http://dergipark.ulakbim.gov.tr/ijhmt/
Int Journal Of Health Manag. And Tourism 2017, 2(1), 16-27

IJHMT
International Journal Of Health Management And Tourism

Editorial

THE CAUSAL IMPACT OF HEALTH TOURISM ON ECONOMIC GROWTH: EVIDANCE FROM TURKEY

Kadriye Hilal TOPAL[1], Fatma Doğanay ERGEN[2*]

[1]*Lecturer,Vocational School, University of Nişantaşı,Turkey*
[2]*Lecturer, Vocational School, University of Nişantaşı,Turkey*
**E-mail: doganay.ergen@nisantasi.edu.tr*

Abstract: People seem to be more interested in medical treatment and thermal sources, thus are travelling across to benefit from the rehabilitation services country's health tourism's are providing and therefore health tourism has started to become a growing industry. It is seen those who are concerned and are curious to discover for more are aware of being able to get a much better service quality with a much affordable price by the hospital accreditation the countries health services have to offer. The increase in the number of people who have travelled and become a part of this tourism sector have increased the revenues of medical tourism and health tourism along with the health tourism sector's importance.

This study has examined the health tourism income in Turkey to determine whether the impact of health tourism has triggered economic growth. This study also aims to assist the resolution process of tourism sector with the studies results. In order to investigate the relationship between health tourism and economic growth in Turkey both Granger causality and Cointegration analysis were conducted with a quarterly data between 2003Q1-2015Q3 period. The results indicating causal relationship between health tourism and economic growth while previous studies of the grown literature claim the opposite have resulted this paper as a contribution to the existing literature.

Key Words: Health Tourism, Causality Analysis, Economic Growth

Introduction

With the aging of the population in the World and particularly in developed countries, the ratio of chronic diseases has increased and the increasing level of health expenditures have caused the individuals to go to cheaper countries for treatment. As well as the costs, the long waiting times for getting treated in their own countries also have been seen to encourage these individuals to go abroad to receive service. The absence of the requirement for waiting too long, the increasing demand for cheaper service increased the amount of international transportation opportunities as well as the development of information technologies have enabled people to learn easily about the hospitals abroad and to travel to foreign countries to receive health service (Turkish Ministry of Development, 2014, p.1).

Turkey wishes to spread tourism activities throughout the year to maintain and accelerate the upward trend it has caught regarding the number of tourists and income from tourists. In parallel with this, thermal resources, advanced treatment centers and medical advancements of Turkey has revealed out its significant potential in health tourism as well as mass tourism and has shown that Turkey is progressing fast to become a leader country in the world in this respect. Therefore, we find it is important to study the correlation between health tourism revenues and economic growth and to analyze this correlation on a short-long term basis before making any decisions about health tourism.

The literature review presents studies analyzing the causality relationship between tourism and economic growth. These studies have revealed out a unilateral Granger causality relationship rising from tourism income towards economic growth (Bahar, 2006; Şahbaz, 2007; Bozgeyik and Yoloğlu, 2015; Özdemir and Öksüzler, 2006; Kaygısız, 2015). Whereas Çoban and Özcan (2013) found no relationship in the short-term in their study, although there is a bilateral causality relationship between tourism revenues and economic growth in long-term. In contrast to the literature studies, Kızılgöl and Erbaykal (2008) found a direction of the causality relationship between economic growth and tourism revenues. Yavuz (2006) found no causality relationship between tourism growth and economic growth. While reviewing similar studies in the literature we have come across Bahar and Baldemir's (2008) study which have found a unilateral causality relationship between international trading and international tourism, rising from tourism towards export.

Owing to the previous studies in the literature we believe that it is important to determine whether health tourism was the cause for the growth of tourism revenues in Turkey while Turkey is at a time while it intends to obtain more income from tourism with a significant potential for health tourism and set new goals to support the sector in a greatly manner. Furthermore, the fact that literature review presented no study analyzing the causality relationship between health tourism revenues and tourism revenues also encouraged us to carry out this study.

Health Tourism

Health tourism is deemed to be among the different types of touristic products and is particularly known as "traveling for health". Health tourism involves all kinds of medical operations from meditation to hair transplantation, from aesthetic operations to in vitro fertilization operations. Accommodation facilities such as hotels, resorts, motels and pensions; hospitals and various cure centers serve in health tourism as well (Selvi, 2008, p.275).

