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Assessment of Geotourism and Industrial Tourism Development: A Case Study of Pars Special Economic Energy Zone, Iran

Abstract: This study was conducted to investigate attractions of geotourism and industrial tourism in the Pars Special Economic Energy Zone, Bushehr province, Iran. Also, tourism priorities were identified as well as providing appropriate strategies for tourism development. Then, tourism capacity was studied in the Pars Special Economic Energy Zone (PSEEZ) using the SWOT method. Data were collected using questionnaire surveys and unstructured interviews, field surveys, and documentary information, and then strengths, weaknesses, threats, and effective opportunities were analyzed by SWOT. Finally, appropriate strategies were provided for tourism development. Results showed that defensive strategy is the most suitable strategy in tourism development of the PSEEZ. Aims of this strategy are 1) improvement of tourism management; 2) development of transportation and infrastructures; 3) financial support; 4) modification of restricting laws for visiting industrial sites; 5) prevention of degradation and pollution of natural and cultural heritage, and 6) development of tourism information system.

Keywords: Tourism development, Geotourism, Industrial tourism, SWOT, Pars Special Economic Energy Zone

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Introduction

Tourism is among the main agents of sustainable development across the economic, social, cultural, and environmental dimensions. The tourism industry is one of the most successful industries globally in terms of developing cultural relations, high foreign exchange earnings, creating new job opportunities (Sariisik, et al., 2011), and displaying stability and security of a country for the world. Geotourism and industrial tourism are two types of attractive forms of tourism. Geotourism is an important subject of ecotourism. This type of tourism preserves and / or improves geographical features, culture, beauty, and heritage of visiting a place and provides welfare for citizens (Tourtellot, 2002). In another definition, geotourism is defined as one of the nature-related tourism fields introducing geological phenomena to tourists by preserving their spatial identity. Geotourism helps various geological sciences and invites nature and geological phenomena enthusiasts to visit the earth's beautiful attractions. The study about geotourism has been started very quickly since the 2000s in the world (Ruban, 2015). There are some studies, which have addressed theoretical aspects of geomorphosites (Panizza and Piacente, 1993; Panizza, 2001; Reynard,

2005; Comanescu, et al., 2011), and assessment methods (Pralong, 2005; Serrano and González Trueba, 2005; Pereira, et al., 2007; Reynard et al., 2007; Fassoulas, et al, 2011). Generally, geomorphologic issues and tourism have been widely addressed in interdisciplinary studies worldwide (e.g., Pralong, 2006; Dowling, 2010; Dowling and Newsome, 2010; Newsome and Dowling, 2010; Gordon, 2012a; Hose and Vasiljevic, 2012; Gray, 2013; Martinez-Grana, et al., 2013; Farsani, et al., 2014; Lazzari and Aloia, 2014; Ólafsdóttir and Tverijonaite, 2018; Ólafsdóttir, 2019). Most of the research has focused on identifying, describing, and assessing geoheritage of the areas and their geotourism potential. Other common research topics regarding geotourism include the management of geotourism and geoheritage, new geosite/geomorphosite assessment models, together with other methodological approaches. Thus, there is a need for empirical research focusing on geotourism, knowledge on effective management of main challenges of geotourism, and stakeholders and their complex interrelations (Ólafsdóttir and Tverijonaite, 2018).

Also, industrial tourism is an approach developed for many years from industrialized countries of the world. An important area of tourism attractions is industrial sites. In addition to providing a tourism experience in its various dimensions, they offer visitors the opportunity to generate income, create jobs, preserve the native culture of the region, and raise awareness of the community. Industrial tourism is defined as an operational industrial site that is visited by tourists. The main activities of an industrial site are not tourism-oriented (Frew, 2008). Industrial sites are open to the public with or without reservations with access provided to the facilities for tourists. The main business activities include both the production of goods or services for current visitors (tourism consumption) and the production of goods and services solely for visitors (industrial tourism) (Frew and Shaw 1999). The main applicants for industrial tourism are industrialists, and students who are willing to visit the process of producing a product or become familiar with the function of industrial machines.

Industrial tourism includes achieving experience in mining, refineries, and petrochemical industries, visiting oilfields, steelmaking, automobile factories, power plants, dams, and food factories. Industrial tourism has been considered in various countries since the 1980s. Research on industrial tourism is an interesting topic (Otgaar, 2012), and there are several papers in this field (Frew, 2000; Frew, 2008; Różycki, 2010; Otgaar, 2012; Boros, et al., 2013; Lee, 2015). The most important shortcoming of the research mentioned above is that few practical works on industrial tourism's potential.

