

Medical Tourism in Tehran Development as a global city

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ABSTRACT: In comprehensive urban development plan, a vision of Tehran has been considered as a world city. Tehran is also considered the regional medical center in the world of Islam in the comprehensive scientific map of Iran. In the era of globalization, medical tourism is a growing market in developing countries and has become one of fields of competition in regional development. According to the importance of strategic planning for the development of medical tourism in the globalization process, the effect of medical service globalization in the mega city of Tehran, and Tehran's response to the requirements are essential to investigate Tehran as a medical tourism destination. This is a descriptive survey and also an analytical and exploratory study. Quantitative and qualitative methods were employed in this research. Data were collected using in-depth interviews with 20 experts and a Delphi questionnaire. In the first step, a desk study was performed and the conceptual model was developed. External (environmental threats and opportunities) and internal (strengths and weaknesses) factors were analyzed by SWOT matrix. According to the SWOT matrix, medical tourism industry was in WO and SPACE matrix confirmed the result of the IE matrix. Percent using four strategies calculated and strategies ranked quantitatively by QSPM matrix as follows: i) Marketing and Information System Development, ii) Public Infrastructure Development, iii) Product Development, iv) Human Resource Development. Accordingly, policies were developed..

Keywords: Medical tourism, SWOT analysis, SPACE matrix, Globalization, Tehran development

INTRODUCTION

Providing medical services beyond territorial boundaries is known as medical tourism (Heung et al., 2010). Much medical tourism is short distance and diasporic, despite being part of an increasingly global medical industry, linked to and parallel with the tourism industry (Connell, 2013). The formation of new urban functions such as medical tourism destination to providing development of trade, services, and communication infrastructures which aim to increase the city's sphere of influence beyond the national borders is a sign of globalization. National Documents of Tehran Development in globalization and medical services show that Tehran globalization has been taken into account in numerous urban development documents including 1404 [2025] Vision Document of Islamic Republic of Iran, Spatial Planning, Southern Alborz Plan, National Document of Tehran Province, 1404 [2025] Tehran Plan, Tehran Urban Plan, and Comprehensive Structural-Strategic

Plan of Tehran. Scientific development plan of Iran has also considered it as a Medical Center, first ranked country in the region and among Islamic countries, and among 10 top countries in the world in terms of wealth and science generation (Comprehensive Scientific Plan of Iran, 2013). Although medical tourism has not explicitly mentioned in the documents and programs, globalization-based specialized development has been taken into account in national documents and development macro-plan through medical wisdom. These documents show that the specialized area of medical knowledge has the competitive advantage for medical tourism planning. The target market of medical tourism is the world of Islam and regional countries. Iranian competitive advantage is stem cells in the field of science and technology. Over the last two decades, globalization driven by advances in transportation and telecommunications, and a positive political climate has created a global economy characterized by unprecedented levels of urbanization (Salau,2016). Short

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(2009) maintain that each metropolis capable of providing medical services on international scale requires planning and promotion to become a node in the network of flows. In order to promote in the network structure of the global economy, global cities are constantly competing with each other to take more opportunities from the global economy for their citizens. Due to environmental dynamism of global cities, medical tourism in destination cities requires strategic planning for medical tourism and coordination among the main players of markets. The remainder of the article is structured as follows: First, globalization and medical tourism relationship is defined, and its importance to metropolitan development as tourism destination is explained. Second, the existing literature is discussed and integrated theoretical framework in this area is proposed. Third, Medical Tourism in Development Planning is reviewed. Fourth, external and internal factors affecting the formation of development strategies of Tehran with an emphasis on medical tourism industry are identified and ranked using SWOT, SPACE matrix and QSPM matrix. Finally, the policies were developed.

Globalization and Medical Tourism in Metropolitan

Cities, particularly capital cities, are where the vast majority of modern productive activities are concentrated on the developing world and where the vast majority of paid employment opportunities are located (Salau, 2016). Within a decade, the tourism and travel industry have become an economic importance in urban development in many countries (Rahnemai, et al., 2015). Most researchers believe that globalization has facilitated the tourism process by the collapse of borders and the creation of space of flows. Globalization is a multidimensional phenomenon with cultural, economic, and political components. Tourism industry is fully dependent on economic, political, and cultural conditions of communities too (Baker, 2015). These dimensions have been fundamentally changed in the globalization process. The role of the state and public policy influences sustainable tourism development (Shone et al., 2016). At the same time, tourism has also strengthened the globalization. Key stimuli of globalization in tourism sector and transportation technology mean financial and time reduction, breaking the constraints and geographic boundaries, and advanced communication technology (Smerel, 1998). Medical tourism is one of the fastest growing tourism sectors internationally, and many countries are currently planning legally and practically for this market. According to globalization, developing countries, in particular, are increasingly offering state-of-the-art medical facilities and services to foreign customers. This international trade in medical services also has huge economic potential for the global economy in metropolitan (Heung et al., 2010) with cultural-political components.

