

MANAGING OF THE TOURIST DESTINATIONS OFFER BASED ON THE DYNAMICS AND THE FORECAST OF TOURIST MOVEMENT

Kozicka K., Szopa R.*

Abstract: The purpose of this article was to examine dynamics of tourist movements of Greek destinations of Itaka travel agency in years 2005 - 2015 as one of factors affecting the creation and management of the offer of its tour operator. A statistical analysis showed the permanent upturn of the number of tourists of this office travelling to Greece in the discussed period and meaning resemblance of structures of some destinations. On the base on statistical observation it is possible to deduce, that upturn will be stable in next few years. The forecast of the number of tourists for years 2016 and 2017 was being made as the confirmation.

Key words: tourism, tourist movement dynamics, tourist supply, tourist demand, managing the tourist offer

DOI: 10.17512/pjms.2016.14.2.12

Article's history:

Received June 6, 2016; Revised September 20, 2016; Accepted September 26, 2016

Introduction

Tourism is one of the most dynamically developing branches of the contemporary world economy. According to data of the World Tourism Organization (UNWTO, 2016) in 2015 international incomings from tourism amounted circa 1136 billion EUR. International tourism is responsible for 7% of the world export of goods and services and is no match in this respect only for fuel and chemical industries. Moreover it creates 10% of world GDP, and every eleventh employee is employed in this sector. The stable development of tourism is possible thanks to the globalization, the market economy and progress in areas of transport and communications technologies (Murali and Poyyamoli, 2010; Fedorko et al., 2015; Ślusarczyk, et al., 2016).

Increase of tourist movements has a positive impact on the economy of every country for instance through the inflow of cash (from non-residents coming from abroad) and increase in the competitiveness of the state being a purpose of the arrival tourism, the betterment of investment in tourist objects and para tourism infrastructure, the improvement of the situation of the local business or reduction of unemployment thanks to generating new places of employment (Harasarn and Chancharat, 2014; Chancharat and Somsawas, 2015; Pyke et al., 2016; Frolova et al., 2016; Bačík et al., 2016). However, there will be no development of the tourist

* **Katarzyna Kozicka**, MSc Czestochowa University of Technology, Faculty of Management, **Romuald Szopa**, Prof. PhD, Academy of Physical Education in Katowice, Faculty of Management,

✉ Corresponding author: romuald.szopa@gmail.com

industry, if there will be no willingness to practice tourism from one side and the readiness of meeting these tourist needs from the other side, which means, saying straighter – without the demand for tourist products and their supply.

Supply and demand (by tourist product) are main categories describing the tourist market, therefore one should devote them a little bit more attention. It is possible to define the tourist supply straight as the whole of goods and services, which are being offered on the tourist market by the determined price level. Elements being characteristic of this category above are above all big capital-intensive nature, lack of ability of storing, seasonal character, connection with advantages of the place of the tourist reception and the unity of manufacturing processes and consumption in time and space (Pawlusiński, 2008).

The tourist demand, however, constitutes the sum of tourist goods and services, which tourists are willing to purchase at the determined price (Gaworecki, 2010). However, for specific destination it he can be defined as the quantity of tourist products, which consumers are ready to purchase in the stated time by the given set of conditions. These conditions, determining the volume of inquiry, are costs of living of the tourist in the place of the tourist reception and travel expenses, the availability and prices in alternative destinations, the potential income of consumers, advertising expenses of tourist enterprises, tastes of consumers and other social, cultural, geographical and political factors (Song and Witt, 2011). Analyzing factors affecting the forming of the tourist demand, the majority of researchers' focus on two economic factors, which income and prices are, although many of them emphasize that marketing expenses have equally great significance (Song et al., 2010).

The degree of fitting the supply and demand, similarly as in other branch of economy, decides about success or failure of tourism activity. Therefore an appropriate measurement and tourist demand forecasting has a great significance. Tourist demand can be measured with different indicators, but definitely its size is the most often given by the number of arriving tourists, tourist expenses and the number of tourist-nights in the place of the tourist reception (Ouerfell, 2008; Song et al., 2009). Setting the number of tourists arriving to given destination is particularly useful from the point of view of suppliers of tourist services, which want to know, how great number of customers they can expect. Next, the amount of tourist expenses is useful at assessing the impact of tourism on economy – and so has material meaning for economists and authorities (Song et al., 2010).

However, confining oneself to the measurement and the forecasting of the demand is not able to assure of the market equilibrium, the success of the industry and individual tourist enterprises. Therefore proper management of the tourist supply and demand gains the special significance. Managing the supply in broad meaning consists in control of relations in the tourist supply chain (Zhang et al., 2009). Looking from a perspective of the individual company, it is possible however to consider them also as managing his own offer – e.g. from a tour operator point of view it will be a management of the fan of tourist packages offered by it.

However managing the tourist demand comprises from such elements, as the demand forecasting, marketing action and planning the sale based on manufacturing capacities (Zhang et al., 2009).

Individuals, which have peculiarly great abilities in the managing of supply and demand are tour operators that are entities dealing with providing tourist packages, in which accommodating, transport, trips, service and delivering the food and souvenirs are usually included (Font et al., 2008). In their sphere of influence remains not only a modelling of the supply, which they are directly creating, but also a forming of the tourist demand. It is relatively easy to steer this demand at using the appropriate marketing toolkit, because it is highly susceptible to promotional measures. Wanting to achieve the respective effects in this regard one should however remember about taking other distinctive features into account, like e.g. the complementary character and the substitution-ness, the seasonal character, the sensitivity to hesitations of the trade boom or the individuality of feeling the needs by tourists (Dziedzic and Skalska, 2012).

