehee & Andereck, 2004; Wu & Chen, 2015). This topic has garnered interest recently due to the increasing evidence of negative impacts of tourism development on locals (Sinclair-Maragh, Gursoy, & Vieregge, 2015). A close look at the literature on resident perception reveals a number of gaps and shortcomings. First, the majority of the studies on this topic have been conducted in developed countries (North America and the United Kingdom being the most

frequent (Nunkoo & Gursoy, 2012; Rasoolimanesh, Roldán, Jaafar, & Ramayah, 2016; Sharpley, 2014). Few studies have focused on the developing world (Rasoolimanesh et al., 2016; Strzelecka, Boley, & Woosnam, 2017; Strzelecka, Boley, & Strzelecka, 2016). This disparity has prompted calls for more studies in tourist destinations throughout the developing world to analyze different antecedents of resident attitudes (Gannon et al., 2020; Nunkoo et al., 2013; Sharpley, 2014; Vargas-Sanchez, Porrás-Bueno, & Plaza-Mejía, 2011). Moreover, despite the well-established fact that economic uncertainty influences perceptions and attitudes (Garau-Vadell, Diaz-Armas, & Gutierrez-Tano, 2014; Voon & Voon, 2012), no previous studies have investigated the effect of economic crises in host destinations on local attitudes toward tourism and their willingness to support tourism development. Recently, an economic crisis has engulfed many countries, developing ones in particular. Researchers believe that the individual decision-making process is subject to various types of economic and psychological influences (Giesen & Pieters, 2019; Thaler, 1994) and when individuals are financially strained, they change their behavior and attitudes (Graham, Chattopadhyay, & Picon, 2010; Voon & Voon, 2012). It is thus reasonable to assume that a bleak economic environment can influence residents' attitudes toward tourism and that ignoring this relationship can bias resident perceptions' evaluations in an unknown direction.

With these research gaps in mind, this study aims to breathe new air into the literature on resident perception of tourism development and explore how economic difficulty affects this perception and their willingness to support tourism development. The hypothesized relationship is examined in Isfahan, Iran. Our choice of Isfahan as a case study was motivated by the study from Rasoolimanesh et al. (2016) that called for more emphasis on developing destinations; it also pairs well with our hypothesis. The sanctions imposed on Iran by the United States have

dramatically hurt Iran's economy. In particular, its oil-oriented economy was affected by sanctions against crude oil exports (Dudlák, 2018). The austerity measures imposed by the Iranian government affected significantly the life of the vast majority of Iranians. Iran is struggling with extremely high unemployment, job insecurity, loss of income, loss of wealth, currency depreciation, uncertainty, and pessimism about the future (Dudlák, 2018).

Therefore, the main purpose of this study is (1) to characterize the residents' perception of the positive and negative impacts of tourism, and to identify the factors that indicate their enthusiasm for tourism development in Isfahan, Iran. Examining the local perception of tourism facilitates a better understanding of attitudes, perceptions and values of the host residents for researchers, organizers and public bodies. (2) to examine how a destination's economic difficulty affects residents' willingness to support tourism development and how it moderates the relationships between residents' perceived impacts of tourism and their support for tourism development. This study may be the first one to examine the moderation effect of the destination's economic environment in modeling locals' support for tourism. It also provides new insights for marketers and managers to formulate strategies that will encourage residents to support tourism development in their living area.

In most of the oil-oriented economy (like Iran), most of the provinces depend on products for their economic development; However, Isfahan has set a different tone and has considered tourism as one of the most vital industrial activities, its unique historical and cultural attractions can introduce this country as one of the most famous cultural and historical tourist destinations in the world. Isfahan is located in the center of Iran, and is home to many tangible and intangible heritage assets. The United Nations Educational, Scientific, and Cultural Organization (UNESCO) calls Isfahan a top Iranian tourist destination; the city possesses 22,000 historical

sites and monuments, 850 of which are nationally recorded and four of which are considered world heritage sites by UNESCO. This destination provides an excellent opportunity to explore the effects of economic struggle on residents' perception of tourism and their willingness to support its development. This study may be the first one to incorporate the effect of local economic crisis in modeling local support for tourism development. It provides new insights for marketers and managers to formulate strategies that will encourage residents to support tourism development in their area.

In fact, Isfahan can attract the attention of people to its rich tourism resources and especially to its cultural and historical tourism potentials. For this purpose, this study aims to examine residents' perceptions toward tourism impacts in Isfahan and factors predicting residents' support for tourism development according to the notion of social exchange theory.

### **Definition of Key Terms**

- **Sustainable tourism:** The development guidelines and management practices of sustainable tourism are pertinent to any form of tourism, such as mass tourism or niche tourism segments for any destination. The environmental, economic and sociocultural dimensions of tourism development form the principles of sustainability. It is necessary to establish an appropriate balance among these three aspects to ensure the long-term sustainability of tourism (UNWTO, 2005).
- **Tourism impact:** Tourism can be considered as a double-edged sword and its positive and negative impacts are an expected part of tourism development (McKercher, 1993) which arise from the interactions between host communities, tourists and the natural environment

(Lindberg, Andersson & Dellaert, 2001; Mathieson & Wall, 1982). Tourism consequences on destinations are often gauged by their social, economic and environmental implications (Mathieson & Wall, 1982)

- **Local community:** A member of community in this study is a person who has lived in Isfahan for more than one consecutive year.
- **Sustainable tourism:** according to UNEP & UNWTO (2005, p.11), sustainable tourism should: “respect the socio-cultural authenticity of host communities, conserve their built and living cultural heritage and traditional values, and contribute to inter-cultural understanding and tolerance.”

### **Outline of the Study**

The course of work is divided into five sections. The first section is an introductory chapter. It presents the topic of study, the research aims, and a general depiction of how the research question was addressed and the study mission was tackled. The second section reviews residents' perception and related theories, explores the gap in previous studies, and finally develops hypotheses to propose a conceptual framework for the empirical research. The author then explains the study method, the research plan, and related methods and techniques used for analyzing data in the next section. Finally, section five provides a discussion on the implications for tourism planning and development and on directions for future research.



## **2. Theoretical Background**

### **2.1. Resident Perception of Tourism Impacts on Host Community**

The perception that residents have of tourism impacts (TI) has been shown to predict their attitudes toward tourism. Local perception of TI has been extensively investigated since the 1970s. The majority of studies have focused on whether residents recognize tourism as a “blessing or blight” (Young, 1973). Earlier work (Madrigal, 1993; Pizam, 1978) evaluated only the perception of tourism’s economic impacts. Several researchers, however, believed that the impacts of tourism development are not limited to economic impacts. A three-dimensional model or triple-bottom-line approach focusing on economic, environmental, and socio-cultural impacts on the local community has been conducted by several scholars (Choi & Sirakaya, 2005; Stylidis & Terzidou, 2014). The rationale behind this is that tourism, as does any other human activity, occurs within the context of both place and environment. In general, these studies concluded that residents’ support for tourism development is a function of their assessment of the potential economic, socio-cultural, and environmental benefits as well as the costs of tourism development. Accordingly, researchers have divided perceived TI into positive (i.e., benefits) and negative (i.e., costs) categories (Stylidis & Terzidou, 2014; Rasoolimaesh et al., 2016). They then divided them further into economic, socio-cultural, and environmental impacts (Choi & Sirakaya, 2005; Gursoy, Ouyang, Nunkoo, & Wei, 2018; Stylidis & Terzidou, 2014; Rasoolimaesh et al., 2016).

In addition, according to the studies conducted in the field of tourism impacts, host communities’ attitudes toward tourism development in their society are influenced by their perceived effects of tourism (e.g., Akis et al., 1996; Almeida-Garcia et al., 2016; Andereck & Nyaupane, 2011; Diedrich & García, 2009; Eusébio et al., 2018; Fredline & Faulkner, 2000;

Gursoy & Rutherford, 2004; Lee & Jan, 2019; Nunkoo & Gursoy, 2012; Rasoolimanesh et al., 2015; Sharpley, 2009; Sinclair-Maragh et al., 2015; Williams & Lawson, 2001; Xu & Fox, 2014; Zamani-Farahani & Musa, 2012). In almost all studies, researchers recognized three main categories of tourism impacts; economics, the environmental, and the socio-cultural (Eusébio et al., 2018; Lee & Jan, 2019; Sharpley, 2014). Researchers believed that tourism-related perceived impacts could cause the local population to form and perpetuate positive/negative attitudes towards tourism development in their living area.

### **Economic Impacts of Tourism**

Since 1960, tourism impacts on host destination has become a central issue in tourism research. The majority of the scholars in this stream of research focused on tourism economic impacts rather than other aspects (i.e., environmental and sociocultural impacts). Moreover, earlier works (Ap, 1992; Pizam, 1978) on tourism economic impacts have been focused on the positive impacts, corresponding with the period of time during which tourism development was regarded with optimism. In the 70s, however, the occurrence of deleterious impacts in many destinations resulted in a shift in attention toward the more negative aspects of tourism (Ap, 1992).

Positive types of economic impacts include increased family incomes, improved standards of living, job creation and employment opportunities, increased the income of local businesses and diversified the local economy in the host community (Eusébio et al., 2018; Ko & Stewart, 2002; Rasoolimanesh et al., 2015). On the negative side, tourism can increase the cost of living, create unstable employment, increase low-skilled and low-paying employment, increasing the cost of land, housing, and other products (Rasoolimanesh et al., 2015).

## **Environmental Impacts of Tourism**

An indispensable element of tourism which acts as a primary attraction is the quality of the environment (Inskip, 1991; Holden, 2000). Depending on the type of planning and management, tourism may have a positive, negative or negligible consequences on the environment. The positive environmental impacts may occur in destinations that are managed according to sustainable development principles, and happen as a result of incentivized activities that protect the environment, landscape and wildlife. These constructive impacts are able to promote the conservation of natural and cultural monuments and the establishment of protected areas, as well as generating the income necessary for their maintenance. It has been claimed that tourism development can enhance the residents' consciousness and valuation of environmental preservation.

After World War II, and the emergence of mass tourism in the 1950s, tourists' destinations are subject to significant adverse environmental impacts (Mason, 2003). Since tourism usually develops in vulnerable environments such as mountains, marine areas, islands, and historical sites, visitors' activities can potentially have a damaging effect on an environment (Andriotis, 2000). The negative tourism impacts on the environment include traffic congestion and overcrowding, climate impact, increased pollution, environmental damage and degradation, congestion in the use of public infrastructures, and remodeling landscapes (Eusébio et al., 2018; Rasoolimanesh et al., 2015; Sirakaya et al., 2002).

## **Sociocultural Impacts of Tourism**

Mathieson & Wall (1982), in their discussion of the host perceptions of socio-cultural effects of tourism, proposed that 'the social and cultural impacts of tourism are the ways in which

tourism is contributing to changes in value systems, individual behavior, family relationships, collective lifestyles, safety levels, moral conduct, creative expressions, traditional ceremonies and society organizations (p 133). The positive and negative sociocultural impacts of tourism development on local communities have been identified by several studies (e.g. Almeida-Garcia et al., 2016; Andereck & Nyaupane, 2011; Eusébio et al., 2018; Fredline & Faulkner, 2000; Gursoy & Rutherford, 2004; Lee & Jan, 2019; Rasoolimanesh et al., 2015; Sharpley, 2009; Sinclair-Maragh et al., 2015; Xu & Fox, 2014; Zamani-Farahani & Musa, 2012).

Tourism can potentially improve the revival of local arts, handicrafts, and cultural activities, increase the locals' interest in the preservation of resources, preserve residents' identity and cultural pride, and improve their awareness of the value and importance of their heritage. However, residents also identified a number of negative sociocultural impacts associated with tourism development, including increased crime, prostitution, drug and alcohol addiction, changes in traditional values, and makes host-tourist interactions more commercialized. Tourism also creates social instability and dilutes sociocultural values.

In summary, previous studies have concluded that host residents are capable of perceiving both positive and negative impacts as a consequence of tourism development in their communities, and that they perceive these impacts from economic, sociocultural, and environmental perspectives.

Therefore, community members face a critical dilemma in supporting tourism development in their community. While the perceived positive impacts of tourism development might encourage residents to support tourism development, the perceived negative impacts can potentially result in the loss of that support. Table 1 shows TI that can be used to assess resident perception of tourism.

Table 1. Tourism Perceived Impacts

	Positive impacts	Negative impacts
<b>Economic</b>	Recovering of poor regions(1), Improving the standard of living (1, 3, 4, 5, 9 ), Increasing employment opportunities (1, 3, 5, 6, 7, 8, 9, 10, 11, 15, 16, 17), Increasing the income of local businesses (3, 9, 11, 13, 22), Increase of quality of life (11, 12, 13)	Increasing unstable employment (2, 3, 8,17), Increasing cost of land and housing (10, 14, 15, 16, 18, 19), Increasing the cost of living (1, 10, 14, 15, 16, 17, 19, 20, 22), Generating low-paid jobs (2, 8, 17)
<b>Environmental</b>	Improving public facilities (1, 2, 14, 15, 16, 8, 22), Improving in standards of living (10, 14, 15, 17, 18, 19, 20, 22), Increasing leisure opportunities for residents (21), Increasing locals' awareness and appreciation of environmental preservation (15, 16)	Spoiling historic sites (8, 15, 16, 10, 18), Traffic congestion (1, 18, 19), Overcrowding (8, 10, 15, 16, 20, 22), Environmental damage and degradation (1, 3, 18,19, 20 ), Increases in waste and pollution (1, 3, 14, 15, 18,19, 20 ), Congestion in the use of public infrastructures (8, 10, 16, 22 )
<b>Socio-cultural</b>	Improving revival of local handicrafts & cultural activities (8, 20 ), Increasing in the locals' interest in the preservation of resources (8, 20), Improving cultural interaction between residents and tourists (1, 8, 16, 20, 22), Preserving residents' identity and the cultural pride (1, 3, 5, 15, 81, 20, 22)	Drug and alcohol addiction (8, 10, 11, 17, 22), Increasing prostitution and crime (1, 10, 14, 15, 16, 22, 25, 26, 27, 28), Commodification of local cultures (23, 24), Loss of authenticity (23, 24), Dilution of traditional values (1, 8, 15, 20), Trivialization of culture

**1:** Williams & Lawson (2001); **2:** McCool & Martin, (1994); **3:** Andereck, Valentine, Knopf, & Vogt (2005); **4:** Oviedo, Castellanos, & Martin (2008); **5:** Yoon, Gursoy, & Chen, (2001); **6:** Andereck & Nyaupane, (2011); **7:** Bujosa & Rosello, (2005); **8:** Sheldon & Abenoja (2001);**9:** Garau-Vadell et al.,(2014); 10: Belisle & Hoy(1980); **11:** Diedrich & Garcia-Buades, (2009); **12:** Gursoy & Rutherford, (2004); **13:** McDowall & Choi, (2010); **14:** Wan ko & Stewart (2002); **15:** Sanchez, Meji & Bueno, (2009); **16:** Sirakaya, Teye & Somez, (2002); **17:** Tosun (2002); **18:** Ritchie & Inkari (2006); **19:** Tovar & Lockwood (2008); **20:** McGehee & Andereck (2004); **21:** Perdue, Long, & Allen, (1990); **22:** Liu & Var (1986); **23:** Bonard & Felli, (2008); **24:** Fagnoni (2013); **25:** Cohen, (1988); **26:** Lindberg & Johnson (1997); **27:** Bonard & Felli (2008); **28:** Látková & Vogt (2012).

## **2.2. Factors Influencing Resident Perception of Tourism Impacts (TI)**

Factors influencing resident perception of tourism impacts (TI) and its development have received extensive attention from academics (Xu & Fox, 2014). Previous studies have been heterogeneous in scope (i.e., different geographic areas and tourist segments) and in their variables, theories, and methodology. For example, there have been papers analyzing resident perceived TI in various destinations, such as Arizona, USA (Andereck et al., 2005; Andereck & Nyaupane, 2011), South Carolina, USA (Draper, Woosnam, & Norman, 2009), Virginia, USA (Boley, McGehee, Perdue, & Long, 2014), Gold Coast, Australia (Fredline & Faulkner, 2000), Wales, UK (Palmer, Koenig-Lewis, & Jones, 2013), and Choczewo, Poland (Strzelecka et al., 2017). In addition, previous studies have differed in their conceptual frameworks, e.g., institutional theory (Sinclair-Maragh et al., 2015), quality of life (Andereck & Nyaupane, 2011), model of attitude-behavior (Carmichael, 2000), theory of reasoned action (Bestard & Nadal, 2007; Lepp, 2007), social representations theory (Andriotis & Vaughan, 2003), Butler's tourism area life cycle theory (Akis, Peristianis, & Warner, 1996; Diedrich & Garcia-Buades, 2009; Lee & Jan, 2019; Lee, Kim, & Kang, 2003), Doxey's irridex model (Diedrich & Garcia-Buades, 2009; Mason & Cheyne, 2000), place attachment theory (Eusébio, Vieira & Lima, 2018; Gu & Ryan, 2008), Weber's theory of rationality and empowerment (Boley et al., 2014), stakeholder theory (Nicholas, Thapa, & Ko, 2009), and emotional solidarity (Woosnam, 2012). Many frameworks have been employed to explain residents' attitudes toward tourism, but social exchange theory (SET) is most frequently used by researchers to understand this topic (Gursoy et al., 2018; Gursoy et al., 2002; Nunkoo et al., 2013; Nunkoo & Ramkissoon, 2012; Rasoolimanesh et al., 2015, Rasoolimanesh et al., 2016; Vargas-Sanchez et al., 2011; Wan Ko & Stewart, 2002). Finally, in a review of factors that directly or indirectly impact the formation

of resident attitude toward tourism, Sharpley (2014) indicated that, in terms of the choice of variables included in the analysis, the variation is substantial and we can classify these independent variables in two main categories:

- a) intrinsic variables: for instance, residents' socio-demographic profile (Almeida-Garcia et al., 2016; Fredline & Faulkner, 2000; Mason & Cheyne, 2000; Rasoolimanesh et al., 2015), their community attachment (Almeida-Garcia et al., 2016; Gursoy & Rutherford, 2004; Gursoy et al., 2002; Rasoolimanesh et al., 2015), community concern (Gursoy & Rutherford, 2004; Gursoy et al., 2002; Gursoy, Chi, & Dyer, 2010; Perdue et al., 1990), residents' empowerment (Boley et al., 2014; Strzelecka et al., 2016), distance from tourism zone (Belisle & Hoy, 1980), interaction with tourists (Andereck et al., 2005; Eusébio et al., 2018), place attachment (Eusébio et al., 2018; Gu & Ryan, 2008; Wu & Chen, 2015).
- b) extrinsic variables: for instance, level of tourism development in destination (Butler, 1980; Doxey, 1975; Gu & Ryan, 2008; Lepp, 2007; Sheldon & Abenoja, 2001; Nunkoo & Ramkissoon, 2010; Vargas-Sanchez et al., 2011), density of tourists (Bestard & Nadal, 2007; Vargas-Sanchez et al., 2011), and tourists type (Vargas-Sanchez et al., 2011).

In Table 2 we present a summary of some recent studies mentioned above, which can be considered to be representative of resident perception analysis. The table provides a brief description of these papers in terms of the geographic area of analysis, the chosen framework and methodology and the main empirical results.

Table 2. Studies on resident perception of tourism.

<b>Reference</b>	<b>Geographic area</b>	<b>Framework</b>	<b>Methodology</b>	<b>Empirical results</b>
<b>Chen (2001)</b>	Virginia, USA	n/a	Quantitative	economic and social costs/benefits, cultural enrichment, and environmental deterioration influence STD.
<b>Andriotis &amp; Vaughan (2003)</b>	Crete, Greek	SET & SRT	Quantitative	Less educated and residents reliant to tourism-related jobs are the most likely to support tourism development.
<b>Gursoy &amp; Rutherford (2004)</b>	Washington and Idaho, USA	n/a	Quantitative	CC, CA, sensitivity to environment and using tourism resources are influence on perception of TI and perceptions of benefits & costs and local economy are significant explanatory variables of their support for tourism development.
<b>McGehee &amp; Andereck (2004)</b>	Arizona, USA	SET	Quantitative	individual characteristics (except age and having lived in the community as child) did not predict attitudes toward tourism but dependence on tourism can consider as a predictor.
<b>Andriotis (2005)</b>	Crete, Greek	SET	Quantitative	tourism employment, non-reliant residents and tourism business people have higher odds to positive perceptions about tourism development



<b>Andereck, Valentine, Knopf, &amp; Vogt (2005)</b>	Arizona (state-wide), USA	SET	Quantitative	residents who received greater personal benefit from tourism and are more knowledgeable also perceived greater PI of tourism development on their community and consequently have greater support toward tourism.
<b>Bestard &amp; Nadal (2007)</b>	Balearic Islands Spain	SET & TRA	Quantitative	the level of dependence of the family's incomes on tourism and some socioeconomic characteristics of residents influence on their perception. Besides, in municipal with higher density of tourist accommodation residents are usually less prone to perceived NI of tourism and have greater tolerance.
<b>Lepp (2007)</b>	Bigodi, Uganda	TRA	Quantitative	residents have positive attitudes towards tourism. Positive attitudes result from resident's belief that tourism creates community development, improves agricultural markets, generates income, and finally, that tourism brings random good fortune.
<b>Gursoy, Chi &amp; Dyer (2010)</b>	Sunshine Coast, Australia	n/a	Quantitative	level of CC, CA, locals' environmentally sensitive, use of the tourism resource, state of the local economy, and the residents' perceptions toward TI are the important factors that affect their support for tourism development.

<b>Woosnam, (2012)</b>	Galveston, County, Texas, USA	Emotional solidarity	Quantitative	each of the three Emotional Solidarity Scale (ESS) factors (such as, welcoming nature, emotional closeness, and sympathetic understanding) significantly predicted residents' perceived impacts, their support toward tourism and contributions tourism makes to the community.
<b>Zamani-Farahani &amp; Musa, (2012)</b>	Masooleh and Sare'in, Iran	n/a	Quantitative	Islam is not against the development of tourism industry. 'Islamic Belief' and 'Islamic Practice' have negative relationships with the perceptions of socio-cultural impacts of tourism are not supported.
<b>Boley, McGehee, Perdue, &amp; Long (2014)</b>	Floyd, Botetourt, and Franklin County, Virginia	SET, WFSR, and RETS	Quantitative	Residents' perceived positive impacts, psychological empowerment and personal economic benefit having direct and positive effects on support for tourism, and perceived negative impacts has negative effect on support for tourism. In addition, psychological empowerment, social empowerment, and political empowerment have direct and positive effects on residents' perceived positive impacts of tourism, and negative effects on their perceived negative impacts.
<b>Wu &amp; Chen (2015)</b>	Macau and Singapore	n/a	Quantitative	Macau residents tended to be higher scores regarding the consequences of gambling in their

				living area (more than Singaporeans)
<b>Strzelecka, Boley, &amp; Strzelecka (2016)</b>	Choczewo, Poland	SET, WFSR, and RETS	Quantitative	psychological empowerment was the best predictor of STD, however, political empowerment and economic benefits from tourism did not predict STD.
<b>Eusébio, Vieira &amp; Lima (2018)</b>	Boa Vista Island, Cape Verde, Africa	SET, PAT, and social contact.	Quantitative	residents' attitudes are positively affected by PA, host–tourist interaction, and perceived PI; and negatively affected by perceived NI. Residents' perceived PI & NI have significant impacts on STD.
<b>Shakeela &amp; Weaver (2018)</b>	Maldives	SET, SRT	Qualitative and quantitative	in the more tourism-affiliated destination, social exchange and social representations influenced how tourism is rationalized as a 'managed evil'.

**TI:** Tourism impacts; **PI:** Positive impacts; **NI:** Negative impacts; **STD:** support tourism development; **CC:** Community concern, **CA:** Community attach; **PA:** Place attachment; **SET:** Social exchange theory; **SRT:** Social representations theory; **PAT:** Place attachment theory; **TRA:** Theory of reasoned action; **WFSR:** Weber's theory of formal and substantive rationality; **RETS:** Resident Empowerment through Tourism Scale.

In consideration of the foregoing, some variables have been extensively examined, including economic dependence on tourism, resident sociodemographic characteristics, community attachment, and host-tourist interactions. In other words, the literature offers significant empirical links between these variables and resident perception. Therefore, we do not focus on these variables despite their ties to resident perception. Some variables have received little attention in the literature, such as place attachment (Eusébio et al., 2018), community concern

(Gursoy et al., 2010; Gurosy et al., 2002), involvement (Gannon et al., 2020; Rasoolimanesh et al., 2016); hence, we focus on these variables as predictors of resident perceived tourism impacts. Moreover, despite rhetoric of economic uncertainty and crisis having an important role in perceptions and attitudes (Voon & Voon, 2012; Kayat, 2002), insufficient focus has been placed on determining its influence on residents' perceptions toward tourism and their willingness to support its development. This gap in the literature is surprising since economic crises are considered one of the most influential exogenous factors on tourism (Ritchie, Molinar, & Frechtling, 2010; Sheldon & Dwyer, 2010; Smeral, 2010).

In addition, due to the explanatory power of the social exchange theory (Hadinejad, Moyle, Scott, Kralj, & Nunkoo, 2019; Rasoolimanesh et al., 2016), it has been applied most frequently by researchers to understand the formation of residents' perception of tourism. According to the SET prediction, residents evaluate tourism's impacts and support its development if they believe the benefits of said development (i.e. positive impacts) exceed its costs (i.e., negative impacts) (Ap, 1992; Nunkoo & Ramkissoon, 2012; Sharpley, 2014; Styliadis & Terzidou, 2014). However, a recent body of literature has called this framework's explanatory power into question (Andereck et al., 2005; Boley et al., 2014; Sharpley, 2014; Strzelecka et al., 2017). Some scholars argue that SET overemphasizes the economic aspect of the relationship between residents and tourists. Latkova & Vogt (2012) assert that this issue can be addressed by integrating SET with another theory to "provide a better insight into residents' attitudes toward tourism." Therefore, several scholars endeavored to tackle this shortcoming by combining SET with different theoretical perspectives and new constructs. For instance, Ward & Berno (2011) integrated SET with threat theory; Boley et al. (2014) and Strzelecka et al. (2016) tested the resident empowerment through tourism scale alongside the combined Weber/SET theoretical

perspective; Shakeela & Weaver (2018) integrated it with social representations theory; Eusébio et al. (2018) combined it with place attachment theory. These revised frameworks for SET were the building blocks for the maturation of resident perception studies.

In view of aforementioned, this study adopts SET and extended it by incorporating two less-examined constructs, community concern and involvement, as well as place-attachment theory and residents' perceived economic crisis (PEC) to investigate residents' perceptions of tourism and their willingness to support its development.

### 2.3. Model and Hypotheses

#### Social Exchange Theory (SET)

Social Exchange Theory (SET) is one of the most dominant conceptual paradigms for understanding social behavior on an individual level and in the interaction of two parties. This theory traced back to the 1920s (e.g., Malinowski, 1922; Mauss, 1925), and influenced by anthropology (e.g., Firth, 1967; Sahlins, 1972), sociology (e.g., Blau, 1964) and social psychology (e.g., Homans, 1958; Gouldner, 1960). This theory has been widely used since being proposed and amplified. As described by Ap, this is “a general sociological theory concerned with understanding the exchange of resources between individuals or groups in an interaction situation” (1992, p.668). Emerson (1976, p. 336) summarized SET as “a two-sided, mutually contingent, and mutually rewarding process involving ‘transactions’ or simply ‘exchange’”.

As noted by Liden et al., (1997) exchange process is the “black box” of social interactions. Based on SET prediction, when people have a choice to engage in an interaction, they have

analyzed and evaluated that exchange regarding to the costs and rewards incurred as a result of that, and once they believe the benefits of an exchange outweigh its costs, they will participate in that interaction (Gursoy et al., 2002).

Ritzer (2005) asserted that the key assumptions of SET, summarized recently by Molm & Cook (1995, p.210), include the following:

“(1) Behavior is motivated by the desire to increase gain and to avoid loss (or to increase outcomes that are positively valued and to decrease outcomes that are negatively valued).

(2) Exchange relations develop in structures of mutual dependence (both parties have some reason to engage in exchange to obtain resources of value, and there would be no need to form an exchange relation).

(3) Actors engage in recurrent, mutually contingent exchanges with specific partners over time (i.e., they are not engaged in simple one-shot transactions).

(4) Valued outcomes obey the economic law of diminishing marginal utility (or the psychological principle of satiation)”.

When it comes to SET in tourism area, it is among the most influential conceptual frameworks for understanding residents’ perceptions toward tourism impacts and consequently, their support/opposition for its development in their community. It is postulated that host locals evaluate tourism impacts (economic, sociocultural, and environmental impacts) on their society and they support its development if they believe that positive impacts of tourism exceed its negative impacts (Andereck et al., 2005; Ap, 1992; Nunkoo & Ramkissoon, 2012; Sharpley, 2014; Rasoolimanesh et al., 2015; Stylidis et al., 2014).

According to logic behind SET and a number of prior studies (including Andereck et al., 2005; Boley et al., 2014; Látková & Vogt, 2012; Nunkoo & Ramkissoon, 2012; Gursoy et al., 2010) resident perceived TI, both positive and negative, influence their willingness to support tourism development (STD). Essentially, residents who perceive more positive impacts (PI) are inclined to support tourism development while residents who perceive more negative impacts (NI) are less likely to support tourism development. Therefore, the following hypotheses have been developed:

H<sub>1</sub>: A direct positive relationship exists between residents' perceived PI and their STD.

H<sub>2</sub>: A direct negative relationship exists between residents' perceived NI and their STD.

#### Community Concern

As mentioned above, early work primarily modeled resident perception of tourism as a function of perceived personal economic gain using SET. Recently, scholars have critiqued SET for overstating the importance of personal economic benefit (Boley et al., 2014; Latkova & Vogt, 2012; Gurosy et al., 2002; Woosnam, 2012). Among others, Gurosy et al. (2002) attempted to solve this shortcoming and improve the explanatory power of SET by incorporating community concern (CC) into the model. They believed that a focus on CC marked a departure from SET's original overemphasis on individual economic benefits. Based on the group gain rule, they argued that resident perception of tourism is formed not only on objective personal cost and benefit judgments, but also on their community. They concluded that people who are highly concerned about their local community are more likely to have a positive attitude toward tourism impacts (TI). This is in line with previous studies, which found concerned residents to have positive views on tourism (Andereck et al., 2005; Gursoy et al., 2018). Thus, the level of

concern residents feels about various community aspects (such as, crime, economy, culture, and tradition) is expected to impact resident perceived TI (Andereck et al., 2005; Gursoy et al., 2010; Gursoy & Rutherford, 2004). Therefore, the following hypotheses have been developed:

**H<sub>3a</sub>.** The level of CC is directly and positively associated with residents' perceived PI.

**H<sub>3b</sub>.** The level of CC is directly and negatively associated with residents' perceived NI.

### Place Attachment

The concept of place attachment (PA) can be traced back to attachment theory (Bowlby, 1969). Derived from this theory, any positive or negative association an individual has with a particular location/place is often characterized as place attachment (Hidalgo & Hernandez, 2001; Strzelecka et al., 2017). It has multiple and complex dimensions (Wang & Chen, 2015; Wu & Chen, 2015) and by using numerous approaches and scales, this intricate concept has been measured. The literature on environmental psychology primarily has concentrated on the attachment of people to places; some other researchers have proposed that PA can also include other aspects, such as family, friends, society, as well as local culture (Kyle, Graefe & Manning, 2005).

Once theories of place identity are applied to clarify attitudes of residents towards the growth of tourism, two aspects are often used to measure the attachment to place: place identity (a symbolic or affective place attachment); and place dependence (associated with the place functionality for recreational activities) (Eusébio et al., 2018; Lee, 2013). Several scholars, however, conceptualize attachment to place according to other aspects, including nature



bonding (Strzelecka et al., 2017), place social bonding and place affect (Kyle et al., 2005; Ramkissoon, Weiler, & Smith, 2013).

Referring to Hidalgo & Hernandez (2001), individuals' perceptions and attitudes may be shaped by analyzing the feelings they develop towards the places they live in. This concept, however, has not usually been analyzed as a determining factor of residents' perceptions towards tourism development (Eusébio et al., 2018; Gu & Ryan, 2008) perhaps due to its difficulty to both describe and operationalize. Similar terms to PA have also been applied as well, including community attachment (Gursoy & Rutherford, 2004; Rasoolimanesh et al., 2015), place identity (Wang & Chen, 2015), and sense of community (Van Winkle & Woosnam, 2014).

Given that, in the literature, various terms were applied to describe the association of an individual with a particular place, the conceptualization of the PA was on the basis of theories of place identity for this study. Place identity and dependence are central elements of PA in this context (Eusébio et al., 2018; Strzelecka et al., 2017). PA is affected not only by the physical elements but also the meanings, commitment, knowledge, as well as satisfaction an individual links to a particular place (Wang & Chen, 2015). Highly attached residents are, thus, expected to have a tendency to perceive tourism development more favorably than those less attached (Stylidis, 2017). In other words, residents with strong affinity to the place have higher odds for a positive attitude towards tourism development in their society (Eusébio et al., 2018; Stylidis, 2017) and consequently they will support tourism development (Eusébio et al., 2018). The following three hypotheses are suggested in line with few studies on the association between residents' PA and their perceptions of tourism effects and willingness to support tourism development.

**H<sub>4a</sub>:** Residents' PA has a direct positive impact on residents' perceived PI.

**H<sub>4b</sub>:** Residents' PA has a direct negative impact on residents' perceived NI.

**H<sub>4c</sub>:** Residents' PA positively and directly predicts their willingness to STD.

#### Economic Benefit and Involvement

At the core of the literature on resident perception of tourism, researchers argue that the more potential economic benefits (EB) stem from tourism, the more residents perceive tourism positively (e.g., McGehee & Andereck, 2004; Andereck et al., 2005; Rasoolimanesh et al., 2015; Wan Ko & Stewart, 2002; Gursoy et al., 2002). This is in line with self-interest theory, "the assumption that individuals seek to maximize their own material gains in interactions and expect others to do the same" (Baiman, 1982). However, the effect of personal EB on perceived NI is ambiguous. Some empirical evidence has concluded that there is a direct negative relationship between residents' economic gain and their perceived NI (Látková & Vogt, 2012) while some researchers have found that economic benefits are not a significant explanatory variable of residents' perceived NI (Boley et al., 2014; Gursoy et al., 2002; Wan Ko & Stewart, 2002). Therefore, the following hypothesis has been developed:

**H<sub>5a</sub>:** EB has a direct positive impact on residents' perceived PI.

**H<sub>5b</sub>:** EB has a direct negative impact on residents' perceived NI.

Murphy (1985) provided evidence that tourism may not be viewed as sustainable without resident involvement (IN) in decision-making. Community IN opens up enables residents to take part in tourism development and be social actors instead of passive subjects; they can

control activities that affect their lives (Gannon et al., 2020; Rasoolimanesh et al., 2016). Since community IN can empower residents and inspire them to align more closely with the local region, it can lead to a more positive perceptions of tourism development (Andereck & Nyaupane, 2011; Boley et al., 2014; Gannon et al., 2020; Latkova & Vogt, 2012; Rasoolimanesh et al., 2016). The degree to which community IN inspires support and perceived control over the process of tourism development is emphasized in this paper (Zuo, Gursoy, & Wall, 2017). Residents' IN also fosters awareness of the benefits for locals at both the individual and community level (Richard & Hall, 2002; Boley et al., 2014). Tosun (2002) noted that residents participating in the tourism development decision-making process have a chance to increase the benefits and reduce the costs associated with tourism development by influencing the process early on. Therefore, the following hypothesis has been developed:

**H<sub>6a</sub>:** IN has a direct positive impact on residents' perceived PI.

**H<sub>6b</sub>:** IN has a direct negative impact on residents' perceived NI.

### Perceived Economic Crisis

Because of the rise of unemployment, financial issues, investment failures occurring during economic crisis, the condition of local economy plays a determinative role in individual's lives. Researches, in different disciplines, have underlined that economic crisis exerts a frictional effect on public health (Levy & Sidel, 2009), consumption rate (Hurd & Rohwedder, 2010; Voon & Voon, 2012), individual's behavior (Graham et al., 2010; Voon & Voon, 2012) and hotel occupancy rate (Song, Lin, Witt, & Zhang, 2011).