Global City as Destination of Medical Tourism

In the present era in which tourism has become one of the

main resources of revenue and capital, cities prone to medical tourism destination are placed in an intertwined network with major and secondary roles based on the roles they play in the economic process. They compete to acquire capital and revenue from this process of globalization (Short, 2009). Competitiveness is a key criterion for evaluating the degree of success of countries in political, economic, and commercial fields. In other words, every country, region, or metropolitan capable of attending in competitive markets has greater competitiveness (Agha zadeh et al., 2007). There are many studies discussing relationship between medical tourism and marketing, economy, health, and hospitality. For example Kalshrti and Pillai (2008) have studied Tourism products development and management medical tourism as A Shifting Paradigm. Smith et al. (2011) have discussed history and analysis of bilateral trade in medical tourism. Kazemi (2008) has collected the factors of attracting medical tourism in Iran. Sadre momtaz and Agharahimi (2010) have studied strategies for tourism development in Iran. Delgoshaei et al. (2011) have studied the current status of medical tourism in Iran. However an extensive review of the current literature reveals that no integrated theoretical framework for global city as medical tourism destination exists. This study, therefore, aims to fill this gap by proposing an conceptual model for the investigation of field developed with a view to capture the current situation of medical tourism in a given country and metropolitan from the supply and demand perspectives. Analysis the previous studies and reviewing the literature on globalization and medical tourism has shown that this phenomenon, regardless of medical services-related components, is heavily affected by the conditions in destination (Smeral, 1998; Connell, 2006). A combination of local factors is involved in global requirements to provide medical services beyond national borders (medical tourism) by a mega city. Studies have shown that tourists who seek medical services select the destination through a two-stage process based on economic, social, and cultural items and regulatory policies. In the second step, they select the megacity destination based on infrastructural facilities, marketing activities, quality assurance, and communication facilities of international medical services (Heung et al., 2010). In other words, at macro level the development of metropolises which are medical tourism destination is influenced by globalization. At micro level, it is influenced by local advantages of supply and demand (Abdul Aziz et al., 2015). Variables and their relationships of medical tourism in metropolis development are shown as conceptual model in Fig.1. The model shows that the independent variables are the model input and how they affect the dependent variable through criteria and sub-criteria as outputs.

Medical Tourism in Development Planning

Tourism is a well-established contributor to national and regional development. Development models, economically, in particular, have been embedded within many of the most

established approaches to tourism master planning (Lawson and Baud-Bovy, 1977). Market-oriented planning models (e.g., Heath & Wall, 1992; Mill & Morrison, 1985) provide an alternative approach, which attempts to match existing and potential tourism resources and products to existing and potential target markets, with the aim of increasing the economic benefits of tourism. In general, this model tends to focus on macro-destination planning issues, though consideration of resources, products, and markets can be related to micro (local and regional) destinations within a broader strategic macro framework (Jamal & Robinson, 2009). All metropolises, which are medical tourism destinations, require strategy, planning, assessment, supervision, and updating in terms of medical tourism market. According to the model, the globalization process is a set of transnational flows of economic, politic and culture in global cities network which form niche markets and guide the metropolitan development through the local advantages of place. Thus a set of strategic processes and planning are necessary for the development of services. On the other hand, medical tourism industry is released from the spatial constraints and moves through territorial boundaries. Movement toward the sustainable development of medical tourism industry is the promotion to global city. At the same time, improving territorial boundaries requires flexibility and constant update of strategies for destination services in the space of flows. Medical tourism development depends on both country environment and local environment (Fig.2).

Therefore, a strategic view to dynamic changes of metropolis development plays a key role in development planning of destinations (Cooper & Wahab, 2000). In line with methodology and stepwise processes, planning, in fact, must emphasize the cognitive measures and understanding the market. In this regard, conceptual models and strategies through advice must be taken into account. Due to the dynamic and evolving urban environment in the era of globalization, strategic management and planning are the best and most important tool to harness these changes or conscious presence in the medical tourism market. Development strategies facilitate the sustainable development, control of plan, and effects of tourism (Bramwell and Lane, 1993). Accordingly, developing destinations in the space of flows is possible as physical and spatial collections through the development of economic, social, cultural, and environmental strategies, investment, development of infrastructures, marketing, and development of products.

MATERIALS AND METHODS

SWOT analysis is an efficient technique to identify environmental conditions in strategic planning and marketing issues. Analysis of internal and external environment in order to identify points of strengths, weaknesses, opportunities and threats is the first step of SWOT approach. The strengths and weaknesses are identified from internal evaluation as controllable activities. The opportunities and threats are economic, social, cultural, ecological, political, legal and technology events and