Iran is a country in the Middle East with high potential (such as archaeological, cultural, natural, and geological attractions) in the tourism industry. Iran is also an energy and petroleum industry superpower in the Middle East (Ghabezi, 2012). Iran possesses some of the world's largest deposits of proved oil and natural gas reserves, ranking as the world's fourth-largest and second-largest reserve holder of oil and natural gas, respectively. It ranks among the world's top 10 oil producers and the top 5 natural gas producers (U.S. Energy Information Administration, 2019). In this regard, Iran can have industrial tourism potential because it has important oil and gas refineries. According to Gelbert (1994), oil and gas refineries are mining and refining industry for tourism potential.

There are many studies carried out in the field of natural tourism attractions in Iran (e.g., Ghasemi Yalgouz-Agaj, et al., 2010; Ghorbani, et al., 2015; Menbari, 2016; Pourkhosravani and Rahimi, 2016; Reihanian, et al., 2012; Seyedi and Dalfardi, 2015; Yazdi, et al., 2013; Yazdi, et al., 2015; Habibi and Ruban, 2017; Hosseinzadeh, et al., 2018), but there are only a few international paper about industrial tourism in Iran (e.g., Molchanova and Ruban, 2019; Habibi and Ruban, 2017). Further, these papers have only briefly referred to industrial tourism and have not done any practical work in this regard. Among many tourist destinations in Iran, the Pars Special Economic Energy Zone (PSEEZ) is characterized by its unique terrestrial and coastal nature and presence of petrochemical, oil, and gas

companies capable of becoming one of the most important tourism hubs in Iran. Hence, hydrocarbon-related industrial tourism and geotourism activities can be coupled for mutual benefit (Molchanova and Ruban, 2019). The Pars Special Economic Energy Zone has different types of tourism potential such as ecotourism, adventure tourism, marine tourism, cultural tourism, coastal tourism but geotourism and industrial tourism are the main forms of tourism in this area. For this reason, the present study was conducted to investigate attractions of geotourism along with the high potential of industrial tourism and identifying capabilities and weaknesses of tourism development in the Pars Special Economic Energy Zone using a strategic approach. Strategic planning and management are processes through which internal (strengths and weaknesses) and external environment (their opportunities and threats) are analyzed and recognized. Many studies have been conducted on the development of tourism using the strengths, weaknesses, opportunities, and threats (SWOT) technique (e.g., Reihanian, et al., 2012; Ghanbari et al., 2014; Ghorbani, et al., 2015; Marlina and Natalia 2016; Antic and Tomic, 2017; Carrión Mero et al., 2018). This research was conducted for different tourism features such as ecotourism, geotourism, mining tourism, and their aims were determining tourism potential and identifying different strategies for tourism development.

Thus, for the first time, the current study is carried out to investigate the linkage between geotourism and industrial tourism in the PSEEZ, which is considered a novelty of the research. Also, it is practical research on the management and development of tourism. This assessment involves strengths, opportunities, weaknesses, and threats of PSEEZ to obtain the best strategies for its development.

Methodology

The study area is located in Bushehr province, Iran, starting from the Zagros Mountains in the north and extending to the Persian Gulf in the south. Kagan City is located in the north, and Asalouyeh City is located in the south part of the study area (Figure 1). This region is considered the capital of energy and gas of Iran. Also, it is one of the most important economic hubs of world energy production. This zone is located on the Persian Gulf coast, 300 Km to the east of the Port of Boushehr, and 570 Km to the west of the Port of Bandar Abbas. It is approximately 100 Km away from the South Pars Gas Field (Qatar's North Dome). This region is called the Pars Special Economic Energy Zone (PSEEZ) and is a special economic zone in the south of Iran. Pars Special Economic Energy Zone (PSEEZ) was established in 1998 to utilize oil and gas resources of the South Pars Gas Field and encourage commercial activities in oil, gas, and petrochemical industries (<http://www.pseez.ir/>). This region is one of the largest gas sources in the world. The PSEEZ includes Pars 1 (South Pars), Pars 2 (Kangan), and Pars 3 phases. Therefore, it has the potential to become the most famous area in the field of industrial tourism. Also, PSEEZ has geotourism potential, according to which it can be a destination for tourists (Figure 2). This area has the best geotourism landscapes such as Nayband National Park, Siraf port (Taheri port), sandy hills, sandy beaches and cliffs, springs, Mangrove forests, estuaries, Nayband Bay, mudflats, etc. The study area is divided into two parts: plains and mountains. More than half of the area has a slope between 0 - 15 degrees, and in some parts, it is equal to 30 degrees. The southern part of the PSEEZ has an arid climate, and the northern part is dominated by a dry climate.