Nonetheless, by objective evaluation of economic conditions through GDP and data available on unemployment rate, the multiple phenomenon of economic crisis cannot be understood precisely (Hayo, 2005). For instance, Campbell & Converse (1972) verify that even though betterment of national income in the US, people did not perceive a progress in their socioeconomic situation. Therefore, by analyzing individuals' perception of economic life, the economic crisis can be defined more precisely. As suggested by Gabel & Whitten (1997), subjective economy rather than the objective one affects residents' attitudes. Therefore, in the case of Isfahan, Iran, which has one of the most fragile economic condition in the world, we measure residents' perceived economic crisis (PEC).

Conducting research on residents' perception of local economy in tourism destinations is crucial to the tourism development in destinations, especially the Middle East, due to the financial limitations of these destinations. Literature shows the influence of local economy on tourism demand has been gaining increased attention (Ritchie et al., 2010; Sheldon & Dwyer, 2010; Smeral, 2010). On the other hand, it has been proven that economic instability affects individuals' attitudes and perceptions (Graham et al., 2010; Kayat, 2002; Voon & Voon, 2012), and leaves effects on people's decision making process (Thaler, 1994). However, the topic still remains intact for studying the effect of PEC on residents' perceptions of tourism and their inclination to support tourism development (STD).

In the literature there is only a short list of research studies focusing on the relationship between resident's perception of the local economic state (not necessarily during an economic crisis) and their attitudes towards tourism impacts. These studies identify diverse connections between the local economy and residents' perceptions of tourism (Gursoy et al., 2010; Nunkoo & Ramkissoon, 2010). That is, those residents who had a better understanding of the local

economy showed more concern about the positive sides of tourism development (Lepp, 2007). In the context of a struggling local economy, even residents who are economically independent of tourism also have more positive attitudes toward tourism impacts, fearing that if the tourism industry fails, ultimately it will end up affecting them negatively (Wyllie, 1998).

In relation to the perceived economic impacts, it appears that in a bleak economic environment, residents failed to understand the economic costs (i.e. negative economic impacts) of tourism development (Gursoy et al.,2002), such as, increasing cost of land and goods (Ko & Stewart, 2002). Regarding the perceived socio-cultural impacts, Gursoy & Rutherford (2004) and Gursoy et al. (2010) concluded that there is a significant negative relationship between the state of the local economy and residents' perceived tourism socio-cultural costs. In other words, that residents overlook their socio-cultural values in favor of economic values and they prioritize economic benefits over their perceived socio-cultural costs (Akis et al., 1996; Kayat, 2002; Nunkoo & Ramkissoon, 2010). In respect to the perceived environmental impacts, studies illustrate a direct relationship between residents' perceptions in relation to the local economy and their perceived negative environmental impacts of tourism (Gursoy et al., 2010; Nunkoo & Ramkissoon, 2010; Styliadis & Terzidou, 2014). This behavior is in line with a general view (i.e., non-touristic) that indicates individuals prefer to sacrifice the environment for achieving economic benefits; for example, where unemployment is an issue, residents do not prefer development for environmental protection (Harris, 2006; Vargas-Sanchez et al., 2011). So, the following hypotheses are proposed:

**H<sub>7a</sub>**. Residents who perceive economic crisis (PEC) have higher odds for STD.

**H<sub>7b</sub>**. There is a positive direct relationship between PEC and residents' perceived PI.

**H<sub>7c</sub>.** There is a negative direct relationship between PEC and residents' perceived NI.

The focus of this study is on how PEC in a destination affects residents' perceived TI and their willingness to STD as well as how PEC moderates the relationship between these two constructs (i.e., perceived TI and STD). Therefore, the following hypothesis has been developed:

**H<sub>8a</sub>.** PEC moderates the relationship between residents' perceived PI and STD.

**H<sub>8b</sub>.** PEC moderates the relationship between residents' perceived NI and STD.

In view of the 16 hypotheses, a comprehensive model is developed in figure 1 as an inclusive and simultaneous illustration of the proposed hypotheses. The model is deduced from the literature review and identification of the knowledge gap.

Figure 1 presents the proposed conceptual model for the current study.

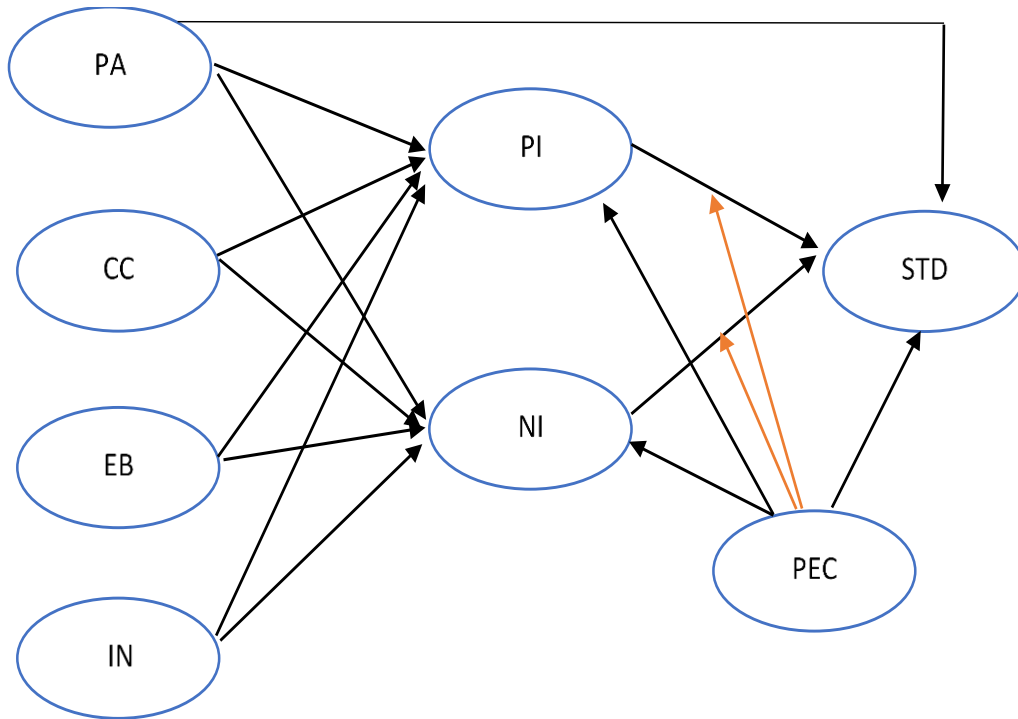


Figure 1. Theoretical (Priori) Model. Note: Place Attachment (PA), Community Concern (CC), Economic Benefits (EB), Involvement (IN), Residents' Perceived Positive Impacts (PI), Residents' Perceived Negative Impacts (NI), Perceived Economic Crisis (PEC), Support for Tourism Development (STD).

## 2.4. Study Setting

This study uses Isfahan, a province in central Iran, as the study setting. It is primarily selected based on some characteristics that will be explained in this section.

### Iran

The Islamic Republic of Iran is a country in south-western Asia, east of Iraq, west of Afghanistan and Pakistan, south of the Caspian Sea, north of the Persian Gulf and the Oman Sea. It lies between latitudes 24° and 40° N and longitudes 44° and 64° E, and is situated on the

historic trade route, the Silk Road, the world's oldest trade route. From ancient times until 1935 (Akhoondnejad, 2015).

Iran, located in the heart of the Middle East, is at a crossroads between the East and the West. According to Forbes Magazine Iran is one of the 'top 10 coolest places' to visit in 2017. Also, the United Nations Educational, Scientific, and Cultural Organization (UNESCO) introduced Iran as one of the world's top countries in terms of the number of ancient and historical sites. Moreover, the United Nations Educational, Scientific and Cultural Organization (UNESCO) has inscribed 22 Iranian cultural and natural sites as World Heritage Sites (WHS), with 11 elements having been inscribed as intangible cultural heritage (UNESCO, 2017a, 2017b).

Despite the great potential of Iran compared to other countries in terms of diverse climatic conditions, six-thousand-year recorded history, ancient civilization, and many historical and Islamic monuments, original architecture and its special geographical position, political orientation and conflicts may have limited the country's tourism growth.

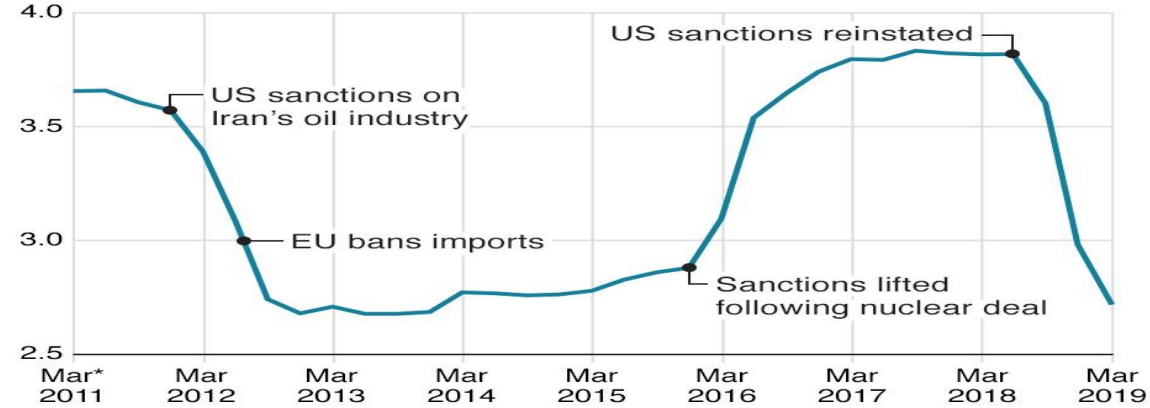
Recently the Iranian oil-oriented economy has been plagued by international sanctions. Since last year, the U.S. has been imposing new sanctions and dwindling Iran's oil exports and consequently crippling the Iranian economy. Iran, ranking as the world's fourth-largest and second-largest reserve holder of oil and natural gas, is considered as an important player in world oil markets. But current oil-export sanctions are crippling the Iranian economy (Charts 1-4 provide more detailed information). These sanctions have had significant effects, e.g., negative GDP, dramatic inflation, rise in the price of goods, currency depreciation, etc. (Dudlák, 2018). Therefore, the development of tourism can be one of the pillars that should be supported by Iranian governments as part of the solution to stimulating economic growth. Since, according to UNWTO 2018 report, travel & tourism contributed US\$8.8 trillion to the global economy in



2018. This equates to 10.4% of global GDP. Therefore, Tourism development in Iran may provide a viable economic solution to some financial problems due to oil export restrictions. However, tourism development cannot be sustained without the support of local residents (Rasoolimanesh et al., 2015), and this support is largely contingent upon residents' perceptions of how tourism development impacts their community (Andereck, Valentine, Knopf & Vogt, 2005). Therefore, one should not disregard the fundamental role of local residents' perceptions and their support in tourism development.

**Iran's oil output**

Production in millions of barrels per day



\*Quarterly data from 1st of each month

Source: OPEC



Figure 2. Iran oil output

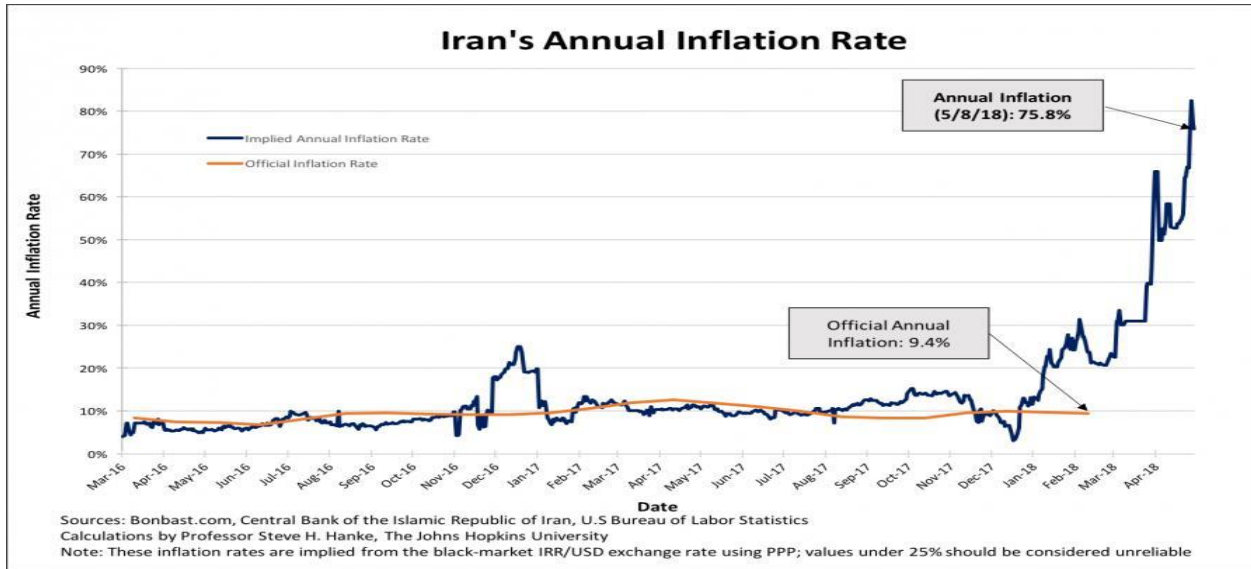


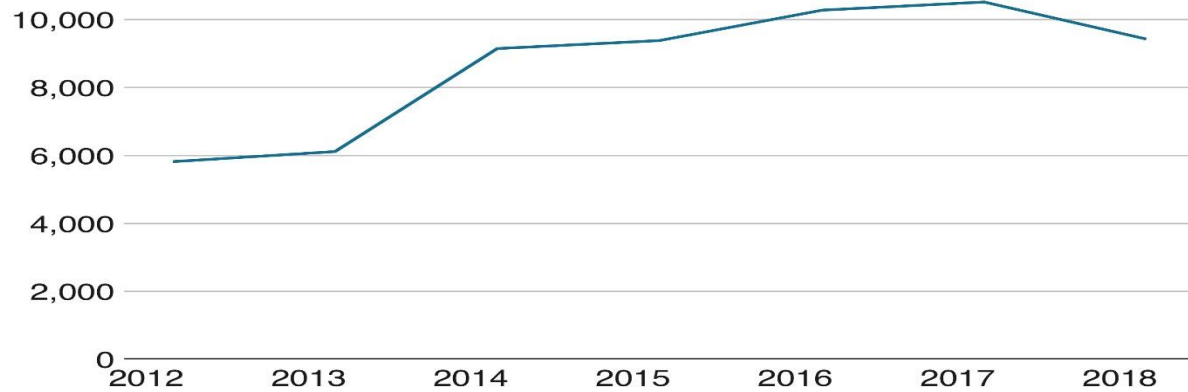
Figure 3. Iran's annual inflation rate



Figure 4. Value of Iranian Rial relative to U.S. dollar.

## Incomes in Iran are falling in real terms

Average annual household income, US\$



All figures for year ending March

Source: Central Bank of Iran/Historical exchange rate data from Bonbast.com



Figure 5. Iranians' income

### Isfahan

The historic city of Isfahan, one of the largest cities in Iran, is located in a central part of the country with numerous historical sites and heritages that are mostly from the Islamic period (Hooshangi, 2000).

Isfahan has considered tourism as one of the most vital industrial activities, its unique historical and cultural attractions can introduce this country as one of the most famous cultural and historical tourist destinations in the world. Isfahan possess over 22000 historical sites and monuments, 850 of which are nationally recorded and four have been identified by UNESCO as world heritage sites. As reported by Isfahan province office of Iran's Cultural Heritage, Handicrafts and Tourism Organization, during the first nine months of the Iranian year in 2017 (starting on March 21), at least half a million inbound tourists have visited this province.

Therefore, it is the time to investigate the effect of the economic crisis in Isfahan, Iran, on residents' perceptions and their support for tourism development according to the notion of social exchange theory (SET).

### **3. Method**

After a careful review of the literature in the previous section, this section operationalizes the research agenda. Concepts and measurements are explained in detail throughout the section. The success and quality of the studies depend on the accuracy of the research plan, set appropriate variables and selection of correct methods and tools for collecting relevant data. This section also establishes and identifies the study's scales and pinpoints its boundaries.

In order to satisfy the objectives of the current study, a quantitative approach was chosen. The quantitative methods of research have a rich history in natural sciences and have been widely applied in social sciences. The researcher's objective in quantitative approach is usually to look for distribution of variables or to find a universally accepted law through a logical structure with premises and conclusions. Typically, the quantitative researcher begins with the hypothesis and concludes with a measured outcome.

#### **3.1. Measures**

This research model is composed of eight constructs: place attachment (PA), community concern (CC), economic benefits (EB), involvement (IN), perceived positive impacts (PI), perceived negative impacts (NI), perceived economic crisis (PEC), and support for tourism development (STD). All constructs were measured using multiple-item scales adapted from

extant literature on a five-point Likert scale (1 indicated “strongly disagree” and 5 indicated “strongly agree”).

Questionnaires were used to collect data. They were completed by local residents who have lived in Isfahan for at least one full year and are over 18 years old. The questionnaire asked about a set of variables based on this study’s theoretical model and, in order to ensure validity, the measurement items were adapted from previous studies.

### 3.2. Questionnaire design

The questionnaire was used to collect data; these questionnaires were filled by local residents who were eighteen years of age or older and have lived at least for one consecutive year in Isfahan. The questionnaire construct adopted asked about a set of variables based on the current study’s theoretical model. It has been translated from its original English into Persian by an official translation house, minimizing language errors, in order to accommodate the preference of the residents for answering in their local language. Beginning with a short summary description of the research and its aims, the questionnaire itself is composed five main sections. Part one: The first section that includes questions about residents’ perception towards tourism impacts on their living area, this part has 18 questions. In order to avoid bias in responses, the statements were written in form of positive and negative sentences.

The questions in this section are classified into two groups; one estimates the tourism development’s perceived positive impacts and the other estimates its perceived negative impacts.

Nine items measured the residents' perceptions of positive impacts of tourism in Isfahan. These were growing employment opportunities, improving basic service use, increasing quality of life, stimulating cultural activities, enhancing local residents proud and cultural identity, improving revival of local handicrafts and tradition, helping to improvement of infrastructure, and preserving the natural environment. The respondents were asked to specify their attitudes toward tourism positive impacts by using a five level Likert type scale ranging from 1= strongly disagree to 5= strongly agree. Higher scores of statements mean more positively attitudes towards tourism development in Isfahan.

Moreover, nine questions of this part measured local community perceptions about the negative impacts of tourism in Isfahan. These items were increasing the cost of land and housing, increasing unstable employment, increasing crime rate, causing the loss of Iranian Islamic culture, increasing drug abuse and alcoholism among locals, increasing traffic problems, deteriorating the environment and historical sites, and increasing pollution.

Respondents indicated their attitudes towards the negative impacts of tourism by choosing one option on a five-level Likert scale. Higher scores of statements mean more adverse attitudes towards tourism development in Isfahan.

Part two: the second section focused on residents' attitudes about tourism development in Isfahan and their willingness to support it. The residents were asked whether they have supported tourism development in Isfahan, and their support for tourism was evaluated by their responses to five levels Likert-type scale in which, 1=strongly oppose, 2= oppose, 3= neither support nor oppose, 4= support, 5= strongly support. A higher score of statement means a higher level of willingness to support tourism development.

Part three: based on the literature and defined research gap in the previous section independent and exogenous variables were selected. Five variables including place attachment, community concern, economic benefits, involvement, and perceived economic crisis were employed as the independent and exogenous variables in the current study.

Part four: The last section collects questions about various socio-demographic characteristics of respondents (Appendix I).

### 3.3. Pilot study

The purpose of the pilot study was mainly to confirm the measurement properties of local community tourism development support. In the first step, the questionnaire was distributed to thirteen post graduate and undergraduate students with the purpose of enhancing the design, wording and clarity of the questionnaire. In view of that, some changes were made mainly including wording of questions, eliminating, and changing some questions.

The next step was designed to evaluate the properties of residents' support questionnaires. Accordingly, the properties of construct composition, construct order, construct validity, measurement validity, reliability, and item analysis were analyzed based upon the responses of a sample of fifty individuals. Since they were Isfahan city's residents who prefer to fill the form in Persian, the questionnaire was translated to Persian and approved by sworn a translator to minimize or avoid language error as much as possible. To minimize missing answers resulting from any vagueness or contingency, respondents were personally reached, and data was collected in the form of interviews where questionnaires were completed by the surveyor unless the respondent wished to complete it himself/herself. Pilot study data were collected in December 2018. The collected data was used to carry out an Exploratory Factor Analysis (EFA)

in order to refine the questionnaire and test the initial loadings, and a Confirmatory Factor Analysis (CFA) in order to test the hypothesized loadings and the structure of the measurement model.

After the pilot study, several adjustments were applied to the original questionnaire that revolved mainly around the wording and changing the order and layout of questions in order to make the questionnaire more understandable.

### 3.4. Sample Design and Data Collection

Our target population consists of residents who are 18 years old or older and have resided in Isfahan for at least one full year. The population of Isfahan is 2.5 million with 554,000 households (Statistical Center of Iran report, 2018). About 775,000 people in the city are under 18-years-old, so they were excluded from our sampling. The sample size was determined according to the Cochran (1977) equation, which is standard in social science research, especially when addressing large populations.

$$n = \frac{Z^2 (pq)}{d^2}$$

Z is the selected critical value of the desired confidence level; p is the (estimated) proportion of the population that has the attribute in question; q is 1-p; d is the desired level of precision (i.e., the acceptable margin of error).

For this study, with a 95% confidence level and  $\pm 5\%$  precision, the necessary sample size was 385. A sample size of 385 questionnaires was also sufficient according to the requirements of SEM, the primary method for data analysis in this study (Hair, Hult, Ringle, & Sarstedt, 2014). In addition, the “ten-times rule” is a rule of thumb for PLS-SEM (Ringle, Wende, and Becker,



2015); it states that the minimum sample size has to be ten times that of the most significant number of paths in the measurement or structural model. For our model, a sample size of 50 would be sufficient. Therefore, the Cochran's sample size exceeds this assumption too.

A multi-stage sampling strategy was used to obtain this sample. Initially, since each postcode denotes one of the city's six districts, street names were geographically clustered based on their postcodes (Iran Post Office, 2019). To obtain a balanced representation of residents in all six districts, stratified random sampling was applied (Graziano & Raulin, 2004). Next, applying the street directory, streets were randomly sampled in each district using the street directory. Then, by house number, households were randomly approached and invited to participate in the research. According to Selvanathan, Selvanathan, Keller, Warrack, & Bartel, (1994) this process is useful in obtaining a symbolic sample.

The data was collected between April and May 2019 using a structured self-administered questionnaire that was hand-delivered to 450 households by a researcher. The researcher explained the research to whoever opened the door and invited them to take part; if the offer was accepted, the researcher waited while the respondent filled out the questionnaire. This technique was employed because it likely gets higher response rates than the drop-off and pick-up strategy (Stylidis, Biran, Sit, & Szivas, 2014). Respondents were assured that their involvement would be voluntary and anonymous so that they would express their personal views as honestly despite the potential bias brought about by the interviewer-participant interaction. Only one individual from each household was invited to take part because household members typically have similar opinions to each other (Andriotis, 2005; Stylidis et al., 2014). Finally, 90.88% of questionnaires (409) were completed and returned. This rate of return, according to Dillman (1978), was acceptable. After initial cleaning and data screening,

383 responses were used for analysis and entered into SPSS (26 questionnaires were omitted, due to incomplete answers).

## **4. Data analysis and Results**

### 4.1. Descriptive results

Socio-demographic characteristics of the sample

From a demographic perspective, 73.1% of participants were males, while 26.9 % were females.

One explanation for this issue may have been because of the more limitation for Iranian females in compare with males to talk to foreigners and answer their questions. Moreover, in this survey, the majority of respondents (35.8%) are between 34-44 ages, followed by the 25-34 age group with 24% and the lowest frequency, 8.6% belongs to residents who older than 65 years old.

Based on the findings, the majority of respondents (55.1%) were married, 26.6% were single and 18.3% were divorced or separated.

As for the monthly income, the highest percentage 35.5% was for respondents who have an income between 2.000.000-5.000.000 Toman (one US dollar was 12000 Toman), and only 13% of Isfahan residents earned more than 8.000.000 Toman in a month (approximately, 666 US dollar).

According to the educational level, the majority of respondents (56.9%) earned a college university degree. In addition, results indicate that majorities of respondents (48.6%) had inhabited Isfahan for more than eight years, followed by 35.2% for residents who lived in Isfahan between 5-8 years.

Table 3. Demographic Characteristics of study sample.

<b>variable</b>	<b>N</b>	<b>%</b>
<b>Gender</b>		
men	280	73.1
women	112	26.9
<b>Age</b>		
18-24	43	11.2
25-34	92	24
34-44	137	35.8
45-65	78	20.4
65 and older	33	8.6
<b>Marital Status</b>		
single	102	26.6
married	211	55.1
separated/divorced	70	18.3
<b>Education</b>		
up to diploma	165	43.1
university degree	218	56.9
<b>Income (Toman)</b>		
under2.000.000	66	17.2
2.000.000-5.000.000	136	35.5
5.000.000- 8.000.000	131	34.2
8.000.000 and over	50	13
<b>Length of Residence</b>		
1year-4year	62	16.2
4year-8year	135	35.2
8year and more	186	48.6

### Local community perceptions of tourism impacts in Isfahan

This section presents the results of local community perceptions towards tourism impacts in Isfahan and correlations between dependent and independent variables based on research questions.

Table 4. Distribution of residents' responses to statements

N	PTI	Mean	Std. Deviation
PI1	Tourism generates huge employment opportunities for residents	4.09	0.9976
PI2	Tourism promotes improvement in basic services useful in everyday life	3.49	1.3752
PI3	Tourism contributes to the increase of residents' quality life.	3.30	1.4338
PI4	Tourism encourages residents to appreciate their own cultural identity.	3.41	1.4201
PI5	Tourism encourages cultural activities.	3.52	1.3741
PI6	Tourism improves revival of local handicrafts, cultural activities, and traditions.	3.64	1.3167
PI7	Tourism helps to infrastructure improvement.	3.55	1.4045
PI8	Tourism preserves the natural environment.	3.33	1.4698
PI9	Tourism has not contributed to a decline in the natural environment of Isfahan.	3.46	1.4302
NI1	Tourism has made prices rise and increased the cost of living in Isfahan.	4.18	1.0456
NI2	Tourism increases unstable employment.	2.99	1.3683
NI3	Tourism increases crime (robbery, violence, prostitution, etc.).	2.75	1.5109
NI4	Tourism is causing the loss Iranian Islamic culture.	2.62	1.4037
NI5	Tourism increases drug abuse and alcoholism among locals.	2.79	1.4641
NI6	Our historical sites are being spoilt by tourist visitations.	3.87	1.4081

NI7	Tourism is the major cause of traffic congestion in Isfahan.	2.70	1.4239
NI8	Tourists disrupt the peace and tranquility of public places.	2.61	1.3809
NI9	Tourism causes significant contamination and pollution problems (litter, noise, etc.).	2.53	1.4121

PTI: Perceived Tourism Impacts; PI: Perceived Positive Impacts; NI: Perceived Negative Impacts Source: findings of research

Table 4 presents the responses to 18 statements on the positive and negative impacts of tourism in Isfahan. The findings indicate that the residents have a comparatively stronger perception of tourism's positive impacts, which is more evident in developing countries (Gursoy & Rutherford, 2004; Rasoolimanesh et al., 2015). Residents strongly believe (i.e., Mean= 4.09) that tourism development provides job opportunities for local residents. In addition, most of the residents approved that tourism improves the revival of local handicrafts, cultural activities, and traditions (Mean=3.64).

Moreover, this study suggested residents believe tourism development has resulted in increased cost of living in Isfahan (Mean= 4.18), this finding is in line with the previous studies (McGehee & Andereck, 2004; Rasoolimanesh et al., 2015; Wanko & Stewart, 2002). Residents also blamed tourism for historical sites spoliation by tourist visitations (Mean=3.87). Tables 3-5 shows the distribution of residents' responses to statements.

Table 5. Distribution of residents' responses to statements

Items	Question	Mean	Std. Deviation
PA1	I strongly identify myself with Isfahan.	3.27	1.1754
PA2	I have an emotional attachment to this place - it has meaning to me.	3.38	1.1738
PA3	For living, I wouldn't replace this city with any other place.	2.98	1.3331
PA4	Isfahan is the best place for the activities I like to do.	3.02	1.3082
CC1	I have concerned about future economic development in Isfahan.	3.95	1.1186
CC2	I have concerned about crime rate in Isfahan.	4.05	1.1740
CC3	I have concerned about cultural and traditional.	3.32	1.3477
EB1	Tourism increases my personal income level.	2.028	1.2158
EB2	A high percentage of my current income comes from the money spent by visitors.	2.094	1.2371
EB3	Most of the income of the company I work for (or business I own) comes from the tourist trade.	2.316	1.2691
IN1	I actively participate in tourism planning.	1.747	1.1833
IN2	I have desire to be involved in decision making process	2.245	1.3775

IN3	Most of the time my opinions have been asked regarding planning and development of tourism.	2.123	1.3320
PEC1	Isfahan has high unemployment rates and loss of income.	4.409	0.7702
PEC2	Iranian economy collapses by the sanctions.	3.775	1.4851
STD1	The positive benefits of tourism outweigh negative impacts.	3.689	1.5281
STD2	I strongly support tourism development in Isfahan.	3.663	1.441
STD3	Tourism should be boosted as one of the key drivers of the economy of Isfahan.	3.509	1.4648

Note: Place Attachment (PA), Community Concern (CC), Economic Benefits (EB), Involvement (IN), Perceived Economic Crisis (PEC), Support for Tourism Development (STD).

Source: findings of research.

## 4.2. Data Analysis and Results

Structural equation modeling (SEM) is a statistical method increasingly become popular among researchers in the field of social sciences in recent years. The most crucial reason behind the spread of this statistical technique is that the direct and indirect relationships among causal variables can be measured with a single model (Civelek, 2018; Hair, Ringle, & Sarstedt, 2012; Hair, Hult, Ringle, & Sarstedt, 2017). In traditional regression analysis, only direct effects can be detected. However, in the method of structural equation modeling, direct and indirect effects are put together. Since, SEMs are complex models allowing us to study real-world complexity by taking into account to the whole number of causal relationships among observed and latent variables. More specifically, various theoretical models can be tested in SEM that hypothesize how sets of variables define constructs and how these constructs are related to each other (Ali,

Rasoolimanesh, Sarstedt, Ringle, & Ryu, 2018; Civelek, 2018; Hair et al., 2012; Hair et al., 2017; Rasoolimanesh et al., 2015). Another reason for the popularity of this method is the ability to take into the account the measurement errors and the relationships between errors in the observed variables. In this way, measurement errors can be minimized (Ali et al., 2018; Civelek, 2018; Hair et al., 2017; Rasoolimanesh et al., 2015).

Therefore, its ability to simultaneously examine a series of interrelated dependence relationships between sets of constructs represented by multiple variables while accounting for measurement error has contributed to the SEM's widespread application (Ali et al., 2018; Hair et al., 2017).

Researchers applying SEM can choose between a covariance base analysis (CB-SEM) or a variance based approach (VB-SEM) (Gefen et al., 2000; Hair, et al., 2012). VB-SEM includes several techniques such as generalized structured component analysis (Hwang et al., 2010, Ali et al., 2018), path analysis (Lastovicka & Thamodaran, 1991), and the most powerful technique is partial least squares structural equation modeling (PLS).

The CB-SEM approach aims at reproducing the theoretical covariance matrix, without focusing on explained variance, while PLS-SEM does not fit a common factor model to the data, it rather fits a composite model. In doing so, it maximizes the amount of variance explained (Hair et al., 2012). As Hair et al. (2013), claim PLS-SEM is a method increasingly used in several disciplines to assess structural models. It is a comprehensive multivariate approach to statistical analysis that can simultaneously examine each of the relationships between the variables in a conceptual model, including measurement and structural components. Because of its ability to analyze complex models with formative and/or reflective constructs with non-normal data and small sample sizes, PLS-SEM has become a popular choice for marketing and management



researchers (Ali et al., 2018; do Valle & Assaker; 2016; Hair et al., 2012; Rasoolimanesh et al., 2015; Richter, Cepeda Carrión, Roldán, & Ringle, 2016).

The current study applies variance-based (VB-SEM) approach with partial least square (PLS) estimation (PLS-SEM) to perform the analysis because it is well suited for theory development and prediction-oriented studies (Ali et al., 2018; Rasoolimanesh et al., 2015).

PLS-SEM is a hybrid of factor analysis and path analysis. In order to test the accuracy of the conceptual model, PLS-SEM is conducted in two phases; in the first phase, the measurement model is tested, and in the second phase the structural model is tested (Ali et al., 2018; Civelek, 2018; Hair et al., 2017; Rasoolimanesh et al., 2015). In summary, the measurement model (Phase I) describes the relationships between observed variables (e.g., instruments) and the construct or constructs those variables are hypothesized to measure. In contrast, the structural model (Phase II) describes interrelationships among constructs (Civelek, 2018; Hair et al., 2017).

In PLS-SEM, structural and measurement models are also referred to as inner and outer models. In summary, structural equation modeling is a compound of factor analysis and regression analysis.

The measurement model and the structural model are interwoven.

