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Spatial Spillover Effects of Insecurity on Tourist Attraction among Iranian Provinces

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	Abstract One of the most influential factors in the tourism boom is the security of tourism destinations as well as the security of the adjacent regions of the destinations. Thus in this study, the impact of security on tourism attraction among the Iranian provinces is studied due to the regional spillover effect. Security index derived from the combination of several variables such as data on murder, suspicious deaths, quarrels, conflicts, sedition, bullying, extortion, hooliganism, and suicides divided by provinces and based on the Principal Component Analysis (PCA). Spatial diagnosis tests are done and positive spatial dependency confirmed among the regions and then the model estimated in the form of dynamic spatial panel data by spatial Durbin for the period 2011-2017. The results show that insecurity increase in a region not only reduces the number of tourists in that region (direct effects), but also significantly reduces the number of tourists in nearby regions (spatial spillover effects). While the spatial effects of insecurity index are greater than its direct effects, which means that insecurity increase in a province decreases the number of the tourists of adjacent regions more than the number of the tourists of that province. Also due to the results, beside insecurity the number of specialists, the number of cultural centers, and the information and communication technology index respectively have the most effect on tourist attraction.

Highlights

- Insecutirty has the greatest impact on tourism industry.
- In the inter-provincial study, the main part of the effect of insecurity on tourism is in the form of spatial spillover effect which is caused by the insecurity of the adjacent provinces.
- In many cases, a large part of the causes of tourist insecurity in a province, is beyond the causes of insecurity in the province and it is not within the responsibility of provincial officials.

1. Introduction

The development of the tourism industry requires various conditions one of the most important of which is gaining trust and providing security for tourists. Mansfeld states that if the security infrastructure in a tourist destination is not following acceptance criteria, the tourism industry will stagnate even if the tourist destination has plenty of accommodation, recreational facilities, and attractions (Mansfeld, 2000).

The importance of tourism destinations' security in tourist attraction has been studied in some studies including Dragičević et al. (2018), Baker (2014), Mekinc and Cvikl (2013), Shokoohi Manesh et al. (2017) and Anabestani et al. (2016). However, the effect of insecurity in the studies only includes insecurity in tourism destinations. While the tourists' insecurity feeling can be cuased by insecurity of the adjacent regions which share common roads with tourist destinations. However, some other researchers such as Ma et al. (2014) emphasize the effectiveness of tourist attraction among the factors affecting tourism in adjacent regions and some others such as Farahmand et al. (2017) reveal that crime and insecurity can have spatial consequences.

The consequences of insecurity in adjacent areas on tourism are significant when the subject of the study is domestic tourism of a region and people and factors causing insecurity can easily and freely commute between the cities of the mentioned region. In this case, the presence of insecurity in a region reduces the number of tourists in the adjacent regions. As regional planning of the country done by provinces, it raises the issue that whether the consequences of insecurity in a particular region of a province are limited to tourists of that province, or can the effects of insecurity in a particular region of a province significantly affect the number of tourists in adjacent provinces? In other words, this study tries to investigate the extent and spatial limits of the consequences of insecurity in a region on tourism in adjacent regions.

Considering the above and the importance of tourism industry development in the country, the purpose of this study is to explain and quantify the effects of security on tourist attraction with emphasis on the effects of spatial spillover among the provinces of Iran in the period 2011-2017.To conduct this study, the theoretical foundations and research background have been discussed in the second part and the methodology of the research has been discussed in the third part. In the fourth part, the results and analysis of the findings are presented and the fifth and final part of the article is dedicated to summarizing, concluding, and presenting suggestions.

2. Literature Review
2.1 Theoretical Framework

Various definitions of security have been made in literature, but in general, Security means being protected from harm by others (Hezarjaribi, 2011). The phenomenon of insecurity has objective and subjective aspects in literature. From an objective point of view, insecurity forms all manifestations of insecurity,

including robbery, violence, etc, and from a subjective point of view; it involves insecurity concerning the security of the region and space. (Khademi et al., 2015). feeling secure is more significant than its objective dimension because what affects human behavior and actions is the feeling of security or feeling safe (Yari & Hezarjaribi, 2013).