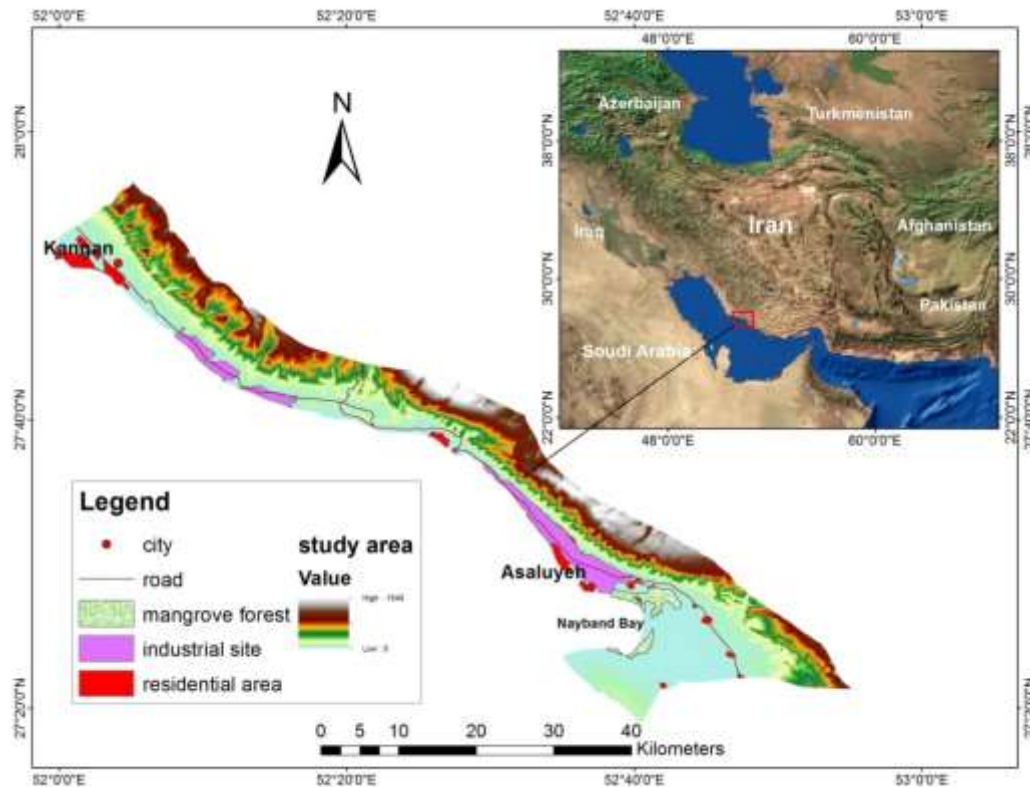


Figure 1. Location of the study area



Nayband Bay: It is a small coastal bay. It has few estuaries, Mangrove forests, sandy beaches, plant, and animal species.



Nayband headland: It has been mainly created by erosion of sea waves on sandstone coasts.



Mangrove forest and Basatin Estuary: Basatin Estuary has been created at entry of the Gavbandi River and is influenced by sea tide. It has Mangrove forests and wetlands.



Kangan mud flat: Mud flats appear during the tide and declining the water. Ripple marks are main features of this geomorphosite.



Dorzu Waterfall: It has been originated from marly limestone rocks and it has been created by geological structure. Presence of unique plant species around the spring and waterfall has doubled beauty of this pristine nature.



Source: <http://www.pseez.ir/>

Mangrove forest and Asaluyeh Estuary: It has been created behind sand bar and it has a main channel extending westward. It has tidal beaches, sandy beaches, and Mangrove forest.



Source: <http://www.pseez.ir/>

The Pars Special Economic Energy Zone (PSEEZ): is a special economic zone in south of Iran. It was established to utilize oil and gas resources of the South Pars Gas Field and encouraging commercial activities in the field of oil, gas, and petrochemical industries, and this region is one of the largest gas sources in the world.

Figure 2. Tourist attraction sites in the PSEEZ

The present research is descriptive-analytic in terms of methodology and is based on field surveys and documents. Therefore, the collected information was analyzed to present appropriate tourism development strategies in the PSEEZ (Figure 3) using the SWOT model. SWOT model is one of the strategic planning and management tools. SWOT identifies the strengths and weaknesses of a system and opportunities and threats of outsourcing the system. This model is an appropriate tool for developing tourism and tourism development strategies by recognizing internal (strengths and weaknesses) and external factors (opportunities and threats) and the confrontation between them.