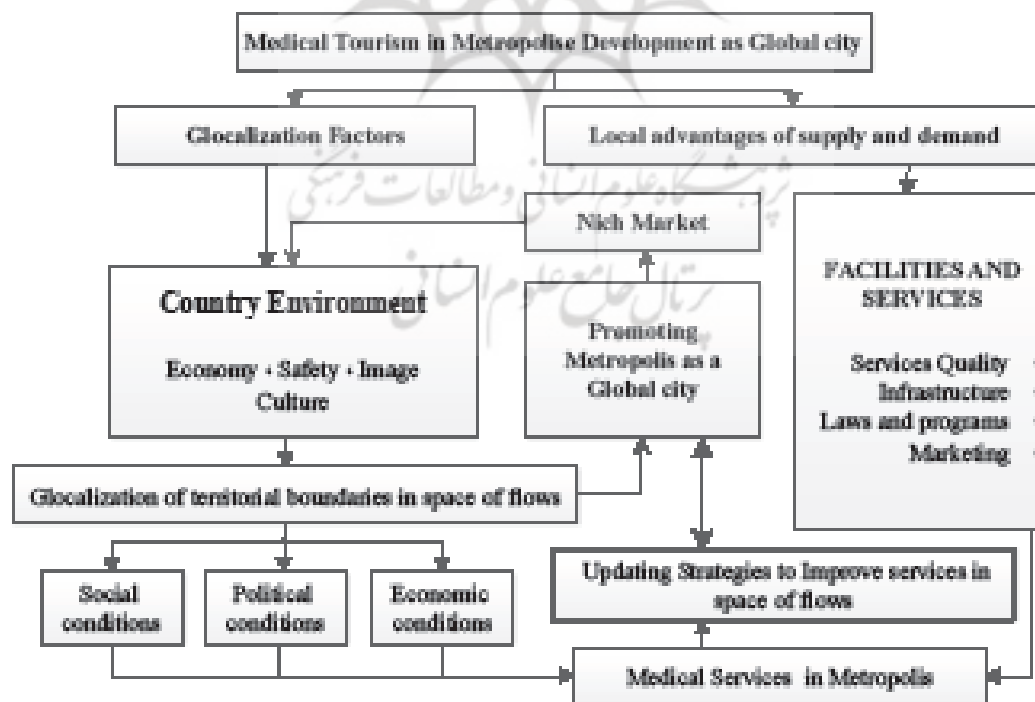


Fig. 1: Conceptual Model of Medical Tourism in Metropolis Development

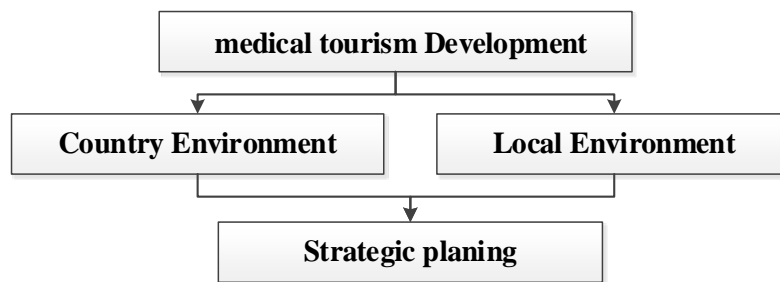


Fig. 2: Medical Tourism Development plan

trends that could be greatly profitable or harmful for medical tourism in future. Opportunities and threats are identified from the external environment assessment (Parhizgar et al., 2003). In the second stage, the position of medical tourism industry is determined in SWOT matrix. Depending on the matrix, various strategies are proposed using prescriptive approach.

This is a descriptive survey and also an analytical, exploratory study. Quantitative and qualitative methods were employed in this research. Data were collected using in-depth interviews and Delphi questionnaire. Tables were completed by the opinions of experts and decision makers in the field of medical tourism. In the first stage, a desk study was performed using the outputs of the conceptual model. Note that interviews with 20 experts and Delphi were employed. All participants were working in managerial positions. After identifying weaknesses, strengths, threats, and opportunities, external performance evaluation matrix, internal performance evaluation matrix, and IE were formed in order to clarify the strategic region. Then, essential policies were recommended.

According to the conceptual model and opinions of experts, infrastructures, quality of services, marketing, and rules and programs were considered effective internal factors. Competitive environment, economic and technological conditions, social, cultural, and environmental conditions, and political conditions were determined as the external factors. The data were 24 opportunities, 26 threats, 10 strengths, and 20 weaknesses. Tables 1 and 2 show opportunities, threats, strengths, and weaknesses.

RESULTS AND DISCUSSION

Internal Factor Evaluation (IFE) score was 1.3. Since it is less than 2.5, it is concluded that the weaknesses outweigh strengths. External Factor Evaluation (EFE) score was 3. Since it is greater than 2.5, it indicates that business opportunities outweigh threats. Therefore, IE matrix can be used. IE (Internal-External) matrix is formed by Internal and External Evaluation matrices. Table 3 shows the strategic position of medical tourism industry in Tehran, Iran using IE matrix.

Since the internal score affecting the industry (internal business environment) is 1.3 and external 3, the strategy is located in

Area 3. As a result, Weakness-Opportunity strategy is used. Medical tourism industry is very optimal in terms of external factors; however, the internal factors need improvement. Opportunities cannot be used due to poor internal factors. The objective of WO strategy is to use the hidden advantages of opportunities in order to compensate the weaknesses. In such a condition, maintenance of major capabilities and market, product development, and homogeneous diversity must be taken into account. Among internal factors, weak points were more than the strengths for all factors except for marketing. Among the external factors, opportunities were more than threats except for the political condition. However, evaluation score was less than 2.5 for all factors. Despite opportunities, medical tourism industry of Tehran has no potential to direct the process of urban development and the promotion of Tehran as a global city (Table 4).

To make sure of the result the SPACE matrix is used, the Strategic Position & Action Evaluation matrix or short a SPACE matrix is a strategic management tool that focuses on strategy formulation especially related to the competitive position of an organization (GÜRBÜZ, 2013). The SPACE matrix has two internal and external strategic dimension and is broken down to four quadrants where each quadrant suggests a different type or a nature of a strategy: Aggressive, Conservative, Defensive, and Competitive. Table 5 shows External Strategic dimension (Environment Stability and Industry strength factors) and Internal Strategic dimension (Financial Strength and Competitive advantage factors). The SPACE matrix calculates the importance of each of these dimensions and places them on a Cartesian graph with X and Y coordinates. The following are model technical assumptions:

- By definition, the CA and IS values in the SPACE matrix are plotted on the X axis.

CA values can range from -1 to -6.

IS values can take +1 to +6.