According to Mansfield (2000), tourism security is the tourist's perceived or actual immunity while traveling to a specific destination that is associated with actual or potential problems and endangers tourists or their assets. Some of the most important of these problems are crime and delinquency for tourism purposes, social and political unrest, terrorist activities, and war (Mansfeld, 2000).

In the meantime, some believe that what is known as tourism security is not just safeguarding tourists against thieves and criminals. Road casualties, plane crashes, bureaucracy in ceremonies, visas, and insurance, police behavior, activities of businesses, and limited business hours are related to tourism security (Rezadoust et al., 2013). Reducing road fatalities and other mentioned cases decrease insecurity in people's minds and persuades them to make a journey.

Regarding tourism security, some believe that high levels of security happen when the quality of food, health, accommodation, tourism activities, transportation infrastructure, and services are all considered in one tourism industry. Tourists prefer a safe and worry-free journey, and their caution lead to greater comfort, peace, trust, and security (Samadian et al., 2009).

Further investigation in tourism literature indicates that the sense of security in the tourism industry has a key role to play in the tourism industry than security itself. Some experts, including Khosravi (2010), state that "feeling secure" is affected by its surrounding issues, it hypothesizes that by decreasing security in a region, the feeling of insecurity in adjacent regions increases due to the exestance of common communication routes in different regions.

Taking Tabler's theory into account reinforces the above hypothesis. Everything is related to everything, but closer things have more to do with things farther away, Tabler said. According to this theory, no region is isolated and regions are exchanging products, agents, knowledge and information with each other. The cost of this exchange is directly related to distance, and the interaction among regions with closer spatial locations is significant. According to Tabler's theory, some researchers such as Ma et al. (2014) and Mamipour and Abdi (2017) by examining the spatial effects of tourism state that tourism development in a region is effective on tourism in adjacent regions. Furthermore, Farahmand et al. (2017) demonstrate that crime and insecurity has spatial effects, which means that the occurrence of crime in a region can lead to increased crime and insecurity in adjacent regions due to the relationship among adjacent regions, and therefore insecurity in a region can exacerbate insecurity in adjacent regions and dissuades tourists from traveling.

Considering the above, the tourist's decision is affected by two types of insecurity. The insecurity that arises from tourism destinations and the other the insecurity of adjacent regions of the tourist destination which boosts the feeling

of insecurity and deters them from traveling to a secure destination. In econometric texts, the second effect of insecurity is called spatial spillover effects. The spatial effects of insecurity reinforce the feeling of insecurity of tourists through which effects tourists' decision making process.

In many studies, security has been considered as the key constituent of the tourism boom and it has been emphasized that other factors affecting tourism without a proper level of security cannot influence the tourism boom. Therefore, if the spatial effects of insecurity are considerable, then the issue of security in the internal regions of a country and the development of the tourism industry is considered as the national issue of a country and its planing should be at transregional level. Thus, in determining the position of planning for tourism development, it is necessary to answer the question of how wide the spatial impacts of insecurity are? Does the security of the tourist destination itself play a leading role in the tourist's decision to select a tourist destination?

In this regard, Basiri et al. (2008) assume that if tourism is studied comprehensively, it will be concluded that national security must be taken into special account in the development of tourism. (Rezadost et al., 2013).

Considering the above, this study seeks to examine the influence of the security of tourist destinations on attracting tourists with an emphasis on spatial effects among the Iranian provinces.

2.2 Research Background

Studies on tourism security have considered various aspects of tourism insecurity. Some of these studies have been conducted in different countries and some in different regions of a country. In this section, various aspects of insecurity are identified and analyzed according to the studies.

One of the studies on insecurity in tourism is the study conducted by Xue Qing et al. (2009) entitled "Risk Concepts and Travel Destinations". Different types of risks considered by the participants of the Chinese Olympic Games have been investigated in this research. They introduced four types of risks including "personal safety", "cultural risk", "psychosocial risk" and "harshness and violence" through factor analysis approach.