The Ministry of Culture and Tourism defines health tourism as the type of tourism which helps the development of health institutions by the number of international patient potential as well as the individuals travelling to thermal spring centers or other health centers and the ones in need of aesthetical surgical operation, organ transplantation, dental treatment, physical treatment, rehabilitation etc.(Turkish Ministry of Culture and Tourism, General Directorate of Investments and Businesses, 2014). According to the Ministry of Health; health tourism is traveling abroad for treatment only, due to any reason (such as long waiting times in the home country, the opportunity to receive cheaper and higher quality service abroad). Going abroad for thermal spring treatments, the necessity of which is stated in medical reports is also included in this definition (Turkish Ministry of Health, 2014). Although there are several different definitions, health tourism can be summarized as traveling to someplace (either inland or abroad) for receiving any health service (Turkish Ministry of Health, 2012b, p.22).

Health tourism is classified under three main titles: "Medical tourism", "Thermal tourism (SPA-Wellness)", "Tourism for the Elderly and Disabled People" (Turkish Ministry of Health, 2012b, p.64). *Medical tourism* involves medical operations or activities performed for the improvement of the wellness of the health tourist. Treatment of diseases includes medical check-up, health screening, dental treatment, heart operation, prosthesis attachment, cancer treatment, neurosurgery, organ transplantation and other operations requiring quality medical interventions (Turkish Ministry of Health, 2012a, p.14). International patient mobility has facilitated the development and significance of medical tourism in Turkey and all around the world. Within this framework, when individuals travel abroad to receive treatment due to the lack of health services (even though the services are given in their homeland) demanded by patients in their home countries and the elevation of the prices in their home countries and exclusion of such services from insurance policies result under the terminology medical tourism (Binler, 2015, p.6). *Thermal tourism* is the performance of rehabilitation or treatment supporting activities by assistant healthcare personnel or other health specialists at thermal spring and spa centers in follow-up rehabilitation periods or for partial treatment of disorders with permanent damage (Thermal Spring Treatments, Physiotherapies, Thalasso Therapies, Hydrotherapies, Balneotherapies, Peloidotherapies, Climatotherapies etc.) (Turkish Ministry of Health, 2011, p.6). In this type of tourism, there are various methods such as thermo-mineral bathing, drinking, inhaling and mud bathing as well as curative activities combining several supportive treatments such as climate therapy, physical treatment, rehabilitation, exercise, psychotherapy, and diet. The use of thermal waters for recreational purpose is also included in this type of tourism (Turkish Ministry of Health, www.saglikturizmi.gov.tr, 10.02.2015). *Tourism for the elderly and disabled people*,

includes activities performed by certified personnel at Clinical Guesthouses, Geriatric Treatment Centers and Nurseries for the health care and rehabilitation of elderly and disabled tourists (Excursions, Hobby Therapies, Activities for the Disabled etc.) (Turkish Ministry of Health, 2011, p.6). Excursions, rehabilitation services, different types of therapies, nursing of the elderly in nurseries, specific purpose trips and caring activities form the basic elements of this type of health tourism (Topuz, 2012, p.11). Tourism for the elderly and disabled people can also be done to help the disabled people to meet their needs to travel, to have fun and get treatment.

Health Tourism in Turkey

The number of tourists visiting Turkey for health and the income from health tourism is tabulated in Table 1. The number or tourists and health spending per person in health tourism are shown based on the data obtained from Turkish Statistical Institute.

Table 1. Number of Tourists Visiting for Health-Related Purpose and Average Spending per Person

Year	Number of Tourists	Tourism Income (US - $)	Average Spending per Person	Health Tourism Income (US - $)	Number of Tourists in Health Tourism	Number of Foreign Tourists in Health Tourism	Average Spending per Person in Health Tourism
2003	16 302 053	13 854 868	850	203 703	139 971	103 403	1.455
2004	20 262 640	17 076 609	843	283 789	171 994	133 722	1.649
2005	24 124 501	20 322 111	842	343 181	220 338	164 597	1.557
2006	23 148 669	18 593 950	803	382 412	193 728	153 894	1.973
2007	27 214 988	20 942 501	770	441 677	198 554	154 603	2.224
2008	30 979 979	25 415 067	820	486 342	224 654	162 484	2.164
2009	32 006 149	25 064 481	783	447 296	201 222	132 677	2.222
2010	33 027 943	24 930 996	755	433 398	163 252	115 222	2.654
2011	36 151 328	28 115 694	778	488 443	187 363	142 463	2.606
2012	36 463 921	29 007 003	795	627 862	216 229	153 520	2.903
2013	39 226 226	32 308 991	824	772 901	267 461	188 295	2.889
2014	41 415 070	34 305 904	828	837 796	414 658	328 647	2.020
2015	41 617 530	31 464 777	756	638 622	360 180	260 339	1.773
2016	31 365 330	22 107 440	705	715 438	377 384	251 809	1.895