The FS and ES dimensions of the model are plotted on the Y axis.

ES values can be between -1 and -6.

FS values range from +1 to +6.

Tables 4 and 5 and Fig. 3 show values used to create the SPACE matrix displayed above.

Table 1: Internal Factors Evaluation Matrix (IFE)

Weighted Score	Rating	Weight	Strengths	IFE
0.078	3.53	0.022	1. Establishing almost a third of Iran's large and conversion industries in the province	Infrastructure
0.065	3.6	0.018	2. Being in international transportation corridors, having appropriate land and air networks due to Imam Khomeini International Airport as the international Hub, and having rail systems to all parts of Iran and world	
0.088	3.66	0.024	3.The presence of numerous therapeutic specialized centers with international standards and equipped laboratories	
0.084	3.66	0.023	1.Significant advances in medical knowledge and medicine	quality of service
0.072	3.6	0.02	2. Skilled workforce and world-renowned experts in advanced surgical and advanced reproductive procedure	
0.084	3.8	0.022	1. Planning to become the regionally medical pole in the Iranian Comprehensive Scientific Map	Laws and programs
0.066	3.46	0.019	1.Cultural, recreational, and natural tourist attractions	Marketing
0.078	3.73	0.021	2.Competitive cost advantage in some surgeries	
0.096	3.83	0.025	3.Multiple potential sources of demand (Iranians residing abroad, Muslim and neighboring countries, and patients who need specific treatment from developed countries)	
0.058	3.66	0.016	4.Geographical proximity of Iran to Central Asia, the Middle East and the Arab market (Persian Gulf countries, Afghanistan, Pakistan, Iraq, etc.)	
Weighted Score	Rating	Weight	Weaknesses	IFE
0.024	1.2	0.02	1. Promoting the basic infrastructure especially aviation industry, hospitality, health and communications in accordance with international standards.	Infrastructure
0.021	1.26	0.017	2. Lack of Integrated Systems Management (registration, control and survey)	
0.021	1.2	0.018	3. Lack of tourism infrastructures	
0.018	1.26	0.014	4. Limited ability in crisis management	
0.02	1.73	0.012	5. Lack of protecting city's capitals	
0.033	1.33	0.025	1. Lack of standardization of tariffs and costs of medical tourism services (pricing strategy and pricing flexibility	quality of service
0.03	1.33	0.03	2. Poor professional HR development in medical tourism industry	
0.03	1.33	0.024	3. International insurance limitations (Insurance Transferability)	
0.03	1.13	0.023	4. Lack of legal framework for the follow-up of lawsuits related to medical tourism	
0.02	1.2	0.021	5. Lack of accreditation for medical centers and obtaining international certificates	
0.03	1.4	0.02	6. Poor communication (language, access to Internet, etc.)	

Continuation of Table 1: Internal Factors Evaluation Matrix (IFE)

Weighted Score	Rating	Weight	Strengths	IFE
0.03	1.2	0.028	1. Limited cooperation and effective participation of different departments at macro and operational levels	Laws and programs
0.04	1.4	0.029	2. Lack of systematic planning for medical tourism (definitions, rules, policies, programs)	
0.024	1.6	0.015	3. Legal barriers of Foreign Direct Investment in medical sector and high investment risk	
0.03	1.33	0.024	4. Limitation of rules for controlling patents and exploration (intellectual property rights)	
0.03	1.2	0.023	1. Lack of comprehensive, effective marketing system, identifying target markets and advertisements (lack of trusted tourism institute facilitator for medical tourism, lack of defined intermediates, etc.)	Marketing
0.02	1.26	0.018	2. Lack of diversity in accordance with needs and patient preference, lack of defined package for medical tourism to Tehran	
0.02	1.26	0.016	3. Poor market research (feedback and market development)	
0.02	1	0.019	4. Poor management of service package process and design for medical tourists	
0.02	1.13	0.018	5. Lack of communicative skills and market information	
1.3		1		Total score

Table 2: External Factors Evaluation Matrix (EFE)

Weighted Score	Rating	Weight	Opportunities	EFE
0.06	3.53	0.018	1. Low quality of health care in target countries	competitive environment
0.07	3.73	0.018	2. Increasing high-quality service demand by the rich in neighboring countries such as the Middle East, Persian Gulf Countries, etc.	
0.04	3.4	0.013	3. Ever-increasing willingness of certain governments to encourage medical tourism services	
0.1	3.8	0.027	4. Competition to get international medical events	
0.1	3.86	0.032	5. Positive vision of urban development for Tehran	
0.08	3.6	0.024	6. International role of Tehran in education and research for high level of specialized and premium services	
0.12	3.96	0.031	7. Competitive qualitative advantage in certain sciences such as stem cells, spinal cord injuries, infertility, and invasive radiology topics	
0.12	3.93	0.03	8. Low medical costs compared to regional and global scale	
0.11	3.6	0.032	9. Demand in private sector for work and investment	

Continue of Table 2: External Factors Evaluation Matrix (EFE)