Also, Mekinc & Cvikl (2013) devided tourism security into two general categories: A) natural-technological causes such as major industrial accidents, air accidents, and natural disasters such as earthquakes that depend on the geographical location of the states. B) Social political causes such as government policies towards tourism and terrorism.

Most studies on the safety of international tourists focus on socio-political causes and more on the issue of terrorism, including the study of Dragičević et al. (2018), Baker (2014), Tan et al. (2017), Steiner (2009), and Arana and Leon (2008). The results of Dragičević et al. (2018) studies indicate that terrorism in Croatia, Spain, and France does not affect tourist attractions, but in Turkey, it reduces the number of tourists. Tan et al.'s (2017) studies also showed that increased security in Malaysia strengthens tourists' motivation to travel to

Malaysia. They also found that security had a significant effect on improving tourists' satisfaction.

Meanwhile, some studies emphasize the issue of tourism security among Third World countries more than developed countries. In this regard, Hall (2008) in an article investigated the status of tourism among Third World countries and some of the most important tourism problems of these countries, including the lack of psychological and life security, and emphasized the necessity of Third World governments' attention to eliminate these problems by creating tourism police. Also, Hezarjaribi (2011) investigated the Feeling of Security in tourism development and showed that there is a positive relationship between the sense of security and the development of tourism. In other words, the higher tourists feeling of security, the more they tend to stay in Iran and even re-travel. Comparing the feeling of security from the perspective of foreign tourists traveling to Iran, he found that African tourists felt the most secure, and European tourists had the least feeling of security in Iran.

Ghasemi et al. (2014) with a field approach studied the effect of security on foreign tourists and based on this identified the main obstacles to the entry of foreign tourists to Iran. Their results indicate that during the last few decades, negative perceptions have been formed in the minds of the people of the world for the security of Iran, so tourists consider Iran's security as the security of war-torn countries such as Iraq and Afghanistan, and this has been the main cause of the decline of foreign tourists in Iran over the past few decades.They also concluded that at least 50 percent of foreign tourists had misconceptions about the people and the security situation of Iran before entering Iran. In this regard, Kianpour and Hajiesmaeeli (2014) showed that the feeling of insecurity in different areas has overshadowed the tourism boom in Iran and has caused a significant decline in foreign tourists, followed by foreign exchange income decrease.

Tourism security in Iran has been considered in various studies. In this regard, Shokoohi Manesh et al. (2017) showed that ecotourism security consists of 5 different components including economic security, cultural security, social security, political security, and environmental security.

A review of the studies conducted in Iran showed that most of the studies were about social security and the role of police in providing security for foreign tourism, including studies conducted by Rezaei and Pourbagerkordi (2018), Anabestani et al. (2016), Reza Doust et al. (2013) and Rabani et al. (2011). In these studies, it has been concluded that tourists' satisfaction increases with better police performance and this issue contributes to the development of tourism. Also, some studies such as Meshkini et al. (2017), Shahabadi and Turkan (2013), and Khoshfar et al. (2013) considered the sense of security in tourism emphasizing the role of police as well as the tourists' characteristics.

A review of the above studies indicates that the feeling of insecurity in tourism is of great importance for third-world countries especially Iran. Also, the study area in these researches has been more about the national security of countries and foreign tourists, and no study has been done on the security of

domestic tourists and the feeling of insecurity of tourists due to insecurity in adjacent areas. However, some studies emphasize the effects of spatial spillover of security and tourism, which need to be considered in studies related to tourism security. The effects of security spatial spillover in tourism become more important when the study population is tourism of the interior regions of a country and traffic between cities is easily and uncontrollably possible for insecurity factors. Accordingly, in this study, the security of domestic tourists and the effects of spatial insecurity were considered.

Considering the above explanations, in this study, in addition to the effects of insecurity, the effects of the feeling of insecurity on the attraction of national tourist, which was not considered in previous studies, investigated using the spatial effects approach.

3. Methodology

This section covers the method of investigating the spatial effects of security on tourism among the provinces of Iran. To do so, first, the spatial econometric approach is explained. Then the model is introduced.