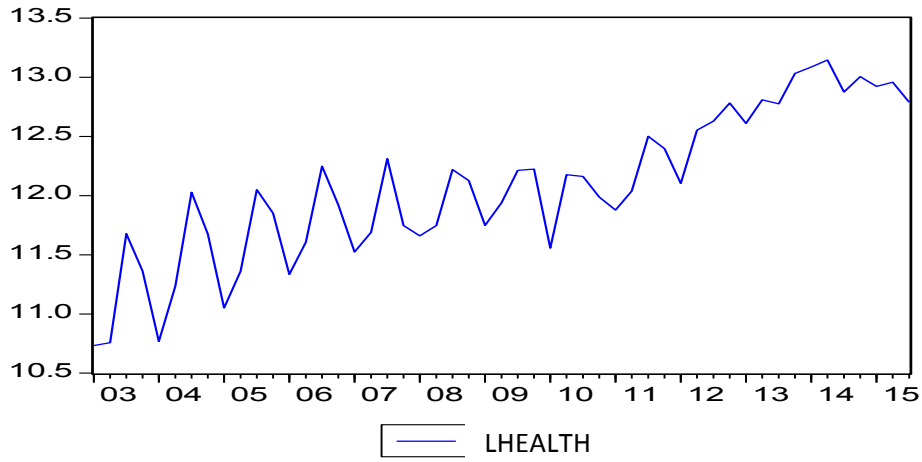
Source: Turkish Statistical Institute, (2016). Number of tourists with respect to their purpose of visit, Amount of income from tourism with respect to the types of spending, Tourism income and Average spending per person 2013-2016. Turkish Statistical Institute.

Income from tourism has had a continuous growth and reached 837 million US dollars in 2014. Though it dropped back to 638 million US dollars in 2015 and began to rise again in 2016. Study of the data reveals out the fact that, average spending of each health tourist is higher than the average spending of tourists coming for other purposes. This can be one of the reasons why states are focusing on health tourism today.

Data Set And Method

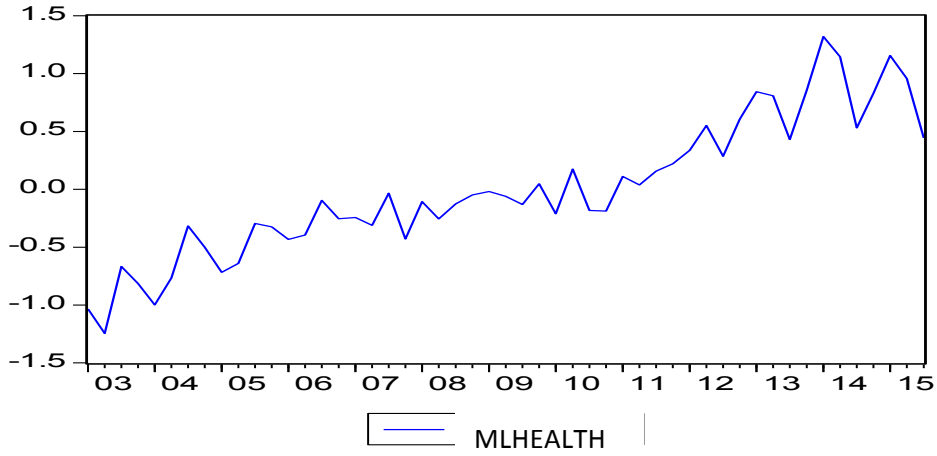
This study aims to analyze the relationship between Turkey's income from health tourism and economic growth. The data set used in the research was obtained from Turkish Statistical Institute's (www.tuik.gov.tr) Tourism Income with respect to the Types of Spending and Gross Domestic Product (GDP) data as an indicator of economic growth, which is taken from the Electronic Database in Central Bank of Republic of Turkey official website. The Health Tourism Quarterly Revenues and real GDP variables were gathered for the 2003Q1-2015Q3. Health tourism revenues were multiplied by Turkish Central Bank average currency exchange rate to transform the values given in Dollars to Turkish Liras. Natural logarithms of the both variables were taken for both entire dataset. As the series are subject to the effect of seasonality, the seasonal dummy variable was used to eliminate the deterministic seasonal effects. For the reliability of the results regarding the relationship between the variables, the series are expected to be stationary. Augmented Dickey-Fuller (ADF) unit root test was applied for the testing the stationarity of the series. In respect to the unit root tests, results show that the series were stationary at the same level, thus cointegration test was performed. Cointegration test also gives us information about the long-term relationships of the series (Engle and Granger, 1987, 252). A cointegration analysis was conducted by estimating an ECM (Error Correction Model) in order to search for short term relationship between variables. Both the short-term dynamics and long-term dynamics were combined by using the ECM model following a causality analysis by the Granger Causality test.