0.09	3.6	0.024	1. The development of related technologies	Economic and technological conditions
0.08	3.73	0.021	2. Governmental investment for expanding IT	
0.09	3.86	0.021	3. Efforts of local governments for attracting investment	
0.12	3.93	0.026	4. Development of privatization of enterprises and banks	
0.05	3.46	0.016	5. The effect of economic conditions of other countries on tourist entry	
0.09	3.86	0.023	1. Ensuring the security of citizens and medical tourists	Socio-cultural and environmental conditions
0.13	3.73	0.035	2. Developing local policies in planning	
0.09	3.2	0.027	3. Increasing the educated and specialized population in Tehran with a wide range of culture and lifestyle	
0.08	3.6	0.024	4. Maintaining the privacy of medical tourists	
0.04	3.3	0.014	5. Rich religious, theoretical, philosophical, and ethical sources in Tehran	
0.1	3.93	0.026	1. Membership of international organizations and NGOs in strengthening urban management (sister cities)	Political conditions and rules
0.06	3.66	0.016	2. Preparing the ground for medical tourism development in National Documents	
0.08	3.73	0.021	3. Development of Outsourcing and Privatization	
0.08	3.53	0.022	4. Presence of antitrust laws	
0.08	3.8	0.022	5. Maintaining and improving political relationships with target countries and visa procedures	
Weighted Score	Rating	Weight	Threats	EFE
0.024	1.2	0.02	1. Multiplicity of existing brands with similar services	competitive environment
0.02	1.26	0.017	2. Diversity of services provided by competitors (multi-product)	
0.024	1.6	0.015	3. Careful planning and massive investment of competitors to maintain and increase their share in the market	
0.02	1.26	0.014	4. Possessing a major share of the market by competitors	
0.02	1.73	0.012	5. Advertising and marketing measures to introduce a variety of services and products on the market	
0.03	1.53	0.022	6. Follow-up services and Telemedicine by competitors	
0.02	1.2	0.018	7. The introduction of new medical tourism destinations	
0.03	1.2	0.022	1. Instability of energy prices and its impact on the rising costs of transport, accommodation, and treatment	Economic and technological conditions
0.02	1.33	0.019	2. Iran's negative revenue-expenditure balance (revenue, money generation, management)	
0.03	1.33	0.024	3. Obstacles to attracting foreign investment (risk, inflation, etc.)	
0.03	1.46	0.019	4. Problems of economic activity because of the lack of definition of complementary functions among different regions	
0.03	1.33	0.019	5. Rapidly changing software and hardware and poor adaption	
0.02	1.2	0.019	6. Volatility of the market, rising inflation and its impact on the attractiveness of medical tourism destinations	
0.05	1.33	0.019	7. Exchange rate fluctuations and its relation to the purchasing power of patients	
			8. Credit constraints in the supply of infrastructures and technological reconstruction	

Continuie of Table 2: External Factors Evaluation Matrix (EFE)

Continuie of Table 2: External Factors Evaluation Matrix (EFE)					Socio-cultural and environmental conditions
0.03	1.46	0.019	1.	Lack of a common language with target markets	
0.03	1.46	0.018	2.	Certain cultural conflicts in the development of target markets	
0.05	1.6	0.033	3.	Hiring elite professionals and entrepreneurs by competitors	
0.05	1.33	0.035	4.	The lack of effective exchange of information systems and a framework for collective action	
0.04	1.46	0.025	5.	Environmental problems and lack of development sustainability (lack of pollution control, dust, ecology, and extensive use of fossil fuels)	
<hr/>					Political conditions and Rules
0.04	1.65	0.024	1.	Imposing certain restrictions Iran (e.g., resolutions or sanctions) in connection with international companies and institutions to develop industry	
0.023	1.26	0.018	2.	Destroying the prospect of Iran in the international arena by West (external threats, political unrest, strikes and wars)	
0.02	1.26	0.016	3.	The requirement for standards compliance and quality of service	
0.019	1	0.019	4.	Restrictions on border control and visa procedures	
0.03	1.4	0.023	5.	Lack of economic membership in international organizations and the possibility of global banks and insurance	
0.02	1.26	0.016	6.	Instability of regulations, policies and multiplicity of inconsistent laws	
3.13		1			Total score

Table 3: Strategic Position of Medical Tourism Industry in Tehran, Iran

		Internal Factor Evaluation (IFE) Matrix Score				
		Weak		Strong		
		1	2	2.5	3	4
External Factor Evaluation (EFE) Matrix Score	Strong	4	(3,1, 3)			
		3	WO Strategy			
	Weak	2.5				
		2				
		1				

Table 4: Points of evaluated components (source: Authors)

Poin	Components	Code
0.34	Infrastructure	A
0.3	Quality of services	B
0.2	Laws and programs	C
0.4	Marketing	D
1	Competitive environment	E
0.55	Economic conditions and technological	F
0.37	Socio-cultural and environmental conditions	G
1.1	Political conditions and rules	H

Table 5: Strategic Position and Action Evaluation matrix of Tehran (SPACE matrix)

Score	External Strategic dimension	Score	Internal Strategic dimension
-6<x<-1	Enviroment Stability (ES)	1<x<6	Financial Strength (FS)
-2	Technology	3	Return investmen
-3	Inflation	2	Financial leverage
-2	Changes in demand	4	Strength liquidity
-3	Price elasticity	3	Working capital
-4	Competitive pressures	4	Cash flow
-4	Barriers to entry	4	Risk of trade
		4	Properties
		3	Facilities to exit
-18	Total	27	Total
-3	Average	3.4	Average
Score	External Strategic dimension	Score	Internal Strategic dimension
6<x<1	Industry strength (IS)	-1<x<-6	Competitive advantage (CA)
4	Industry growth potential	-4	Market share
2	Optimum use of resource	-4	Product quality
3	Facility to entry	-3	Product life cycle
2	Efficiency	-4	Customer loyalty
4	Expertes	-2	Market niche position
3	Financial Stability	-3	The speed of innovation by the industry
2	Skilled in technology		
20	Total	-20	Total
2.8	Average	-3.3	Average