3.1 Structure of Spatial Panel Models

The general specification for spatial panel data is equation (1)

$$Y_{it} = \tau Y_{1,t\text{-}1} + \rho w Y_{it} + X_{it}\beta + \theta D X_{it} + \alpha_i + \gamma_t + V_{it} \tag{1}$$
$$V_{it} = \lambda E V_{it} + U_{it} \quad , \quad U_{it} \approx N(0\sigma^2 I_{n)}$$

In which i and t are the cross-section and time, Y indicates an n×1 vector of the dependent variable and X represents a matrix n×k of explanatory variables and W shows the spatial weight matrix of the dependent variable in the dimensions of n×n. D is the spatial weight matrix of the explanatory variable (independent) and E is the spatial weight matrix of the residual. αi is fixed or random effect and γt is the effect of time.

The spatial auto-regression coefficient ρ indicates how much the dependent variable changes in one region affect the dependent variable in adjacent regions. Also, the spatial error coefficient λ shows the spatial dependence of the residual in a region to moderate changes in the residuals of adjacent regions, and finally, θ in the spatial Durbin model indicates the effectiveness of the dependent variable of a region from the weighted average of the explanatory variables of other regions.

Depending on whether the dependent variable, explanatory variables, or residuals are spatially dependent, different spatial models have presented inequations (2), (3), (4), and (5) (Elhorst, 2010).

Spatial Autoregressive Model
$$1)\ (\lambda = \theta = 0) \rightarrow Y_{it} = \tau Y_{i,t-1} + \rho W Y_{it} + X_{it}\beta + \alpha_i + \gamma_t + u_{it} \tag{2}$$

Spatial Durbin Model
$$2)\ (\lambda = 0) \rightarrow Y_{it} = \tau Y_{i,t-1} + \rho W Y_{it} + X_{it}\beta + \theta D X_{it} + \alpha_i + \gamma_t + u_{it} \tag{3}$$

Spatial Error Model

3) $(\rho = \theta = \tau = 0) \rightarrow Y_{it} = X_{it}\beta + \alpha_i + \gamma_t + v_{it}, v_{it} = \lambda E v_{it} + u_{it}$ (4)

    Spatial Autocorrelation Model

4) $(\theta = \tau = 0) \rightarrow Y_{it} = \tau Y_{i,t-1} + \rho W Y_{it} + X_{it}\beta + \alpha_i + \gamma_t + v_{it}, v_{it}, v_{it} = \lambda E v_{it} + u_{it}$ (5)

    In equations (2), (3), (4), (5), if $\tau = 0$, then the spatial autoregression models and the standard spatial Durbin will be static.

    In spatial econometric models, to model the spatial interactions, it is necessary to determine the quantity and numerical value of spatial aspects. Thus, the spatial weight matrix W contains information about the relative distance of n provinces in space. The elements Wij show the spatial relationship of province i with province j in terms of distance, which is defined as $1/d_{ij}$.

$$W = \begin{vmatrix} 0 & w_{12} & ..... & w_{1,n-1} & w_{1n} \\ w_{21} & 0 & ..... & w_{2,n-1} & w_{2n} \\ \vdots & & & & \\ w_{n-1,1} & w_{n-1,2} & .... & 0 & w_{n-1,n} \\ w_{n1} & w_{n2} & ... & w_{n,n-1} & 0 \end{vmatrix}$$

    The distance between the two places is determined in equation (6):

$$d_{ij} = \sqrt{\left(x_i - x_j\right)^2 + \left(y_{i-}y_j\right)^2} \qquad (6)$$

    Where xi and yi indicate the latitude and longitude of the regions, respectively. In this research, first, the distance-inverse matrix is constructed based on $\frac{1}{d_{ij}}$ relation in the dimensions of 31×31 and then it is normalized according to the rows. After normalizing the matrix, the sum of each row will be equal to one. Thus, the elements of the spatial weight matrix after normalization will be as equation (7):

$$w_{ij}^{**} = \frac{w_{ij}^*}{\sum_{j=1}^{N} w_{ij}^*}, N = 31 \qquad (7)$$

    From the multiplication of equation (7) in the explanatory variable, the spatial delay variable is achieved. In this study, Moran's test statistic used to detect spatial dependence and due to the theoretical expectations and regression significance one of the patterns (sar, sem, and sdm) selected.