The SWOT analysis is often used in natural resource management and business (Schmoldt, et al., 2001) and assessing sustainable tourism (NOAA, 2011). Internal factors include the strengths and weaknesses, while external factors include opportunities and threats (Harfst, et al., 2010). SWOT is divided into SW to analyze internal conditions and OT to analyze external conditions (Zhang, 2012). Examining internal and external factors is an important part of a strategic planning process, a component of sustainable development (Reihanian, et al., 2012).

This study's populations included experts, visitors, and staff, and local residents of the PSEEZ. They were purposely selected by a snowball sampling method. After a literature review, a questionnaire was used to collect data from the experts, residents, visitors, and staff. All of the data were collected using field observations, and interviews with visitors, experts, and local people through unstructured questionnaires and then SWOT analysis was carried out to identify the strategies. A field survey was carried out in November 2017, and the visitors, experts, and local people of the PSEEZ were interviewed at the end of the autumn season. Based on collected information, the structure of the questionnaire was prepared, and internal factors were classified as strengths (S) and weaknesses (W), and external factors were classified as opportunities (O) and threats (T). Then, the validity of the questionnaire

was confirmed by the experts. Afterward, Internal Factor Evaluation Matrix (IFEM) and External Factor Evaluation Matrix (EFEM) were prepared. The Likert scale was used in the questionnaires. This scale includes questions related to attitudes. The responder should indicate the extent of agreement or disagreement about each of the questions. Responses are in the form of numerical scores. Therefore, these factors were weighed by experts such as the staff of the gas companies, visitors, and local people. The weight is between 0 - 1, so that 0 represents "not important" and 1 represents "most important" (Ghorbani, et al., 2015) and scores ranged between 1 - 4, so that 1 indicates great weakness, 2 indicates minor weakness, 3 indicates the strength, and 4 indicates great strength. First, 25 questionnaires were filled out by all the experts, local residents, and visitors in the study area, and then, Cronbach's alpha coefficient was used for the reliability of the questionnaires. The Cronbach's alpha value of 0.70 and above indicates that the items are reliable and considered good. Cronbach's alpha coefficient was calculated at 0.94, which showed that the questionnaire has a high internal consistency. Then all of the questionnaires were filled by 40 visitors, experts, and local people. After collecting the questionnaires, data were analyzed using Excel software. The final score calculated by the weights was multiplied by the scores. Finally, the total final score for IFEM and EFEM was calculated by summing each factor's total score. If this value is less than 2.5 (average of 1 + 4), it means that strengths/opportunities are less than weaknesses/ threats, and if it is more than 2.5, then strengths are more than weaknesses (Monavari, et al., 2007; Reihanian, et al., 2012; Ghorbani, et al., 2015).