Table 6: Result

2.8	IS Average	3.4	FS Average
-3.3	CA Average	-3	ES Average
0.5	Total score in X axis		
0.4	Total score in Y axis		

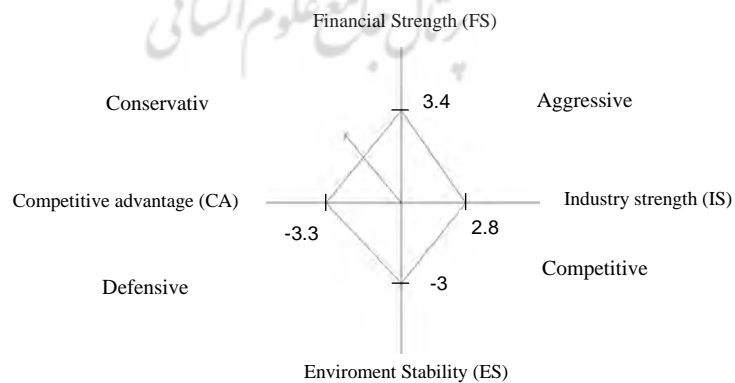


Fig.3: SPACE Matrix

Table 7: Quantitative Strategic Planning Matrix (Internal Factors)

Product Development			Human Resource Development			Marketing and Information System Development			Public Infrastructure Development			Strateg	
Score	AS	Weight	Score	AS	Weight	Score	AS	Weight	Score	AS	Weight	Strengths	IFE
0.072	4	0.018	0.018	1	0.018	0.036	2	0.018	0.072	4	0.018	S1	Infrastructure
0.018	1	0.018	0.052	3	0.018	0.072	4	0.018	0.072	4	0.018	S2	
0.052	4	0.013	0.052	4	0.013	0.052	4	0.013	0.052	4	0.013	S3	
0.092	4	0.023	0.069	3	0.023	0.092	4	0.023	0.069	3	0.023	S1	Quality of service
0.04	2	0.02	0.08	4	0.02	0.08	4	0.02	0.06	3	0.02	S2	
0.088	4	0.022	0.088	4	0.022	0.088	4	0.022	0.088	4	0.022	S1	Laws and programs
0.076	4	0.019	-	-	0.019	0.076	4	0.019	-	-	0.019	S1	Marketing
0.042	2	0.021	-	-	0.021	0.084	4	0.021	0.042	2	0.021	S2	
0.1	4	0.025	-	-	0.025	0.1	4	0.025	-	-	0.025	S3	
0.032	2	0.016	-	-	0.016	0.076	4	0.016	-	-	0.016	S4	
Score	AS	Weight	Score	AS	Weight	Score	AS	Weight	Score	AS	Weight	Weaknesses	IFE
0.08	4	0.02	0.08	4	0.02	0.06	3	0.02	0.08	4	0.02	W1	Infrastructure
0.051	3	0.017	0.051	3	0.017	0.068	4	0.017	0.051	3	0.017	W2	
0.015	1	0.015	0.015	1	0.015	0.06	4	0.015	0.06	4	0.015	W3	
0.028	2	0.014	0.014	1	0.014	0.014	1	0.014	0.028	2	0.014	W4	
0.036	3	0.012	0.012	1	0.012	0.012	1	0.012	0.024	2	0.012	W5	
0.066	3	0.022	0.022	1	0.022	0.022	1	0.022	-	-	0.022	W1	
-	-	0.019	0.076	4	0.019	0.057	3	0.019	-	-	0.019	W2	
0.096	4	0.024	-	-	0.024	0.024	1	0.024	-	-	0.024	W3	
0.104	4	0.026	-	-	0.026	0.026	1	0.026	-	-	0.026	W4	
0.057	3	0.019	-	-	0.019	0.057	3	0.019	-	-	0.019	W5	
-	-	0.019	0.076	4	0.019	0.076	4	0.019	-	-	0.019	W6	
0.076	4	0.019	-	-	0.019	-	-	0.019	-	-	0.019	W1	Laws and programs
0.072	4	0.018	-	-	0.018	0.054	3	0.018	-	-	0.018	W2	
0.099	3	0.033	-	-	0.033	0.132	4	0.033	-	-	0.033	W3	
105.0	3	0.035	-	-	0.035	0.105	3	0.035	-	-	0.035	W4	
0.024	1	0.024	-	-	0.024	0.096	4	0.024	-	-	0.024	W1	Marketing
0.072	4	0.018	-	-	0.018	0.072	4	0.018	-	-	0.018	W2	
0.048	3	0.016	-	-	0.016	0.064	4	0.016	-	-	0.016	W3	
0.038	2	0.019	-	-	0.019	0.076	4	0.019	-	-	0.019	W4	
0.069	3	0.023	0.092	4	0.023	0.092	4	0.023	-	-	0.023	W5	
1.136	-	1	0.438	-	1	1.167	-	1	0.243	-	1	Total score	

Table 8: Quantitative Strategic Planning Matrix (External Factors)(source: Authors)