Graphic 1. Health Tourism Revenues between 2003Q1-2015Q3



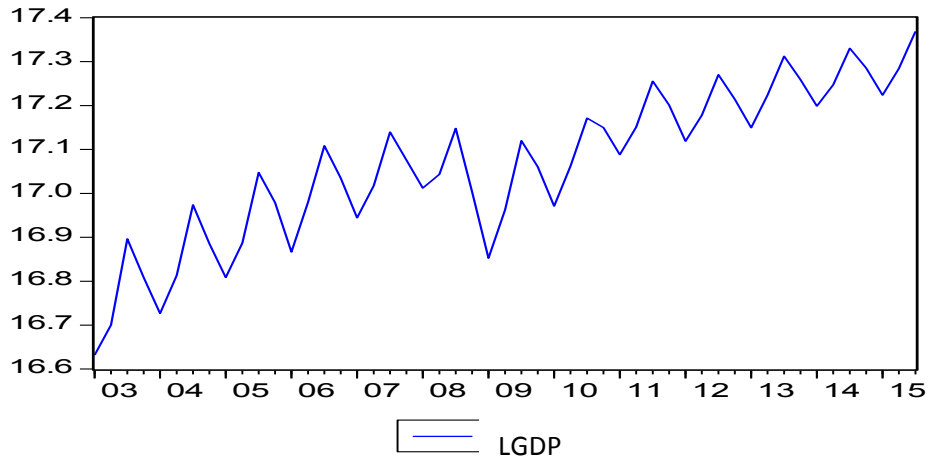
Graphic.1 presents the natural logarithms of health tourism revenues taken for reducing the variance effect. It can be seen that besides the seasonal effects and trend, there is a non-stationary distribution around average. Dummy variable was used to eliminate the deterministic effect of the seasonality and the newly formed series in presented in Graphic.2.

Graphic 2. Health Tourism Revenues Series between 2003Q-2015Q3 eliminated from Seasonality



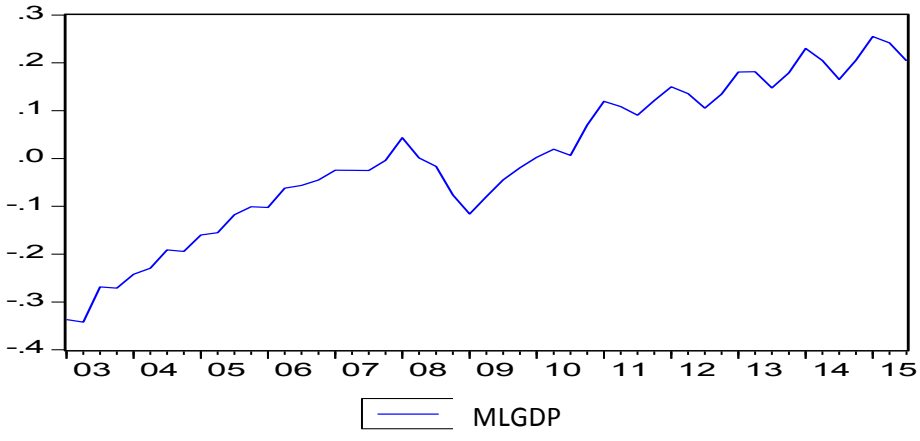
Graphic.2 shows that, there is a constant and increasing linear trend in the series of health tourism revenues which the seasonality was eliminated.