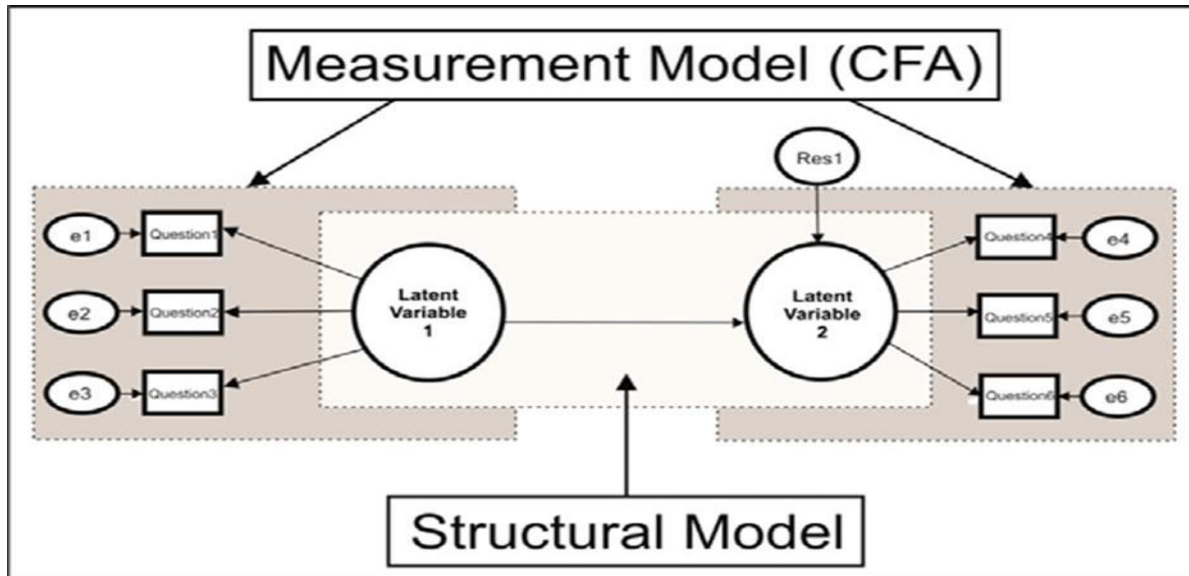


Figure 6. Demarcation between Measurement Model and Structural Model

(Source: Byrne, 2010; Civelek, 2018).

#### Phase I: The measurement model (Outer model)

The measurement model measures how well-hidden variables are represented by the observed variables. Confirmatory factor analysis (CFA) is a theory-driven technique that used in testing the measurement model, and all hypothesized relationship between the constructs and their associated observed and unobserved (latent) variables (Ali et al., 2018; Civelek, 2018; Hair et al., 2017; Hair et al., 2012).

CFA checks the reliability and validity (convergent and discriminant) of measurements and to compare the population covariance matrix with the observed covariance matrix (Hair et al., 2017; Hair et al., 2012; Rasoolimanesh et al., 2015). In this phase, if the measurement model fit indices are low, it will not make sense to test the structural model (phase II).

## Reliability

Reliability is described as the consistency and repeatability of study findings, meaning that a scale consistently measures the same value under the same conditions. For instance, a questionnaire is reliable if the same group of respondents give the same answers under two different applications (Hair et al., 2017). In a nutshell, accuracy is a function of reliability, meaning that a higher reliability provides more accurate results (Eldridge, 2017; Hair et al., 2017). The reliability coefficient demonstrates the accuracy of the test creator in anticipating a specific set of variables to provide interpretable findings about individual differences (Kelley, 1942; Hair et al., 2017).

Three indicators to test reliability are Cronbach's alpha (Cronbach 1951; critical acceptance value=0.7), composite reliability (Fornell & Larcker, 1981; threshold value= 0.7) and average variance extracted (Fornell & Larcker, 1981; threshold value =0.5).

Cronbach's alpha takes a value between 0 and 1. It is a measure based on correlations between items in a construct. It is obtained by dividing the sum of the variances of the items constituting a scale by the general variance. There are various studies on the acceptable alpha range. As some reports suggest that an alpha of 0.95 indicates a high degree of consistency particularly in some applied settings (Bland & Altman 1997), others suggest that a high alpha value over 0.9 may reflect redundancy, length of test and unnecessary duplication of measurement items (Tavakol & Dennick, 2011). However, as mentioned above in the current study, acceptable reliability requires alpha value of 0.7 or higher.

The test was performed on all variables inclusively as well as on each subset separately. According to the statistical results presented in table 6, all latent constructs have Cronbach's alpha above the cut-off point of 0.70, ranging between 0.728 for Perceived Economic Crisis

and 0.967 for Support for Tourism Development. This finding indicates the high levels of internal reliability (Bagozzi & Yi 1988; Civelek, 2018; Hair et al., 2017).

By the same token, average variance extracted (AVE) and composite reliability (CR) for all latent constructs exceeded the cut-off values of 0.5 and 0.7, respectively (Hair et al., 2013). As shown in Table 6, the highest value of CR was exhibited for Support for Tourism Development (0.978), followed by Economic Benefits (0.976), Involvement (0.945), Place attachment (0.911), Perceived Positive Impacts (0.895), Perceived Negative Impacts (0.885), and the minimum value was exhibited by Perceived Economic Crisis (0.786). Moreover, as indicated in Table 6, the AVE value of the latent constructs ranged from 0.574 (Perceived Negative Impacts) to 0.937, which all are above the cut-off value of 0.50. Therefore, it can be said that there is composite reliability (Civelek, 2018; Raykov, 1997).

### Validity

Kelly (1927, p. 14) coined out the term validity and claimed a test is valid if it evaluates what it requires to evaluate. Similarly, Field (2005) referred to validity as “measure what is intended to be measured”. This concept describes how well the collected data covers the real area of examination (Ghauri & Gronhaug, 2005). In a nutshell, if a questionnaire fails to measure the aspects that were intended to investigate, it is not valid. If the questions asked about the concept A are confused with the questions about the concept B, then it means either the intended concepts are not perceived, or they are perceived differently from that of the sample. In this scenario, the scale used is not a valid measurement tool for the chosen sample. As such, there is a need to test the validity (convergent and discriminant validity) of the scale prior to commencing analysis (Hair et al., 1998).

### Convergent validity

Convergent validity defined as the degree to which multiple items to measure the same concept are in agreement. Basically, the degree of positive relationship within scale items created to measure the same construct. As suggested by Hair et al. (2010), convergent validity was evaluated by examining item loadings ( $\lambda$ ), Average Variance Extracted (AVE), Composite Reliability (CR). The suggested values for loadings are assess at  $> 0.5$ , the average variance extracted (AVE) should be  $> 0.5$  and the composite reliability (CR) should be  $> 0.7$ .

As seen in Table 3-6, statistical results in this respect reported that all latent constructs have Cronbach's alpha ( $\alpha$ ) value higher than threshold value of 0.70, ranging between 0.728 for Perceived Economic Crisis and 0.967 for Support for Tourism Development. This finding indicates the high levels of internal. In the same vein, AVE and CR for all latent constructs exceeded the cut-off values of 0.5 and 0.7, respectively (Hair et al., 2013). As shown in Table 6, the highest value of CR (0.978) was exhibited for Support for Tourism Development, and the minimum value was exhibited by Perceived Economic Crisis (0.786). Furthermore, as indicated in Table 6, the AVE value of the latent constructs ranged from 0.574 (Perceived Negative Impacts) to 0.937, which all are above the cut-off value of 0.50.

Table 6. Validity and Reliability for Constructs

construct	Item	$\lambda$	t-value	AVE	CR	$\alpha$
Place	I strongly identify myself with Isfahan.	0.88	82.909			
Attachment	I have an emotional attachment to Isfahan - it has meaning to me.	0.875	64.177			
	For living, I wouldn't replace Isfahan with any other place	0.807	45.821	0.719	0.911	0.869
	Isfahan is the best place for the activities I like to do .	0.824	58.712			
Community Concern	I have concerned about future economic development in Isfahan	0.824	51.358			
	I have concerned about crime rate in Isfahan.	0.873	65.426	0.583	0.802	0.746
	I have concerned about Isfahan culture and tradition	0.555	12.931			
Economic Benefits	Tourism increases my personal income level	0.975	454.894			
	A high percentage of my/my family current income comes from the money spent by visitors.	0.970	351.617	0.932	0.976	0.963
	Most of the income of the company I work for (or business I own) comes from the tourist trade	0.951	197.537			
Involvement	I actively participate in tourism planning.	0.892	75.208			
	I have desire to be involved in decision making process	0.936	146.298	0.852	0.945	0.913
	Most of the time my opinions have been asked regarding planning and development of tourism	0.942	229.069			
Perceived Positive Impacts	Tourism generates employment opportunities for residents	0.560	19.157			
	Tourism increases the standard of living in Isfahan.	0.773	37.409	0.590	0.895	0.868

	Tourism contributes to the increase of residents' quality life	0.710	33.157			
	Tourism encourages residents to appreciate their own cultural identity.	0.784	43.171			
	Tourism encourages cultural activities.	0.797	48.286			
	Tourism improves revival of local handicrafts, cultural activities, and traditions	0.624	19.982			
	Tourism increases locals' awareness and appreciation of environmental preservation	0.706	30.425			
	Tourism preserves the natural environment.	0.685	27.264			
	Tourism improves public facilities	0.624	20.415			
Perceived Negative Impacts	Tourism increases in the goods & services' price level	0.245	6.380			
	Tourism increases unstable employment	0.725	31.995			
	Tourism increases in real estate value	0.785	33.316			
	Tourism increases crime (robbery, violence, prostitution).	0.682	25.472			
	Tourism is causing the loss Iranian Islamic culture	0.766	34.668			
	Tourism increases drug abuse and alcoholism among locals.	0.608	20.950	0.574	0.885	0.849
	Our historical sites are being spoilt by tourist visitations	0.650	21.477			
	Tourism is the major cause of traffic congestion in Isfahan.	0.790	39.664			
	Tourism causes significant contamination and pollution problems	0.772	36.035			
Perceived Economic Crisis	Isfahan has high unemployment rates and loss of income.	0.651	15.243			
	Iranian economy collapses by the sanctions.	0.942	137.333	0.656	0.786	0.728

Support for Tourism Development	The positive benefits of tourism outweigh negative impacts	0.968	415.552			
	I strongly support tourism development in Isfahan	0.973	530.354	0.937	0.978	0.967
	Tourism should be boosted as one of the key drivers of the economy of Isfahan.	0.964	336.513			

### Discriminant validity

Discriminant validity checks whether concepts or measurements that are not supposed to be related, are actually unrelated. It is an index of a low correlation among the questions that form a construct and other questions that form other construct.

Discriminant validity supposes that items should correlate greater between them than they correlate with other items from other constructs which are theoretically expected not to correlate. thus, it intends to illustrate that a specific measure does not correlate with another measure that theoretically it is not expected to correlate with (Fornell & Larcker's, 1981). In current research, in order to investigate the discriminant validity of all constructs, we employed Fornell & Larcker's (1981) procedure, the square root of AVE of each latent construct was compared with its inter-construct correlation (Table 3-7). To obtain sufficient discriminant validity level, all the square roots of AVEs need to be higher than any correlation among any two pairs of constructs (For more information, see Kline, 2015). The statistical results in this respect are indicating satisfactory discriminant validity, because all diagonal values (the squared root of AVEs) exceeded inter- construct correlations, showing a suitable level of discriminate validity.



Table 7. Discriminant Validity and correlation among constructs.

construct	1	2	3	4	5	6	7	8	Mean	$\sqrt{AVE}$
Place Attachment (1)	1								3.881	0.848
Community Concern (2)	0.57	1							3.775	0.763
Economic Benefits (3)	0.565	0.573	1						2.139	0.965
Involvement (4)	0.585	0.551	0.583	1					2.038	0.923
Positive Impacts (5)	0.635	0.514	0.655	0.627	1				3.42	0.768
Negative Impacts (6)	-0.635	-0.502	-0.589	-0.548	-0.504	1			2.822	0.757
Economic Crisis (7)	0.516	0.563	0.559	0.589	0.597	-0.598	1		4.093	0.810
Support for Tourism Development (8)	0.648	0.556	0.596	0.617	0.506	-0.573	0.544	1	3.620	0.968

Additionally, a global fit measure for PLS path modeling has been suggested by Tenenhaus, Amato, & Esposito Vinzi (2004). Goodness of fit (GOF) is an indicator that ensures that the model adequately describes the empirical data. It is measured by employing the geometric mean AVE and  $R^2$  values. GOF values range from 0 and 1 ( $0 \leq GOF \leq 1$ ), where values of 0.10 (small), 0.25 (medium), and 0.36 (large) point out the worldwide validation of the path model (Wetzels, Odekerken-Schroder, & Van Oppen, 2009). An acceptable model fit proves that a model is parsimonious and reliable.

Our complete model achieved a GOF value of 0.747, indicating that it can reliably predict local support for tourism development.

$$GOF = \sqrt{AVE} \times \sqrt{R^2} = 0.855 \times 0.874 = 0.747$$

This value supports that this model is appropriate to predict locals' support for tourism development.

Given that, these indexes support that the total fit of the provided model to the data was good, we can conclude that the structural model was suitable basis for hypothesis assessing. Though, the results generally confirm the study conceptual model.

#### Phase II: Assessment of Structural Model (Inner model)

The second phase, involving assessing the structural model (inner model). The structural model is based on the measurement model (outer model), and as Hair et al., 2017 defined, this phase is concerned with the manner in which the constructs are related to one another (Rasoolimanesh et al., 2015). Equations in the structural portion of the model specify the hypothesized relationships among latent variables (Civelek, 2018).

The structural model enables to assess the path model (i.e., set up with the series of structural equations) portraying the theoretical model (Chin & Dibbern, 2010). The crucial criterions employed for the evaluation of the structural model in current work were- coefficient of determination R-square for the endogenous variable, estimation of path coefficient ( $\beta$ ), and t-value (Chin & Dibbern, 2010; Henseler & Fassott, 2010).

To assess the structural models' projecting power, we considered the  $R^2$ , which depicts the value of variance identified by the exogenous variables (Barclay et al., 1995). The value of  $R^2$  for STD was 0.905, which is considered high by behavioural research standards (Ali et al., 2018; Hair et al., 2017; Rasoolimanesh et al., 2015).

Moreover, this part will provide the detailed SEM results for the path relationships. Path analysis designs to examine cause-effect relations between various variables by looking at the correlation matrix within them. The hypothesized path result model is reported to test the hypothesis. The path approximated and t-statistics were estimated for the hypothesized relationships. Beta coefficient is the value of multiple correlation coefficients among exogenous and endogenous variables (Hair et al., 2012 & 2017; Rasoolimanesh et al., 2015). Value evaluated in terms of sign, magnitude, and Value  $t=2.58$ ,  $p<0.01$  and  $t=1.96$ ,  $p<0.05$ .

The final inner model with the path values is portrayed in Figure 3 and the hypotheses testing results are shown in Table 8 (estimation of path coefficient ( $\beta$ ), which is the measure of multiple correlation coefficients between exogenous and endogenous variables,  $R^2$  which depicts the amount of variance identified by the exogenous variables and ranges between 0 and 1, is an indication of a model's explanatory power and predictive (Hair, et al., 2010), and t-value. Based on our results, all hypotheses except  $H_{4a}$ ,  $H_{4b}$ ,  $H_{6a}$ , and  $H_{6b}$ , were supported.

The findings show that residents' perceived positive impacts (PI) were predicted by community concern ( $\beta=0.185$ ), economic benefits ( $\beta=0.239$ ), and, most significantly, perceived economic crisis ( $\beta=0.525$ ). In contrast, place attachment (PA) and involvement (IN) were not shown to be significantly associated with residents' perceived PI ( $|t|<1.96$ ). Therefore,  $H_{3a}$ ,  $H_{5a}$ , and  $H_{7b}$  are all accepted. However,  $H_{4a}$  and  $H_{6a}$  are rejected.

Community concern ( $\beta= -0.161$ ), economic benefits ( $\beta= -0.206$ ), and, once again most significantly, perceived economic crisis ( $\beta= -0.585$ ) were shown to significantly influence residents' perceived NI. It is worth mentioning that the negative value of  $\beta$  indicates a negative effect, meaning that an increase in the activity measure in one structure leads to a direct,

proportional decrease in the activity measure of the structure it projects to, proportional to the size of the coefficient. However, neither place attachment (PA) nor involvement (IN) significantly influence the residents' perceived NI (the standardized coefficients are not significant at the 95% confidence level). Thus, H<sub>4b</sub> and H<sub>6b</sub> are rejected, and H<sub>3b</sub>, H<sub>5b</sub>, and H<sub>7c</sub> are all accepted.

In terms of the total effect of each determinant on support for tourism development (STD), perceived PI is the strongest predictor with a total standardized effect of 0.490 followed by perceived NI ( $\beta=-0.323$ ) and PEC ( $\beta=0.196$ ). Additionally, PEC is a quasi-moderator variable, as it has a direct effect on support for tourism development (H<sub>7a</sub> is supported) and also moderates the relationships between PI/NI and STD (PI\*PEC->STD,  $\beta=-0.707$  and NI\*PEC->STD,  $\beta=-0.139$ ). Thus, H<sub>8a</sub> and H<sub>8b</sub> are supported. The negative values of  $\beta$  indicate that, as the level of PEC increases, the influence of PI and NI on STD decreases.

The SEM two-steps analysis resulted in testing the hypothesis by investigating the significant correlations and regressions that occur in the model, as well as their CR and  $\beta$  values. Twelve hypotheses were accepted, leading to the development of the final model with significant paths.

It is worth to mention that the Squared Multiple Correlations (SMC) also known as coefficient of determination ( $R^2$ ) was calculated for the endogenous constructs of the empirical model. This coefficient, which varies between 0 and 1, is an indication of a model's explanatory power and predictive accuracy. It indicates the portion of the variance of the endogenous variable which is explained by the exogenous variable(s) (Hair, et al., 2014). The  $R^2$  of the support tourism development (STD) was 0.905, which indicated that the proposed model explained substantial amount of the variance of the dependent variable. In other words, all independent and

moderating variables explain 90.5% of the variance in residents' willingness to support tourism development. The rest of the coefficients were as follow: perceived positive impacts ( $R^2=0.71$ ), and perceived negative impacts ( $R^2=0.677$ ). This in addition to the fact that all criteria related to measurement model—model fitness, construct reliability, and validity—were successfully achieved.

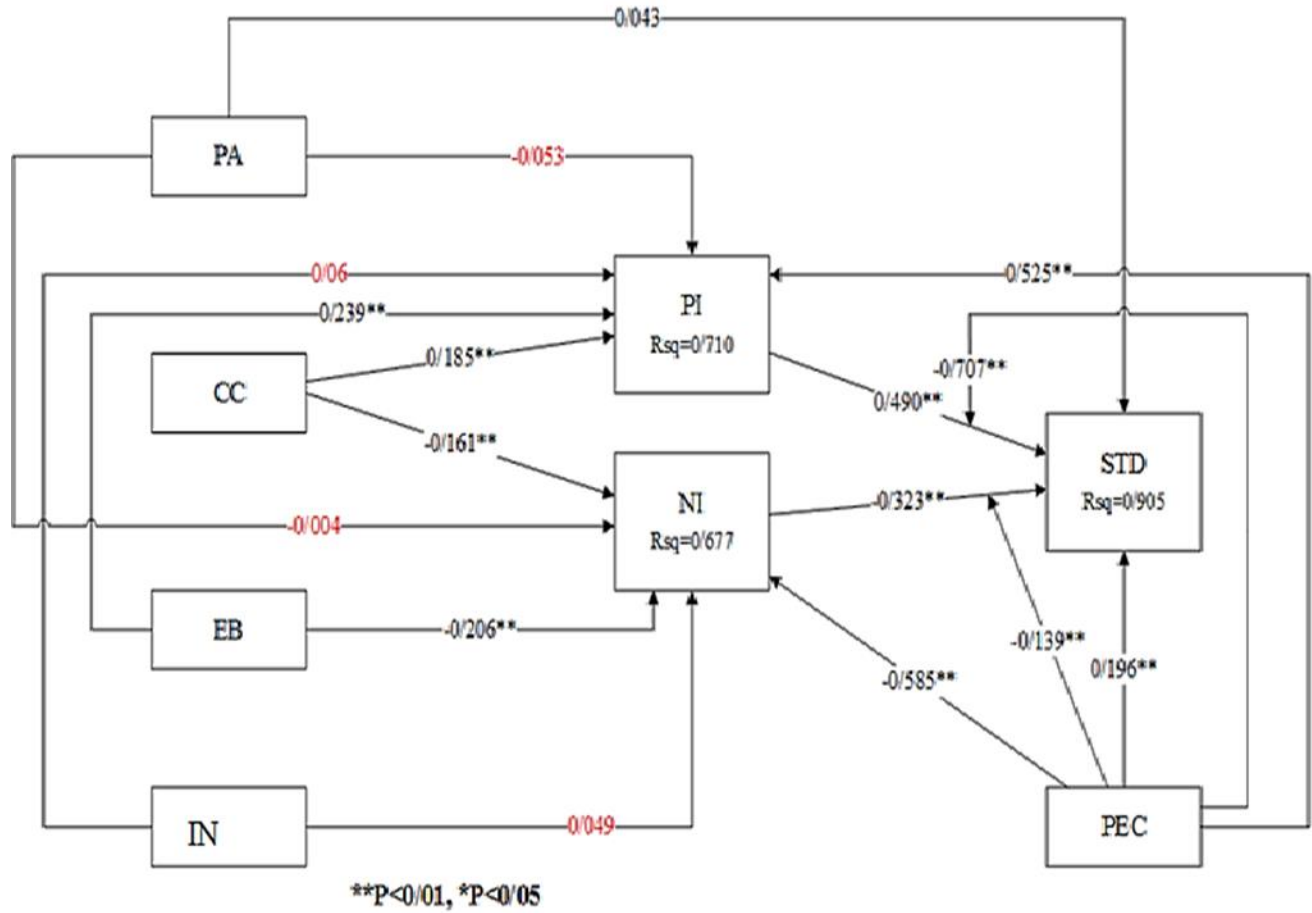


Figure 7. Structural Empirical Model.

Note: Place Attachment (PA), Community Concern (CC), Economic Benefits (EB), Involvement (IN), Residents' Perceived Positive Impacts (PI), Residents' Perceived Negative Impacts (NI), Perceived Economic Crisis (PEC), Support for tourism Development (STD).

Table 8. Hypotheses Tests Summary.

Hypothesis	Beta ( $\beta$ )	t	R <sup>2</sup>	Result	Sign
Place Attachment -> Residents' Perceived Positive Impacts	-0.053	-1.234		Rejected	
Community Concern -> Residents' Perceived Positive Impacts	0.185	4.738		Supported	+
Economic Benefits -> Residents' Perceived Positive Impacts	0.239	7.035	0.710	Supported	+
Involvement -> Residents' Perceived Positive Impacts	0.060	1.694		Rejected	+
Perceived Economic Crisis ->Residents' Perceived Positive Impacts	0.525	13.840		Supported	+
Place Attachment -> Residents' Perceived Negative Impacts	-0.004	-0.110		Rejected	
Community Concern -> Residents' Perceived Negative Impacts	-0.161	-4.153		Supported	-
Economic Benefits -> Residents' Perceived Negative Impacts	-0.206	-5.825	0.677	Supported	-
Involvement -> Residents' Perceived Negative Impacts	0.049	1.217		Rejected	
Perceived Economic Crisis -> Residents' Perceived Negative Impacts	-0.585	14.324		Supported	-
Residents' Perceived Positive Impacts ->Support for Tourism Development	0.490	14.998		Supported	+
Residents' Perceived Negative Impacts -> Support for Tourism Development	-0.323	-9.809		Supported	-
Perceived Economic Crisis -> Support for Tourism Development	0.196	6.207	0.795	Supported	+
Place Attachment -> Support for Tourism Development	0.043	4.0881		Supported	+

Perceived Positive Impacts * Perceived Economic					
Crisis -> Support for Tourism Development					
				Supported	-
	-0.707	-5.453			
			0.11		
Perceived Negative Impacts * Perceived Economic Crisis -> Support for Tourism Development					
	-	-		Supported	-
	0.139	5.173			

|t|>1.96 Significant at P<0.05, |t|>2.58 Significant at P<0.01.

In summary, Examining the full model can be noted (Figure 3):

- Place attachment influences positively and significantly residents' support for tourism development (i.e.,  $\beta = 0.043$ ), but no significant effect on both perceived positive impacts of tourism and perceived negative impacts of tourism were not found.
- Community concern influences positively and significantly perceived positive tourism impacts (i.e.,  $\beta = 0.185$ ) and affect negatively and significantly perceived negative tourism impacts (i.e.,  $\beta = -0.161$ ).
- Understanding of economic benefits has a positive and significant influence on perceived positive impacts (i.e.,  $\beta = 0.239$ ) and negative and significance perceived negative impacts (i.e.,  $\beta = -0.206$ ).
- No significant relationships were found between the level of involvement and both perceived positive and negative impacts.
- The perceived economic crisis has a positive and significant influence on both perceived positive impacts (i.e.,  $\beta = 0.525$ ) and supports for tourism development (i.e.  $\beta = 0.19$ ) but a negative and significance influence on perceived negative impacts (i.e.,  $\beta = -0.585$ ). It also



moderates the relationships between both perceived positive impacts and negative impacts and supports for tourism development (i.e.,  $\beta = -0.707$  and  $\beta = -0.139$ )

- The perceived positive impacts affect positively and significantly supports tourism development (i.e.  $\beta = 0.490$ ).
- The perceived negative impacts have negatively and significantly relationship with support for tourism development (i.e.,  $\beta = -0.323$ ).

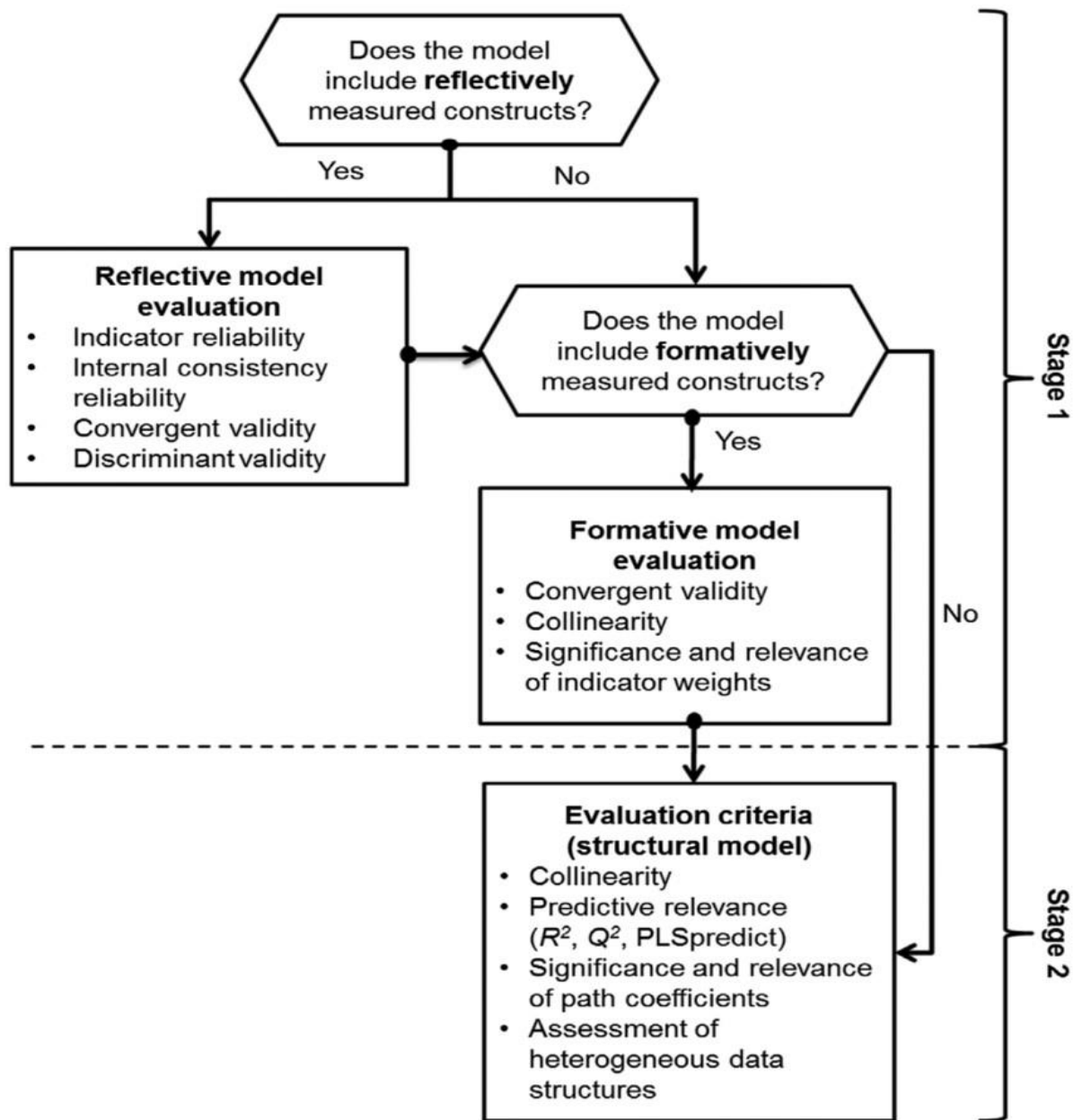


Figure 9. PLS-SEM model evaluation (Adapted from Sarstedt et al. 2014)

This section presented the results of various phases and studies of this research. Investigating the proposed hypotheses, information exposure's impact, and structural composition of perceived TI and STD not only shed light on the effect of perceived TI on STD but also provided

an explanation on how different variables such as PA, CC, EB, IN, and PEC influence perceived TI and STD.

## **5. Discussions and Implications**

First, this study developed and tested a structural model on the influence of place attachment, community concern, economic benefits, involvement, perceived economic crisis, and the positive and negative perceptions of tourism impacts on residents' attitudes toward tourism impacts. Second, it sought to recognize the factors influencing local communities' willingness to support tourism development. Third, and the most important, this study sought to broaden the scope of the literature by evaluating the effect of residents' perception of economic crisis on their perceptions of tourism and willingness to support its development.

The findings demonstrate that the locals have a comparatively stronger perception of tourism positive impacts as compared to negative impacts, which is more evident in developing countries (Eusébio et al., 2018; Gursoy & Rutherford, 2004). Hypotheses 1 and 2 tested the core SET hypotheses that if local residents recognize that positive benefits can outweigh negative impacts, the result of cost-benefit analysis will be positive and they will support tourism development more. The study results show a positive relationship between residents perceived positive impacts of tourism and their support for tourism development, and a negative relationship between residents perceived negative impacts of tourism and their support for tourism development. This finding is in accordance with the previous literature (Boley et al., 2014; Eusébio et al., 2018; Gannon et al., 2020; Gursoy et al., 2002; Ko & Stewart, 2002; Rasoolimanesh et al., 2015) and the notion of SET. There is a strong need for Isfahan's local

authorities and policy-makers to promote initiatives to improve the positive impacts and reduce the negative impacts of tourism on residents. In particular, making residents more aware of the positive impacts is a useful tool (Gannon et al., 2020; Rasoolimanesh et al., 2015).

Hypotheses 3<sub>a</sub> and 3<sub>b</sub> focused on testing the influence of community concern (CC) within the model. Based on our results, residents' perceived positive impacts (PI) was found to be significantly predicted by community concern ( $\beta = 0.185$ ), and residents' perceived negative impacts (NI) has a negative relationship with their level of community concern ( $\beta = -0.161$ ). Thus, both hypotheses were supported by the study. This finding is coherent with several previous empirical studies (Andereck et al., 2005; Gursoy et al., 2010; Gursoy & Rutherford, 2004) which concluded that that resident perception of tourism impacts is a function of the level of concern residents feels about various community aspects (such as, crime, economy, culture, and tradition). Moreover, as indicated in Table 5, Isfahan's local communities are concerned about their community (Mean=3.775). This implies that managers and planners should focus on the aspects that residents are concerned about.

Place attachment is one of the variables that we expected to be effective on resident perceived tourism impacts based on the primary assumptions and existing studies and theories (Eusébio et al., 2018; Gu & Ryan, 2008; Styliadis, 2017; Styliadis et al., 2014). Hypotheses 4<sub>a</sub>, 4<sub>b</sub>, and 4<sub>c</sub> focused on testing the influence of place attachment within the model. This study showed a strong place attachment among locals (Mean=3.881); however, there is no statistically significant association between resident PA and PI or NI. Therefore, the results of hypotheses testing were inconsistent with our expectations and led us to reject both 4<sub>a</sub> and 4<sub>b</sub>. This finding is inconsistent with the empirical studies on the relationship between PA and perceived TI (Eusébio et al., 2018). In addition, results allude to the positive effect of PA on STD. Therefore,

Hypothesis 4<sub>c</sub> “Residents’ PA positively and directly predicts their willingness to STD” was supported by the study. The positive sign indicates that residents who are highly attached to Isfahan tend to be more supportive of tourism development. This finding aligns with the work of Eusébio et al. (2018). Therefore, PA is one of the most prominent non-economic constructs used to explain why locals support or oppose tourism development; resident PA should be included in tourism development plans. One way to accomplish this is to develop an inventory of places in the community that residents value and use zoning or other strategies to protect these places (Williams, McDonald, Riden, & Uysal, 1995).

In terms of residents’ economic benefits, results indicate that economic gain have positive and significant impact on resident perceived positive impacts ( $\beta=0.239$ ), and negative impact on their perceived negative impacts ( $\beta= -0.206$ ). This finding is coherent with several previous empirical studies (Ko & Stewart, 2002; McGehee & Andereck, 2004; Rasoolimanesh et al., 2015) and the notion of SET. Coupled with this strong support is another theoretical support from self-interest theory, as Pechlaner & Volgger (2013) have acknowledged that particularly in the context of a severe economic crisis, the notion of self-interest theory can be among the key drivers that form individuals’ behavior and priorities. This means that local authorities and managers should work to improve the local communities’ economic gains by involving residents in tourism activities that enable them to access more economic benefits. An alternative practical strategy is to raise awareness among residents on the direct and indirect socioeconomic benefits of tourism for their local community, as some may simply lack information on the matter.