3.2 Model and Data

    The main purpose of this study is to estimate the impact of security on tourist attraction with a spatial approach among the provinces of Iran. A review of studies in this regard such as Hu and Ritchie (1993), Vanhove (2005), Nasrolahi et al. (2015), Yusup et al. (2016), Jani and Nikpey (2020) shows that in addition to security, various variables affect tourist attraction that can be expressed in two groups. The first group is related to the supply side factors of the provinces, which include infrastructures such as medical facilities and health level, infrastructures of technology, information, communication, and security. The second group

includes the characteristics of the tourist area such as the number of cultural centers, natural attractions, and geographical distance. Therefore, the models studied in this study concerning the general dynamic spatial model are specified in equation (8):

$$\ln \text{TUR}_{it} = \rho \sum_{j=1}^{n} W_{ij} \ln \text{TUR}_{jt} + \gamma \ln \text{TUR}_{i;t-1} + \theta \sum_{j=1}^{n} W_{ij} \ln \text{SE}_{j;t} +$$
$$\beta_1 \ln \text{CR}_{i.t} + \beta_2 \ln H_{i,t} + \beta_3 \ln \text{ICT}_{it} + \beta_4 \ln \text{SE}_{i,t} + \delta_i + \mu_t + \varepsilon_{it} \, , \, \varepsilon_{it} = \lambda E \varepsilon_{it} + u_{it} \tag{8}$$

In which δi represents constant individual effects and μ_t shows constant time effects, Also, logarithm $\ln TUR_{jt}$ shows the number of incoming tourists in the current year as the dependent variable and Logarithms $lnH_{i,t}, \ln CR_{it}, \ln ICT_{it}$ and $\ln SE_{it}$ represent the number of specialist physicians, the number of cultural centers, information and communication technology index and security index respectively as independent variables. Security and information technology indexes are achieved by combining several variables based on the Principal Component Analysis. In this study, the information technology index is obtained by combining the indexes of the number of active telephones and the number of third-generation (3G) Internet subscribers, the number of fixed high-speed internet lines by provinces of Iran based on the principal components approach. Also, the security index obtaines from the data from suspicious deaths, murder, quarrels, conflicts, sedition, bullying, blackmail, hooliganism, and suicides divided by provinces.

Due to the principal components approach, the components (above indices) are explained through the combination of variables according to their autocorrelation as equation (9).

$$SE_{it} = b_1 * e + b_2 * t + b_3 * h + b_4 * c + b_5 * p + b_6 * u + b_7 * r$$
$$ICT_{it} = a_1 * f + a_2 * d + a_3 * z \tag{9}$$

In the first equation relation (9), u, p, c, h, t, e includes the number of murders, suspicious deaths, fights and conflicts, evil, extortion, knife and machete killings, and suicides. In the first equation, the b's are determined in such a way that the variance of the security index (SE) is maximized under the condition that $\sum b_i^2 = 1$. Similarly, in the second equation, z, d, f represent the number of working telephones, the number of third-generation Internet subscribers, the number of fixed high-speed Internet lines, and the a's are determined in such a way that the variance of ICT maximizes under the condition of $\sum a_i^2 = 1$.

4. Results

Before estimating spatial models, the Moran test was used to emphasize the necessity of using spatial models in this study. The results of this test are briefly stated in Table (1).