Graphic 3. Gross Domestic Product between 2003Q1-2015Q3



In Graphic.3 we can see that due to the deterministic effect of the seasonality and the increasing linear trend of the GDP serie a dummy variable was used to the series like in health tourism revenues series in order to elimination of the seasonal effect and the newly formed series are presented in Graphic.4.

Graphic 4. Gross Domestic Product between 2003Q1-2015Q3 eliminated from the Seasonal Effects



Graphic.4 shows the GDP after the seasonal adjustment series with a constant and trend. In order to obtain reliable results from the analysis one may need to conduct a unit root, thus the stationarity of the variables will be analyzed. Augmented Dickey-Fuller (ADF) unit root test was applied for the testing of the stationarity of the series. The results of this test are tabulated in Table 2.

The unit root null hypothesis against the stationary alternative corresponds to H_0: $\rho=0$ against H_A: $\rho<0$.

Table 2. ADF Unit Root Test Results

Variables	MLGDP		MLHEALTH	
	Zero-Level	1st Difference	Zero-Level	1st Difference
ADF	-2.140399	-6.676291	-2.352725	-9.856802
1% Significance	-4.161144	-3.574446	-4.175640	-3.577723
5% Significance	-3.506374	-2.923780	-3.513075	-2.925169
10% Significance	-3.183002	-2.599925	-3.186854	-2.600658
Probability Value	0.5108	0.0000	0.3983	0.0000
Lag length	2	1	5	2
Result	Non-stationary	I(1)	Non-stationary	I(1)

Results of ADF unit root test given in Table 2 shows that, the series are not stationary at level as they are not more negative than table values at 1%, 5% and 10% significance levels and however their probability values are not lower that 5%. Looking at the first differences, series MLGDP and MLHEALTH are stationary at their first differences. As a result of both series being I(1) the cointegration analysis would be suitable to conduct.

The long-term relationship between two or more non-stationary series can be detected by applying cointegration test following the application of unit root tests to the series and revealing out that they are stationary at the same level (Enders, 2001, p.465). The most commonly used cointegration tests are the Engle-Granger (1987) and Johansen (1998) tests. It is reported in general that, if there are more than two variables in a time series model, it is possible that there are more than one cointegration vector. As a result we have applied the Johansen test (Aral, 2015, p.73). On the other hand as a second test the Engle-Granger cointegration test was applied.

The cointegration null hypothesis against the cointegrated alternative corresponds to H_0: $\rho=0$ against H_A: $\rho<0$.

Table 3. Cointegration Test Results

	With Constant&Trend	With Constant, No Trend	No Constant, No Trend
ADF	-3.822882	-3.711069	-3.758287
1% Significance	-4.152511	-3.568308	-2.612033
5% Significance	-3.502373	-2.921175	-1.947520
10% Significance	-3.180699	-2.598551	-1.612650
Probability Value	0,0234	0,0068	0,0003
Result	Stationary	Stationary	Stationary

According to the results of the cointegration test tabulated in Table 3, results show that as distribution of regression residual series is I(0), there is a strong long-term relationship in both series (Engle and Granger, 1987).

Stationarity test results of model residuals show that ADF test statistics are more negative than table values and probability values are smaller than 5%. For Engle-Granger cointegration testing, residual series of the model are predicted with ordinary least squares (OLS) method results such as the series are stationary at zero-level and it does not contain a unit root.

In this case, gross domestic product and health tourism revenues can be stated to be cointegrated. There is a long-term relationship between the two variables. Once the presence of the long-term relationship is detected, an error correction model (ECM) combining both long-term and short-term dynamics together, is predicted. Lag length shall be determined prior to the Error Correction Model.