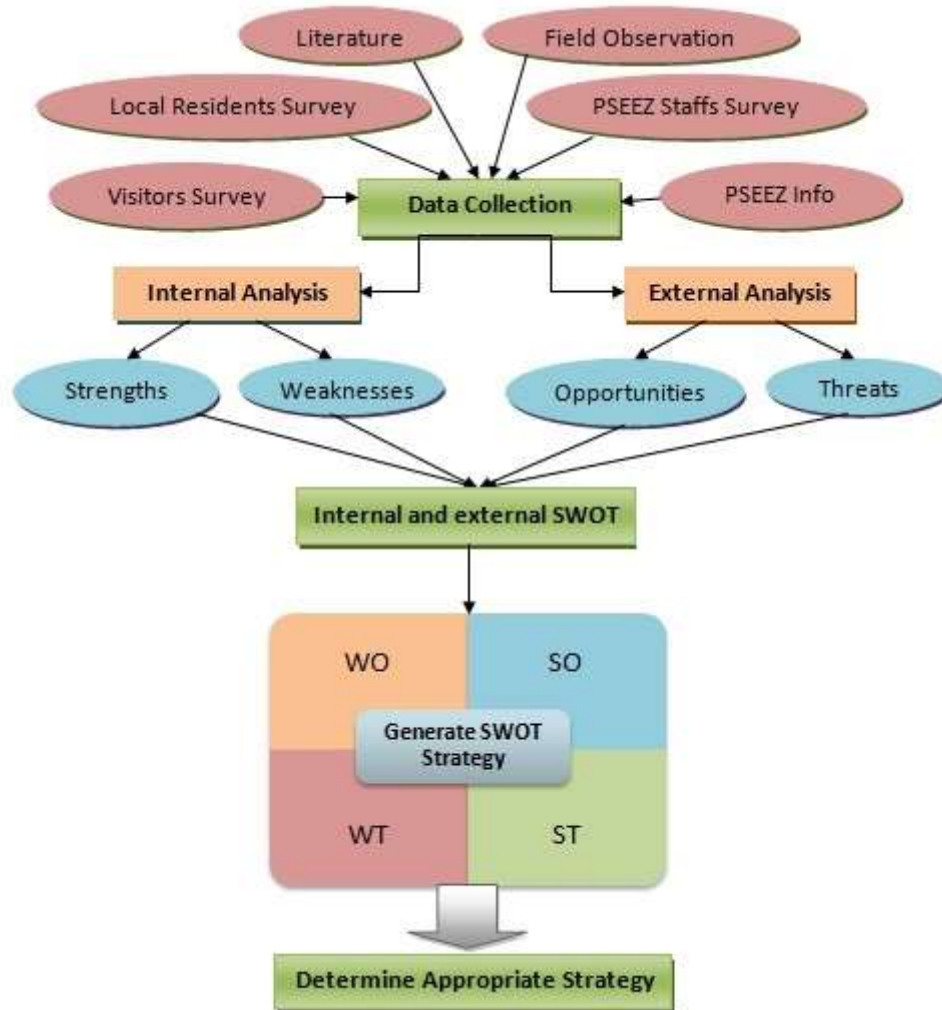


Figure 3. Outline of the research methodology

Results and Discussion

After data collection, SWOT analysis was performed to assess the possibility of sustainable tourism in the PSEEZ through analyzing the results and determining priorities.

Matrix Related to the Strengths and Weaknesses of Tourism Attractions in the PSEEZ

To evaluate IFEM, 11 strengths, and 12 weaknesses (Table 1) were selected. The weights of strengths were between 0.06 - 0.1, and effectiveness scores were between 2, 3, and 4, whereas the weights of weaknesses were between 0.06 0.09 and effectiveness scores were between 2, 3, and 4. Results showed that, the most important strength factor having the

highest weight is "natural attractions, especially geotourism potential of the PSEEZ (beautiful Mangrove forests, estuaries, cliffs and sandy beaches, sunrise and sunset landscape, diversity of plant and vegetation,...)" and the next important factor is "strategic location of the PSEEZ due to direct access through Strait of Hormuz to free waters and Central Asian countries". In addition, less important factors having the lowest weight were "benefiting from appropriate infrastructure for transporting and moving passengers in and between the cities" and "presence of native and familiar people to the attractions for entrepreneurship and employment in the field of tourism", respectively. Also, in case of weaknesses, the most important factor was "extensive pollution of the air due to activity of oil and gas industrial sites" and "inadequate infrastructure and facilities to provide accommodation services for tourists". Also, the lowest weights for weakness factors were related to "distribution and long distances of tourist attractions from each other in the region" and "increasing immigration of native people due to air pollution and overcrowding of non-native workers", respectively. Finally, the total value of internal factors (6.189) was more than 2.5, meaning that the strengths were more than the weaknesses (Table 1).

Table 1. Matrix of internal factors

Strengths	Weight	Effectiveness score	Final score
1. Strategic location of the PSEEZ due to direct access through Strait of Hormuz to free waters and Central Asian countries	0.104	4	0.415
2. Natural attractions, especially geotourism potential of the PSEEZ (beautiful cliffs and sandy beaches, Mangrove forests, diversity of plant and vegetation, sunrise and sunset landscapes, etc.)	0.114	4	0.455
3. Benefiting from industrial tourism attractions (oil, gas, and petrochemical industries)	0.096	3	0.288
4. Benefiting from recreational activities and sports (including sea trips by boat, recreational fishing, water sports such as swimming, sailing, water skiing, diving, sunshine, beach volleyball, motorboating, hiking on the beach, etc.)	0.101	4	0.402
5. Historical and physical tourist attractions (ancient monuments before and after Islam, native architecture...)	0.080	2	0.160