Table 1. Moran's test results

Test	Z	Prob (z)
Moran's test	0/002	0/057

Source*: Finding Research*

The null hypothesis of the Moran test indicates the absence of spatial autocorrelation among residuals. In this test, the null hypotheses have been rejected at the probability level of 1% and therefore spatial autocorrelation exists among residuals. Table 2 shows the results of the estimation of the empirical research model by three models of SDM, SAR, and SEM for research variables. Considering the results presented in Table 2 for the ρ and λ parameters in models (1), (2), (3), as well as Moran's test results in Table 1, which emphasized spatial dependence in the model, the spatial Durbin Model is approved. The coefficient of spatial autoregressive (ρ) is positive in the Durbin Model and statistically significant at the level of 1% and is equal to 0.69, which shows that if tourist attraction in a particular province increases by 1%, the average number of tourists entering the adjacent provinces increases by 0.69%.

A comparison of estimated coefficients (elasticity) in a table (2) for independent variables shows that the direct role of insecurity (-0.02) in comparison with other variables in the number of tourist attractions is low, but the significant point about security is the spatial spillover effects of this variable on tourist attraction in adjacent regions (- 0.17) which has caused the effect of security on tourist attraction more than other variables. In other words, one percent increase of insecurity of a province, the number of tourists in that province decreases by 0.02 %, while the number of tourists in adjacent regions decreases by 0.17 %. Accordingly, the highest elasticity of the number of tourists compared to other variables are respectively security, medical facilities, cultural variables, and information technology index.

According to the results of table (2), the logarithm coefficient variable of the number of specialist physicians (tourist's elasticity compared to the number of specialist physicians) and the cultural centers (tourist's elasticity compared to the number of cultural centers) is positive and significant at the level of 1%, which shows that with increasing the number of specialist physicians (medical facilities[1]) and cultural centers, the number of tourists in the provinces increase.

The logarithm coefficient of the information and communication technology index is 0.07 which is significant at the level of 1 percent, and shows that in provinces with higher information and communication technology index (related infrastructures), information and access to information of tourist destinations is available for tourists and this leads to an increase in the number of tourists entering the target province. This result is compatible with Feshari 's (2016) study which indicates that through technological infrastructure reinforcement in Iran the

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[1] The effect of increasing medical facilities on tourist attraction in Iran has been studied in detail in the study of Najafi Nasab et al. (2018).

number of tourists in Iran increases.

Table 2. Resuls of model estimation

Model	SEM		SDM		SAR	
Variable	Z (prob z)	Cof.	Z (prob z)	Cof.	Z (prob z)	Cof.
Lntur	-	-	(0/007)2/71	0/169	(0/005)2/82	0/173
Lncr	(0/016)2/40	0/100	(0/014)2/46	0/084	(0/031)2/16	0/076
Lnh	(0/001)3/38	0/201	(0/002)3/10	0/159	(0/011)2/53	0/132
lnict	(0/057)1/90	0/045	(0/017)2/39	0/070	(0/014)2/46	0/068
lnse	(0/385)0/87	0/016	(0/073) -1/70	-0/019	(0/348)-0/94	-0/014
W. lnse	-	-	(0/003)-2/96	-0/178	-	-
ρ	-	-	(0/059)1/89	0/691	(0/177)1/35	0/245
λ	(0/005)2/83	0/461	-	-	-	-

Source*: Finding Research*

In the spatial investigation of the effects of variables, each explanatory variable has a direct effect, an indirect effect (spillover), and a total effect on the dependent variable, i.e. the number of tourists entering the provinces. The direct effect of each variable on the number of tourists indicates that if that variable changes in province i (the target province) how much will it change the province's tourism. The indirect effect of each variable on the number of tourists indicates that if that variable changes in province i (target province), how much the adjacent provinces' tourist attraction will change, which shows the spatial spillover of that variable on other provinces. The total effect of each variable on the number of tourists indicates that if that variable changes in province i (target province) how much does it effect the tourist attraction of all the provinces (including province i) Direct, indirect (spillover), short-term and long-term effects of explanatory variables on the dependent variable are presented in table (3).

Table 3 shows the elasticity of the number of attracted tourists compared to independent variables directly, indirectly (spillover), short-term, and long-term. According to table (3), the indirect effects of independent variables except information technology index are more than their direct effect on the number of attracted tourists. It is important to note that the difference between the direct and indirect effects of the security index is significantly more than the difference between the two mentioned effects for other independent variables and therefore, the effects of security spatial spillover on tourist attraction (W. lnse variable coefficient) are significant in the estimation results of table (2).