Table 4. Determination of the Lag Length

Lag	AIC	SIC
1	-4.463270*	-4.308835*
2	-4.428845	-4.233928
3	-4.415435	-4.179246
4	-4.364947	-4.086675

As shown in Table 4, the model with lag-one is suitable according to AIC and SIC criteria

Table 5. Error Correction Model:

Variable	Coefficient	t-Value
C	0.007410	1.963.938
ΔMLHEALTH	0.068799	4.774.904
ΔMLHEALTH(-1)	-0.044340	-2.434.876
ΔMLGDP(-1)	0.263951	1.836.518
EC_{t-1}	-0.177747	-2.465.265

An error correction model gives information about short-term dynamics. The results in Table.5 show parameters of the ECM model and that the parameter giving short-term information here is significant, There is a causality relationship between health revenues and GDP variables by reason of the short-term information parameter being significant. Error correction parameter is statistically significant, negative and within the (-1, 0) range. There is a convergence between the variables in long-term.

$$\lambda \cong 0{,}18$$

Health tourism and GDP series, which become distant from each other with the effect of shocks, get closer to their previous term balance with a ratio of 0.18 each term and they find their previous long-term balance approximately after 6 terms. Causality equations are

formed for the performance of causality analysis with short-term data. Equations and hypotheses about the causality equations are given below:

$$\Delta MLGDP_t = a_{1+} \sum_{i=1}^{k} (\beta_{1i} \Delta MLHEALTH_{t-i}) + \sum_{i=1}^{k} (\beta_{2i} \Delta MLGDP_{t-i}) + \varepsilon_{1t}$$

$$\Delta MLHEALTH_t = a_{2+} \sum_{i=1}^{k} (\delta_{1i} \Delta MLGDP_{t-i}) + \sum_{i=1}^{k} (\delta_{2i} \Delta MLHEALTH_{t-i}) + \varepsilon_{2t}$$

H_o^1 : $\beta_{1i}=0$ (Health tourism is not the cause of Gross domestic product)

H_A^1 : $\beta_{1i}\neq 0$ (Health tourism is the cause of Gross domestic product) (i=1,2,3,.....)

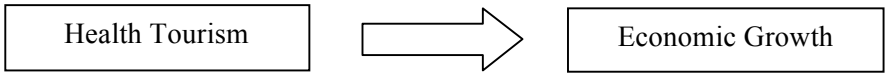
H_o^2 : $\delta_{1i}=0$ (Gross domestic product is not the cause of Health tourism)

H_A^2 : $\delta_{1i}\neq 0$ (Gross domestic product is the cause of Health tourism) (i=1,2,3,.....)

Table 6. Granger Causality Analysis

H_0 Hypothesis	F-Statistics	Probability Value	Decision
ΔMLHEALTH series is not the Granger cause of ΔMLGDP	6.77724	0.01239	Rejected
ΔMLGDP series is not the Granger cause of ΔMLHEALTH	1.72313	0.19580	Accepted

When the Table 6, showing whether there is a causality relationship between the variables or not, is studied, it can be observed that; "Health tourism income is not the cause of GDP" thus hypothesis is rejected. On the other hand; "GDP is not the cause of Health tourism income" hypothesis is accepted and thus, economic growth has no effect on health tourism income. There is no pairwise causality relationship between these two variables. Consequently, there is a unilateral causality relationship rising from health tourism income to economic growth. As a result, health tourism is the Granger causality of the economic growth.



Conclusion

Although there are numerous studies in literature, analyzing the effect of tourism income on economic growth and revealing out such effect, no study is available about the effect of health tourism income on economic growth. In parallel with this, the relationship between health tourism income and economic growth in Turkey was analyzed in this study and the analysis revealed out a unilateral causality relationship rising from health tourism income toward economic growth.

In recent years, people travel abroad more and more for health reasons including the desire to evade long waiting times and to get treatment services for cheaper prices. Therefore, an intense competition environment is created in the world regarding health tourism. This statement goes along with Turkey as well. Shareholders in health tourism field are supported in order to increase the income from health tourism, to attract more tourists, to gain a competitive advantage over the competitors and to achieve the goals defined for health tourism. This paper, which reveals out that the income from health tourism is one of the causes of economic growth, proves that appropriate decisions are taken regarding the goals defined and the support given.

Health tourism, which has gained importance in Turkey and all around the world, will probably create a competition environment for more countries in the upcoming years. This prediction arises from the fact that, as also seen at the end of our study, there will be more countries revealing out the income from health tourism as the cause of economic growth. Therefore, these countries will try to find themselves a place in the ever-growing health tourism market as soon as possible and to become a leader country in this regard. Within this framework, Turkey has defined its program objectives in the Action Plan designed for the Health Tourism Development Program, which is prepared in parallel with the tenth development plan and introduced the actions to be taken in order to achieve these objectives. Considering that competitor countries define similar objectives and implement similar actions, Turkey can only gain a competitive edge if it defines its distinctive properties and focuses on these. To achieve this:

- Shareholders taking part in the health tourism chain and carrying out supportive activities must be identified and actions must be taken in cooperation with them in order to create added value.