Hypotheses 5<sub>a</sub> and 5<sub>b</sub> tested the relationship between residents’ involvement and the perceptions of the positive and negative impacts of tourism. We expected the effects of residents’

involvement on their perceived impacts; however, we did not find any significant relationship between the level of involvement and PI or NI. This finding is inconsistent with several previous studies (Andereck & Nyaupane, 2011; Látková & Vogt, 2012) that found that residents' involvement in tourism activity had positive effects on their perceived PI of tourism development as well as a negative effect on their perceived NI. This could stem from the low level of resident involvement in tourism development within Isfahan (Mean= 2.038). In other words, local people in Isfahan felt that they were generally not involved. This finding indicates the absence of effective planning and understanding of local community involvement in the Isfahan tourism industry. Tosun (2000) sees operational, cultural, and structural issues as major impediments to community involvement in developing countries. Moreover, Cole (2006) believes that leakage of revenue and the lack of ownership, capital, skills, knowledge, and resources all constrain the ability of communities to fully control their involvement in tourism development. This may be due to the fact that the government plays a major role in Iranian tourism activities; the main stockholders are government institutions. Therefore, to promote sustainable development, it is crucial to reconsider extant policies and design suitable strategies to empower local communities and stimulate their involvement (for instance, by offering resources to small enterprise development, maximizing linkages to the local economy, and minimizing leakages.). Another reason for this dissimilar outcome might lay under the fact that almost all of the previous studies were conducted in developed destinations (Gannon et al., 2020; Rasoolimanesh et al., 2015). In the present case, research has been conducted in a developing tourism destinations, facing a financial austerity.

Hypotheses 7 and 8 focused on testing the influence of perceived economic crisis (PEC) within the model. Our findings show that perceived economic crisis was found to be the best predictor

of residents' perceived positive impacts of tourism ( $\beta=0.525$ ; Hypothesis 7<sub>a</sub>), negative impacts of tourism ( $\beta= -0.585$ ; Hypothesis 7<sub>b</sub>) and their willingness to support its development in their community ( $\beta= 0.196$ ; Hypothesis 7<sub>c</sub>). This means that the more residents perceive economic crisis in their community, the more they will perceive tourism positively and the more willing they will be to support its development. An explanation is that, in a struggling economic environment, residents tend to overestimate the economic benefits of tourism (Lepp, 2007) and underestimate the negative impacts (especially socio-cultural and environmental) by hoping for a better economic situation (Kayat, 2002; Nunkoo & Ramkissoon, 2010). In other words, locals become more friendly with tourists amid economic troubles if they believe that tourism development will help them and their community achieve a better economic environment; this sacrifice of environmental, social, and cultural beliefs has the potential to result in socio-cultural discord or environmental and cultural degradation. This leads unsustainable tourism development in destination. Therefore, destination managers and local authorities must be keenly aware of tourism's negative impacts being marginalized by community members. This study hypothesized that perceived economic crisis would have a moderating effect on the relationships between residents' perceived impacts of tourism and support for tourism development. As seen in Table 6, as the level of resident's perceived economic crisis increases, the influence of the perceived impacts of tourism (both positive and negative impacts) on resident willingness to support tourism increases as well. Thus, Hypotheses 8<sub>a</sub> and 8<sub>b</sub> were both supported by the study. Despite the fact that economic downturn exerts a frictional effect on individual's quality of life, it can create an opportunity for a destination in the context of a severe economic crisis, to restructure its tourism industry and alleviate poverty in societies under economic crisis (O'Brien, 2012)

This is one of the first studies to take perceived economic crisis as an antecedent of residents' perceived tourism impacts and their support for tourism. It reacts to the calls of Gursoy et al., (2018) and Smeral (2010) to examine exogenous variables that constitute the residents' perceptions of tourism impacts. It is also a response to Gannon et al., (2020) and Sharpley (2014) complaint related to the scarcity of research into residents' perceptions in developing destinations. However, as with any piece of research, several limitations narrow the scope of our conclusions. This study took place in Isfahan, Iran. So, in order to generalize the results, it would be of interest to test perceived economic crisis's influence on resident perception within and across alternative developed and developing contexts with different level of economic crisis and comparing residents' perceived tourism impacts among them. Moreover, it should be noted that as Rasoolimanesh et al., (2015) assert the results of an investigation in a developing country can be significantly different from those in developed countries. For instance, we did not find any significant relationship between involvement and perceived impacts of tourism (PI and NI), which is in contrast to previous studies done on developed countries. Since the results are not generalizable, there is a need for similar studies in other developing countries, where the involvement in tourism are more widely felt. The second limitation is associated with the decision to use quantitative methodology to investigate resident perception rather than using qualitative methods. Future research should conduct detailed semi-structured interviews with residents to capture a deeper level and answer the question of why they support or oppose tourism development. Finally, this study did not use longitudinal data and conducted in a particular time. Another option to future research should be based in an attempt to identify how residents' perception of tourism are formed during an economic crisis. A longitudinal research,



in particular, would allow a deeper examination of the potential change in residents' perception of tourism in relation to the economic crisis.

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## Appendix: Questionnaires

**Dear resident,**

This survey looks to analysis the local residents’ perception of the impact of tourism on Isfahan. Your responses are an indispensable part of achieving this goal. Your responses to this questionnaire, as well as your identity, will remain anonymous. We greatly appreciate the time you take to complete this survey.

Fahimeh HATEFTABAR, Ph.D. Candidate, Principal Investigator

Jean Michel CHAPUIS, Supervisor

### Part 1. Perception of tourism impacts

Please indicate how strongly you agree or disagree with the following statements	strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	strongly agree
1. Tourism generates huge employment opportunities for residents	1	2	3	4	5
2. tourism promotes improvement in basic services useful in everyday life (water, electricity, community centers).	1	2	3	4	5
3. Tourism contributes to the increase of residents’ quality life	1	2	3	4	5
4. Tourism encourages residents to appreciate their own cultural identity.	1	2	3	4	5
5. Tourism encourages cultural activities.	1	2	3	4	5

6. Tourism improves revival of local handicrafts, cultural activities, and traditions. 1 2 3 4 5

7. Tourism helps to infrastructure improvement (roads, sports facilities, etc.) 1 2 3 4 5

8. Tourism preserves the natural environment. 1 2 3 4 5

9. Tourism increases locals' awareness and appreciation of environmental preservation 1 2 3 4 5

10. Tourism has made prices rise and increased the cost of living in Isfahan. 1 2 3 4 5

11. Tourism increases unstable employment. 1 2 3 4 5

12. Tourism increases in real estate value in Isfahan. 1 2 3 4 5

13. Tourism increases crime (robbery, violence, prostitution, etc.). 1 2 3 4 5

14. Tourism is causing the loss Iranian Islamic culture. 1 2 3 4 5

15. Tourism increases drug abuse and alcoholism among locals. 1 2 3 4 5

16. Our historical sites are being spoilt by tourist visitations 1 2 3 4 5

17. Tourism is the major cause of traffic congestion in Isfahan.	1	2	3	4	5
18. Tourism causes significant contamination and pollution problems (litter, noise, etc.).	1	2	3	4	5

### Part 2. Support tourism development

Please, select the number that best explains your opinions about tourism development in Isfahan.	stro	Somew			stro
	ngly	hat	Neither	Somew	ngly
	disa	disagre	agree nor	hat	agre
	gree	e	disagree	agree	e
1. The positive benefits of tourism outweigh negative impacts	1	2	3	4	5
2. I strongly support tourism development in Isfahan.	1	2	3	4	5
3. Tourism should be boosted as one of the key drivers of the economy of Isfahan.	1	2	3	4	5

### Part 3. Independent variables of study

Please, select the number that best explains your opinions	stro	Somew			stro
	ngly	hat	Neither	Somew	ngly
	disa	disagre	agree nor	hat	agre
	gree	e	disagree	agree	e
1. I strongly identify myself with Isfahan.	1	2	3	4	5



2. I have an emotional attachment to this place - it has meaning to me. 1 2 3 4 5

3. I wouldn't replace this city with any other place., for living, 1 2 3 4 5

4. Isfahan is the best place for the activities I like to do. 1 2 3 4 5

5. I have concerned about future economic development in Isfahan. 1 2 3 4 5

6. I have concerned about crime rate in Isfahan. 1 2 3 4 5

7. I have concerned about cultural and traditional. 1 2 3 4 5

8. Tourism increases my personal income level. 1 2 3 4 5

9. A high percentage of my/my family current income comes from the money spent by visitors. 1 2 3 4 5

10. Most of the income of the company I work for (or business I own) comes from the tourist trade. 1 2 3 4 5

11. I actively participate in tourism planning. 1 2 3 4 5

12. I have desire to be involved in decision making process 1 2 3 4 5

13. Most of the time my opinions have been asked regarding planning and development of tourism 1 2 3 4 5

14. Isfahan has high unemployment rates and loss of income                    1                    2                    3                    4                    5

15. Iranian economy collapses by the sanctions.                    1                    2                    3                    4                    5

**part 4. Socio-demographic characteristics**

---

1. What is your gender?

Male                    female

2.How old are you?

18-24                    25-34                    34-44                    45-65                    more than 65

3.What is your family status?

single                    married                    separated/divorced

4.What is your highest level of education?

up to diploma                    university degree

5. How much is your monthly personal income? (Toman)

Under 2.000.000                    2.000.000-5.000.000                    5.000.000- 8.000.000                    8.000.000 and over

6.Since when have you lived in Isfahan?

1-4 years                    4-8 years                    8 years and more

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# **Chapter 4: Analyzing the adoption of online purchases in the tourism industry: Effects of perceived tourism value and personal innovativeness**

## **Abstract**

This paper constructs an integrated model that examines the adoption of online purchases in the tourism industry and how this adoption is influenced by individual perceptions of tourism value and personal innovativeness. The proposed model assimilates factors from UTAUT alongside personal innovativeness and four values attributed to tourism. Data was collected from 389 individuals and PLS-SEM was conducted to assess the hypotheses. The results indicate that the online purchasing intentions of tourists are significantly influenced by effort expectancy, performance expectancy, social influence, and perceived tourism value. All findings' policy implications are provided for scholars, website designers, and marketers.

**Keywords:** Acceptation of technology; Online purchase intention; Tourism value; Personal innovativeness; Unified theory of acceptance and use of technology.

## 1. Introduction

The tourism industry has changed dramatically since the 1960s due to evolving information communication technology (ICT; Buhalis & Law, 2008). The development of computer reservation systems (CRS) in the 1960s, global distribution systems (GDS) in the 1980s, and the Internet in the 1990s radically transformed the tourism industry (Amaro & Duarte, 2015; Navío-Marco, Ruiz-Gómez, & Sevilla-Sevilla, 2018). These technological advancements changed both industrial operations and tourist behavior (Amaro & Duarte, 2015; Buhalis, 1998). The Internet provides powerful distribution channels for travel service providers and facilitates connections between suppliers and consumers (Law, Buhalis, & Cobanoglu, 2014; Legohérel, Fischer-Lokou, & Guéguen, 2000). Over the past several decades, the airline, cruise, accommodation, and recreational industries have distributed their products and services through mediators in the tourism industry. However, the Internet has improved production efficiency by providing new distribution channels and a new way to sell services and products (Agag & El-Masry, 2016; Legohérel et al., 2000). Consumers use this new channel to access a tremendous number of services and products and make purchases with lower prices in less time (Amaro & Duarte, 2015; Assaker, Hallak, & El-Haddad, 2019; Legohérel et al., 2000; Standing, Tang-Taye & Boyer, 2014). Figure 1 shows the impact of Internet on travel and tourism industry.

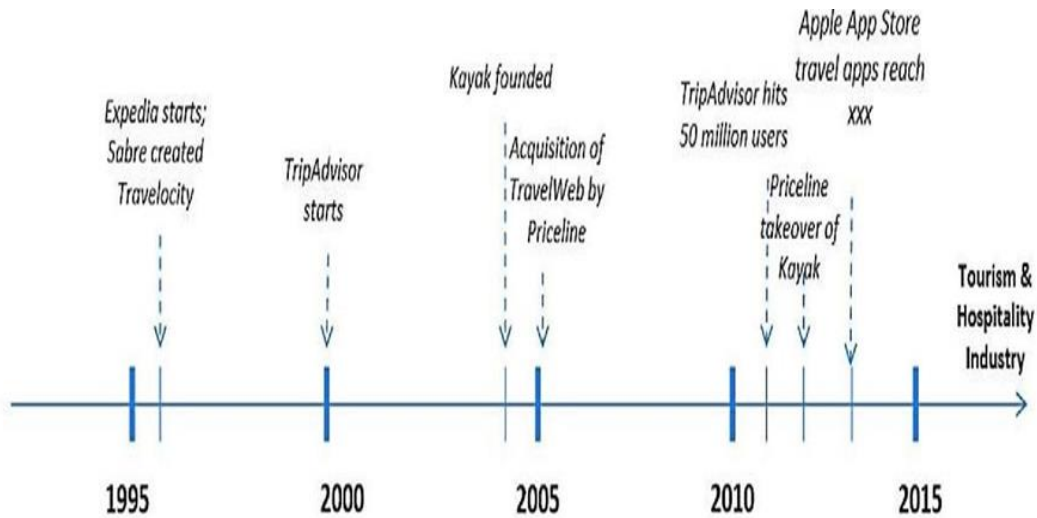


Figure 1. Important developments in the Internet.  
 Source: Xiang, Wang, O'Leary, & Fesenmaier (2014).

In recent years, there has been considerable growth in online shopping in the tourism industry (Besbes & Legoh  rel, 2016; Kucukusta, Law, Besbes, & Legoh  rel, 2015). In fact, “travel” is the second-most popular category of online purchases (Nielsen, 2018). In 2018, online travel sales for the Asia-Pacific were collectively worth 253.56 billion USD; estimates indicate that this figure will rise above 360 billion USD by 2021. The popularity of online shopping has led to a great deal of interest from researchers in the tourism literature. According to Law et al. (2014) and O’Connor and Murphy (2004), most studies in this stream of research have explored these issues largely from the supplier side and technological development—the consumer side of online shopping in the tourism industry has received limited attention (Amaro & Duarte, 2015; Prentice, Han, Hua, & Hu, 2018). This disparity should be addressed by carrying out more research on consumers’ online purchasing behaviour to analyse different antecedents of their behaviours. Amaro and Duarte (2015) and San-Mart  n and Herrero (2012) have affirmed

that further research is needed on this subject, as the few studies with this focus have presented contradictory results.

One of the most significant gaps in the literature pertains to travelers' perceptions of tourism impacts and values attributed to tourist destinations (Joo, Cho, & Woosnam, 2019). Joo et al. (2019) conclude that travelers can be mindful about the impacts of their activities in a destination. Recently, San-Martín, Jimenez, & Liebana-Cabanillas (2020) suggest that the existing literature on the value of tourism overlooks e-purchasing and the perceived inconvenience of travel to specific destinations from the traveler's perspective; the majority of the literature concentrates on the value (positive impacts) of tourism as perceived by local residents (Nunkoo & Gursoy, 2012; Hateftabar & Chapuis, 2020; Styliadis & Terzidou, 2014) rather than travelers. They conclude that travelers' perceptions of the impacts of tourism on destinations influence their intention to make travel purchases online. To the best of the knowledge of this paper's authors, San-Martín et al. (2020) provide the only study that examines the relationship between tourists' online-purchase intentions and tourists' perceptions of the impact of tourism on destinations; they believe that there is a need for further examination of this relationship, as more research is required to understand tourists' online purchasing behavior. Therefore, heeding this call, the current study examines the impact of travelers' perceptions of tourism on their online-purchase intentions. It addresses the following research question:

Do the impacts of tourism on destination matter for travelers when making travel purchases online?

Given this gap in the research background, the present study was conducted to take a step forward for detailing online-purchase intentions and explore the effective factors in consumer

intention of booking travel online. In this study the social, economic, physical and technological values of tourist destinations (as new extrinsic variables) and personal innovativeness (as an intrinsic variable of tourists) were incorporated into the unified theory of acceptance and use of technology (UTAUT) to scrutinize tourists' behavioral intentions toward online purchasing. The results will provide marketers and researchers with a more comprehensive insight into tourists' online purchasing intentions and behaviors. Moreover, recognizing the determinant factors of online tourism purchases will aid marketers and managers with the development of new strategies to convert potential consumers into actual buyers.

### **Research structure**

In line with the previous section, this paper displays a sequential process that results in outcomes, recommendations and conclusions. The course of work is divided into six sections. Section one is an introductory part. It presents the topic of study and a general depiction of how the research's aims were addressed and study mission was tackled.

Section two is a descriptive chapter. This section follows the subsequent logical pattern: in "tourism online shopping" section, key terms and their importance in tourism studies have been defined and discussed. After that, the literature in behavioral intention in accepting new technology and different theories in behavioral intention is discussed extensively and the gap in mainstream tourism online shopping intention is explored. This section ends with the subsection of "Rational & Hypotheses". In this part, the hypotheses, which are developed, based on previous literature, arguments, and definitions, are explained. Finally, a theoretical framework which is comprised of key determinants that are expected to influence online purchase behavior and actual online purchase proposed.

Third section represents the adopted research methodology that were employed to test the hypothesized relationships and obtain deeper understanding of the online purchase behavioral intention and behavior. Moreover, the chapter presents population, sample and data collection processes and procedures as well as applications to obtain an enhanced representative sample. Section four is dedicated to descriptive findings of the study and results. It consists of two subsections: measurement model and structural model results.

Section five is a discussion of the findings considering the research question. It commences from the results of hypothesis testing and expands broader to discuss the theoretical and empirical implications of the study findings. The addressed recommendations fall in harmony with the study's model. Finally, section six encapsulates the research limitation and suggestion for future researches.

## **2. Literature Review**

### **2.1. E-tourism**

Application of Information and Communication Technology in tourism industry is called electronic tourism or E-tourism (Buhalis, 2003; Buhalis & Law, 2008). Buhalis (2003) asserts that e-tourism reflects digitalizing all processes and chain values in tourism industries, travelling, accommodation, and entertainment. In technological scope, e-tourism including e-commerce and application of information and communication technology maximizes efficiency and influentially of tourism organization. In strategic scope, electronic tourism consists of all business processes, chain values, and also strategic relations of tourism organizations with all their partnerships. Etourism determines the competitiveness of an organization through using the benefits of Internet for rearranging internal processes, extranet and performing transactions



with reliable partnerships and Internet for cooperation with all partnerships and costumers (Buhalis & Law, 2008; Law, Qi, & Buhalis, 2010).

The concept of E-tourism includes all business activities such as e-commerce, electronic marketing, electronic accountancy, management of electronic human resources, electronic shopping, electronic research and development and electronic production. Also, strategic design, planning, and management for all sections of tourism industry including tourism, travelling, transportation, entertainment, accommodation, and mediators of state organizations are electronically performed. Therefore, electronic tourism consists of a connection between three distinct sections that consist of business management, information systems and their management, as well as tourism.

## 2.2. Proportionality of Tourism Products and Services to ICT

More than a decade ago, in 1999 Werthner and Klein declared that tourism and information and communication technologies are a good match, since traveling products and services have ideal features for being offered to online market. Where products have business potentiality and products are easily describable, it is possible to coordinate things in security chain by substituting electronic markets and decentralized strategy for exclusive marketing channels. Products and services offered by tourism hold features which are essential for working in electronic environment. Convenience in the commercial nature of many tourism products (such as airplane seats or hotel rooms) indicates that the travel industry offers products that are suitable for ecommerce, and many studies have indicated that tourism products coordinate to internet capabilities (Buhalis & Licata, 2002; Kim, Sun, & Kim, 2013).

### 2.3. ICT and Online Shopping

One of the most prominent innovativeness of past decades is Internet technology (Beldona, Racherla, & Mundhra, 2011), and the number of Internet users has increased dramatically. The growth and popularity of the internet leads rapid developing of online shopping and it has adopted as an important medium, offering a wide range of products and services with 24-hours availability and it makes shopping very easy for customers. As Buhalis and Law (2008) claimed it shifted the balance of power in favor of customers' sides because online customers have more control and bargaining power compared to physical markets. They can access to greater amount of reliable and accurate information about products and services and available to make price comparison between different online shopping stores and evaluate alternatives without being pressured by salesperson (increased the number of choices for consumers).

On another hand, companies can increase their profits by bypassing traditional intermediaries in the distribution channel and decreasing the gap between customers and suppliers. Additionally, they can increase their sales by putting emphasis on the consumer online shopping behavior (Zhao, 2012). According to Lin (2009) definition online shopping behavior refers to the process of buying a product or service via the Internet. Before doing any activity, individuals should have an intention toward that activity. Therefore, the understanding of customers' intention toward online purchase is more effective than other factors in order to make lookers to shoppers (Li & Buhalis, 2006; Nunkoo & Ramkissoon, 2012).

## 2.4. Online Shopping in the Tourism Industry

As mentioned above, tourism-related products and services are usually bought without experiencing them first, so buying them online is not so different from offline experience. For this reason, the online method is ideal for the tourism industry in terms of enabling information retrieval and electronic transactions. Nowadays, travelers can fulfill the necessary purchase transactions in a convenient way without having to visit physical travel agencies through the world. It is considered as a competitive and powerful tool for travelers to purchase products/services online (Morrison, Jing, & O'Leary, 2001) and an essential marketing tool for the tourism industry.

Data statistics from different sources show the fast growth of tourism industry and online accommodation that indicate the significance of online shopping in tourism industry (Buhalish, 2003; Kim et al., 2013). For instance, in a survey conducted by Nielsen in 2008, traveling is the most important online transaction. Several studies point out that tourism is one of the first three ranking of online product and service shopping. According to a research carried out by a Danish center for Regional and Tourism Research, there is a 21 percent raise in selling travels online from 2011 to 2012 and has reached 63.4 billion in European market in 2012 (Amaro & Duarte, 2013).

In addition, research findings prove that airline tickets are the most favorable travel products which are purchased online and next is hotel reservation. However, tours are publically accepted (Card, Chen & Cole, 2003). In other studies, done by Morrison et al. (2001) and also Park, Wang, & Fesenmaier (2011), they specify similar findings which consider purchasing airline tickets online and hotel reservation respectively as the most favorable online shopping in tourism industry.

An increasing number of research on tourism online shopping have been published since 2001, and the growth and ubiquity of the online shopping in travel and tourism have been widely documented in the existing literature (Buhalis & Law, 2008). Despite the presence of numerous of studies on this topic, researchers have rarely examined the travelers' behavioral intention to online shopping. Apparently, prior studies have largely concentrated on website analyses (Beldona, 2005; Kim et al., 2013; Grønflaten, 2009), social media and virtual society of tourism (Park et al., 2011), online travel planning (Tanford, Baloglu, & Erdem, 2012; Xiang et al., 2014).

## 2.5. Online Shopping in Iran

In most of the developed countries, online buying has been adopted as a popular way among costumers. In some other countries, such as Iran (as a developing country), however e-commerce has been much below than anticipated proportion of total retail business (Moshref Javadi et al., 2012).

There is even very contradictory statistics about Iranian Internet users (Moshref Javadi et al., 2012). The internet has started rapid growing in Iran at a high speed over the past few years. Statistics for the past year is indicative of the fact that the penetration rate of the internet in Iran is 82.12%. In Iran, there are about 49 million online users and the Middle East has the first rating (Internet World Stats, 2017). Therefore, Iran is one of the appropriate countries regarding shop and sale of online products and services. Available evidences show that although there is such a big market of online users in Iran, this country is placed among countries with the lowest e-commerce (Hanafizadeh, Behboudi, Ilani, & Kalhor, 2012). Following the rapid growth of internet in Iran, online shopping of Iranian is expected to increase. Estimates show that online

shopping from Iranian e-shops rises by an average of 60 percent per year (Bidad, 2017; Moshref Javadi et al., 2012). Therefore, as online shopping is expected to increase in Iran (Bidad, 2017), it could be useful for Iranian e-marketers to understand consumers' intention towards online buying in order to respond to the shifting shopping behaviors as proficiently as possible. By doing this, the e-marketers and online shopping websites' vendors would be able to create more successful online shopping platforms where customers will finalize the purchase, and adapt their marketing effort to further drive the adoption.

In tourism area, it is indicated that observing products and services of tourism and traveling in websites are the lowest in Iranian users which is about 8 percent, and this number is about 19 percent for traveling and tourism services (Arab, Blake, & Neuendorf, 2003).

## 2.6. Theoretical Background

Researchers have shown a deep interest in understanding customers' online shopping behaviors. Since shopping is a behavioral act and online shopping is dependent on technology, the theories used by researchers are Technology acceptance theories. These group of theories aim to predict individuals' intention to engage in behavior.

Many theories and models have tried to analyze the intention to utilize new technology. The dominant theories in this area include: TRA, theory of reasoned action (Fishbein & Ajzen, 1975); TPB, theory of planned behavior (Ajzen, 1985, 1991); TAM, technology acceptance model (Davis, 1985, 1989); DTPB, decomposed theory of planned behavior (Taylor & Todd, 1995); IDT, innovation diffusion theory (Rogers, 1995); MM, motivational model (Davis, Bagozzi, & Warshaw, 1992); MPCU, model of PC utilization (Thompson, Higgins, & Howell, 1991); and SCT, socio-cognitive theory (Compeau & Higgins, 1995).

These models have been considered the building blocks of new technology acceptance and have been practiced in various fields. However, due to inabilities regarding comprehensive analysis, they have been criticized by researchers (Venkatesh, Morris, Davis, & Davis, 2003). Venkatesh et al. (2003) studied in the background of various theories and tried to study the real behavior of staff after six months of training. They synthesized the dominant constructs of eight previously prevailing models (see Table 1) to construct a new model in the name of UTAUT—they proved their theory using former theories. UTAUT has been employed in nine different countries and has been upheld by the results. It is viewed as a melting pot for eight former models and, therefore, as more practical than any other individual model (San Martín & Herrero, 2012).

- Innovation Diffusion Theory (IDT)

Theory of “diffusion of innovation” proposed by E.M. Rogers in 1995, and is one of the oldest social science theories, that tries to explain how, why, and at what rate new ideas and technology spread. Rogers established this theory for conducting research to clarify how a new idea or product gains momentum and diffuses through a social system. In better words he tried to formulate innovation acceptance and adoption through a specific population. He defined adoption as “a person does something differently than what they had previously (i.e., purchase or use a new product, acquire and perform a new behavior, etc.)” Rogers concluded that the innovation and adoption happened after going through several stages including understanding, persuasion, decision, implementation, and confirmation that led to the development of Rogers

(1995) S-shaped adoption curve of innovators, early adopters, early majority, late majority and laggards as shown in Figure 2.

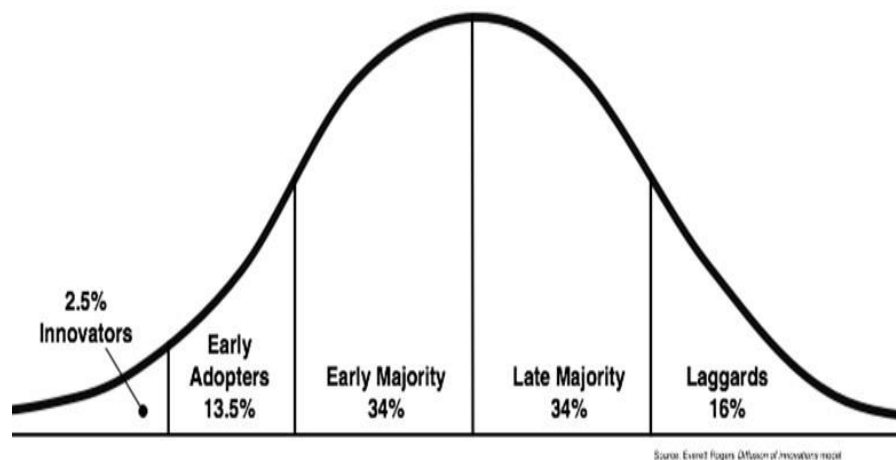


Figure 2. Innovation Diffusion Theory (IDT)

- Theory of Reasonable Action (TRA)

Fishbein and Ajzen in 1975 developed the first social-psychology technology acceptance theory and this theory is one of the most extensive theory in explaining behavioral intention. Fishbein and Ajzen tried to propose a theory that could predict, explain, and influence human behavior and they believed that TRA was designed to explain virtually any human behavior. TRA suggests that a person's behavior is determined by his/her intention to perform the behavior and this intention is, in turn, a function of their attitude toward the behavior and normative component (i.e. subjective norms surrounding the act). They defined attitude as "the individual's evaluation of an object" and defined behavior as "a result or intention". Moreover, they defined behavioral intention as "a result of a belief that performing the behavior will lead to a specific outcome". Based on this theory the stronger intentions lead to increased effort to

perform the behavior, which also increases the likelihood for the behavior to be performed.

Figure 3 depicts TRA.

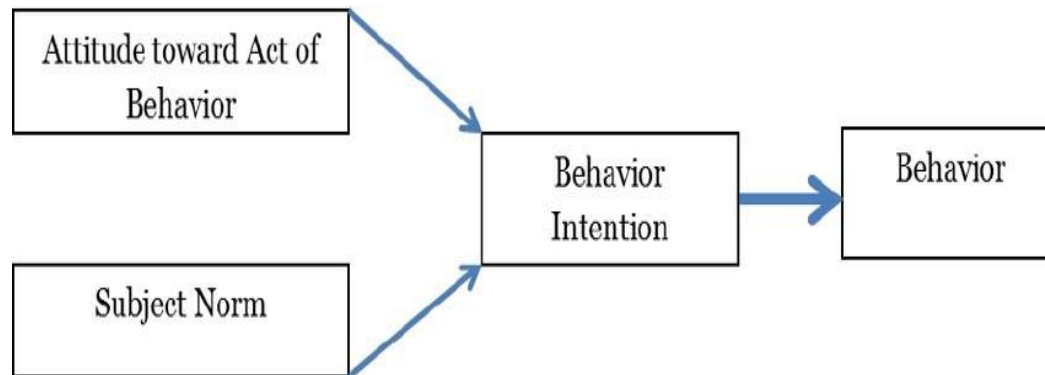


Figure 3. Theory of Reasonable Action (TRA)

- Social Cognitive Theory (SCT)

The social cognitive theory (SCT) was presented by Bandura (1986). The most important point of SCT is the emphasis on social influence and its emphasis on external and internal social reinforcement. In other words, based on SCT human functioning should be viewed as the product of a dynamic interplay of personal, behavior, and environmental influences. Bandura (1986) claims that past experiences are the key determinants of behavior, since these experiences have impacts on reinforcements and expectations. When people observe a model performing a behavior and the consequences of that specific behavior, they interpret the results of that behavior and remember the sequence of events and use this information to guide subsequent behaviors (see figure 4)



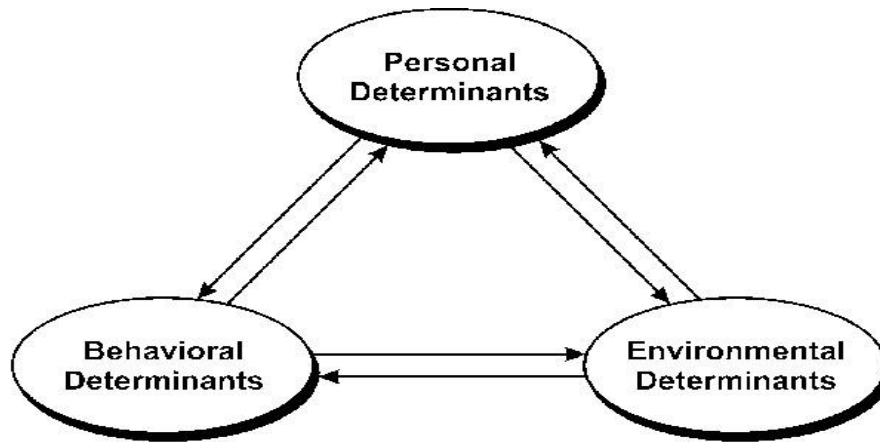


Figure 4. Social Cognitive Theory (SCT)

- Theory of Planned Behavior (TPB)

Ajzen in 1991 proposed the theory of planned action as an extension of previous theory (TRA). He extended TRA by adding a new construct which was perceived behavioral control. This extended version of TRA has been successfully applied to the explaining of individual acceptance and usage of many different technologies. In TPB the two first constructs are the same as TRA (Fishbein & Ajzen, 1975), the third determinant of intention and behavior is “perceived behavioral control” and refers to a person's perception of the ease or difficulty of performing the behavior of interest. Perceived behavioral control varies across situations and actions, which results in a person having varying perceptions of behavioral control depending on the situation. TPB states that attitude toward behavior, subjective norms, and perceived behavioral control, together shape an individual's behavioral intentions and behaviors (shown in Figure 5).

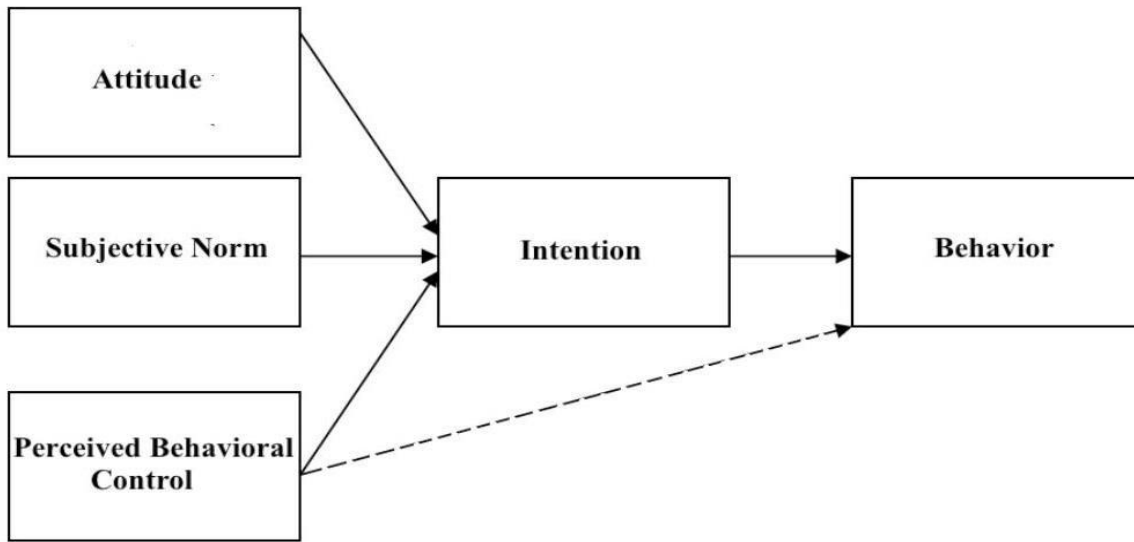


Figure 5. Theory of Planned Behavior (TPB)

- Technology Acceptance Model (TAM)

Technology acceptance model (TAM), introduced in 1989 by Fred Davis. This model is an extension of Ajzen and Fishbein’s theory of reason action (TRA). Davis’s TAM is the most widely applied theoretical model in users’ acceptance and usage of technology (Venkatesh et al., 2003; Venkatesh et al., 2012). TAM replaces the constructs of TRA’s attitude with two technology acceptance variables and assumes that individual’s technology acceptance is determined by two external variables: perceived ease of use and perceived usefulness. According to Davis (1989) “perceived usefulness” is defined as the potential user’s subjective likelihood that the use of a certain system will improve his/her action and “perceived ease of use” refers to the degree to which the potential user expects the target system to be effortless.