6. Socio-cultural attractions (ethnic diversity, the hospitality of local people, local cuisine, handicrafts, local festivals, etc.)	0.078	2	0.155
7. Access to major shopping malls and local markets	0.100	4	0.399
8. Benefiting from appropriate infrastructure for transporting and moving passengers in and between the cities	0.068	2	0.135
9. Presence of native people who are familiar with entrepreneurship and employment in the field of tourism	0.073	2	0.146
10. Proper social security of the PSEEEZ for the presence of tourists	0.086	3	0.258
11. Possibility of traveling to neighboring countries of the Persian Gulf	0.102	4	0.409
Weaknesses			
1. Lack of information and advertising agencies about the tourism capabilities of the PSEEEZ	0.084	3	0.252
2. Weakness of the organizations in preserving natural and historical attractions of the PSEEEZ	0.086	3	0.259
3. Weakness in investment of private sector in the field of tourism in the PSEEEZ	0.089	3	0.267
4. Inadequate infrastructure and facilities to provide accommodation services for tourists	0.090	4	0.360
5. Lack of roads and transportation services for access to natural and geotourism attractions in the PSEEEZ	0.077	2	0.153
6. Lack of specialized and trained personnel in the field of natural attractions in the PSEEEZ	0.085	3	0.254
7. Distribution and long distances of tourist attractions from each other in the PSEEEZ	0.068	2	0.137
8. Unfavorable climate of this region due to warmth and sultry climate in most of the seasons	0.081	3	0.244
9. Extensive pollution of air due to activity of the oil and gas industrial sites	0.096	4	0.383
10. Increasing immigration of native people due to air pollution and overcrowding of non-native workers	0.072	2	0.144
11. Destruction of the traditional and natural landscapes due to development of the South Pars industry	0.085	3	0.256
12. Limitations on public visiting in the PSEEEZ	0.086	3	0.259
Total	1		6.189

Matrix Related to Opportunities and Threats of Tourism Attractions in the PSEEEZ

To evaluate EFEM, 11 opportunities, and 12 threats (Table 2) were selected. The weights of opportunities were between 0.07 - 0.1, and effectiveness scores were between 2, 3,

and 4, whereas the weights of threats were between 0.06 - 0.09, and effectiveness scores were between 2, 3, and 4. Results showed that the most important opportunity factor with the highest weight is "prominence of the PSEEZ as an economic and industrial hub in Iran." The next important factor is the "connection between aviation networks with Asaluyeh airport in Iran". Also, the least important opportunity factor with the lowest weight was the "high potential of the attractions of the South Pars zone for visiting in Iran," followed by the "focus of policy and planning on economic diversification and tourism development in Iran." In the case of threats, the most important factors were "lack of expert personnel in organizations to encourage and provide necessary guidelines for investors in the tourism sector" and "lack of financial support for small business entrepreneurs in the field of tourism". Also, the lowest weights for threat factors belonged to "increasing destruction of traditional and local culture due to presence of tourists in the PSEEZ" and "reducing social security and increasing criminal offenses due to presence of tourists in the PSEEZ," respectively. Finally, the total value of external factors (6.367) was more than 2.5, meaning that opportunities were more than threats (Table 2).

Table 2. Matrix of external factors

Opportunities	Weight	Effectiveness score	Final score
1. Prominence of the PSEEZ as an economic and industrial hub in Iran	0.103	4	0.412
2. Focus of policy and planning on economic diversification and tourism development in Iran	0.085	2	0.170
3. Approval of supportive laws and regulations for tourism industry and existence of special credit for tourism development	0.088	3	0.264
4. Increasing private sector investment in the field of tourism	0.089	3	0.268
5. High potential of the attractions of the South Pars zone for visiting	0.077	2	0.154
6. Possibility to connect with foreign countries, especially the countries in Persian Gulf to attract foreign tourists	0.089	3	0.268
7. Benefit from varied transportation (aviation, marine and terrestrial) in Iran	0.090	3	0.270
8. Connection between aviation network with Asaluyeh airport in Iran	0.098	4	0.390
9. Promotion of tourism industry at	0.093	3	0.278

national and international levels for leisure time			
10. Increasing attention of policy makers and planners to convert the PSEEZ into an industrial tourism hub in Iran	0.093	3	0.278
11. Presence of a large number of native and foreign human resources in the PSEEZ	0.096	4	0.382