- Health Tourism Coordination Board was established to eliminate the problems and defects of health tourism, to strengthen its merits and to work in cooperation with all shareholders. Establishment of this Board is significant for health tourism as it brings key players of the sector together. Shareholders must regularly meet, create solutions, put the solution offers into practice and share the results with the society so that the Board can attain its objectives.

- Quality service is important in health tourism just like in any other field. Therefore; while granting incentives to accredited institutions would be an appropriate step to take, the ever growing market will need new investors. So, it is deemed important to consider about the encouragement of the potential investors. For example; Turkey has rich resources in terms of thermal spring tourism and it becomes the 7th in the world and the 1st in Europe in this regard (Turkish Ministry of Culture and Tourism, 2012, p.17). On the other hand; as our country doesn't have sufficient amount of facilities and beds, we cannot make use of these resources and we fall behind our competitors.

- A special focus must be given to the development of the image and perception of Turkey, as this is very important for the future of all types of tourism, including health tourism. Advertising and promotional activities must be carried out in order to overcome the negative perception of Turkey that is unethically being tried to be developed in the international market. Marketing activities can focus on loyal customers as the most

effective advertising tool. The holiday concept of the sea-sand-sun triple created by Turkey over the years and its rich historical and cultural heritage can provide the country with a great competitive advantage for the development of image for health tourism. Furthermore; in the promotional activities organized abroad, a special focus can be given to accredited institutions and successful physicians of Turkey and the fact that high-quality service can be received at a cheaper price and without the need to wait for long.

- Besides all these recommendations and the improvement of the physical infrastructure and available facilities, there is the need for qualified human resources and more accredited health institutions for both thermal spring tourism and the tourism for the elderly disabled people. The number of tourists coming to Turkey can be increased with the modifications of the infrastructure to make the things easier for the disabled tourists. Moreover; expectations and complaints of tourists must be regularly inquired and remedied for the improvement of service quality in health tourism.

References

Aral, A. (2015). Türkiye'de Döviz Kuru ve Dış Ticaret İlişkisi: 1992-2013 Dönemi Eşbütünleşme Analizi. Adnan Menderes Üniversitesi Sosyal Bilimler Enstitüsü İktisat Anabilim Dalı (YL Tezi), Aydın.

Bahar, O. (2006). Turizm Sektörünün Türkiye'nin Ekonomik Büyümesi Üzerindeki Etkisi: VAR Analizi Yaklaşımı. *Celal Bayar Üniversitesi İktisadi ve İdari Bilimler Fakültesi Yönetim ve Ekonomi Dergisi* 13/2 137-150.

Bahar, O. ve Baldemir, E. (2008). Uluslararası Ticaret ile Uluslararası Turizm Arasındaki Nedensellik İlişkisi: Türkiye Örneği. *Dokuz Eylül Üniversitesi Sosyal Bilimler Enstitüsü Dergisi,* 10(4), 97-111.

Binler, A. (2015). Türkiye'nin Medikal Turizm Açısından Değerlendirilmesi ve Politika Önerileri. (Uzmanlık Tezi). www.kalkinma.gov.tr

Bozgeyik, Y. ve Yoloğlu, Y. (2015). Türkiye'de Turizm Gelirleri ile GSYH Arasındaki İlişki: 2002-2014 Dönemi. *Uluslararası Sosyal Araştırmalar Dergisi,* 8(40), 627-640.

Çoban, O. ve Özcan, C., C. (2013). Türkiye'de Turizm Gelirleri-Ekonomik Büyüme İlişkisi: Nedensellik Analizi (1963-2010). *Eskişehir Osmangazi Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi,* Nisan 8(1), 243-262.

Engle, F., R. ve Granger, J., W., C. (1987). CoIntegration and Error Correction: Representation, Estimation, and Testing. Econometrica, 55(2), 251-276.

Johansen, S. (1988). Statistical Analysis of Cointegration Vectors. *Journal of Economic Dynamics and Control,* 12, 231-254.

Kaygısız, D., A. (2015). Net Turizm Gelirleri ve Büyüme İlişkisi: Var Model-Granger Nedensellik Analizi. Uluslararası Alanya İşletme Fakültesi Dergisi, 7(2), 155-164.