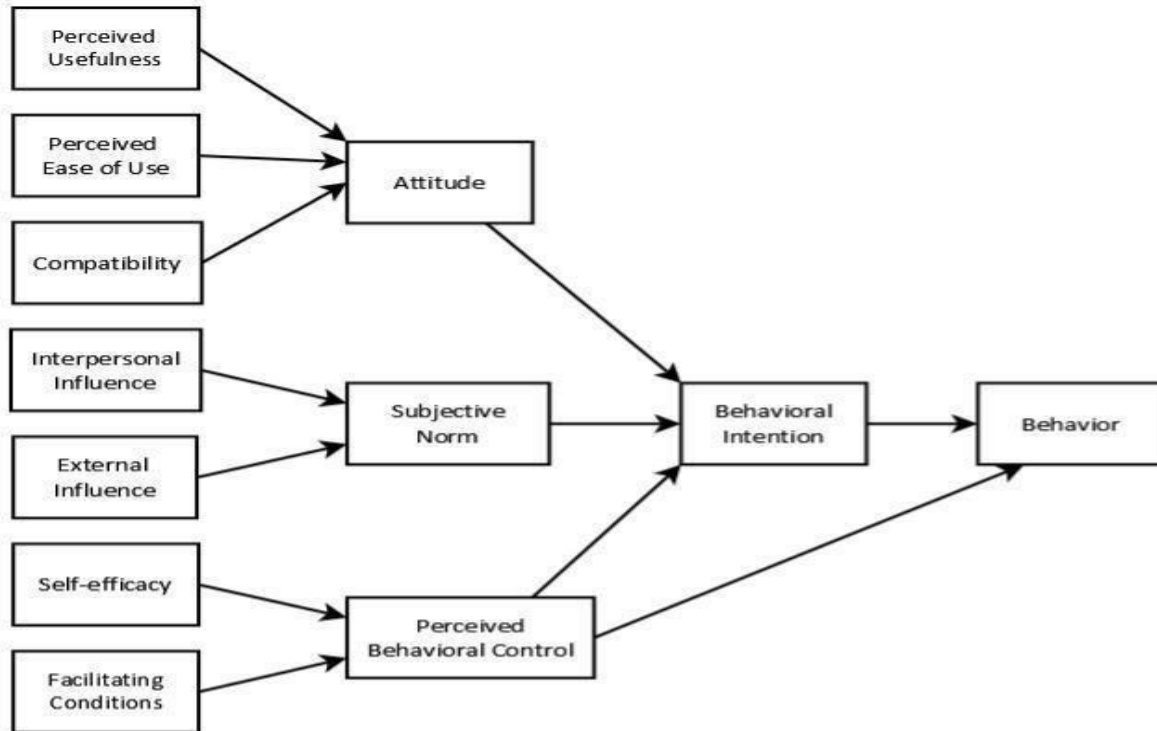


Figure 6. Decomposed Theory of Planned Behavior (DTPB)

- Model of Personal Computer Utilization (MPCU)

Thompson, Higgins, and Howell (1991) based on the Triandis's theory of human behavior proposed a new technology acceptance model. Triandis (1979) tried to understand how individual's behavior occurs and what are influential factors of individual's behavior, he concluded that "behavior is determined by what people would like to do (attitudes), what they think they should do (social norms), what they have usually done (habits), and by the expected consequences of their behavior".

Later in 1991, Thompson et al. adapted and refined the theoretical model of Triandis for Information systems (IS) context with an aim to predict individuals' acceptance and use of

personal computers and use of several information systems. They conducted a research to understand the determinants of workers' PC utilization and the results of their study indicated that workers' computer using is influenced by several factors such as their feelings (affect) toward using PCs, prevalent social norms regarding use of PC at the workplace, general habits related to use of the computer, consequences expected by the user by using the PC and extent of conditions that are present at the work place for facilitating use of PC. These constructs are depicted in the figure 7.

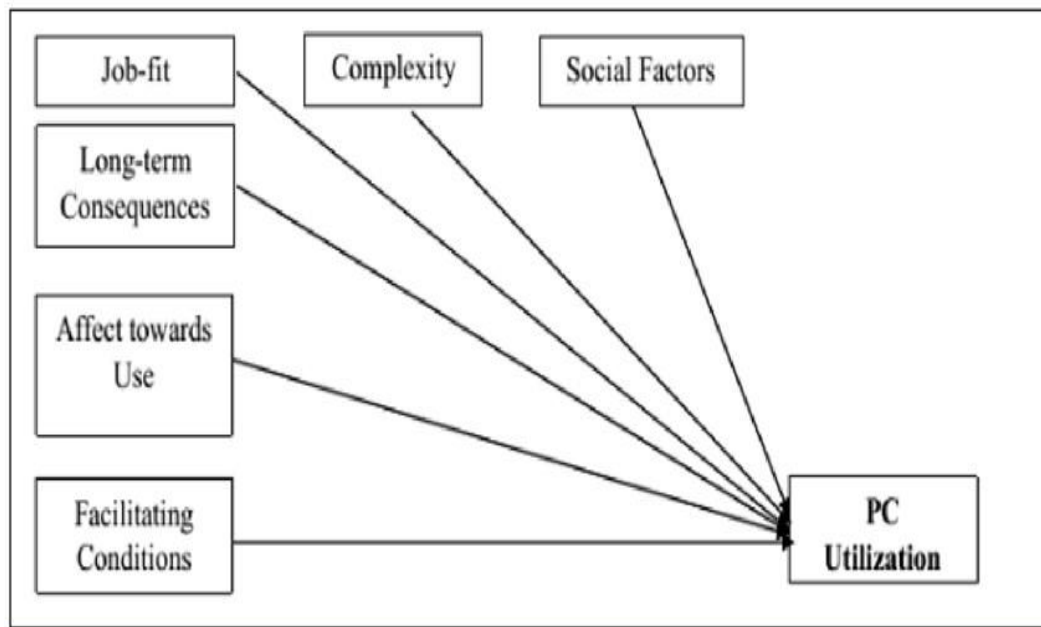


Figure 7. Model of Personal Computer Utilization (MPCU)

- Motivational Model (MM)

Davis, Bagozzi, and Warshaw, (1992) proposed motivational model in order to study information technology adoption and use. They believed that motivations shape users'

behaviors and highlighted two main forms of motivation: extrinsic and intrinsic. Based on their definition intrinsic motivation refers to doing something because it is enjoyable or interesting, such as playing computer games for enjoyment”. While, extrinsic motivation is defined “doing an activity because it leads to valued outcomes that are distinct from the activity itself, such as improved job performance, pay, or promotions” (Davis et al., 1992, p 1112).

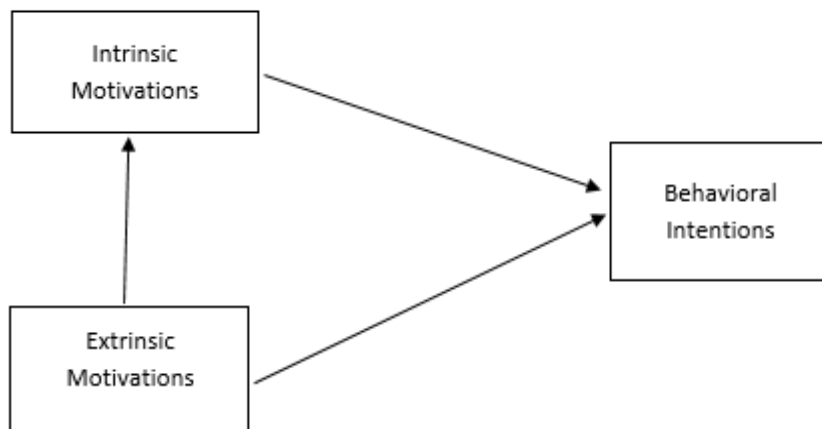


Figure 8. Motivational Model (MM)

Based on our previous discussion, it is possible to summarize the evolution stages for technology acceptance models (see Figure 9).

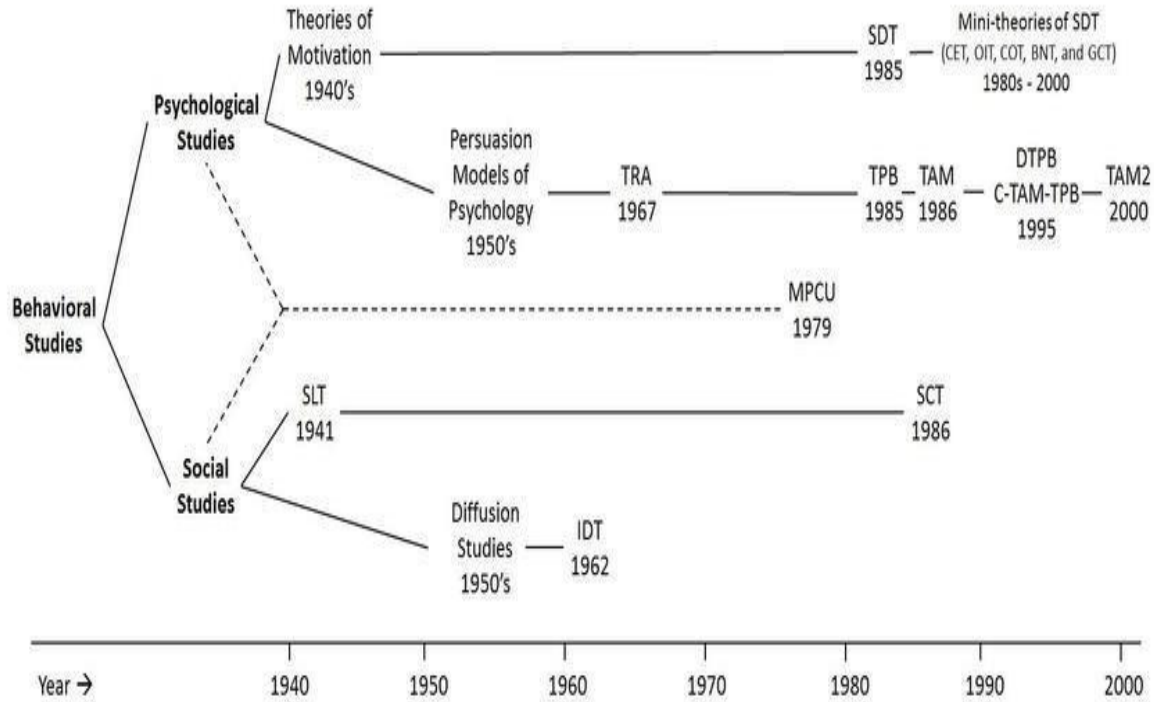


Figure 9. Chronological graph for the evolution of technology acceptance theories.

Source: Momani & Jamous (2017)

These models have been considered the building blocks of new technology acceptance and have been practiced in various fields. However, due to inabilities regarding comprehensive analysis, they have been criticized by researchers (Venkatesh et al., 2003). Scholars tried to conclude an optimal model and therefore, countless extensions and synthesis of previous models have been made. Venkatesh et al. (2003) studied in the background of various theories and tried to study the real behavior of staff after six months of training. They synthesized the dominant constructs of eight previously prevailing models (see Table 1) to construct a new model in the name of UTAUT—they proved their theory using former theories. UTAUT has been employed in nine different countries and has been upheld by the results. It is viewed as a melting pot for eight former models and, therefore, as more practical than any other individual model (San Martín & Herrero, 2012).

Table 1. Models and theories integrated in the UTAUT

UTAUT construct	Model	Old Construct Name
Performance expectancy	Technology Acceptance Model (TAM) , Combined TAM-TPB	Perceived usefulness
	Motivation Model (MM)	Extrinsic motivation
	Innovation Diffusion Theory (IDT)	Relative Advantage
	Model of PC Utilization (MPCU)	Task adjustment
	Socio Cognitive Theory (SCT)	Outcome Expectations
Effort expectancy	Technology Acceptance Model (TAM), Combined TAM-TPB, Motivation Model (MM)	Perceived Ease of Use
	Model of PC Utilization (MPCU)	complexity
	Innovation Diffusion Theory (IDT)	actual ease of use
Social influence	Technology Acceptance Model (TAM), Theory of Planned Behavior (TPB), Combined TAM-TPB	subjective norm
	Model of PC Utilization (MPCU)	social factors
	Innovation Diffusion Theory (IDT)	social image
Facilitating conditions	Theory of Planned Behavior (TPB), Combined TAM-TPB	Perceived Behavioral Control
	Model of PC Utilization (MPCU)	facilitating conditions
	Innovation Diffusion Theory (IDT)	perceived compatibility



Figure 10 shows the core UTAUT model.

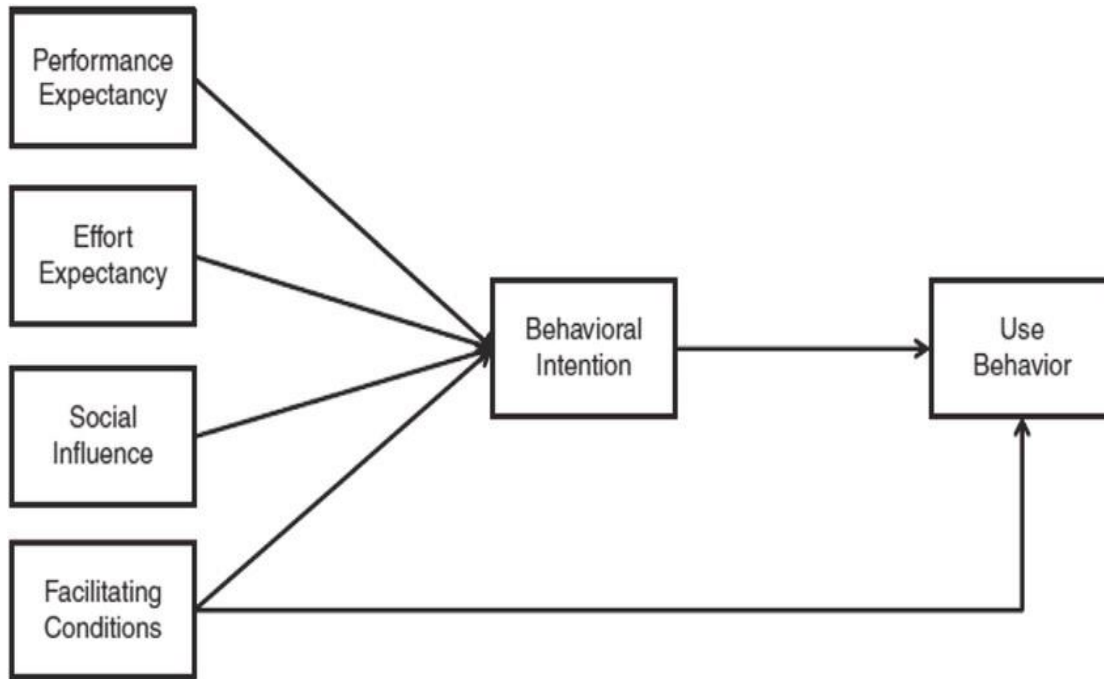


Figure 10. Unified Theory of Acceptance and Use of Technology (UTAUT)

Rondan, Arenas, & Ramírez (2015), by using wrapPLS (non-linear model) and partial least squares (linear model) conducted a comparison study among most popular technology acceptance models which include; TAM, TRA, and UTAUT. The result of their study indicates that UTAUT model has a better explanation power than other models for the acceptance of new technology. The UTAUT has received substantial empirical support by explaining user acceptance in several domains (Alalwan, Dwivedi, Rana, & Williams, 2016; Alalwan, Dwivedi, & Rana, 2017; khalilzadeh, Ozturk, & Bilgihan, 2017)—it can be described as a milestone in the technology-acceptance field. Therefore, it is logical to use the UTAUT model as our theoretical lens, as this model built upon all prior major models (Alalwan et al., 2017; Alalwan

et al., 2016; Okumus et al., 2018); it contributes to a comprehensive evaluation and understanding of the drivers behind behavior and intention (Alalwan et al., 2017; Escobar-Rodríguez and Carvajal-Trujillo, 2014; Khalilzadeh et al., 2017; Venkatesh et al. 2003).

## 2.7. Conceptual model and research hypothesis

### The UTAUT model and its variations

The UTAUT model includes six core constructs: performance expectancy, effort expectancy, social influence, facilitating conditions, behavioral intention to use the system, and usage behavior (Venkatesh et al., 2003). Venkatesh et al. (2003) concluded that four constructs- performance expectancy, effort expectancy, social influence, and facilitating conditions- are the direct determinants of behavioral intention.

### Performance expectancy

Various technology-adoption models, such as TAM, DTPB, and UTAUT, suggest that consumers tend to accept and use new technology if they believe that it will enhance their performance in their daily life and help them achieve desired results (Alalwan et al., 2017; Besbes & Legohérel, 2016; Kucukusta et al., 2015; Okumus et al., 2018; Shaw & Sergueeva, 2019; Wang, Wu, & Wang, 2009). Venkatesh et al. (2003) defined performance expectancy as the degree to which one believes that applying technology improves job performance. According to previous studies, online shopping is generally viewed as an advantageous channel that enables customers to obtain a wide range of information and services with time and price flexibility (Amaro & Duarte, 2015; Law, Qi, & Buhalis, 2010; Pappas, Kourouthanassis, Giannakos, & Lekakos, 2017). Kucukusta et al., (2015) and San-Marín and Herrero (2015)

confirmed that potential travelers who perceive online reservation to enhance their performance are more likely to respond favorably toward its adoption and make purchases online. Therefore:

H<sub>1</sub>: Performance expectancy positively influences tourists' online-purchase intentions.

### Effort expectancy

As another critical factor in behavioral intention to accept and use new technology, effort expectancy was defined by Venkatesh et al. (2003) as the simplicity of using technology. It relates to ease of use in TAM. According to TAM, user tendency to adopt new technology is significantly predicted by the degree to which the adoption would be difficult and require effort. Several studies have indicated that ease of use is a primary determinant of consumer engagement with online shopping (Alalwan et al., 2016; Oliveira, Thomas, Baptista, & Campos, 2016; Yang, 2010). In the context of this study, effort expectancy is defined as the amount of effort expected of the online purchasing process by potential online buyers/travelers.

It is also worth noting that some previous studies, in contrast to the original UTAUT, suggest that performance expectancy is driven by effort expectancy, meaning that a greater perception of ease of use can increase technology-adoption intentions directly or indirectly by boosting the function of perceived usefulness (Alalwan et al., 2016; Alalwan et al., 2017; Dwivedi, Rana, Chen, & Williams, 2011; khalilzadeh et al., 2017; Yang, 2010; Yoon, 2016). Therefore:

H<sub>2a</sub>: Effort expectancy positively influences tourists' online-purchase intentions.

H<sub>2b</sub>. Effort expectancy positively influences performance expectancy.

## Social influence

Social influence is “the degree to which an individual perceives that significant others believe he or she should use the new system” (Venkatesh et al., 2003, p. 451). It relates to subjective norm in TPB and the social image in IDT. Ajzen (1991, p.188) introduced subjective norm as “the perceived social pressure to perform or not to perform the behavior”. According to previous studies, the motivations provided by people surrounding customers triggers their awareness of and tendency to use new technology (Ali et al., 2016; Besbes & Legohérel, 2016; Dwivedi et al., 2011; Okumus et al. 2018). In this study, SI is defined as the degree to which potential travelers assume that important people believe that they make travel purchases online. Despite the fact that online purchases often constitute solo actions, consumers might be encouraged by family or friends. Moreover, they may want to impress (or influence) their surrounding people by indicating that they made a purchase online. Thus:

H<sub>3</sub>: Social influence positively influences tourists’ online-purchase intentions.

## Facilitating conditions

Facilitating conditions is defined as “the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system” (Venkatesh et al., 2003, p.453). Rogers (1983) also examined the influence of this variable on the adoption of a new system using a factor labeled “perceived compatibility,” which relates to the perception of resource availability or environmental barriers that individuals may perceived in relation to new technology/service usage. Employing the original UTAUT model, they found facilitating conditions to be unrelated to behavioral intention and positively related to use behavior. However, after recently proving the role of facilitating conditions in the acceptance and usage

of new technology, some researchers have concluded that facilitating conditions has a direct positive impact on behavioral intention to adopt a new technology/service (Alalwan et al., 2017; Ali et al., 2016; Baabdullah, 2018; Besbes & Legohérel, 2016; Venkatesh et al. 2012; Yang, 2010). This study proposes the following hypotheses to test conformity or dispute with literature;

H<sub>4a</sub>: Facilitating conditions positively influences tourists' online-purchase intentions.

H<sub>4b</sub>: Facilitating conditions positively influences tourists' actual online purchase.

#### Model Focal Constructs: Use Behavior and Behavioral Intention

Behavioral Intention fundamentally garners influence from Fishbein and Ajzen's theory of reasoned action and refers to individual's strength of intention to conduct a specific behavior. This theory considers intention rather than attitude to be the most influential factor for usage behavior.

According to Brown (2003), purchasing rates for specific products and services increase alongside purchasing intentions and willingness. In other words, individual behavior would be determined by willingness to perform certain behaviors (i.e. use the innovation). In the UTAUT model, the key predictor of actual use and usage behavior is individual behavioral intention (Venkatesh et al., 2003). Several previous empirical studies have affirmed the strong positive relationship between

Behavioral intention and actual usage different fields (Alalwan, Dwivedi, Rana, Algharabat, 2018; Alalwan et al., 2017; Jaruwachirathanakul & Fink, 2005; Martins, Oliveira, & Popovic, 2014), and this relationship has been widely supported in IT/IS fields. However, Amaro and

Duarte (2013) assert that this relationship has received little attention in the literature on tourism. Therefore, this study examines this relationship;

H<sub>5</sub>: behavioral intention positively affects tourists' online purchase behavior.

### The UTAUT model expansion

#### Personal innovativeness

Personal innovativeness was defined by Agarwal and Prasad (1998) as individual's inclination to adopt and use an innovative technology. Decision making and cognitive paradigms were frequently reported to be affected by personal innovativeness (Gatignon & Robertson, 1985; Rogers, 1983, 1995). Individual personality differences result in different attitudes and behaviors. Individuals have varying levels of innovativeness and willingness, so while some consumers are conservative and hesitate to adopt new technology, others effectively serve as pioneers (Limayem, Hirt, & Cheung, 2007). This personal characteristic has gained momentum in the literature on consumer behavior (Lee, Qu, & Kim, 2007) and on the adoption of new technology/service (Okumus et al., 2018; San Martín & Herrero, 2012). Previous studies have concluded that personal innovativeness level is an important predictor of individual's readiness to use an innovative technology (Liu, Li, & Carlsson, 2010; Okumus et al., 2018). Recent tourism research has revealed that the online-purchase intentions of tourists are significantly related to their level of innovativeness (San Martín & Herrero, 2012). Given that online purchasing options in Iran are at an early stage of implementation, they constitute a unique experience that requires innovative behavior. Therefore, individuals who are more innovative with regard to information technology are more intent on making purchases online (Goldsmith, 2002). With this in mind:

H<sub>6</sub>: Personal innovativeness positively affects tourists' online-purchase intentions.

In 2002, Dabholkar and Bagozzi found personal innovativeness to be a moderator construct on the antecedents and consequences of perceptions in the domain of information technology. Thus, in line with IDT (Rogers, 1983, 1995), individual willingness to innovate depends on the sources of information used in the decision-making process. Personal innovativeness has been shown to influence perceptions of innovation. Therefore, highly innovative consumers have greater perceptions of new technology in terms of effort expectancy, performance expectancy, and intentions relative to less-innovative consumers (Okumus, 2018). Crespo & Del Bosque (2008), however, assert that high levels of innovativeness lead to high levels of risk acceptance. Due to this reason, facilitating conditions can be less effective for innovators when adopting a new technology. In addition, those who are highly innovative may not be influenced by those close to them in terms of the consequences of using new technology (San Martín & Herrero, 2012). Therefore, in line with IDT we hypothesize;

H<sub>7</sub>. Personal innovativeness moderates the relationship between (a) performance expectancy, (b) effort expectancy, (c) social influence, (d) facilitating conditions and online-purchase intentions.

#### Perceived Value of tourism

In the literature on tourism, researchers have found that individuals' perceptions of tourism values constitute a critical factor in their behavior and attitude toward tourism and activities associated with tourism (Joo et al., 2019; Su & Swanson, 2017). Previous studies have consistently found that residents who negatively view tourism values are less likely to support

the development of tourism and its associated activities while those who have a positive perception of tourism are more likely to support the development of tourism and its associated activities (Gursoy, Ouyang, Nunkoo, & Wei, 2018; Hateftabar & Chapuis, 2020). However, there is a dearth of research to assess the value attributed to tourism by travelers, especially those specifically making travel purchases online. As far as we know, San-Martín et al. (2020) provide the only study that evaluates the value attributed to tourism by travelers who have booked their trips online. They indicate that tourists' perceptions of tourism as extrinsic factors—to a greater degree than intrinsic factors, such as previous experience, anxiety, and perceived risk—affect their intentions to make travel purchases online. In other words, the more positively travelers view the impacts of tourism on destinations, the more they are inclined to participate in tourism-related activities (including making purchasing tourism products online). San Martín et al. (2020) examine the perceived impacts of tourism as a substitute for perceived quality in destinations; they find that positive perception not only affects host-community residents but also the behavior of tourists. It has been shown that the impacts of tourism on destinations constitute a factor behind tourists' intentions to make travel purchases online. In other words, from a tourist's perspective, the positive impact of tourism on destinations benefit tourists by providing higher-quality tourism products and services. Thus, the benefits generated by tourism are mutual. As recommended by San Martín et al. (2020), we examine the impact of tourists' perceptions—in terms of the four main dimensions of tourism value (i.e., economic, social, physical, and technological)—on their online-purchase intentions.

The tourism economic value is derived from a formal economic exchange that creates an easily assessable cost-benefit system. Several scholars have shown that those who benefit economically from tourism tend to favorably perceive the activities associated with it and, in



turn, support its development (Andereck, Valentine, Knopf & Vogt, 2005; Hateftabar & Chapuis, 2020; Gursoy et al., 2018). These economic benefits are felt by residents with higher living standards through an increase in employment opportunities and local business incomes (Andereck et al., 2005; Hateftabar & Chapuis, 2020). Meanwhile, as per San Martín et al. (2020), there is a significant positive relationship between travelers' perceived tourism economic benefits on destination and their intention to online buying. The reason for this relationship may be the fact that travelers perceive themselves to benefit from higher-quality tourism services and activities (San Martín et al. 2020).

Abdollahzadeh and Sharifzadeh (2014) found that the area landscape and physical structures are modeled by tourism physical impacts. This analysis is used to assess the effects of tourism on local investment, services, and infrastructure. Andereck et al. (2005) have concluded that the more residents perceive physical values in their community, the more they support tourism and engage in tourism-related activities. Regarding the travelers' perspective, Chiang (2014) that travelers consider the quality of services and infrastructure in tourism destinations when they search for information online. Moreover, San-Martín et al. (2020) conclude that if travelers perceive tourism to lead to physical improvement in destinations, they also perceive themselves to benefit from higher-quality landscapes and touristic infrastructure, positively impacting their online-purchase intentions.

In relation to social value of tourism, individuals who perceive social benefits from tourism are eager to support tourism development in their living area (Hateftabar & Chapuis, 2020). These positive impacts include enhancing local cultural activities, opportunities for entertainment, cultural exchanges, and cultural identity, as per San Martín et al. (2020) these factors also increase intentions to booking travel online. Technological value is another variable within this

research. Scholars argue that perceived technological quality cannot be ignored when promoting purchase intentions. Given that the current study focuses on online purchases, tourism's technological value was considered as the factors influencing the digital and technological improvement of tourist destinations, such as investment in innovative technologies and services, such as travel apps. San-Martín et al. (2020) examined the impact of tourists' perceptions of destinations' technological values on their intentions to book trips online; based on their findings, it is clear that a positive perception of tourism's technological impacts is a significant factor behind online-purchase intentions.

Moreover, studies have determined that if consumers believe purchasing a specific product will improve the producer's quality of life, they tend to purchase that product (Darian et al., 2015). Thus, another explanation for the impacts of these four variables on online-purchase intentions may be the element of social responsibility among tourists. In other words, tourists' behavior could be formed not only based on personal gains, but also on their perceived responsibility to improve destinations and benefit the host community through their own personal engagement (Luo, Lam, et al., 2017); ethical issues could influence purchase intentions (Blasi, Brigato, & Sedita, 2020).

Therefore, in light of the above discussion, we have found enough justification to merge tourists' perceptions of the value of tourism with the UTAUT model, producing the following hypothesis:

H<sub>8</sub>: Tourists' perceived (a) economic, (b) physical, (c) social, and (d) technological value attributed to tourism positively affects their online-purchase intentions.

In view of the above-mentioned hypotheses, Figure 11 depicts the proposed conceptual model for the current study; In which:

BI = Behavioral Intention toward purchase travel online

UB= Usage behavior (actual online purchase)

EE= Effort Expectancy

PE=Performance Expectancy

SI=Social Influence

FC= Facilitating Conditions

PI= Personal Innovativeness

SV= Perceived Social Value

EV= Perceived Economic Value

PV= Perceived physical Value

TV= Perceived Technological Value

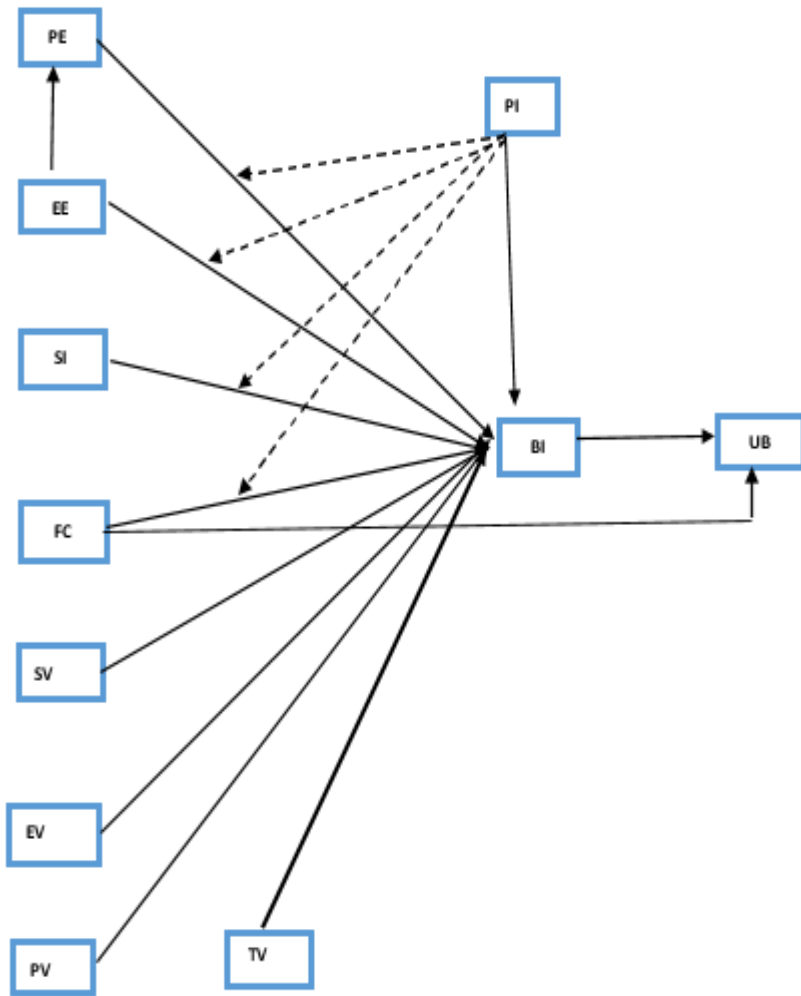


Figure 11. Theoretical (Priori) Model.

### **3. Methodology**

The purpose of this section is to explain in detail the research methods and the methodology implemented for this study. After a careful review of the literature in previous section, research objectives, hypotheses and variables formulated according to theoretical base of study. The conceptual framework of current study (figure 11) was developed based on the UTAUT model proposed by Venkatesh et al. 2003 and extended it by integrating personal innovativeness and involvement which is based on previous studies. The theoretical (piori) model is composed of 11 constructs (see figure 11).

This section operationalizes the research agenda. Concepts and measurements are explained in detail throughout the section. Success and quality of the studies depend on the accuracy of the research plan, set appropriate variables and selection of correct methods and tools for collecting relevant data. The chapter then goes on to discuss the sample size and the sampling strategy applied by the author, and the data analysis methods which have been used.

In order to satisfy the objectives of this study, a quantitative research strategy is particularly applicable, where the connection between several different variables had to be established through interpretation. Quantitative methods of research have a rich history in natural sciences and have been widely applied in social sciences. The main characteristics of this method are; structured research instruments for data collection, larger sample size, high reliability that makes research replicable, tools such as questionnaires or computer software were used to collect numerical data. In summary, the overarching aim of a quantitative research study is to classify features, count them, and construct statistical models in an attempt to explain what is observed.

### 3.1. Sample and Data collecting

The definition of statistical population refers to a group of people who share common characteristics and it distinguishes them from other groups (Creswell, 2007). Statistical population is defined based on the research area and research objectives, and the researcher surveys members of this group. Accordingly, the target population for this study comprises all Iranian individuals who departing Tehran to other countries in the waiting lounges of IK Airport in Tehran (the capital of Iran).

Herein, three points must be taken into account:

- 1) The first one is related to the definition of online tourists. Online tourists are introduced in two groups: online website visitors of selling tourism products and services who have online exploration without shopping experience fall into the first group. The second group are online shoppers who have visited and purchased products and services (Law & Bai, 2008). These two groups are online tourists who have intention to shop online and they can contribute in the statistical population of such studies.

In order to prove this, we can refer to researches which have consulted the intention to online shopping of tourism products and services (Izquierdo-Yusta et al., 2014; Escobar-Rodríguez & Carvajal-Trujillo, 2014; San Martín & Herrero, 2012; Kim, Kim, & Shin, 2009). Additionally, given to the defined objective, in some studies only tourists who have experienced shopping are accounted in statistical population while their intention to shop online have been studied based on different elements (Nunkoo & Ramkissoon, 2012; Escobar-Rodríguez et al., 2014; Wen, 2012).

- 2) Another point is related with the timing which is specified in different studies for visiting or shopping on tourism product websites. In several studies, the specified timing for visiting and shopping on online tourism product and service websites is defined as one year (Card et al., 2003; Kim et al., 2006; Law & Bai, 2008). However, in some studies this timing is defined as six months (Escobar-Rodríguez & Carvajal-Trujillo, 2014; San Martín & Herrero, 2012), while other researches introduce their statistical population without considering this timing (Izquierdo-Yusta et al., 2014; Wen, 2012).
- 3) The third point is about products and services that tourists purchase online. Some tourism products such as airline tickets or accommodation reservations are among less complex tasks. However, tours and other services such as cabin cruisers are more perplexed (Beldona, 2005; Beldona et al., 2011), and this can be influential on the intention of tourists to shop tourism products and services online. Thus, we can control this issue as an effective variable and obviate the issue through choosing an appropriate statistical population. It is noteworthy to mention that online shopping of complex products and more complex traveling packages has not been offered in Iran. For this reason, there are limitations in studying this issue which results in analyzing products with less complexity.