Threats			
1. Increasing environmental pollution caused by external tourists	0.083	3	0.250
2. Destruction of natural attractions due to ignorance of the tourists regarding sustainable tourism standards	0.088	3	0.265
3. Population density in the PSEEZ due to poor tourism management	0.077	3	0.231
4. Lack of traveling tours to the PSEEZ in the country	0.086	3	0.257
5. Unfamiliarity of foreign and native tourists with geotourism and industrial tourism potential of the PSEEZ	0.088	3	0.265
6. Reducing social security and increasing criminal offenses due to presence of tourists in the PSEEZ	0.069	2	0.138
7. Increasing destruction of traditional and local culture due to presence of tourists in the PSEEZ	0.068	2	0.137
8. Existence and increasing tourism facilities and services in other internal and foreign rival coastal regions and motivation of tourists for traveling to those regions	0.090	4	0.361
9. Lack of expert personnel in organizations to encourage and provide necessary guidelines for investors in the tourism sector	0.096	4	0.383
10. Lack of financial support for small business entrepreneurs in the field of tourism	0.093	4	0.371
11. Lack of motivation and tendency of the oil and gas ministry to income-generating activities in the field of industrial tourism	0.091	4	0.366
12. Weakening of native and traditional culture due to presence of oil and gas industry employees	0.070	3	0.209
Total	1		6.367

SWOT Strategies for Tourism Development in the PSEEZ

After evaluating the most important internal and external factors and identification of relations between internal and external factors, four types of strategies were developed through SWOT analysis, which can be used for sustainable tourism development in the

PSEEZ. Strong relations between strengths and opportunities (SO) can show the good condition of the PSEEZ and allow using aggressive strategies. Also, strong relations between weaknesses and threats (WT) can indicate a potential warning and offer using defensive strategies. Strong relations between strengths and threats (ST) can offer using diverse strategies, and strong interactions between weaknesses and opportunities (WO) could be analyzed as a potential for using review or overview strategies (Ghorbani, et al., 2015).

Results regarding four strategies are explained in the following:

SO Strategies

- Diversification of the PSEEZ economy by utilizing vast natural, human, and industrial attractions of the PSEEZ in order to develop a variety of tourism-based policies and effective planning at local and national levels.
- Benefiting from tourist attractions in the PSEEZ to create and expand tourism industry by relying on institutional capacity and promotion of public and private investments and sponsorship.
- Development of entrepreneurial environment and legal, financial, and non-financial support from entrepreneurs in the field of tourism and creation of opportunities for development of tourism industry in the PSEEZ to attract local and foreign tourists.
- Benefiting from strategic position and possibility of extensive international communication through improvement of international relations of the country to develop tourism industry and tourism exchange.
- Development and benefiting from the country and the PSEEZ transportation and infrastructure facilities to increase travels of local and foreign tourists.

ST Strategies

- Benefiting from potential of local people for entrepreneurship in various fields of tourism, providing information systems, and organizing tours for tourists.

- Focusing on human, natural, and tourism potentials and benefiting from local and regional transport infrastructure, and promoting investment and financial support for entrepreneurs to develop infrastructures and tourism industry aimed at enhancing competitiveness.
- Preservation and promotion of social security, heritage, and cultural values by presence of tourists in the PSEEZ.

WO Strategies

- Providing necessary outlines for encouraging and strengthening of public and private investments to develop infrastructure and recreational facilities and tourist accommodations in the PSEEZ.
- Promotion of investments, establishment and implementation of management rules and regulations for conservation, restoration, and prevention of destruction and pollution of natural and human heritage in the PSEEZ.
- Development of transport systems to accelerate and facilitate communication and access to tourist attractions.
- Development and empowerment of human resources in order to work in the field of tourism with an emphasis on sustainable tourism in the PSEEZ.

WT Strategies

- Improvement of tourism management and empowerment of active human resources in agencies in relation to tourism industry development.
- Improvement of competitiveness in tourism industry, development of transportation and residential infrastructures, and tourism information system in the PSEEZ.
- Providing favorable outlines for private sector activities and promoting financial support and facilities for tourism entrepreneurs.

- Modification of laws and regulations restricting sustainable tourism activities in industrial sites, especially in petroleum and gas industry.
- Development of institutions and activities for preserving natural, human, cultural, and native values in the PSEEZ.

Finally, according to SWOT results, WT type of strategies is the best strategy for sustainable tourism development in the PSEEZ (defensive strategies) (Figure 4).