Product Development			Human Resource Development			Marketing and Information System Development			Public Infrastructure Development			STRATEGY	
Score	AS	Weight	Score	AS	Weight	Score	AS	Weight	Score	AS	Weight	Opportunities	EFE
0.072	4	0.018	0.072	4	0.018	0.072	4	0.018	-	-	0.018	O1	competitive environment
0.072	4	0.018	0.072	2	0.018	0.072	4	0.018	-	-	0.018	O2	
0.026	2	0.013	-	-	0.013	0.052	4	0.013	-	-	0.013	O3	
0.081	3	0.027	-	-	0.027	0.108	4	0.027	-	-	0.027	O4	
0.096	3	0.032	-	-	0.032	0.128	4	0.032	-	-	0.032	O5	
0.072	3	0.024	-	-	0.024	0.072	3	0.024	-	-	0.024	O6	
0.124	4	0.031	0.093	3	0.031	0.093	3	0.031	-	-	0.031	O7	
0.09	3	0.03	-	-	0.03	0.12	4	0.03	-	-	0.03	O8	
0.096	3	0.032	-	-	0.032	0.128	4	0.032	-	-	0.032	O9	
0.006	4	0.024	-	-	0.024	0.072	3	0.024	-	-	0.024	O1	Economic and technological conditions
0.084	4	0.021	-	-	0.021	0.084	4	0.021	-	-	0.021	O2	
0.042	2	0.021	-	-	0.021	0.063	3	0.021	-	-	0.021	O3	
0.104	4	0.026	-	-	0.026	0.104	4	0.026	-	-	0.026	O4	
0.032	2	0.016	-	-	0.016	0.064	4	0.016	-	-	0.016	O5	
-	-	0.023	-	-	0.023	0.092	4	0.023	-	-	0.023	O1	Socio-cultural and environmental conditions
0.140	4	0.035	-	-	0.035	0.105	3	0.035	-	-	0.035	O2	
0.054	2	0.027	0.108	4	0.027	0.054	2	0.027	-	-	0.027	O3	
-	-	0.024	-	-	0.024	0.096	4	0.024	-	-	0.024	O4	
0.042	3	0.014	0.028	2	0.014	0.056	4	0.014	-	-	0.014	O5	
0.052	2	0.026	-	-	0.026	0.078	3	0.026	-	-	0.026	O1	Political conditions and rules
0.064	4	0.06	-	-	0.06	-	-	0.06	-	-	0.06	O2	
0.063	3	0.021	-	-	0.021	0.084	4	0.021	-	-	0.021	O3	
0.088	4	0.022	-	-	0.022	0.088	4	0.022	-	-	0.022	O4	
0.088	4	0.022	-	-	0.022	0.088	4	0.022	-	-	0.022	O5	
Score	AS	Weight	Score	AS	Weight	Score	AS	Weight	Score	AS	Weight	Threats	EFE
-	-	0.02	-	-	0.02	0.04	2	0.02	-	-	0.02	T1	competitive environment
-	-	0.017	-	-	0.017	0.068	4	0.017	-	-	0.017	T2	
0.03	2	0.015	-	-	0.015	0.045	3	0.015	-	-	0.015	T3	
0.028	2	0.014	-	-	0.014	0.042	3	0.014	-	-	0.014	T4	
0.048	4	0.012	-	-	0.012	0.024	2	0.012	-	-	0.012	T5	
0.066	3	0.022	0.044	2	0.022	0.088	4	0.022	0.066	3	0.022	T6	
-	-	0.018	-	-	0.018	0.072	4	0.018	-	-	0.018	T7	

Continue of Table 8: Quantitative Strategic Planning Matrix (External Factors)(source: Authors)

0.066	3	0.022			0.022	0.044	2	0.022	0.088	4	0.022	T1	Economic and technological conditions	
0.019	1	0.019	-	-	0.019	-	-	0.019	0.057	3	0.019	T2		
0.072	3	0.024	-	-	0.024	0.096	4	0.024	0.024	1	0.024	T3		
0.104	4	0.026	-	-	0.026	-	-	0.026	-	-	0.026	T4		
0.038	2	0.019	-	-	0.019	0.076	4	0.019	0.076	4	0.019	T5		
0.019	1	0.019	-	-	0.019	0.076	4	0.019	0.057	3	0.019	T6		
0.057	3	0.019	-	-	0.019	0.076	4	0.019	0.057	3	0.019	T7		
0.105	3	0.035			0.035	0.105	3	0.035	0.140	4	0.035	T8		
-	-	0.019	-	-	0.019	0.038	2	0.019	-	-	0.019	T1	Socio-cultural and environmental conditions	
0.036	2	0.018	0.054	3	0.018	0.072	4	0.018	-	-	0.018	T2		
0.033	1	0.033	0.132	4	0.033	0.132	4	0.033	0.099	3	0.033	T3		
0.07	2	0.035	-	-	0.035	0.140	4	0.035	-	-	0.035	T4		
0.05	2	0.025	-	-	0.025	0.075	3	0.025	0.075	3	0.025	T5		
0.096	4	0.024			0.024	0.096	4	0.024	-	-	0.024	T1	Political conditions and rules	
-	-	0.018	-	-	0.018	0.072	4	0.018	-	-	0.018	T2		
0.064	4	0.016	-	-	0.016	0.064	4	0.016	0.048	3	0.016	T3		
-	-	0.019	-	-	0.019	0.076	4	0.019	-	-	0.019	T4		
0.069	3	0.023	-	-	0.023	0.092	4	0.023	0.046	2	0.023	T5		
0.064	4	0.016	-	-	0.016	0.064	4	0.016	0.032	2	0.016	T6		
1.725	-	1	0.36	-	1	2.51	-	1	0.865	-	1	score		
2.34				0.72				3.26				1.06		Total score