Taking cues from previous studies (Alalwan et al., 2017; San Martín & Herrero, 2012; Shaw & Sergueeva, 2019; Okumus et al., 2018), we developed a questionnaire to collect data.

The questionnaire included three parts. The first part focused on travelers' demographic information; the second part focused on the perceived impacts of tourism (items for perceived impacts of tourism were based on the questionnaire designed by Nunkoo & Gursoy, (2012) and San-Martin et al. (2020); the third part focused on the measurement items of UTAUT's

construct. We constructed the initial list of measurement items based on those most commonly quoted in the literature, especially those on the well-documented UTAUT scales (Venkatesh et al., 2003). As shown in Table 2, 33 items were created through this procedure. The questionnaire applies five-point Likert-type scales (1 indicates “strongly disagree”; 5 indicates “strongly agree”) to measure the items.

The original version of the questionnaire was pre-tested with a sample of graduate students in the tourism and marketing department; the questionnaire was then refined using their comments and feedback. The survey was conducted in Farsi, the respondents’ native language; the original version was translated from English to Farsi.

Data for this study was collected between March and April 2020 from travelers departing Tehran to other countries in the waiting lounges of IK Airport in Tehran (the capital of Iran). The researcher explained the research to travelers and invited them to take part; if the offer was accepted, the researcher provided them with a packet including the questionnaire and waited until the travelers completed it. This technique was employed because it likely gets higher response rates than the drop-off and pick-up strategy (Stylidis, Biran, Sit, & Szivas, 2014). A total number of 428 individuals participated. Following initial data screening, 39 questionnaires were discarded due to missing values. Ultimately, 389 responses were retained and used for analysis.

The relationships proposed were examined with partial least squares structural equation modeling (PLS-SEM), the second-generation multivariate technique (Hair, Hult, Ringle, & Sarstedt, 2016). Given the “10-times rule” as a PLS-SEM sampling rule of thumb, the present research considered a sample size of 90 adequate. Thus, the sample size (i.e., 389) was adequate



for a successful analysis using PLS-SEM (Chin, 2010; Hair et al., 2016). PLS-SEM can simultaneously evaluate the measurement model (i.e., validity and reliability) and the structural model (i.e., hypotheses testing) while minimizing the error variance. Smart PLS v.2 software was used to analyze the data.

The demographic makeup of the participants was as follows: male (58.5%), female (41.5%); 18-24 (23.5%), 25-34 (34.2%), 35-44 (26.3%), 44+ (16%) years of age; no formal education (9.7%), high school (26.5 %), college graduate (42.4%), postgraduate/professional (21%).

### 3.2.Measures

The research theoretical model is composed of 11 constructs including, performance expectancy, effort expectancy, social influence, facilitating conditions, personal innovativeness, perceived economic value of tourism, perceived social value of tourism, perceived physical value of tourism, perceived technological value of tourism, Behavioral Intention and Usage behavior. In order to preserve the content validity, all the measurement items were adapted from previous studies.

We adapt a preliminary list of measurement items based on those most quoted in the literature, especially on the well-documented UTAUT scales (Venkatesh et al., 2003). As shown in Table 2, 33 items were created through this procedure. All items were measured with five-point Likert scales ranging. This five-point scale anchored from (1) indicated strongly disagree to (5) indicated strongly agree.

Table 2. Constructs and items.

<p><b>Performance Expectancy (PE)</b>, (adapted from Venkatesh et al., 2003; Yang, 2010)</p> <p>PE1- online purchase is very useful in purchasing airline ticket and accommodation.</p> <p>PE2- online purchase of the ticket and accommodation enables me to accomplish the purchasing process more quickly.</p> <p>PE3- online purchase improves the performance in the purchasing process.</p>
<p><b>Effort Expectancy (EE)</b>, (adapted from Venkatesh et al., 2003)</p> <p>EE1- learning how to purchase airline tickets and accommodation online is easy for me.</p> <p>EE2- my interaction with online purchasing would be clear and understandable.</p> <p>EE3- purchasing airline ticket and accommodations online implies little effort for me.</p>
<p><b>Social Influence (SI)</b>, (adapted from Venkatesh et al., 2003)</p> <p>SI1- People who influence my behavior think that online purchasing is useful.</p> <p>SI2- I would purchase airline ticket and accommodation online because of the proportion of my friends who do their purchase online.</p> <p>SI3- People who are important to me think that I should purchase travel online.</p>
<p><b>Facilitating Condition (FC)</b>, (adapted from Venkatesh et al., 2003)</p> <p>FC1- I have the resources necessary to purchase online.</p> <p>FC2- I have the knowledge necessary to purchase online.</p> <p>FC3- I can get help from others when I have difficulties purchasing online.</p>
<p><b>Perceived economic value of tourism (EV)</b>, (adapted from Abdollahzadeh &amp; Sharifzadeh, 2014; San Martin et al., 2020).</p> <p>EV1- Tourism generates employment opportunities in the zone.</p> <p>EV2- Tourism create new business investment opportunity in the destination.</p> <p>EV3- Tourism increases the income.</p>
<p><b>Perceived social value of tourism (SV)</b>, (adapted from Abdollahzadeh &amp; Sharifzadeh, 2014; San Martin et al., 2020)</p> <p>SV1- Tourism increases the standard of living.</p> <p>SV2- Tourism improves knowledge of the customs and the culture of the destination.</p>

SV3- Tourism caused revival of local handicrafts& cultural activities in the destination.
<p><b>Perceived physical value of tourism (PV)</b>, (adapted from Abdollahzadeh &amp; Sharifzadeh, 2014; San Martin et al., 2020)</p> <p>PV1-Tourism increases investments in tourism infrastructures (e.g. hotels, restaurants, souvenir shops)</p> <p>PV2-Tourism increases investments in basic infrastructures of destination (road, sanitation, water supply, health centres)</p> <p>PV3-Tourism improves landscape of the area.</p>
<p><b>Perceived technological value of tourism (TV)</b>, (adapted from San Martin et al., 2020)</p> <p>TV1- Tourism increases investment in new technologies</p> <p>TV2-Tourism stimulates the use of new technologies (e.g. Travel Apps.).</p> <p>TV3-Tourism caused digital development of tourist destinations.</p>
<p><b>Personal Innovativeness (PI)</b>, (adapted from Agarwal &amp; Prasad, 1998)</p> <p>PI1-among my peers, I am usually the first to explore new technologies.</p> <p>PI2-I like to experiment with new technology.</p> <p>PI3-If I heard about a new technology, I would look for ways to experiment with it.</p>
<p><b>Behavior Intention (BI)</b>, (adapted from Davis et al., 1989; Yang, 2010)</p> <p>BI1- given the chance I intend to purchase airline tickets and accommodation online.</p> <p>BI2-given the chance I predict that I should purchase airline tickets and accommodation online.</p> <p>BI3-given the chance I plan to continue online purchase of airline tickets and accommodation.</p>
<p><b>Use Behavior (UB)</b>, (adapted from Chen, Gillenson, &amp; Sherrell 2002)</p> <p>UB<sub>1</sub>-I prefer to utilize the internet to buy airline tickets or book a hotel.</p> <p>UB<sub>2</sub>-I often buy airline tickets and book accommodation through the Internet.</p> <p>UB<sub>3</sub>-In the past six months, I have used online shopping in order to book accommodation or airline ticket.</p>

### 3.3. Structural Equation Modelling (SEM)

Structural Equation Modeling, or SEM, is a very popular statistical modeling technique, which is widely used in variety of scientific disciplines such psychology, marketing, management, organizational behavioral (among others, Civelek, 2018; Hair et al., 2010) over the last decade and it involves the estimation of parameters for system of simultaneous equations.

According to Kaplan definition, “structural equation modeling can perhaps best be defined as a class of methodologies that seeks to represent hypotheses about the means, variances and covariance of observed data in terms of a smaller number of ‘structural’ parameters defined by a hypothesized underlying model” (Kaplan, 2000, p.1).

The most prominent reason behind the popularity of this statistical technique is that the direct and indirect relationships among causal variables can be measured with a single model (Civelek, 2018; Hair et al., 2010; Hair et al., 2016). In addition, SEM is very useful technique in marketing research, because one of the most important features of SEM is the capability to deal with latent variables (Edwards & Bagozzi, 2000; Hair et al., 2010). Therefore, with SEM marketers can visually test the relationship among variables of interest in order to prioritize resources to better serve their customers.

SEMs comprise two sub-models: first, the measurement model (outer model) estimates the relationships between the latent variables and their indicators. Indicator, also referred to a variable that is directly associated with a latent variable and can be measured directly. In other words, inner model estimates how well hidden variables are represented by the observed variables. Second, the structural model (inner model) that relates latent variables to one another (Civelek, 2018; Hair et al., 2016). The measurement model and the structural model are interwoven. This is illustrated below.

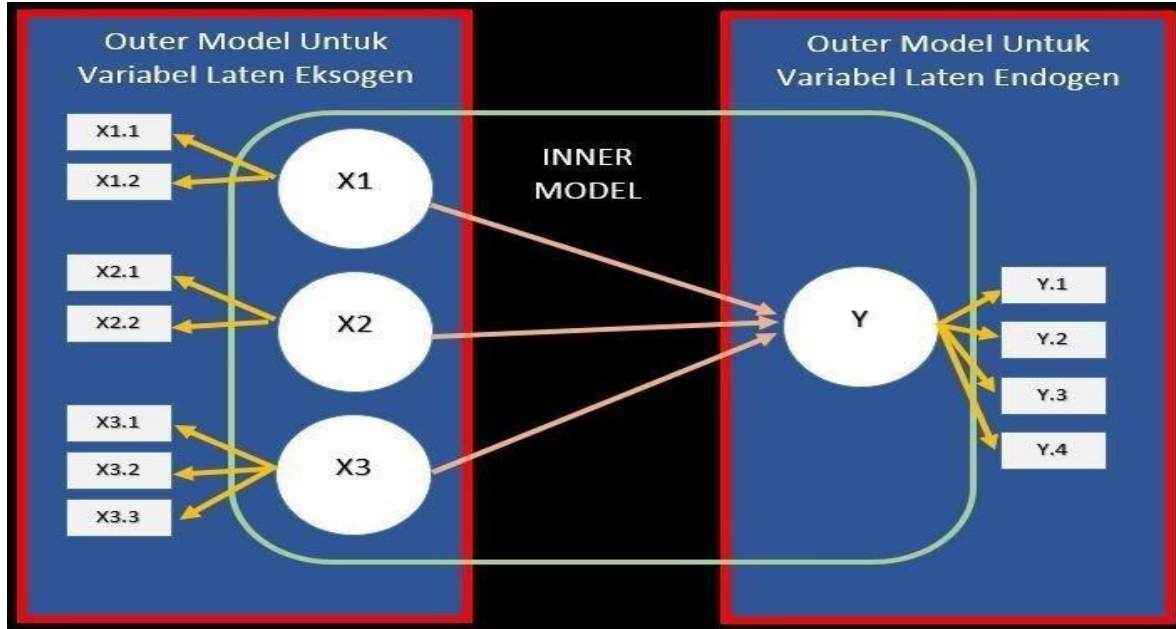


Figure 12. Inner vs. Outer Model in a SEM Diagram.

- Different Approaches to SEM

There are several distinct approaches to SEM: The first approach is the widely applied Covariance based SEM (CB-SEM) and the second approach is variance-based SEM (PLS-SEM) (Civelek, 2018; Hair et al., 2010; Hair et al., 2016). These two approaches differ not only in terms of their basic assumptions and outcomes, but also in terms of their estimation procedure (Hair et al., 2010). The CB-SEM approach reproducing the theoretical covariance matrix, without focusing on explained variance and it follows a maximum likelihood (ML) estimation procedure. While PLSSEM uses a regression-based ordinary least squares (OLS) estimation method, and it does not fit a common factor model to the data, it rather fits a composite model. In doing so, it maximizes the amount of variance explained (Hair et al., 2010 p. 139). In other words, PLS is characterized as a technique most suitable where the research purpose is

prediction or exploratory modeling, while CB-SEM is preferred when the research purpose is confirmatory modeling.

Based on the Bacon (1999) conclusion, the PLS-SEM analysis is an appropriate alternative for CB-SEM when; sample size is small, the structural model is complex (many constructs and many indicators, and predictive accuracy is paramount.

Table 3 summarizes the most salient differences between CB-SEM and PLS-SEM.

Table 3. Comparison of PLS-SEM and CB-SEM

<b>Criteria</b>	<b>PLS-SEM</b>	<b>CB-SEM</b>
objective	Prediction oriented	Parameter oriented
Approach	Variance based	Covariance based
Assumptions	Predictor specification (nonparametric)	Typically multivariate normal distribution and independent observation (Parametric)
Parameter estimates	Consistent as indicators and sample size increase (i.e., consistency at large)	Consistent
Latent variable scores	Explicitly estimated	Indeterminate
Model complexity	Large complexity (e.g., 100 constructs and 1000 indicators)	Small to moderate complexity (e.g., less than 100 indicators)

Sample size	Power analysis based on the portion of the model with the largest number of predictors. Recommendations for the minimum number of observations range from 30 to 100 cases	Ideally based on power analysis of specific model. Recommendations for the minimum number of observations generally range from 200 to 800
Indicators per construct	One-two OK  Large number OK	Typically 3-4 minimum to meet identification requirements
Implications	Optimal for prediction accuracy	Optimal for parameter accuracy

Source: Chin and Newsted (1999)

As Hair et al. (2010) claimed PLS-SEM has become a widely employed method in several disciplines. It is a comprehensive multivariate approach to statistical analysis that can simultaneously examine each of the relationships between the variables in a conceptual model, including measurement and structural components. Because of its ability to analyze complex models with formative and/or reflective constructs with non-normal data and small sample sizes,

PLS-SEM has become a popular choice for marketing and management researchers (Civelek, 2018; Hair et al., 2010). The current study applies variance based (VB-SEM) approach with partial least square (PLS) estimation (PLS-SEM) to perform the analysis because it is well suited for theory development and prediction-oriented studies (Hair et al., 2016).

The PLS-SEM is called “Partial Least Squares” because the parameters are estimated by means of a series of least squares, while the term “partial” derives from the iterative estimation procedure of the parameters in blocks (per latent variable), to the detriment of the entire model, simultaneously.

In PLS-SEM, when a model is created, factors are represented by ellipse (circle) and indicator (rectangle) variables, a PLS path model consists of two elements: first, the measuring models (in context of PLS-SEM is also called outer model), which in figure 13 depicted as the indicator rectangles and arrows connecting them. Second, structural model (in context of PLS-SEM is also called inner model), which in figure 12 depicted as the factor ellipses and arrow creating them. Measurement models relate latent variables (i.e., unobserved variables identified on theoretical basis, such as language motivation) and indicator variables (i.e., observed variables, such as questionnaire or test scores) that underlie the latent constructs. Because scores on indicator variables are a linear function of their respective latent constructs, this family of indicators is referred to as effect indicators (MacCallum and Browne, 1993).

Structural models, in turn, describe the relationships among latent constructs. Critical ratios, parameter values divided by corresponding standard errors, served as a test of statistical significance for all types of path coefficients (For more information, see Fornell and Larcker, 1981).

Based on the steps above, and for the purpose of the current research, two phases were designed to find the results; the first phase is allocated to testing the measurement model (outer model), and the second phase is allocated to testing the structural pattern (inner model) and research hypotheses’ testing which shall be discussed in detail later.



## Phase 1. Measurement Model (Outer model)

The Measuring theory specifies how the latent variables (constructs) are measured. Before testing the structural relationships in the theoretical model, the outer model (measurement model) was examined to assess the reliability, convergent and discriminant validity of the measures used to represent each construct (Hair et al., 2010; Hair et al., 2016).

PLS-SEM is a confirmatory method providing a comprehensive means for validating the measurement model of latent (unobserved) constructs. The validating procedure is called Confirmatory Factor Analysis (CFA) (Civelek, 2018; Hair et al., 2010; Hair et al., 2016). CFA which is often performed through structural equation modeling incorporates a sophisticated technique that test the theory about latent processes. The researcher needs to perform CFA for all latent constructs involved in the study before modeling their interrelationship in a structural model (SEM).

In other words, the aim of this phase is to ensure the reliability and validity of the construct measures and therefore provide support for the suitability of their inclusion in the path model. Confirmatory factor analysis (CFA) is a theory- driven technique that used in testing the measurement model, and all hypothesized relationship between the constructs and their associated observed and unobserved (latent) variables. In this phase, if the measurement model fit indices are low, it will not make sense to test the inner model (phase 2).

### Reliability

Reliability is the extent to which an assessment tool produces stable and consistent results. It means that a scale is always measure the same value under the same conditions consistently.

Accuracy is a function of reliability, higher reliability yields in more accurate results and vice versa (Eldridge, 2017). For example, a questionnaire is reliable if the same group is given the same result when applied two different times (Hair et al., 2016). In other words, accuracy is a function of reliability, higher reliability yields in more accurate results and vice versa (Eldridge, 2017; Hair et al., 2016). A reliability coefficient indicates the accuracy of the test designer in expecting a certain collection of variables to yield interpretable results about individual differences (Hair et al., 2016).

The assessment for reliability for an outer model could be made using the following criteria:

- a.** Composite Reliability (CR) – The Composite Reliability is used to assess whether a sample is free from bias or if the responses are reliable. It indicates the reliability and internal consistency of a latent construct. Based on Fornell & Larcker (1981) the threshold value of composite reliability is 0.7.
  
- b.** Average Variance Extracted (AVE) – The Average Variance Extracted indicates the average percentage of variation explained by the measuring items for a latent construct. The variance extracted is the extent to which a measure is positively correlated with alternative measures of the same construct. To establish the variance extracted, the researcher considers the external loadings of the indicators and the Average Variance Extracted (AVE). The AVE is the part of the data of the variables explained by each of the respective latent constructs or, in other words, the average extent to which the variables are positively correlated with their respective

constructs (Ringle, Silva, & Bido, 2014). Thus, when the AVE is superior to 0.50, it is admitted that the model converges to a satisfactory result (Fornell & Larcker, 1981).

- c. Cronbach's alpha – Cronbach's alpha, which is one of the most popular methods for reliability testing, takes a value between 0 and 1. It is a measure based on correlations between items in a construct. It is obtained by dividing the sum of the variances of the items constituting a scale by the general variance. There are various studies on the acceptable alpha range. As some reports suggest that an alpha of 0.95 indicates a high degree of consistency particularly in some applied settings (Bland & Altman 1997), others suggest that a high alpha value over 0.9 may reflect redundancy, length of test and unnecessary duplication of measurement items (Tavakol & Dennick, 2011). However, as mentioned above in current study, acceptable reliability requires alpha value of 0.7 or higher.

While reliability is necessary, it alone is not sufficient for validating the measurement model of latent constructs (a test might be reliable, but lack strong validity for another reason; See figure 13).

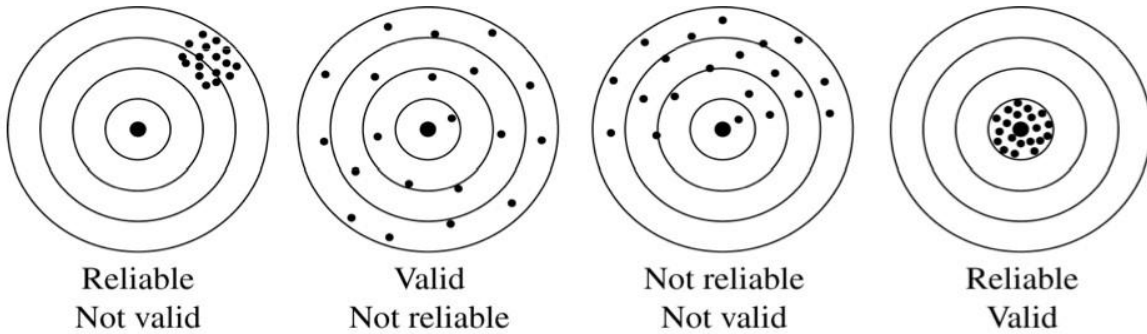


Figure 13. Reliability is not sufficient.

## Validity

Validity of an assessment is the degree to which it measures what it is supposed to measure (Robson, 2011).

It is the degree to which the results are truthful. So that it requires research instrument (questionnaire) to correctly measure the concepts under the study (Robson, 2011). It encompasses the entire experimental concept, and establishes whether the results obtained meet all of the requirements of the scientific research method. In summary, if a questionnaire actually measures a different concept than the dimension we want to measure, it is not valid. If the questions we ask about the concept A are confused with the questions about the concept B, then it means that the concepts we consider to measure are not perceived or perceived as different from those in the sample. In this case, the scale we use is not a valid measurement tool for this sample. For this reason, it is necessary to test the validity of the scale before any analysis is started (Hair et al., 2010).

Two types of validity are required for each measurement model is: convergent validity and discriminant validity. The convergent validity assesses the degree to which a variable is actually

measuring what it is supposed to measure. In essence, the degree of positive relationship among scale items developed to measure the same construct. Opposite to convergent validity, discriminant validity assesses the degree that a variable is not measuring in reality what it is not supposed to measure in theory. Therefore, it aims to demonstrate that a measure does not correlate with another measure that theoretically it is not supposed to correlate with (Schumacker & Lomax, 2010).

### Convergent Validity

Convergent validity is achieved when all items in a measurement model are statistically significant. It is the degree to which multiple items to measure the same concept are in agreement. According to Hiar et al. (2010), the convergent validity could be verified by computing the average variance extracted (AVE). In addition, the factor loadings and composite reliability are other criteria which we can use to assess this validity. The recommended values for loadings are set at  $> 0.5$ , the average variance extracted (AVE) should be  $> 0.5$  and the composite reliability (CR) should be  $> 0.7$ .

### Discriminant Validity

Discriminant validity or divergent validity indicates the measurement model of a construct is free from redundant items. It tests whether concepts or measurements that are not supposed to be related are actually unrelated. In other words, it assumes that items should correlate higher among them than they correlate with other items from other constructs that are theoretically supposed not to correlate. Therefore, it aims to demonstrate that a measure does not correlate

with another measure that theoretically it is not supposed to correlate with (Fornell & Larcker's, 1981).

Testing for discriminant validity can be done using different methods (e.g. Fornell-Larcker criterion, Cross loadings, HTMT criteria). In current research, in order to examine the discriminant validity of all constructs we used Fornell & Larcker's (1981) procedure; the square root of the AVE of each construct should be higher than its highest correlation with any other construct. Based on this method, in order to have enough discriminant validity, all the square roots of AVEs should be higher than any correlation between any two pairs of constructs (For more information, see (Fornell & Larcker, 1981).

## Phase 2. Structural Model (Inner model)

After assessing measurement model (outer model) and the validating procedure of it (Confirmatory Factor Analysis), researcher needs to perform second phase (inner model). If the outer model evaluation provides evidence of reliability and validity, it is appropriate to examine inner model estimates. This phase is concerned with the manner in which the constructs are related to one another. In summary, the first phase (measurement model) gives empirical evidences, while the second phase (structural model) provides framework to support the hypothesis.

When the measurement model and the structural model are considered together, the model may be called the composite or full structural model. Since, as mentioned before, the measurement model (phase 1) deals with the relationships between measured variables and latent variables. The structural model (phase 2) deals with the relationships between latent variables only.

Path analysis is a tool to formulate the structural model and aims to study cause-effect relations among several variables by looking to the correlation matrix among them. In other words, the structural model permits to evaluate the path model i.e., established with the series of structural equations representing the theoretical model (Chin & Dibbern, 2010). The crucial criterions used for the assessment of the structural model in this study were- coefficient of determination R-square for the endogenous variable, estimation of path coefficient ( $\beta$ ), and t-value (Chin & Dibbern, 2010;

Henseler & Fassott, 2010). To assess the structural models' projecting power, we considered the  $R^2$ ,  $R^2$  which depicts the amount of variance identified by the exogenous variables (Barclay et al.1995). The path approximated and t-statistics were calculated for the hypothesized relationships. Beta coefficient is the measure of multiple correlation coefficients between exogenous and endogenous variables (Hair et al., 2012).

#### **4. Data Analysing and Results**

This chapter is dedicated to the examination and analysis of the confirmatory findings of the survey data. It begins with descriptive statistics and then followed by the two-step approach of structural equation modeling (Anderson and Gerbing ,1988) to test the relationships considered in the theoretical model. The first step is allocated to testing the measurement model, which relates latent variables (LVs) and indicator variables that underlie the latent variables; the second step is meant to testing the structural pattern, which describes the relationships among LVs (Hair et al., 2017). Critical ratios, parameter values divided by corresponding standard errors, served as a test of statistical significance for all types of path coefficients.

In current study, we use smart PLS for data analysis process. Smart PLS is one of the prominent software applications for Partial Least Squares Structural Equation Modeling (PLS-SEM). It was developed by Ringle, Wende & Will (2005). The software has gained popularity since its launch in 2005 not only because it is freely available to academics and researchers, but also because it has a friendly user interface and advanced reporting features. Also following the suggestions of (GilGarcia, 2008) we used the bootstrapping method (500 resamples) to determine the significance levels for loadings factor and path coefficients.

#### Measurement Model (outer model) Results

Before the structural relationships in the theoretical model were put into practice, the outer model was examined to assess the reliability and both convergent and discriminant validity of the measures used to represent each construct (Hair, Black, Babin, & Anderson, 2010; Hair et al., 2016).

#### Reliability and Validity

Reliability is a property related to validity (Chin, 2010). Three indicators to test reliability are Cronbach's alpha (critical acceptance value=0.7; Cronbach, 1951), composite reliability (threshold value= 0.7; Fornell & Larcker, 1981), and average variance extracted (threshold value=0.5; Fornell & Larcker, 1981).

The reliability of the variables was tested using Cronbach Alpha which is one of the most popular methods for reliability testing (Hair et al., 2017). When reliability was tested using Cronbach Alpha, the test was performed on all variables inclusively as well as on each subset separately. Acceptable reliability requires alpha value of 0.7 or higher.



The results (Table 4 and Table 5) suggest that the CRs for all of the LVs in the measurement model exceed 0.8. Therefore, the measurement model is reliable.

As for validity of the constructs, it can be tested in terms of convergent validity and discriminant validity. In terms of convergent validity, the loading of each indicator on its associated LV must be calculated and compared to a threshold. This study follows the procedure from Hair et al. (2017) by using factor loadings, composite reliability, and average variance extracted to examine convergent validity. A common threshold for sufficient value of the average variance extracted (AVE) is 0.5, that for composite reliability (CR) is 0.7, and that for factor loadings is 0.5.

Results regarding the evidence of converge validity are provided in Table 4 and Table 5. All of the loadings were significant at a level of 0.01; the minimum loading was 0.719, indicating high convergent validity. Moreover, AVE values range between 0.574 (FC) and 0.781 (SI) while CR values range between 0.801 (FC) and 0.914 (SI). Thus, all AVE and CR values are above the thresholds, indicating sufficient convergent validity (see Table 4 and Table 5).

Table 4. Measurement Model & Descriptive Statistics

Item	Measurement Model		Descriptive Statistics	
	Loading factor	t	Mean	SD
BI1	0.823	45.525	3.25	0.942
BI2	0.902	89.39	3.3	1.085
BI3	0.865	60.874	3.21	0.988
EF1	0.836	42.607	3.27	0.943
EF2	0.87	57.209	3.44	0.972
EF3	0.863	69.662	3.26	1.027
FC1	0.816	23.665	3.03	0.896
FC2	0.735	13.576	3.37	0.785
FC3	0.719	12.002	3.24	0.837
TV1	0.809	37.351	3.43	0.966
TV2	0.803	39.03	3.32	0.904
TV3	0.781	35.598	3.3	0.946
SV1	0.825	48.268	2.86	1.001
SV2	0.75	25.89	3.2	0.994
SV3	0.893	99.863	3.19	1.077
PV1	0.775	25.032	3.25	0.915
PV2	0.819	32.878	3.12	0.972
PV3	0.794	32.534	3.22	0.915
PE1	0.793	32.39	3.35	0.968
PE2	0.836	48.403	3.14	1.002
PE3	0.819	45.735	3.41	0.912

PI1	0.884	62.91	3.48	0.995
PI2	0.907	87.563	3.44	1.045
PI3	0.817	44.438	3.18	0.99
EV1	0.837	54.068	2.96	0.979
EV2	0.891	83.391	2.81	1.039
EV3	0.872	68.185	2.71	0.996
SI1	0.877	63.091	3.19	1.004
SI2	0.882	57.555	3.36	1.014
SI3	0.892	74.607	3.27	1.02
UB1	0.864	56.293	3.11	1.103
UB2	0.87	68.583	2.92	1.04
UB3	0.831	48.82	3.24	1.004

**SD: Standard deviation**

Table 5. Validity and Reliability for Constructs.

<b>Construct</b>	<b>AVE</b>	<b>CR</b>	<b>Index Value</b>	<b>CA</b>
Behavioral Intention	0.746	0.898	3.256	0.830
Effort Expectancy	0.733	0.892	3.324	0.818
Facilitating Conditions	0.574	0.801	3.210	0.762
Perceived technological value	0.636	0.840	3.35	0.714
Perceived social value	0.680	0.864	3.078	0.768
Perceived physical value	0.634	0.838	3.194	0.715
Performance Expectancy	0.666	0.857	3.304	0.749
Personal Innovativeness	0.757	0.903	3.370	0.838
Perceived economic value	0.751	0.901	2.827	0.835
Social Influence	0.781	0.914	3.270	0.860
Usage behavior	0.732	0.891	3.090	0.817

AVE = Average Variance Extracted, CR = Composite Reliability, CA=Cronbach Alpha

After confirming convergent validity, the measurement model was repeatedly tested to ensure discriminant validity. Discriminant validity is the extent to which each LV is distinct from other constructs in the model. This study applies the method from Fornell and Larcker (1981) to assess discriminant validity, which states that all of the square roots of AVEs should be higher

than the correlation between any two pairs of constructs. The assessment results do not reveal any problems; therefore, discriminant validity is satisfied (see Table 6).

Table 6. Inter-construct correlations of the estimations (Discriminant Validity)

Construct	BI	EE	FC	TV	SV	PV	PE	PI	EV	SI	UB
Behavioral Intention	<b>0.864</b>										
Effort Expectancy	0.633	<b>0.856</b>									
Facilitating Conditions	0.351	0.481	<b>0.758</b>								
Technological value	0.492	0.538	0.284	<b>0.798</b>							
Social value	0.459	0.592	0.334	0.415	<b>0.825</b>						
Physical value	0.526	0.561	0.443	0.447	0.446	<b>0.796</b>					
Performance Expectancy	0.601	0.669	0.463	0.467	0.483	0.484	<b>0.816</b>				
Personal Innovativeness	0.588	0.731	0.443	0.494	0.512	0.557	0.595	<b>0.87</b>			
Economic value	0.542	0.536	0.331	0.594	0.348	0.512	0.545	0.468	<b>0.867</b>		
Social Influence	0.552	0.627	0.451	0.478	0.477	0.589	0.545	0.608	0.435	<b>0.884</b>	
Usage behavior	0.515	0.505	0.366	0.652	0.334	0.535	0.489	0.533	0.652	0.441	<b>0.855</b>

The diagonal figures in bold indicate the average variances extracted (AVE) for constructs

### Structural Model (Inner model) Results

Once we validated our outer model, several steps must be taken to provide evidence supporting the hypothesized relationships among the dependent and independent variables. To adequately assess the structural model, there are three criteria:  $R^2$  values for endogenous constructs, estimations of path coefficients ( $\beta$ ), and t-values (Chin & Dibbern, 2010; Hair et al., 2016). In line with Hair et al. (2016), in order to assess the structural model's explanatory power, we considered the  $R^2$  values that indicate the amount of variance of the dependent variable explained by the independent variables. The  $R^2$  value ranges from 0 to 1, with higher levels indicating higher levels of explanatory power. Hair et al. (2016) suggest that in fields like

consumer behavior, an acceptable value for  $R^2$  is 0.2 or greater. As seen in Table 6, the  $R^2$  value surpasses 0.2, meaning our conceptual model is supported by the data.

It is worth considering that all independent and moderating constructs explain 57.3% and 49.3% of the variance in two final dependent constructs (i.e., intention to make travel purchases online and usage behavior), exceeding all recommended values in behavioral intention analysis (i.e., 40% according to Straub, Boudreau, & Gefen, 2004; 30% according to Kline, 2011). Thus, there is a satisfactory level of prediction power for consumer behavior. In other words, 49.3% of the variance in online tourism purchases behavior can be predicted by online-purchase intention and facilitating conditions.

The path coefficients ( $\beta$ ), t-statistics, and p-values (p) were calculated for the hypothesized relationships.  $\beta$  is the measure of multiple correlation coefficients between exogenous and endogenous variables (Hair et al., 2016). The results of the examination are listed in Table 7 and illustrated in Figure 14. The results of SEM show the significant positive effect of performance expectancy ( $\beta=0.196$ ;  $H_1$  accepted), effort expectancy ( $\beta=0.173$ ;  $H_{2a}$  accepted), social influence ( $\beta=0.113$ ;  $H_3$  accepted), personal innovativeness ( $\beta=0.124$ ;  $H_6$  accepted), perceived economic value ( $\beta=0.156$ ;  $H_{8a}$  accepted), perceived physical value ( $\beta=0.101$ ;  $H_{8b}$  accepted), and perceived technological value ( $\beta=0.153$ ;  $H_{8d}$  accepted) on intention to make tourism purchases online.

However, the effects of facilitating conditions ( $\beta=-0.054$ ;  $H_{4a}$  rejected), and perceived social value ( $\beta=0.042$ ;  $H_{8c}$  rejected) on intention to make tourism purchases online are not significant at  $P<0.05$ . Additionally, facilitating conditions ( $\beta=0.147$ ) and behavioral intention ( $\beta=0.215$ ) have a positive effect on actual use; thus, hypotheses  $H_{4b}$  and  $H_5$  were acknowledged.

Table 7 shows that personal innovativeness does not moderate the relationships between facilitating conditions or social influence and intention to make tourism purchases online; therefore, H<sub>7c</sub> and H<sub>7d</sub> were rejected. On the other hand, personal innovativeness has a moderating effect relationship of performance expectancy and effort expectancy with intention to make tourism purchases online; thus, H<sub>7a</sub> and H<sub>7b</sub> were confirmed at P<0.05. In addition, the trace of effort expectancy on performance expectancy ( $\beta=0.298$ ; P<0.01) is significant; thus, H<sub>2b</sub> was confirmed. Based on this analysis, Figure 14 displays the final behavior model of Iranian tourists' intention to make tourism purchases online.