Kızılgöl, Ö. ve Erbaykal, E. (2008). Türkiye'de Turizm Gelirleri ile Ekonomik Büyüme İlişkisi: Bir Nedensellik Analizi. *Süleyman Demirel Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi,* 13(2), 351-360.

Özdemir, A., R. ve Öksüzler, O. (2006). Türkiye'de Turizm Bir Ekonomik Büyüme Politikası Aracı Olabilir mi? Bir Granger Nedensellik Analizi. *Balıkesir Üniversitesi Sosyal Bilimler Enstitüsü Dergisi,* 9(16), 107-126.

Sağlık Turizmi Koordinasyon Kurulu (SATURKK). http://saturk.gov.tr/index.php.

Şahbaz, Ü. (2007). Zaman Serilerinde Nedensellik Analizi (Türkiye'de Ekonomik Büyüme ve Turizm Gelirleri Arasındaki İlişkinin Nedensellik Analizi) Anadolu Üniversitesi Sosyal Bilimler Enstitüsü İşletme Anabilim Dalı (YL Tezi)

Selvi, S. M. (2008). Sağlık Turizmi. (Editörler: Necdet Hacıoğlu and Cevdet Avcıkurt). Turistik Ürün Çeşitlendirilmesi. Nobel Akademik Yayıncılık Eğitim Danışmanlık Tic. Ltd.Şti, Ankara, ss.275-294.

T.C. Kalkınma Bakanlığı, (2014). Sağlık Turizminin Geliştirilmesi Programı Eylem Planı, Onuncu Kalkınma Planı (2014-2018). Program Koordinatörü Sağlık Bakanlığı.

T.C. Kültür ve Turizm Bakanlığı, (2014). Sağlık Turizmi. http://www.ktbyatirimisletmeler.gov.tr/TR,11492/saglik-ve-termal-turizmi-tanimi.html

T.C. Kültür ve Turizm Bakanlığı, (2012). Sağlık ve Termal Turizmi. Yatırım ve İşletmeler Genel Müdürlüğü, Kasım 2012.

T.C. Merkez Bankası, (2015). Elektronik Veri Dağıtım Sistemi, http://evds.tcmb.gov.tr/

T.C. Sağlık Bakanlığı, (2011). Sağlık Turizmi ve Turistin Sağlığı Uygulama Rehberi. Tedavi Hizmetleri Genel Müdürlüğü, Sağlık Turizmi Koordinatörlüğü.

T.C. Sağlık Bakanlığı, (2012a). Sağlık Turizminde Süreçler ve Aracı Kuruluşlar Araştırma Raporu. Hazırlayanlar; Aydın, D., Constantinides, C., Mike, C., Yılmaz, C., Genç, A. ve Lanyı, A. (2012). Sağlık Hizmetleri Genel Müdürlüğü Sağlık Turizmi Daire Başkanlığı, Ankara.

T.C. Sağlık Bakanlığı, (2012b). Sağlık Turizmi El Kitabı. Sağlık Hizmetleri Genel Müdürlüğü. Sağlık Turizmi Daire Başkanlığı.

T.C. Sağlık Bakanlığı, (2014). Turizm ve Sağlık. http://saglik.gov.tr/SaglikTurizmi/belge/1-10592/turizm-ve saglik.html

T.C. Sağlık Bakanlığı, (2015). Türkiye'de Termal Turizm. http://www.saglikturizmi.gov.tr/tr/turkiyede-termal-turizm.php

Topuz, N. (2012). Türkiye Sağlık (Medikal) Turizmi Stratejisi 2023. (Uzmanlık Tezi) T.C. Kültür ve Turizm Bakanlığı Yatırım ve İşletmeler Genel Müdürlüğü, Ankara.

TÜİK. (2016). Geliş Nedenine Göre Çıkış Yapan Ziyaretçiler, Harcama Türlerine Göre Turizm Geliri, Turizm Geliri ve Kişi Başı Ortalama Harcama 2003 - 2016. Türkiye İstatistik Kurumu.

Yavuz, Ç., N. (2006). Türkiye'de Turizm Gelirlerinin Ekonomik Büyümeye Etkisinin Testi: Yapısal Kırılma ve Nedensellik Analizi. *Doğuş Üniversitesi Dergisi,* 7(2), 162-171.