The greater role of the technology index's direct effects than its indirect effects means that the promotion of technological indicators attracts more tourists

to the tourist destination comparing to the adjacent regions, which shows that informing, advertising, and doing tourism affairs using technology tools, strengthens the competitiveness of the tourist destination and promotes the attractiveness of the tourist destination compared to the adjacent regions.

Teble 3. Direct effect and indirect effect (Spillover)
divided long-ran and short-ran

Varaiable	Effect	Cof.	Z	Prob z
lncr	Direct Short-Run	0/08	2/46	0/014
	Indirect Short-Run	0/131	1/36	0/172
	Short-Run Total	0/211	2/20	0/028
	Direct Long-Run	0/095	2/40	0/017
	Indirect Long-Run	0/120	1/20	0/232
	Long-Run Total	0/216	2/20	0/028
lnh	Direct Short-Run	0/147	2/83	0/005
	Indirect Short-Run	0/279	1/62	0/105
	Short-Run Total	0/147	2/96	0/003
	Direct Long-Run	0/175	2/75	0/006
	Indirect Long-Run	0/261	1/44	0/149
	Long-Run Total	0/43	2/51	0/012
lnict	Direct Short-Run	0/069	2/25	0/025
	Indirect Short-Run	0/066	1/29	0/195
	Short-Run Total	0/135	3/15	0/002
	Direct Long-Run	0/083	2/20	0/028
	Indirect Long-Run	0/055	0/98	0/326
	Long-Run Total	0/138	3/14	0/002
lnse	Direct Short-Run	-0/015	-1/75	0/083
	Indirect Short-Run	-0/100	-3/27	0/001
	Short-Run Total	-0/116	-4/25	0/000
	Direct Long-Run	-0/017	-1/80	0/065
	Indirect Long-Run	-0/101	-3/02	0/003
	Long-Run Total	-0/118	-4/24	0/000

Source: Finding Research

5. Discussion

Commuting among the regions of the country without controlling the causative factors of insecurity detter domestic tourists' travel to destinations that are adjacent to unsafe regions and this issue reduces the success of the mentioned tourist destination managers in tourism development. Referring to the regional planning of a country which is done separately by the provinces raises the question that to what extent does the spatial scope of the insecurity effects the adjacent regions' tourism? Therefore, the effect of security on tourist attraction in Iran provinces was investigated under the influence of regional spatial spillover effects

during 2011-2017 in this study. The results of this study showed that insecurity in a province, in addition to reducing the number of tourists in that province, also has a negative and significant effect on the number of tourists in adjacent provinces. According to the results of this study, the factors affecting the number of tourists in the provinces are security, medical facilities, cultural variables, and information technology index, respectively. These results are compatible with the findings of Pourbagerkordi and Rezaei (2018), Anabestani et al. (2016) and Meshkini et al. (2017), and other studies.

The results also showed that the indirect effects of independent variables are more than their direct effects on tourist attraction except for the information technology index. Of course, the difference between the direct and indirect effects of the security index is significantly more than the difference between the two mentioned effects for other independent variables, indicating the necessity of considering spatial effects in the tourism security field.

6. Concluding Remarks

According to the results, security has the greatest impact on the tourism industry that the main part is in the form of indirect and spatial spillover effects. Regarding the location of this study which was at the provincial level, the results show that the feeling of tourist insecurity in a province is beyond the causes of insecurity in the province. Considering that regional planning of the country is done separately by the provinces, the findings in this study suggest that the key component of security is not under the control of the officials of tourism destinations that are located in insecure adjacent regions. Accordingly, despite the fact that provinces' plans and actions in tourist attraction help tourism industry development, due to the impossibility of controlling the security of adjacent regions by managers of tourist destinations, the development of the tourism industry for regions adjacent to insecure regions requires appropriate actions at the national level. The above results point to the uncontrollable insecurity costs of provinces that have good potential to attract tourists, but because of being adjacent to insecure regions, their number of tourists is low.

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