Table 7. Hypotheses Tests Summary.

Hypothesis	Beta	t-value	R <sup>2</sup>	Result	Sign
Effort Expectancy -> Performance Expectancy	0.669	19.973	0.448	Supported	+
Behavioral Intention -> Usage behavior	0.215	6.136	0.493	Supported	+
Facilitating Conditions -> Usage behavior	0.147	3.895		Supported	+
Effort Expectancy -> Behavioral Intention	0.173	2.838	0.523	Supported	+
Perceived economic value -> Behavioral Intention	0.156	3.836		Supported	+
Social Influence -> Behavioral Intention	0.113	2.37		Supported	+
Perceived social value -> Behavioral Intention	0.042	1.003		NS	
Perceived economic value -> Behavioral Intention	0.101	2.997		Supported	+
Performance Expectancy -> Behavioral Intention	0.196	4.41		Supported	+
Personal Innovativeness -> Behavioral Intention	0.124	2.586		Supported	+
Facilitating Conditions -> Behavioral Intention	-0.054	1.491		NS	

Perceived technological value -> Behavioral Intention	0.153	3.126		Supported   +	
Personal Innovativeness -> Behavioral Intention	0.124	2.586		Supported   +	
Effort Expectancy * Personal Innovativeness -> Behavioral Intention	0.18	2.042	0.05	Supported   +	
Facilitating Conditions * Personal Innovativeness -> Behavioral Intention	-0.004	0.078		NS	
Performance Expectancy * Personal Innovativeness -> Behavioral Intention	0.127	2.597		Supported   +	
Social Influence * Personal Innovativeness -> Behavioral Intention	-0.141	1.096		NS	



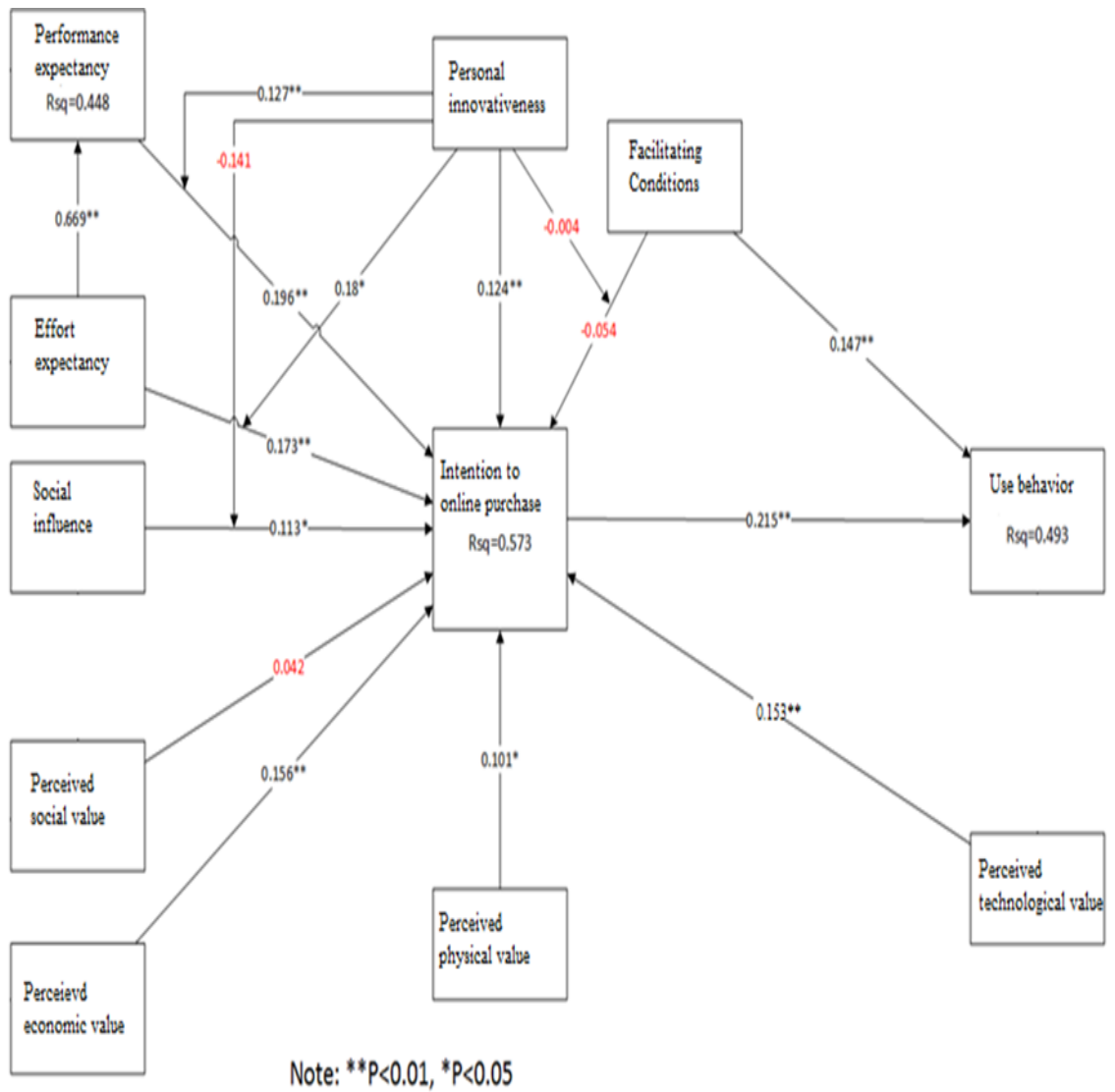


Figure 14. Paths Standardized coefficient

## Importance-performance Matrix Analysis (IPMA)

In the final step, the importance-performance matrix analysis (IPMA) was conducted. This step, which introduced by Martilla and James (1977), improves the result reporting of the path coefficient modeling with an index value-based estimation. More precisely, IMPA enables one to identify areas of improvement of a specific target variable (i.e., a key endogenous construct in the analysis) under the consideration of both importance and performance dimension (see Hock, Ringle, & Sarstedt, 2010; Trang, Zander, de Visser, & Kolbe, 2016).

In current study, the IMPA contrasts structural model total effect on our key endogenous constructs (i.e., such as usage behavior in figure 15) with average latent construct scores of this constructs' predecessors (i.e., behavioral intention and facilitating conditions). The total effects indicate the predecessor constructs' importance in shaping the target construct (usage behavior), while their average latent variable scores represent their performance.

This technique has become crucial to provide managerial insights to identify and improve predecessors which have high importance for target constructs but also low performance (Hiar et al., 2016; Hock et al., 2010).

Three requirements need to be met before running an IPMA (Hock et al., 2010; Trang et al., 2016); The first is to change the index values of the performance dimension, which are based on the latent variable scores, from 0-100. The second, all construct indicators must have the same scale direction, Finally, the outer weight estimates for the measurement model should be positive, regardless of whether the model is formative or reflective.

The importance-performance results are depicted in Table 8 and Figure 15 for target construct "intention to purchase travel online" and in Table 9 and Figure 16 for target construct "actual purchase travel online".

The behavioral intention to buy travel online has an index value of 56.4. As can be seen, effort expectancy has a highest importance (0.381) in predicting tourists' intention to purchase travel online, followed by performance expectancy (0.281), perceived economic value (0.155), perceived technological value (0.153), personal innovativeness (0.124), social influence (0.120), perceived physical value (0.101), perceived social value (0.042), and facilitating conditions (0.054). Moreover, in terms of performance of these constructs in predicting tourists' intention to purchase travel online, personal innovativeness (index value = 59.25) tops the list followed by), perceived technological value (index value = 58.75), and effort expectancy (index value = 58.1).

As mentioned above, effort expectancy has the highest importance (0.381). At the same time, effort expectancy already has a comparatively high-performance level; a lower priority for performance improvements there is only minor potential for performance improvements in comparison to the other predecessor constructs. On the other hand, while economic value displays a high importance and lower performance (index value= 46.75), relative to other constructs, in the IMPA map. Therefore, it offers substantial space in improving the target construct (i.e., intention to buy travel online).

In short, while effort expectancy is the most important predictor of travelers' intentions to buy online, perceived economic value of tourism should have the highest priority for performance improvements.

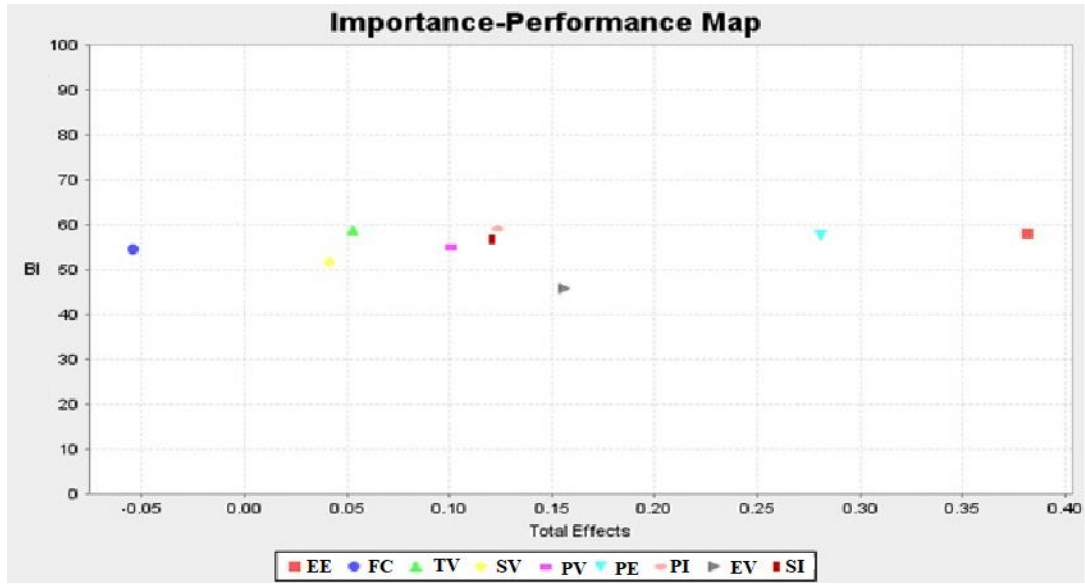


Figure 15. Importance-Performance Map for behavioural intention (BI).

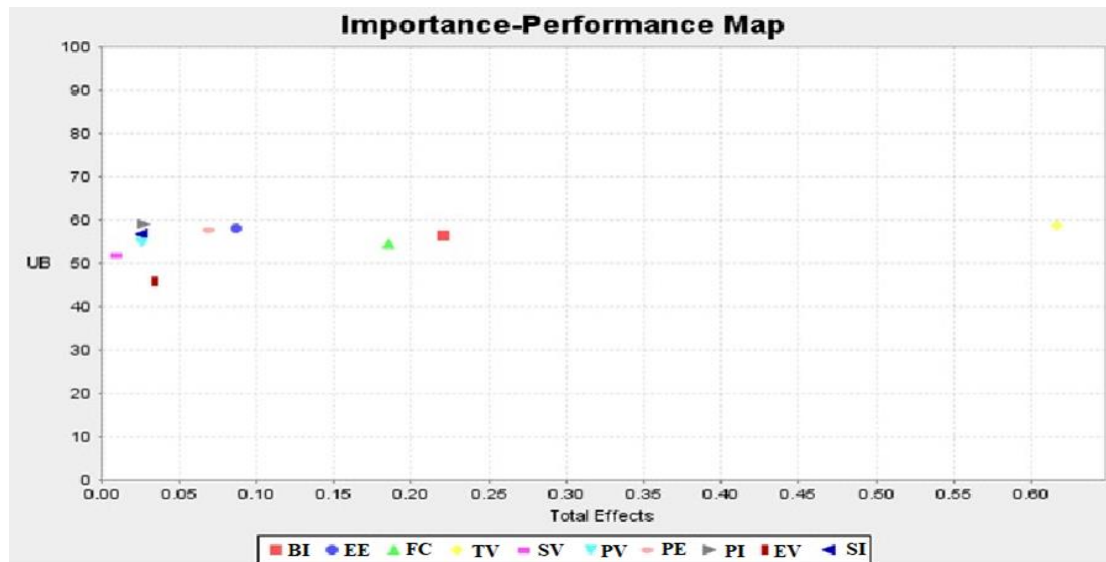


Figure 16 . Importance-Performance Map for usage behavior (UB).

Table 8. IPMA Results for behavioural intention (BI)

Latent Variables	Behavioral Intention	
	Total Effect (Importance)	Index Value (Performance)
Effort Expectancy	0.381	58.1
Performance Expectancy	0.281	58.5
Facilitating Conditions	-0.054	55.25
Social Influence	0.120	56.75
Perceived Social value	0.042	51.95
Perceived economic value	0.155	46.75
Perceived technological value	0.153	58.75
Personal Innovativeness	0.124	59.25
Perceived physical value	0.101	54.85

Table 9. IPMA Results for usage behavior (UB)

Latent Variables	Usage Behavior	
	Total Effect (Importance)	Index Value (Performance)
Behavioral Intention	0.215	59.25
Facilitating Conditions	0.135	55.25

## 5. Discussions and implications

Given the importance of information technology in online booking and reservation systems, this study aimed to understand the acceptance of making tourism purchases online through the use of UTAUT. However, this study goes beyond UTAUT by incorporating tourists' personal innovativeness and their perceived four-level value attributed to tourism and personal innovativeness with reference to the literature review. While only one previous study has examined this relationship (San Martin et al., 2020), the current study indicates the serious impact of tourists' perceptions of tourism values on their online-purchase intentions. This study constitutes one of the first pieces of research to provide evidence of a positive relationship between tourists' perceptions of tourism values and their online purchasing behavior.

The results of this study indicate that effort expectancy ( $\beta=0.173$ ), social influence ( $\beta=0.113$ ), perceived economic value ( $\beta=0.156$ ), personal innovativeness ( $\beta=0.124$ ), performance expectancy ( $\beta= 0.196$ ), perceived technological value ( $\beta = 0.153$ ), and perceived physical value ( $\beta = 0.101$ ) significantly impact tourists' intentions to make tourism purchases online. Therefore, elements related to these factors should be carefully considered by booking and reservation websites.

As shown in figure 14, the empirical results have verified the significant relationship between performance expectancy and behavioral intention to purchase travel online. In other words, the aspects related to performance expectancy (functional utilities) constitute the focus of attention for Iranian tourists formulating their intention to make tourism purchases online. This means that if they perceive the technology to be useful and effective in their daily lives, they are more likely to engage in online purchasing. In other words, if Iranian tourists perceived online purchasing to be an advantageous method that allows them to obtain a large amount of information and services without restrictions on place and time, their intentions to adopt online-purchase technology would

be higher. This finding is consistent with the results of several previous studies (Alalwan et al., 2017; Khalilzadeh et al., 2017; Kucukusta et al., 2015; Okumus et al., 2018; San Martín & Herrero, 2012; Venkatesh et al., 2003; Wang et al., 2009).

In addition, the results demonstrate that effort expectancy (with a weight of 0.173) is a primary driver behind Iranian tourists' behavioral intentions to adopt online reservation methods. This means that Iranian tourists value simplicity in their online purchasing process and are concerned about the difficulty of making online travel purchases, as it does require a certain degree of knowledge and skill. Therefore, online purchasing methods that require less effort make travelers more likely to make their purchases online. This is in line with the results of several previous studies (Alalwan et al., 2017; Kucukusta et al., 2015; Okumus et al., 2018; San Martín & Herrero, 2012; Venkatesh et al., 2003). Thus, online booking and reservation websites must work to make the experience easier and more straightforward for consumers at each step of the process. Reducing tourists' anxiety through FAQ pages, online consumer support, and simple payment processes would significantly reduce users' effort expectancy (Alalwan et al., 2017; Okumus et al., 2018).

This study, in line with the few other empirical studies on this relationship (e.g., Alalwan et al., 2017; Besbes & Legohérel, 2016; Khalilzadeh et al., 2017; Yang, 2010), highlights the influence of effort expectancy on performance expectancy. This implies that as an online purchasing process becomes easier to use, consumers perceive it to be more useful for tourism purposes. In other words, if consumers think that online reservation requires little effort, their perceived usefulness of online purchases will become more positive. Evidently, website designers should incorporate user-friendly features and marketers should promote easy-to-use purchasing methods.

The results also indicate that social influence plays a significant role in online purchasing intentions. As more people make tourism purchases online, consumer intentions lean more toward

online booking and reservation. As noted by Khalilzadeh et al. (2017), people surrounding consumers have a fundamental role in influencing consumer purchase intentions. The reason for this outcome may be the fact that Iranians generally support collectivism more than individualism, making social surroundings a significant driver of Iranian tourists' behavior. Clearly, managers and marketers should focus on leaders and influencers making travel purchases online; they could periodically enable opinion leaders to use specific offers and discounts to encourage potential consumers.

Facilitating conditions is a variable that was expected to influence consumers' purchase intentions based on primary assumptions and existing studies (Wang et al., 2009); however, some researchers have found evidence of the opposite, believing that facilitating conditions is not a significant explanatory variable of behavioral intention (Escobar-Rodríguez & Carvajal-Trujillo, 2013; Okumus et al., 2018; Shaw & Sergueeva, 2019). One explanation for these contradictory findings may be the recent ubiquity and pervasiveness of online shopping that have lead to a high degree of familiarity with the process, meaning the facilitating conditions are not crucial for them while engaging in online purchasing processes (San Martín & Herrero, 2012). In line with Oliveira et al. (2016), the results of the present research indicate that facilitating conditions influences consumers' actual usage behaviors ( $\beta=0.147$ ) rather than their intentions to use. This finding implies that website designers should facilitate the online reservation process through their websites. For example, they could provide free or low-cost telephone numbers, emails, and online chat platforms for solving problems and answering questions (Escobar-Rodríguez & Carvajal-Trujillo, 2013).

H<sub>5</sub>, which proposed a positive relationship between behavioral intention and actual use, was supported by the study. This result is consistent with several previous research conducted in



technology adoption (Alalwan, et al., 2018; Alalwan et al., 2017; Jaruwachirathanakul & Fink, 2005). In other words, actual online tourism purchases could be predicted by tourists' intention to make these purchases. Evidently, managers and marketers should work to grow and develop these intentions. Factors such as effort expectancy, performance expectancy, social influence, perceived economic, physical and technological values can all be used to enhance online-purchase intentions. In line with San-Martín and Herrero (2012), our findings show that personal innovativeness is an important predictor of consumers' online tourism purchase intentions. In line with IDT (Rogers, 1995), our results show that consumers with higher level of innovation are influential in diffusing a new technology—in this research, booking trips online. As a result, both promotion and communication campaigns are essential for the growth of online purchasing methods through innovative tourists (San-Martín & Herrero, 2012). It is recommended that marketers foster a positive word of mouth (WOM) using a digital or conventional channel. In turn, positive WOM would boost the intentions of low-innovation tourists to make online purchases (Okumus et al., 2018; San Martín & Herrero, 2012).

Additionally, personal innovativeness moderates the main-effect relationship between PE and BI; the greater the consumer's innovation, the stronger the effect of performance expectancy on behavioral intention. Therefore, categorizing consumers by innovation level could help to analyze the relationship between performance expectancy and online-purchase intentions. Conversely, the influences exerted by social influence and facilitating conditions on tourists' intention to purchase travel online not moderated by their innovativeness.

As already mentioned, this study constitutes one of the first to employ tourists' perceptions of tourism values to understand the adoption of online tourism purchases. According to San-Martín et al. (2020), the economic, physical, and technological values that consumers assign to certain

aspects of tourism have a direct positive effect on intentions to book trips online and an indirect positive effect on actual online tourism purchases. This result signals the significance of the perceived values of tourism, which were found to play a key role in willingness to support the development of tourism among residents (Andereck et al., 2005). This finding is in line with that of San-Martín et al. (2020), who found that the perceived values of tourism among tourists have a positive impact on their online-purchase intentions. This means that companies and businesses must underline the impact that tourism causes in a specific area for both residents and travelers who make purchases online. These impacts include effects on employment and income, infrastructure, and the role of technology in travel purchases. By making travelers more aware of tourism-generated value, they will be more inclined to purchase trips to a specific tourism destination. In other words, companies that seek to improve online purchasing intentions and increase rates of online booking should integrate offered technological, physical, and economic values into the design of their e-commerce platforms.

## **6. Conclusions, limitations and future research**

The purpose of this study was to identify and clarify the factors that influence the willingness of Iranian tourists to adopt online purchasing methods. Based on the findings of previous studies, it was necessary to select a theoretical foundation capable of understanding Iranian tourists' intentions. Accordingly, the proposed model assimilates factors from UTAUT and extends it by incorporating both tourists' personal innovativeness (as an intrinsic factor) and their perceptions of tourism values (as extrinsic factors). We examined the conceptual model on a random sample

of 389 Iranian tourists with structural equation modeling analysis. The results verified our proposed model by predicting a 57.3% variance in online-purchase intentions.

Effort expectancy, performance expectancy, social influence, personal innovativeness, perceived economic, physical and technological positive impacts of tourism all were approved to be significant predictor of online purchasing behavioral intention. This research is unique, as it evaluated the impact of tourists' perceptions of tourism values on their online-purchase intentions.

As with any empirical research, several limitations should be considered while interpreting the results of this study. Of course, these limitations also create interesting opportunities for future research. For instance, we did not consider the socio-demographic characteristics of our sample (such as age, gender, educational attainment, previous experience). These characteristics, which have been considered in previous studies, can affect technological adaptation through social influence, usefulness, and behavioral intentions (Khalizadeh et al., 2017; Okumus et al., 2018; Venkatesh et al., 2012). In a similar vein, cultural diversity was not considered in this study despite previous studies having concluded that cultural characteristics significantly impact technological adaptation and intentions (Im, Hong, & Kang, 2011; Law, Bai, & Leung, 2008; Legohérel, Dauce, Hsu, & Ranchhold, 2009). For example, Law et al. (2008) concluded that Americans are more likely than Chinese citizens to make tourism purchases online. The optimal method to establish causality would be to use an experimental design. However, the examination of the mentioned relationship is possible by studying several destinations with various cultures and comparing the behavioural intention among these destinations. We leave such opportunities for future studies.

Another potential limitation concerns the definition of online tourism purchases. In the present paper, the definition included online airline-ticket purchases and online accommodation booking (low-complexity travel products). According to Kamarulzaman (2007), the motivations behind

shopping online for low-complexity travel products are distinct from those behind shopping online for high-complexity travel products. She concluded that travelers prefer to purchase complex travel products (vacation packages and event tours) from travel agencies rather than online websites. Hence, the results of the current research might differ if employed to high-complexity travel products; this represents a promising avenue for future research. Future research could also provide an understanding of users' innovativeness and effort expectancy when it comes to high-complexity products. As this topic is relatively new, there is plenty of space for additional surveys that test the impact of other antecedents of behavioral intention, such as trust and user's level of expertise as potential moderators.

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## Appendix

Please, select the number that best explains your opinions about online shopping of airline ticket or accommodation.	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
1. Online purchase is very useful in my daily life.	1	2	3	4	5
2. Online purchase enables me to accomplish the purchasing process more quickly.	1	2	3	4	5
3. Online purchase improves the performance in the purchasing process.	1	2	3	4	5
4. Learning how to purchase online is easy for me.	1	2	3	4	5
5. My interaction with online purchasing would be clear and understandable.	1	2	3	4	5
6. Purchasing online implies little effort for me	1	2	3	4	5
7. People who influence my behavior think that online purchasing is useful.	1	2	3	4	5
8. I would purchase airline ticket and accommodation online because of the proportion of my friends who do their purchase online.	1	2	3	4	5
9. People who are important to me think that I should purchase travel online.	1	2	3	4	5

<b>10. I have the resources necessary to purchase online.</b>	1	2	3	4	5
<b>11. I have the knowledge necessary to purchase online.</b>	1	2	3	4	5
<b>12. I can get help from others when I have difficulties purchasing online.</b>	1	2	3	4	5
<b>13. Tourism increases the standard of living.</b>	1	2	3	4	5
<b>14. Tourism improves knowledge of the customs and the culture of the destination.</b>	1	2	3	4	5
<b>15. Tourism caused revival of local handicrafts&amp; cultural activities in the destination.</b>	1	2	3	4	5
<b>16. Tourism generates employment opportunities in the zone.</b>	1	2	3	4	5
<b>17. Tourism create new business investment opportunity in the destination.</b>	1	2	3	4	5
<b>18. Tourism increases the income.</b>	1	2	3	4	5
<b>19. Tourism increases investment in new technologies (e.g. websites)</b>	1	2	3	4	5

20. Tourism stimulates the use of new technologies (e.g. Travel Apps.).	1	2	3	4	5
21. Tourism caused digital development of tourist destinations.	1	2	3	4	5
22. Tourism increases investments in tourism infrastructures (e.g. hotels, restaurants, souvenir shops)	1	2	3	4	5
23. Tourism increases investments in basic infrastructures of destination (road, sanitation, water supply, health centers)	1	2	3	4	5
24. Tourism improves landscape of the area.					
25. Given the chance I intend to online purchase.	1	2	3	4	5
26. Given the chance I predict that I should purchase online.	1	2	3	4	5
27. Given the chance I plan to continue online purchase.	1	2	3	4	5
28. I prefer to utilize the internet to buy airline tickets or book a hotel.	1	2	3	4	5
29. I often buy airline tickets and book accommodation through the Internet.	1	2	3	4	5

<p><b>30. In the past six months, I have used online shopping in order to book accommodation or airline ticket.</b></p>	1	2	3	4	5
<p><b>31 Among my peers, I am usually the first to explore new technologies.</b></p>	1	2	3	4	5
<p><b>32. I like to experiment with new technology.</b></p>	1	2	3	4	5
<p><b>33. If I heard about a new technology, I would look for ways to experiment with it.</b></p>	1	2	3	4	5

## **Chapter 5: Overall conclusion**

Tourism is one of the needs of the modern society and has the highest growth and income generation among various economic sectors (Wang & Yotsumoto, 2019). Today, the tourism industry is considered as the largest and most diverse industry in the world (Seyfi & Hall, 2018; Wang & Yotsumoto, 2019; World Travel & Tourism Council, 2017). Iran is among the top ten countries in the world in terms of tourist attractions (Morakabati, 2013). However, in terms of attracting tourism and tourist flows, it does not have a worthy and desirable position not only in the world but also among the Middle East countries (Chianeh, Rezatab Azgoomi, & Kian, 2019; Morakabati, 2011, 2013). This study seeks to answer the question of why Iran is not successful in attracting foreign tourists and does not have a favorable position, in other words, the researcher seeks to identify the factors affecting tourism development.

To study a certain subject, various alternative techniques are essential to model its functions and structure. Goeldner & Ritchie (2007) identify eighth different ways of studying tourism-based phenomena and scholars assert that one of the comprehensive approaches to tourism is Leiper's system approach (Hall & Page, 2010; Netto, 2009). The issue of integrating various ideas into a coherent model was indicated based on the general system theory (Emery, 1969; Klir, 1972). The general systems theory was effective since it presented a method to render simple phenomena what is then complex and permit a combined holistic viewpoint of an issues. Tourism is extensively known as a dynamic complex system of interacting and interrelated components constantly emerging and evolving (Farrell et al., 2004; Rodriguez-Giron et al., 2019). Leiper proposed a comprehensive system for tourism (1979). A systemic approach is a relatively comprehensive approach to understanding, analyzing, and planning tourism (Leiper,

1979, 1990; Hall & Page, 2010). In this approach, the sectors and factors affecting tourism, such as tourists, destinations, the host community, relevant organizations, the environment, etc. can be studied, analyzed, and organized in an interconnected manner. In other words, the systemic approach depicts the reality, foundation, and basis of tourism in a coherent whole. An extensive perspective is provided by the model of whole tourism systems regarding the functional and structural senses and correspondingly a broad viewpoint on investigating the issue interdisciplinary. Also, this approach manifests links and relationships between the components and elements of the tourism sector, including travelers (or tourists), destinations, tourism-generated region, and environment. In this way, planners can strive for the dynamism of the tourism industry in the global competitive arena.

Based on the epistemology perspective, the investigating systems require a system thinking perspective and holistic method (Farrell et al., 2004; Štrukelj & Šuligoj, 2014). Even though the technical and methodological advancements allow us to model complex adaptive systems through methods like network analysis (Regan, 2009), by developing the toolbox, the systems are investigated from a holistic perspective, which is extremely limited and complicated to a great degree. As we know, no study exists so far empirically and holistically examining the Leiper's (1979) model. The present dissertation is not an exception, as well where we adapted traditional reductionism as the most common method in scientific inquiry owing to the methodological limitations, to assess the geographic aspect of the tourism system model (Verschuren, 2001; Farrell et al., 2004; Regan, 2009). The system should be divided into its most basic components in this regard (Verschuren, 2001).

Stemming from and based around a general model of whole tourism systems, through the use of a three-paper design, this dissertation takes an interdisciplinary approach with multiple



methods. It should be noted that in all three studies, an attempt has been made to examine the issue from a new approach by identifying research gaps in previous studies. It encapsulates theoretical reasoning of basic theories from the disciplines of tourism and marketing in a new research setting. Chapter 2 started off with a study titled “The influence of theocratic rule and political turmoil on length of stay” and the second study, “Residents’ perception of tourism impacts and their support for tourism development” were focused to study the effects of environmental factors of the tourist destination region (TDR) on tourists’ behavior (i.e., the first study) and local residents’ behavior (the second study). The results of this study are useful not only for marketers and managers of the tourism industry in Iran but also for other countries/destinations because the two issues studied in the first two studies (political crisis and economic instability) affect most countries and destinations. Therefore, the results of this research are also applicable to these purposes. Using the third study, “Analyzing the adoption of online purchases in the tourism industry: Effects of perceived tourism value and personal innovativeness”, the Iranian tourism system was studied as a tourist generator region (TGR) to comprehend the environmental factors (indeed the technological aspects of Leiper’s external environment) shaping the Iranian tourists’ behavior.

The first study investigates the determinants of international tourists’ LOS in TDR. More specifically, this study explores the effect that TDR’s environmental condition (i.e., theocratic rule and political turmoil in destination) has on tourists’ LOS, in other words, how heavily these variables influence tourists’ LOS in a tourist destination. A comprehensive recognizing the determinant factors of LOS will aid planners and marketers with the proper tools to design effective marketing strategies and lure in visitors who show a greater predisposition to prolonged stays, as they are particularly profitable. They should consider the impact of

influential factors on international tourists' LOS. From a management perspective, it provides a tool for the destinations manager to anticipate the tourist's LOS and to optimize their attraction offer.

The results of this study indicate that theocratic rule and political instability seriously hinder tourists' LOS lengthier stays. Importantly, the results indicate that Islamic regulations have a negative effect on LOS, particularly for female tourists; such religious restrictions can be serious barriers to attract new tourists (Zamani- Farahani & Henderson, 2010). Although cultural changes need long-term planning, considering the positive effects of tourism on economic development, authorities must swiftly take substantive steps to reduce religious restrictions, at least for tourists. One of the programs in the field of culture is through educational programs. Local and national media presentations can support appropriate interactions with tourists. So, they could take advantage of tourism opportunities in Islamic destinations, like Iran.

Moreover, this study revealed that a primary goal of government should be to maintain political stability, as political turbulence tends to reduce LOS. Additionally, instability fosters a negative image of the country in tourists' minds (Butler & Suntikul, 2017; Seddighi, Nuttall, & Theocharous, 2001). Authorities should conduct recovery marketing, and advertising efforts should be integrated with crisis-management activities. As suggested by Sonmez and Graefe (1998), airlines should conduct promotional campaigns and generous incentive schemes. Authorities in tumultuous areas should issue regular reports on the level of security and assist with travel plans in order to reassure potential tourists (Issa, 2006). The more sensitive potential tourists are to political instability, the more aggressive the marketing and promotional strategies of a tourist destination should (Seddighi et al., 2001). Furthermore, governments need to

maintain stability and security and portray themselves through the media in a way that is comforting to tourists.

The second study were employed to investigate the effect of economic crisis in TDR on resident perception of tourism development. In other words, this study explores another aspect of TDR's environment (i.e., bleak economic environment). It was concluded that the more residents perceive economic crisis in TDR, the more they will perceive tourism positively and the more willing they will be to support its development. An explanation is that, in a bleak economic environment, residents tend to overrate the economic gains of tourism (Lepp, 2007) and underrate the negative impacts (especially socio-cultural and environmental) by hoping for a better economic situation (Kayat, 2002; Nunkoo & Ramkissoon, 2010). In other words, locals become more friendly with tourists amid economic troubles if they believe that tourism development will help them and their community achieve a better economic environment; this sacrifice of environmental, social, and cultural beliefs has the potential to result in socio-cultural discord or environmental and cultural degradation. This leads unsustainable tourism development in destination. Therefore, destination managers and local authorities must be keenly aware of tourism's negative impacts being marginalized by community members.

Returning to Leiper's system model, study 1 and study 2 were employed to investigate TDR function of Iran region. According to Leiper (1979, 1995), TDR provides pull factors and creates the demand to travel to a specific region/destination. The first study provides an understanding of the impacts of destination (TDR) attributes on one of the most important components of tourism demand: the length of time a tourist spends at TDR. The results indicate that in this framework, Iran appears to falter; it does not generate the essential pull elements to

increase LOS and attract those market segments more likely to stay longer. Conservative religious and political instability are primary deterrents to LOS and Iranian tourism in general. Additionally, local residents and their hospitality is considered as one of the most valuable pull factors to lure in visitors. Given the importance of residents and their perception toward tourism for TDR, the second study examined how TDR's economic environment affects local attitudes toward tourism. The results indicate that despite the fact that economic downturn exerts a frictional effect on individual's quality of life, it can create an opportunity for a destination in the context of a severe economic crisis, to restructure its tourism industry and alleviate poverty in societies under economic crisis. Moreover, in order to offer appropriate hospitality (as an important pull factor of TDR), managers and planners should focus on the aspects that lead to residents' positive perception of tourism.

As mentioned in introduction chapter, one of the elements in the model of whole tourism systems is tourist generator region (TGR). The third study following the two previous ones will evaluate the country's performance as a TGR based on ideas from Leiper (1990), Goeldner & Ritchie (2007). Iran as a generating country was described and Iranians as tourists were considered. Information technology and online shopping has become one of the most important parts of daily life and creates many benefits. Also, the widespread use of the Internet is an unprecedented opportunity to develop the tourism industry and change tourist behavior. Hence, it is tried to attain a thorough comprehension of the tourism system in a specific region and understand the role of the region as a travel generator element in the tourism system. Therefore, Chapter 4 "Analyzing the adoption of online purchases in the tourism industry: Effects of perceived tourism value and personal innovativeness", deals with understanding the environmental factors or the technological aspect of Leiper's external environment in shaping

Iranian tourists' behavior. In other words, within the context of TGR, the study is confined to explaining factors that motivate a member of the community to engage in tourism activities and to behave in a specific way. In summary, the different dimensions of the Leiper tourism system are influenced by external factors, such as economy, politics, socio-culture, and technology. In current study, the theme is to consider Iran as a TGR element in the tourism system and to represent environmental factors in TGR affecting the tourists' behavior and help determine how that country performs as a travel generator element in tourism systems. Particularly, the objective is to is to construct an integrated model that examines Iranian tourists' adoption of online purchases in the tourism industry and how this adoption is influenced by individual perceptions of tourism value and personal innovativeness. The proposed model assimilates factors from the unified theory of acceptance and use of technology (UTAUT) alongside personal innovativeness (as tourists' intrinsic variables) and new extrinsic variables to investigate Iranian tourists' behavioral intentions toward online purchasing.