Table 9: selected policies

2. Public Infrastructure Development Policy

- Equipping and modernizing the urban infrastructure for service delivery and planning
- Advanced producer support services and activities that will increase demand for goods and services
- Development of national data centers, Tehran fiber infrastructure, switching and routing infrastructure, security services and availability of communication
- Technological compliance and the use of experiences WTO member states
- International e-payment facilities
- Equipping tourism infrastructures (Standardization and guarantee of safety of commercial, residential, recreational, cultural, and open green spaces facilities)

1. Marketing and Information System Development Policy

- service quality, constant study of target markets and consideration of regional instead of global market
- Creating a coordinated legal and institutional system focused on the development and production with the adoption of the profit motive, capital multiplicity and re-investment in service and financial activities related to medical tourism by recognizing the principles of ownership, private management, and security for private property
- Redefining the city image in order to involve new geographical borders of new capitalism
- Determining a mechanism for passing rules and regulations in line with freedom of market transactions, capital, labor, goods and services with minimal gover

Continuie of Table 9: selected policies

4. Human Resource Development Policies	3. Product Development Policy
<ul style="list-style-type: none"> • Participation of civil institutions and organizations in urban development • Increase in the number of employees working in private sector and direct governmental interference avoidance • HR development at all levels in accordance with the required specialization and skills • Resource management, appointment of multi-sectorial organization for harmony among executive departments • Development of academic education, knowledge-based centers, and new science and technology • Planning for promoting the local culture in line with medical tourism policies 	<ul style="list-style-type: none"> • Developing a comprehensive and long-term plan for competitiveness • Defining job descriptions and management structure, Promoting cross-sectorial management and participation of civil organizations • Stability in policies and regulations, and monitoring system development process • Transparency of decisions and actions of executives along with creating and maintaining judicial independence in relation to conflicts and establishment of inexpensive, effective, and neutral judicial system (legal support and monitoring the activity of international and multinational companies) • Development of international firms, multinational companies, insurance agencies, and international banks and signing essential contracts • Identifying demand market and determining legal protocols with target countries • Taking advantage of potential capacities of embassies • Validation and accreditation of goods in the process of globalization • Presence of diverse service packages for patients and coordination of various industries such as medical centers and hospitals with other tourism sectors • Determining essential incentives for medical tourism investment and allocating financial facilities by the government

The result is shown in Figure 3 and confirmed the result of the IE matrix and continuing medical tourism Tehran's position is

$$S\Delta 1 = 0.5(2.8 * 3.4) = 4.76$$



$$S\Delta 2 = 0.5(2.8 * 3) = 4.2$$



$$S\Delta 3 = 0.5(3.3 * 3.4) = 5.61$$



$$S\Delta 4 = 0.5(3.3 * 3) = 4.95$$



conservative. Percent using four strategies is calculated as follows:

$$S1 / \sum S * 100 = 24.38 \quad \text{Aggressive Strategy}$$

$$S2 / \sum S * 100 = 21.52 \quad \text{Competitive Strategy}$$

$$S3 / \sum S * 100 = 28.74 \quad \text{Conservative Strategy}$$

$$S4 / \sum S * 100 = 25.36 \quad \text{Defensive Strategy}$$

Executive Measures for Realization of Medical Tourism Industry in Tehran development

This particular SPACE matrix shows that urban development planing Tehran medical tourism should pursue an conservative strategy. Tehran having a strong conservative position in the market needs to use its external opportunities to develop a market penetration and market development strategy. According to above, the 4 policies are determined to avoid threats using strengths, remove weaknesses, and take advantage of opportunities:

Public Infrastructure Development;
Human Resource Development Policies;
Product Development;

Marketing and Information System Development.

Quantitative Strategic Planning Matrix

QSPM is a high-level strategic management approach for evaluating possible strategies. The Quantitative Strategic

Planning Matrix or a QSPM approach attempts to objectively select the best strategy using input from other management techniques and some easy computations (David & David, 2009). At this stage strategies are ordered quantitatively by QSPM matrix based on their attractiveness (priority). The results are shown in Tables 7 and 8.

Tehran development Strategies with an emphasis on medical tourism industry were ranked in the following order:

Marketing and Information System Development;
Public Infrastructure Development;
Product Development;
Human Resource Development Policies.

CONCLUSION

According to environmental dynamism and the importance of strategic planning for Tehran development in the globalization process, current study investigated external and internal factors

affecting the formation of development strategies of Tehran with an emphasis on medical tourism industry using SWOT. Accordingly, medical tourism does not have the potential, at the moment, for regional competition and stimulation of development in Tehran. The study showed that Tehran is faced with challenges in terms of basic and medical infrastructures, efficient governmental support, systematic development plan for medical tourism, cross-sectorial competition and coordination at macro, operational level, international recognizable medical centers, competitive advantage, comprehensive marketing, and environmental conditions. SPACE matrix confirmed the result of the IE matrix. Percent using four strategies calculated and strategies ranked quantitatively by QSPM matrix. Based on the strategy, strengths and opportunities need to be used to avoid threats and remove weaknesses. This promotes the competitiveness of Tehran for development of medical tourism destination, determination of infrastructural development policies, product development, HR development, and information and marketing development. Accordingly, policies were developed (Table 9).

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