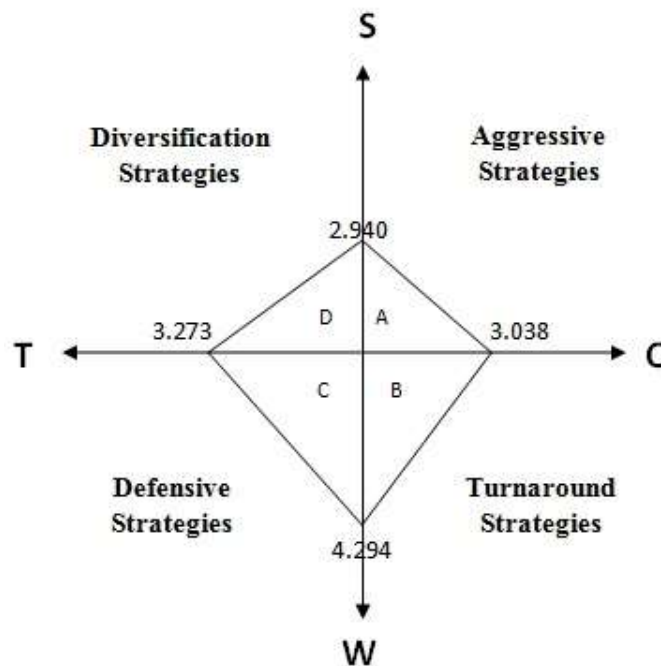


Figure 4. Graphical representation related to results of SWOT strategies in the PSEEZ

There are different types of tourism in Iran but this country is not yet a tourism destination for international visitors. Hence, it is essential to identify the tourism potential and resources to introduce them. The PSEEZ is one of the most important places that could be an effective site for attracting local and international tourists in Iran's southern part. The PSEEZ was established to utilize the oil and gas resources of the South Pars Gas Field. Also, the PSEEZ has high potential in the field of geotourism. Investigation of the linkage between geotourism and industrial tourism is among new approaches in the PSEEZ. Most of the

previous studies have investigated geotourism, some papers have referred to industrial tourism, and few papers have addressed geoheritage and geotourism with a glance on industrial tourism. However, in this study, the linkage between geotourism and industrial tourism was studied for tourism development in practical manner. The results of this study indicated that the geotourism and industrial tourism potential of the PSEEZ is not well-known and has not a good situation. We need to find a solution to improve geotourism situation and infrastructure of industrial tourism.

According to the SWOT results, the most important priorities of people are the development of infrastructures and facilities. These results are confirmed by Ghorbani et al. (2015) and Reihanian et al., (2012), who mentioned that the lack of proper infrastructure causes unsustainable ecotourism activities. If managers consider the opportunities and strengths, they can increase tourism activities in the region and reduce the adverse effects on the environment (Ghorbani et al., 2015). Based on the result, the value of opportunities and strengths in the PSEEZ was more than the threats and weaknesses. This means that the PSEEZ has significant potentials for tourism development, but the geotourism and industrial tourism situation is not compatible with its potentials. This study introduces the policymakers and managers' strategies to dissolve the threats and weaknesses using the opportunities and strengths.

Conclusion

In this study, the role of industrial and natural sites in the Pars Special Economic Energy Zone (PSEEZ) was assessed for the development of tourism. The PSEEZ has a great potential for tourist attraction in natural landscapes such as Nayband National Park, a protected area of Iran's Environmental Protection Agency in Assaluyeh County. The Nayband National Park includes Nayband Bay, Assaluyeh and Basatin Estuaries, sandy

beaches, Nayband highland and mangrove forests. These tourism attraction sites have a unique diversity of wild animals and coral marine habitats and marine grasses. Also, the PSEEZ has high potential in the activities of the gas and petrochemical industries.

This study is the first attempt for potential tourism assessment, especially geotourism and industrial tourism in the PSEEZ. Therefore, this study introduces the features of geotourism (Nayband Bay, Nayband headland, Dorzu Waterfall, Asaluyeh and Basatin estuaries, Kangan mudflats, etc.) and industrial tourism potential and then determines the main issues influencing tourism industry development in the PSEEZ through SWOT analysis. So, the strengths, weaknesses, opportunities, and threats of geotourism and industrial tourism development in the PSEEZ were recognized to obtain the best strategies. Results showed various tourist attractions, but the most important priorities of people are infrastructure and facilities development. This means that, if some activities (such as improvement of tourism management, development of transportation and residential infrastructures, promotion of financial support and facilities for tourism entrepreneurs, modification of restricting regulations for visiting industrial sites, prevention of degradation and pollution of cultural and natural heritage, and development of tourist information system) are taken, tourists will tend to visit natural and industrial sites.

Consequently, this study promotes knowledge and awareness regarding the potential of geotourism and industrial tourism in PSEEZ. According to practical implications, this study can be used by national and local policymakers and planners to develop geotourism and industrial tourism in PSEEZ. The main gap for the study of PSEEZ (as a special economic zone), there isn't any scientific paper and practical works about tourism in special economic zones, especially in oil and gas industries. Therefore, this paper provides an important view for further research on implementing sustainable tourism development in the PSEEZ and other special economic zones.

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