A comprehensive understanding of tourists' behavioral intention determinants would provide planners and marketers with the proper tools to design effective marketing strategies to convert potential consumers into actual buyers. The results of this study indicate that effort expectancy, performance expectancy, social influence, perceived economic value, personal innovativeness, perceived technological value, and perceived physical value significantly impact Iranian tourists' intentions to make tourism purchases online. Therefore, elements related to these factors should be carefully considered by booking and reservation websites.

As mentioned before, Leiper tourism system provides a broad perspective on what tourism is about in a structural and functional sense and a correspondingly broad perspective on how the subject can be studied from interdisciplinary viewpoints. This approach has been used in a series

of studies, on different topics, in the current present dissertation. The approach seems particularly relevant as a guide for marketing, planning and assessing governmental policies in some areas of tourism. A particular government can use the framework to recognize the relationships of its geographical constituency in the tourism system. According to the results of three studies we can conclude that for Iranian tourism system, the path to development and recovery is troubled with severe difficulties (as mentioned in study 1; theocratic rule and political turmoil hinder tourists' LOS lengthier stays, and in study 2; struggling economic environment can lead unsustainable tourism development in destination). In terms of Iranian TGR role, it is indicated that searching products and services of tourism and traveling in websites are the lowest in Iranian tourists which is about 8 percent, and this number is about 19 percent for traveling and tourism services (Arab, Blake, & Neuendorf, 2003). Therefore, Given the economic importance of tourism and the relevance of technology in booking trips, the aim of this study was to study Iranian tourists' behavior in term of online purchasing, in order to improve Iran's role as a TGR.

Despite this primary focus on Iran, this study, will undoubtedly be of interest not only to those readers who focus specifically on Iran but also those who seek a wider understanding of any country, state, or area's role in the region and how tourism is utilized as part of national and regional economic development policies.

Each of the three studies presents separate applications and suggestions for tourism researchers, managers, and those affiliated with tourism in Iran and countries with similar circumstances, all described in detail in each chapter.

Tourism management is a comprehensive and multifaceted phenomenon, and adequately serves countries like Iran –that are in the early stages of tourism development with few studies

administered concerning their issues— in identifying factors that impact their performance both as a tourism destination and source alike. Needless to say, only a few aspects of the factors impacting the Iranian tourism system have been studied in this dissertation, and it is required to study further factors or to examine these aspects more thoroughly. I have conducted other studies in line with this dissertation, and at this stage, I do intend to proceed with a comparative study between Iran (as a less-developed destination) and France (as a destination with a thriving tourism industry). Research is an integral part of an academic, and I walk this journey with passion, cherish every moment, and seek to learn more.

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## Résumé

Cette thèse étudie **le développement de l'industrie touristique en analysant la destination Iran caractérisée par des attributs particuliers**. Cette recherche est structurée autour de **trois propositions théoriques et empiriques**. Cette approche s'est avérée être une expérience très agréable. Elle a cependant exigé un effort important de travail en abordant des travaux de recherche concernant trois sujets différents, et rassembler des données correspondant à trois populations statistiques distinctives et trois les méthodologies différentes.

**L'Iran a été retenu comme destination touristique pour cette recherche**, en raison de ses attributs. De plus, l'Iran est mon pays d'origine. Le tourisme de l'Iran se trouve parmi les sujets peu étudiés, et celui-ci a une portée très limitée dans le domaine du tourisme international (Seyfi, Hall & Kuhzadi, 2018). Par conséquent, la nécessité de faire des études approfondies à propos de ce sujet est tout à fait évidente. De plus, la destination Iran est confrontée à des difficultés, sommes toutes courantes mais peu communes, à savoir les tensions politiques et financières. Conséquemment, l'étude des influences de ces crises sur le secteur du tourisme sera également valable pour les autres destinations.

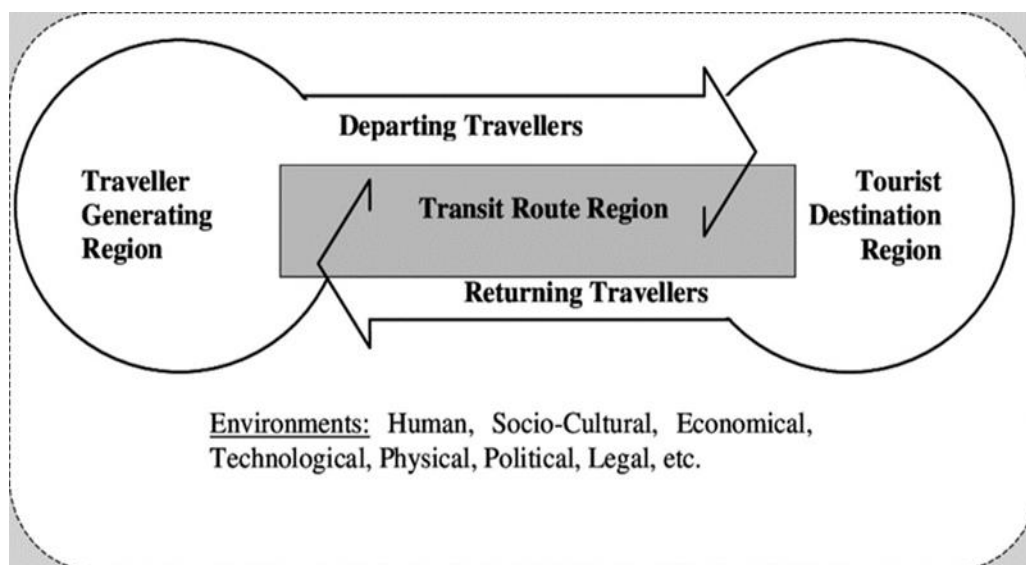
Il y a encore peu de temps, les journaux titraient souvent : « L'organisation Mondiale du tourisme a introduit l'Iran comme une des dix meilleure destination touristique du monde », « l'Iran est nommée comme le cœur de l'histoire et de la civilisation du Moyen- Orient », « l'Iran se place à la dixième place parmi les attractions historiques et anciennes, la cinquième en attractions naturelles », « l'Iran, la porte des nations », « l'Iran, une destination pour les

quatre saisons ». Naturellement, tous les titres et les nouvelles ont été affirmatifs et m'ont plu comme je suis une iranienne. Analysé sous le prisme de la science de gestion en tourisme, la question se pose de savoir pourquoi en dépit de tous ces titres et le solide potentiel qui existe pour la croissance du tourisme, l'Iran ne parvient pas à réclamer une place assez importante dans le monde pour attirer des touristes et assurer le développement du secteur du tourisme. Conséquemment, la question primordiale de ma recherche, qui s'insère dans un courant managérial mais aussi local (les travaux de compatriotes) est de **distinguer les facteurs qui contribuent à l'échec de l'Iran dans le secteur du tourisme.**

En d'autres termes, cette thèse identifie et analyse quelques dissuasions pour le développement du tourisme. Différentes approches coexistent pour étudier le tourisme. L'approche systémique – le système touristique – se considère comme l'une de ces approches. Elle a été introduite dans les années 1950, et elle peut être définie comme un ensemble des composants interconnectés liés de façon à former un tout unifié et organisé pour atteindre un ensemble d'objectifs. Cela intègre les différentes techniques en une méthode totale qui s'adresse aux facteurs micro et macro. L'utilisation de l'approche systémique dans la recherche du tourisme a été examinée par Mill and Morrisson (1985), Gunn (1980), Leiper (1979, 1990), Hall and Page (2010), and Netto (2009). Goeldner and Ritchie (2007) argumentent que la partie la plus vitale de l'étude des phénomènes dans le domaine du tourisme est l'utilisation de la théorie des systèmes. De plus, Hall et Page (2010) affirme qu'une approche systémique totale du tourisme, marquée par l'élan des travaux de Leiper (1979), est assez pertinente dans la recherche en tourisme. Les trois éléments principaux du modèle de Leiper sont les suivants :

- Une personne ou des personnes qui s’engagent dans le comportement touristique (c.-à-d. les touristes) ;
- Les régions géographiques ;
- L’industrie du tourisme (par exemple les entreprises et les organisations qui participent à la livraison des produits touristiques).

De plus, son modèle fait une distinction entre les régions géographiques qui produisent des voyageurs (les régions génératrices des voyageurs, TGR), les régions qui accueillent les touristes (destination touristiques, TDR) et les régions de transit (TRR). Ces divers aspects du système touristique sont arrangés grâce aux connexions spatiales et fonctionnelles. Également, le system touristique de Leiper est muni des caractéristiques d’un system ouvert. Alors, l’organisation de ces cinq composants est entourée par des environnements externes, qui sont déterminés comme des structures physiques, socio-culturelles, économiques, politiques et technologiques qui influencent le fonctionnement du système dans son ensemble.



Un regard plus précis vers le modèle de Leiper (1970) montre que les éléments géographiques du tourisme sont constitués d'un sous-système géographique de trois composantes dans l'environnement d'une industrie, dans lequel les touristes sont considérés comme des agents du système (Leiper, 1979). L'expérience de la destination est un produit fondamental du tourisme (Ritchie & Crouch, 2000), et la région de destination est, certainement, l'une des composantes majeures du système touristique (Dredge, 1999). La région génératrice est une autre composante spatiale primordiale dans les systèmes géographiques, comme elle constitue le marché pour les produits touristiques (Backer & Hing, 2017 ; Leiper, 1979). Néanmoins, la mobilité est la composante la plus visible de la perspective des systèmes de la distribution (Cooper, Fletcher, Gilbert, Fyall, & Wanhill, 2011). D'un point de vue épistémologique, l'étude des systèmes exige une approche intégrale et une perspective systématique (Farrell & Twining-Ward, 2004 ; Štrukelj & Šuligoj, 2014). Alors que les promotions techniques et méthodologiques nous permettent de former des systèmes adaptatifs complexes en utilisant des techniques comme l'analyse des réseaux (Regan, 2009), l'ensemble des outils qui a été développé afin d'enquêter sur les systèmes d'un point de vue global est, semble-t-il, restreint et incroyablement compliqué. A ma connaissance, aucune étude n'a encore examiné le modèle de Leiper (1979) de façon empirique et complète et cette thèse ne fait pas exception. A cause des limites méthodologiques, nous avons adapté le réductionnisme traditionnel – en tant qu'approche la plus courante de l'enquête scientifique – pour étudier les aspects géographiques du modèle du système touristique (Farrell & Twining-Ward, 2004 ; Regan, 2009 ; Verschuren, 2001).

Pour étudier ces aspects géographiques, le système doit être découpé en ses composantes les plus fondamentales (Verschuren, 2001). Par suite, la première et la deuxième étude examine les effets des facteurs environnementaux de la région de destination touristique (TDR) sur le comportement des touristes et des habitants locaux, respectivement. La troisième étude évalue le système touristique Iranien en tant qu'une région génératrice de tourisme. Cette étude est consacrée à la compréhension des facteurs environnementaux (les aspects technologiques de l'environnement externe de Leiper) en Iran qui forment le comportement des touristes iraniens.

### **Les chapitres principaux de la thèse**

La structure de cette thèse est divisée en trois études, chacune comprend un ou plusieurs éléments de l'ensemble du système touristique. Le **Chapitre 2, "Durée du séjour des touristes (LOS),"** aborde les critères de LOS dans les destinations touristiques. La durée du séjour d'un touriste, aussi connu comme la durée de voyage, est un facteur primordial dans la réussite de l'industrie du tourisme. Des preuves empiriques ont démontré que l'augmentation de la durée du séjour est liée avec des niveaux plus élevés de recettes du tourisme (Barros & Machado, 2010) ; cela signifie que la durée du séjour a des effets sur le revenu généré par le tourisme (Barros & Machado, 2010 ; Barros, Correia, & Crouch, 2008 ; Martinez-Garcia & Raya, 2008). Pendant les derniers années, l'industrie du tourisme a rencontré une baisse mondiale en termes de durée du séjour – les voyageurs préfèrent voyager plus mais séjourner avec une durée plus courte (Barros & Machado, 2010). L'augmentation des voyages professionnels et l'émergence des transports aériens bon marché ont amplifié la tendance vers les séjours de courte durée. Ces changements dans l'industrie ont abouti à une réduction considérable dans la contribution en

termes de chiffres d'affaires du tourisme (Alén, Nicolau, Losada, & Domínguez, 2014). **Étant donné l'importance de la durée des visites pour l'industrie, il est également important de déterminer les facteurs qui influencent la durée du séjour.** Une compréhension améliorée de ses facteurs permet aux managers des entreprises et organisations touristiques d'utiliser des outils adaptés afin d'élaborer des stratégies efficaces sur le marché. Les facteurs significatifs de la durée du séjour sont des parties essentielles d'une planification pour le développement durable des destinations touristiques.

L'importance de LOS est récemment devenue un point essentiel dans les recherches en management du tourisme. La croissance graduelle de publications sur ce sujet a commencé en 2008 (Alegre, Mateo, & Pou, 2011 ; Ferrer-Rosell et al., 2014 ; Jackman, Lorde, Naitram, & Greenway, 2020 ; Martinez-Garcia & Raya, 2008 ; Peypoch et al., 2012 ; Rodríguez, Martínez-Roget, & González-Muriasa, 2018). Les documents liés à la durée de séjours des touristes montrent que des facteurs différents, à savoir le profil du touriste, les caractéristiques du voyage et les attributs de la destination peuvent être influents (Gössling, Scott, & Michael, 2018 ; Rodríguez et al., 2018). Néanmoins, un regard plus approfondi vers les études antérieures trouve un nombre de divergences dans la recherche présente. Malgré l'importance de cette variable pour les destinations, peu de travaux ont été conduits dans les pays moins développés. À ce que je sache, jusqu'à présent, aucune recherche antérieure n'a enquêtée la durée du séjour dans les destinations islamiques. Ce déséquilibre a suscité des appels pour étudier les destinations touristiques à travers le monde musulman et analyser les divers antécédents de comportement touristique du point de vue de la durée du séjour.

Selon Alén et al. (2014) et Rodríguez et al. (2018), des destinations différentes présentent des

comportements différents, la durée du séjour semble varier par la zone géographique et/ou le segment touristique (Aguilar & Díaz, 2019). En conséquence, les informations fournies par des études faites dans les destinations non-musulmans peuvent aboutir à des décisions erronées ou sous-optimales par les managers marketing du tourisme dans les destinations islamiques.

**Le choix d'une destination touristique et le niveau d'engagement avec la communauté hôte** sont souvent influencés par des normes culturelles (Brown & Osman, 2017). La religion, comme une composante primordiale de culture, tend à influencer l'hospitalité locale et les lignes directrices légales ; ses nombreuses conséquences pour les différents aspects du tourisme ont attiré l'intérêt des chercheurs. Cependant, il y a un manque de recherche sur la manière dont le régime théocratique ou les règlements religieux influencent le comportement touristique. Il est perceptible que les lois et les règlements dans les destinations islamiques peuvent influencer la durée du séjour des touristes, qui est un aspect crucial du comportement des touristes— ne pas tenir compte de ce lien peut causer une polarisation dans l'estimation des paramètres vers une direction inconnue.

De plus, malgré le fait bien connu que l'instabilité et la crise politique influencent la demande touristique et le comportement des touristes (Lanouar & Goaid, 2019), aucune étude antérieure n'a enquêté leur effet sur la durée du séjour, en tant que l'une des composantes les plus centrales de la demande touristique. Il existe des preuves qui montrent que les troubles sociopolitiques entravent le processus dans lequel les touristes font des décisions (Seddighi, Nuttall, & Theocharous, 2001). Il semble raisonnable de considérer ce fait comme un paramètre important influant sur leur durée du séjour.

Cette étude inclut les paramètres qui ont été identifiés préalablement dans la recherche en tant



que prédicateurs du comportement des touristes. En considérant la lacune existante mentionnée auparavant, cette étude a pour objectif d'apporter un nouveau souffle à la documentation par l'exploration de la façon par laquelle la crise politique et les lois théocratiques dans les destinations musulmanes influencent la durée du séjour des touristes. S'inspirant des chercheurs précédents (Adongo et al., 2017 ; Alén et al., 2014 ; Barros et al., 2010), un questionnaire a été utilisé pour collecter des données. Les données ont été collectées pendant l'été de 2017 en utilisant un questionnaire auto-administré structuré, livré en mains propres par le chercheur aux 1 023 voyageurs internationaux. Finalement, 79 % des questionnaires (808) sont remplis et retournés. Selon Dillman (1978), ce taux de retour a été acceptable. Après le nettoyage initial et le filtrage des données, 726 réponses ont été utilisées pour l'analyse et analysées avec SPSS. La durée du séjour a été évaluée à l'aide d'une analyse de survie semi-paramétrique et paramétrique. Les résultats montrent que les règlements islamiques et la crise politique ont un effet négatif et considérable sur la durée du séjour des touristes. Un signe négatif signifie qu'à mesure que la valeur d'un facteur augmente, la durée du séjour des touristes diminue. Plus précisément, les touristes qui considèrent les "règlements islamiques" comme des limites et "la crise politique" comme un danger significatif tendent à faire des voyages plus courts.

Notamment, ces facteurs peuvent empêcher les longs séjours à Tabriz. Les résultats montrent que les femmes ne restent pas aussi longtemps que les hommes, probablement à cause des contraintes religieuses et le sentiment d'insécurité qu'elles ont dans les destinations islamiques conservatrices (Brown & Osman, 2017). Compte tenu des effets positifs du tourisme sur le progrès économique, les autorités devraient prendre des mesures nécessaires pour réduire les contraintes religieuses - au moins pour les touristes- et d'informer les habitants locaux sur ce sujet pour que le tourisme s'épanouisse dans les destinations islamiques.

Cette étude a révélé que l'un des buts primordiaux des gouvernements doit être de maintenir la stabilité politique, comme la crise politique tend à réduire la durée du séjour des touristes. De plus, l'instabilité favorise une image négative du pays dans les mémoires des touristes (Butler & Suntikul, 2017 ; Seddighi et al., 2001). Les autorités devraient mener des campagnes de relance, et les efforts publicitaires devraient être intégrés avec des activités de la gestion des crises. Comme Sonmez et Graefe (1998) l'ont proposé, les compagnies aériennes devraient mener les campagnes promotionnelles et des programmes d'incitation généreux comme les offres 2-pour-1, les billets de compagnon gratuits, et location de voiture gratuite. En outre, les hôtels peuvent offrir les réductions de prix pour les longs séjours. Les autorités dans les zones tumultueuses devraient faire des rapports réguliers à propos de la sécurité et accompagner les plans de voyages afin de rassurer les touristes potentiels. Plus les touristes potentiels sont sensibles à l'instabilité politique, plus les stratégies de marketing et de promotion sont agressives (Seddighi et al. 2001). En outre, les gouvernements devraient maintenir la stabilité et la sécurité, et introduire eux-mêmes à travers les media une façon qui rassure les touristes. Bien que les changements culturels exigent une planification à long terme, tenant compte des effets du tourisme sur le développement économique, les autorités doivent promptement prendre des mesures nécessaires pour réduire les contraintes religieuses, au moins pour les touristes. Un des plans sur le domaine culturel se fait via les programmes éducatifs. Les présentations par les media locaux et nationaux peuvent soutenir les interactions compatibles avec les touristes. Ainsi, ils pourraient bénéficier des opportunités fournies par le tourisme dans les destinations islamiques comme Tabriz.

Dans le chapitre suivant, une conversation intitulée “**les résidents et leur perception du tourisme**” est présentée. Les habitants sont une des ressources les plus astringentes pour une destination touristique, cela signifie que leurs perceptions du tourisme forment un pilier essentiel pour l’élaboration les stratégies du développement du tourisme, favorisant le développement durable. La perception des habitants à propos du tourisme est devenue un des “domaines du tourisme les plus systématiques et les plus étudiés” (McGehee & Andereck, 2004, p. 232). Le sujet a récemment attiré l’intérêt en raison des preuves en augmentation d’effets négatifs du développement du tourisme sur les habitants locaux (Sinclair-Maragh, Gursoy, & Vieregge, 2015). Un regard en profondeur de la littérature sur la perception des habitants montre un certain nombre d’écarts et d’insuffisances. Premièrement, la plupart des études sur ce sujet a été menée dans les pays développés (l’Amérique du Nord et le Royaume Unie sont les plus fréquentes destinations (Nunkoo & Gursoy, 2012 ; Rasoolimanesh, Roldán, Jaafar, & Ramayah, 2016 ; Sharpley, 2014)). Cela signifie que les organisations et les entreprises devraient mettre en valeur l’impact que le tourisme suscite dans une zone particulière pour les habitants et les voyageurs. Ces répercussions intègrent des effets sur les recettes touristiques et l’emploi en tourisme, mais aussi l’infrastructure et le rôle de la technologie dans les achats de voyage. Plus les voyageurs sont informés de la valeur générée par le tourisme, plus ils seront attirés à voyager vers les destinations particulières. En d’autres termes, les entreprises qui cherchent à améliorer l’intention des achats en ligne et à augmenter le taux de réservation en ligne, devraient incorporer les valeurs technologiques, physiques et économiques données dans l’élaboration de leurs plateformes de commerce électronique. Peu d’études se sont concentrées sur le monde en développement (Rasoolimanesh et al., 2016 ; Strzelecka, Boley, & Woosnam, 2017 ; Strzelecka, Boley, & Strzelecka, 2016). Cette lacune a suscité des appels pour étudier les

destinations touristiques du monde en développement pour analyser les antécédents des attitudes des habitants (Gannon et al., 2020 ; Nunkoo et al., 2013 ; Sharpley, 2014 ; Vargas-Sanchez, Porras-Bueno, & Plaza-Mejía, 2011). De plus, malgré le fait bien établi que l'incertitude économique influence les perceptions et les attitudes (Garau-Vadell, Diaz-Armas, & Gutierrez-Tano, 2014 ; Voon & Voon, 2012), aucune étude antérieure à celle de ce chapitre n'a enquêté sur l'effet des crises économiques dans les destinations sur les attitudes locales envers le tourisme et la volonté de soutenir le développement du tourisme. Récemment, de nombreuses destinations sont confrontées à une crise sanitaire et économique, en particulier les pays en développement. Les chercheurs croient que le processus individuel de prise de décisions fait l'objet de plusieurs types d'influences économiques et psychologiques (Giesen & Pieters, 2019 ; Thaler, 1994) et quand les individus rencontrent des difficultés financières, ils changent leurs comportements et leurs attitudes (Graham, Chattopadhyay, & Picon, 2010 ; Voon & Voon, 2012). Alors il est raisonnable à présumer qu'un environnement morose économiquement peut influencer l'attitude des résidents vers le tourisme et que ne pas tenir compte de cette relation peut induire une évaluation des perceptions des résidents vers une direction inconnue.

Le document présente une étude des facteurs décisifs de la perception des habitants et la volonté pour soutenir le développement du tourisme. Le modèle proposé, qui associe la théorie de l'échange social et la théorie de l'attachement, a été examiné à travers la modélisation d'équations structurelles en utilisant les données recueillies de 409 habitants d'Ispahan. Nos résultats montrent que la crise économique apparente est le meilleur prédicteur des effets positifs perçus par les habitants, les effets négatifs du tourisme et leur volonté à soutenir son développement dans leur société. Cela signifie que plus les habitants ressentent la crise

économique dans leur société, plus ils perçoivent les effets positifs du tourisme et plus volontairement ils soutiennent son développement. Une explication est que dans un environnement à la peine économiquement, les habitants ont tendance à surestimer les avantages économiques du tourisme (Lepp, 2007) et à sous-estimer les effets négatifs (spécialement les effets socio-culturels et environnementaux) en espérant une meilleure situation économique (Kayat, 2002 ; Nunkoo & Ramkissoon, 2010). Autrement dit, les habitants locaux deviennent plus amicaux avec les touristes au milieu des crises économiques s'ils croient que le développement du tourisme va les aider et leur société va obtenir un meilleur environnement économique. Cette « offrande » des convictions environnementales, sociales et culturelles a le potentiel d'aboutir à la discorde socio-culturelle et à la déchéance culturelle et environnementale. Ce fait pousse le tourisme dans la destination vers un développement non-durable. Par conséquent, les entreprises, les gestionnaires de la destination et les autorités locales devraient être volontairement conscients des effets négatifs du tourisme qui sont marginalisés par les membres de société. Cette étude émet l'hypothèse que la crise économique apparente peut avoir un effet modérateur sur la relation entre les influences perçues du tourisme par les résidents et le soutien du développement du tourisme. Comme indiqué par les résultats de l'étude, tant que le niveau de la crise économique perçue par les résidents augmente, l'influence de l'effet perçu du tourisme (les effets positifs et négatifs) sur la volonté des résidents pour soutenir le tourisme augmente aussi. Ainsi, les hypothèses 8a et 8b ont été soutenues par l'étude présente. Malgré le fait que le déclin économique exerce un effet de friction sur la qualité de vie individuelle, il peut constituer une opportunité pour une destination en crise économique très sérieuse, pour réorganiser son industrie du tourisme et apaiser la pauvreté dans les sociétés en proie des crises économiques (O'Brien, 2012).

La troisième étude (chapitre 4) poursuit les deux études précédentes en analysant **l'adoption des achats en ligne dans l'industrie du tourisme en Iran**. L'industrie du tourisme a été notablement altérée par des progrès technologiques de l'information et de communication et l'émergence des achats en ligne en conséquence. Les dernières années sont marquées par une croissance notable dans le domaine des achats en ligne dans l'industrie du tourisme (Besbes & Legohérel, 2016 ; Kucukusta, Law, Besbes, & Legohérel, 2015). En fait, "le voyage" est devenu le deuxième des catégories populaires des achats en ligne (Nielsen, 2018). La popularité des achats en ligne a évoqué beaucoup d'intérêt de la part des chercheurs dans le domaine du tourisme. Selon Law et al. (2014) et O'Connor & Murphy (2004), la plupart des études dans ce domaine de recherche ont examiné le point de vue des fournisseurs et le développement technologique – **le point de vue des consommateurs des achats en ligne** en l'industrie du tourisme n'a reçu qu'une d'attention limitée (Amaro & Duarte, 2015 ; Prentice, Han, Hua, & Hu, 2018). Cette disparité suscite l'intérêt de conduire plus de recherche sur le comportement d'achat en ligne des consommateurs afin d'analyser les divers antécédents de leur comportement. Amaro & Duarte (2015) et San-Martín & Herrero (2012) soutiennent que les recherches supplémentaires sur ce sujet sont attendues, car les études antérieures sont peu concluantes en raison de résultats contradictoires. **Un des écarts les plus considérables dans ce domaine se rapporte à l'importance de la perception du tourisme et les valeurs attribuées aux destinations touristiques chez les voyageurs**. Nouvellement, San-Martín, Jimenez, & Liebana-Cabanillas (2020) remarquent que la littérature existante concernant la valeur du tourisme néglige les achats électroniques et l'inconvenance perçue de voyager à certaines destinations du point de vue des voyageurs ; la plupart des études disponibles dans ce

domaine mettent l'accent sur la valeur (les effets positifs) du tourisme du point de vue des habitants locaux (Nunkoo & Gursoy, 2012 ; Hateftabar & Chapuis, 2020 ; Stylidis & Terzidou, 2014) plutôt que sur les voyageurs. Ils concluent que les perceptions des voyageurs à l'égard des valeurs touristiques et des répercussions positives du tourisme sur la destination ont également un effet sur leur intention d'acheter des voyages en ligne. Au meilleur de notre connaissance, San-Martín et al. (2020) ont réalisé la seule étude qui examine la relation entre l'intention des touristes d'acheter en ligne et les perceptions des effets du tourisme sur destination. Ils pensent qu'il y a un besoin pour les recherches futures sur cette relation. Par conséquent, en réponse aux ces appels, cette étude enquête sur l'effet de la perception du tourisme chez les touristes sur leur intention d'acheter en ligne.

Le présent travail a été mené pour faire un pas de plus vers une description détaillée sur les intentions des achats en ligne et une exploration les facteurs effectifs dans l'intention des consommateurs de réserver en ligne des voyages. Dans cette étude **les valeurs sociales, économiques, physiques, et technologiques des destinations touristiques** (en tant qu'un nouveau facteur extrinsèque) et **l'innovativité personnelle** (en tant que facteur intrinsèque des touristes) ont été intégrées pour former une théorie unifiée relative à la théorie de l'acceptante et l'utilisation de technologie (UTAUT) afin d'examiner minutieusement les intentions comportementales envers les achats en ligne.

Le modèle UTAUT comprend six composantes centrales : l'espérance d'efficacité, l'espérance d'efforts, l'influence sociale, les conditions facilitantes, l'intention comportementale pour utiliser un système et le comportement de consommation (Venkatesh et al., 2003). Cette étude complète UTAUT par incorporation du caractère innovateur personnel des touristes et leur

valeur perçue à quatre niveaux attribués au tourisme. Bien qu'il existe une étude antérieure qui a étudié cette relation (San-Martin et *al.*, 2020), la présente étude montre l'importance de la perception des valeurs du tourisme par les touristes dans la destination sur leurs intentions de faire des achats en ligne. Ce faisant, **la relation positive entre la perception du tourisme par les touristes et leur intention comportementale envers les achats en ligne est théoriquement et empiriquement renforcée**. Les données sont recueillies de 389 individus et le PLS-SEM a été mené pour confronter l'hypothèse. Les résultats de cette étude montrent que l'espérance d'efforts, l'influence sociale, la valeur économique perçue, caractère innovateur de l'individu, l'espérance d'efficacité, la valeur technologique perçue et la valeur physique perçue influent considérablement sur l'intentions des touristes pour faire des achats du tourisme en ligne. En conséquence, les éléments liés à ces facteurs devraient être considérés par les sites internet de réservation.

Comme déjà mentionné dans les parties précédentes, cette étude forme une des premières études à employer les perceptions des valeurs touristiques par les touristes pour comprendre l'adoption des achats du tourisme en ligne. Selon San-Martín et *al.* (2020), les valeurs économiques, physiques et technologiques que les consommateurs confient à certains aspects du tourisme ont un effet positif direct sur l'intention pour faire des réservations en ligne et un effet positif indirect sur les achats actuels en ligne. Ce résultat met l'accent sur l'importance des valeurs perçues du tourisme, qui sont à jouer un rôle clé dans la volonté des habitants pour soutenir le développement du tourisme (Andereck et al. 2005). Ce résultat est en ligne avec celui de San Martín et *al.* (2020), affirmant que les valeurs du tourisme perçues par les touristes ont un effet positif sur leur intention pour acheter les voyages en ligne.



Revenant au modèle de systèmes de Leiper, les chapitres 2 et 3 sont employés pour enquêter sur la fonction de TDR de l'Iran. Selon Leiper (1979, 1995), TDR fournit les facteurs d'attraction et favorise la demande de voyager vers une destination particulière. La première étude fournit une compréhension des impacts des attributs de la destination (TDR) sur une des composantes les plus importantes de la demande touristique qui est la durée du séjour. Plus précisément, il se concentre sur les éléments humains (des individus dans le rôle de touristes) et les conditions environnementales de TDR (le régime théocratique et la crise politique dans la destination) cependant le troisième chapitre aborde l'impact des éléments environnementaux (environnement économique) sur les perceptions des habitants sur le tourisme local. En particulier, l'hospitalité locale est considérée comme un des facteurs d'attraction les plus efficace pour attirer les visiteurs. Compte tenu de l'importance des perceptions des habitants du tourisme pour TDR à ce propos, la deuxième étude (troisième chapitre) étudie comment l'environnement économique de TDR influence les attitudes des habitants locaux envers le tourisme.

Comme il a été mentionné dans les parties précédentes, la région génératrice des touristes est un des éléments composant le modèle de Leiper. La troisième étude (chapitre 4) poursuit les deux modèles antérieurs par l'évaluation de la performance de l'Iran en tant qu'une région génératrice des touristes basés sur les idées de Leiper (1990) et Goeldner et Ritchie (2007), qui ont affirmé qu'afin d'obtenir une compréhension intégrale du système touristique d'une région particulière, il est important de comprendre en première lieu la façon dont cette région se positionne comme une région génératrice des touristes. Cette étude envisage l'Iran comme un pays générateur et les iraniens comme les touristes. Bref, elle interroge comment l'Iran, en tant qu'une région génératrice des touristes, fonctionne dans un système touristique. Elle montre

aussi qu'il existe une série de facteurs dans la région génératrice des touristes qui influent sur les comportements des touristes. Ainsi, notre résultat complète les études précédentes (par exemple Goeldner & Ritchie, 2007) selon lesquelles la technologie est un des plus puissants éléments environnementaux dans le contexte des produits touristiques et l'expérience de voyage. Au total, cette recherche doctorale fournit trois études distinctes s'insérant dans les sciences de gestion, en management du tourisme.

## **Summary**

Tourism is widely known as a dynamic, complex system of interrelated components that are constantly evolving and emerging. A comprehensive systems approach to tourism was suggested by Leiper. A closer look at Leiper's (1970) model reveals that geographical elements of tourism are made up of a tri-component (tourists generating region, transit route, tourism destination region) geographical sub-system within the environment of industry, in which tourists are considered the agents of the system. Destination experience is the fundamental product of tourism, and destination region, arguably, is the most critical component of the tourism system. The generating region is another critical spatial component in geographic systems, as it forms the main market for tourism products. From an epistemological viewpoint, studying systems requires a holistic approach and a systemic perspective. While methodological and technical advancements enable us to model complex adaptive systems using techniques such as network analysis, the toolbox that has been developed to investigate systems from a holistic standpoint is extremely limited and incredibly complicated. Due to methodological limitations, we have adapted traditional reductionism—as the most common approach in scientific inquiry—to study geographical aspects of the tourism system model.

To study these geographical aspects, the system must be broken down into its most basic components. As a result, the first and second studies investigate the effects of the environmental factors of tourist-destination region (TDR) on tourist behavior and local resident behavior, respectively. The third study evaluates the Iranian tourism system as a tourist-generator region (TGR). This study is dedicated to understanding the environmental factors (the technological aspect of Leiper's external environment) in Iran that shape Iranian tourists' behavior. The empirical

findings of each study provide valuable theoretical contributions to researchers and have practical implications for tourism managers.

**Keywords:** Tourism systems approach, Destination management, Tourists' length of stay, Residents' perceptions, Online purchase intention.