Analysis of Tourism Movement of Greek Destinations of Itaka Travel Agency

The fundamental element projecting onto the development of tourism in every state in the world are material tourist facilities, amongst which one should exchange: the tourist accommodation, the availability of means of communication and the catering base. In Greece there are overall 10 thousand lodging objects including hotels and other objects of the hotel type as well as camping sites and campsites. The most from them are on South Aegean Islands, the least in Western Macedonia. Generally lodging objects in Greece can hold 750 thousand people.

In Poland Itaka is one of travel agencies offering long-stay trips to Greece. In 1993 its offer included trips to Greece for the first time. This offer concerned trips to Chania – a city situated on Crete and 2 100 of persons used it. Due to the growing interest with travels in this direction and because of the dynamic international development of tourist movements, offer of Itaka Travel Agency started to grow. In 1996 tourists could go to Rhodes, in 2004 the agency decided to extend the offer by trips to Kawala and Kalamata, and in 2005 it offered travels to islands of Rhodes and Crete and to cities: Athens, Thessaloniki, Kalamata, Paros, Patras and Kawala. Hereinafter above mentioned cities were conventionally called the Continent.

In 2007 Itaka offered tourist travels to island of Lesbos, next year the agency expanded its services to handling trips to Corfu and Zakynthos. In consecutive years tourists having decided on the travel to Greece via Itaka agency could go also to the island of Kos (from 2010), to Patras (from 2012), to Cephalonia (from 2013) to the islands of Samosas and Santorini (from 2014). This year's (i.e. 2016) offer was widened by the organization of trips to Sitia. Increasing the number of tourist destinations in the offer of Itaka travel agency in years 2005-2015 found its reflection in the change of the number of tourists visiting areas of the tourist

reception. Detailed data concerning the number of tourists visiting individual destinations in the discussed period are presented in Table 1.

Table 1. Number of tourists in individual destinations in years 2005-2015

Year Dest.	Rhodes	Crete	Lesbos	Corfu	Zakynthos	Kos	Santorini	Cephalonia	Samos	Continent	Sum
2005	2464	7780	0	0	0	0	0	0	0	3993	14237
2006	3634	10405	0	0	0	0	0	0	0	4392	18431
2007	7202	14036	2294	0	0	0	0	0	0	6960	30492
2008	8459	20857	0	2507	2847	0	0	0	0	9218	43888
2009	8168	22668	0	6568	4903	0	0	0	0	7176	49483
2010	11515	29116	0	5802	7311	3081	0	0	0	4818	61643
2011	16926	29759	0	6642	6247	3162	0	0	0	4608	67344
2012	12886	26841	0	6995	7835	6216	0	0	0	5294	66067
2013	13991	38080	0	11132	12677	10214	0	2926	0	5072	94092
2014	16687	49711	0	17542	13083	19155	2786	2588	2699	14904	139155
2015	21513	53374	0	23664	20129	19506	1732	0	2794	17091	159803
Sum	123445	302627	2294	80852	75032	61334	4518	5514	5493	83526	744635
% share	16.6	40.6	0.3	10.9	10.1	8.2	0.6	0.7	0.7	11.2	X

From all Greek tourist destinations Poles liked Crete for the most. During years 2005-2015 302 627 tourists coming from Poland visited this island, what is being transferred into 40.6% of tourists visiting Greece in the time period indicated higher. On the second place in terms of tourist stays island Rhodes positioned itself, which in years 2005-2015 was visited by 123 445 of tourists (16.6%), whereas on the third place was Continent, which in the indicated time period was visited by 83 526 tourists (11.2%). In turn, there were islands of Corfu (80 852 – 10.9%), Zakynthos (75 032 – 10.1%) and Kos (61 334 – 8.2%). The smaller than one percent of the participation of Polish citizens in tourist movement have: Cephalonia (5 514 – 0.7%), Samos (5 514 – 0.7%), Santorini (4 520 – 0.6%) and Lesbos (2 294 – 0.3%).

The highest growth of the interest of the visitors of Greek tourist directions had the island of Corfu, which in 2008 2507 persons visited, and in 2015 over 800% more. A little bit lower growth had the island of Rhodes, which in 2005 2 464 adult tourists visited, and in 2015 by 773% more. The big increase of tourist stays had also the island of Zakynthos, which in 2008 2 847 tourists visited, but in 2015 about 600% more. The lowest growth had the Continent – in 2005 3 993 tourists

visited these places, and in 2015 only 348% more and islands: Kos (553%) and Crete (586% in comparison to 2005).

At calculating this data years 2005-2015 or the beginning of the period in which Itaka travel agency entered the offer of a given tourist destination were taken into consideration. Therefore, even though the island of Corfu was pleased with greater popularity with Polish tourists than Rhodes in two last years, when we will consider the recalled time period Rhodes in general classification performs better and has the greater percentage than travels to the island of Corfu entered into the offer in 2008.

Dynamics of Tourist Movement

To examine dynamics of the number of tourists visiting Greece in years 2005-2015 fixed-base (2005) and variable-base indexes were determined. Detailed results are presented in Table 2.

Table 2. Fixed-base and variable-base indexes for the number of tourists in years 2005-2015

Year	Number of tourists	Fixed-base indexes	Variable-base indexes	% yearly growths fixed-base	% yearly growths variable-base
2005	14237	1,000	1,000	0	0
2006	18431	1,295	1,295	29.5	29.5
2007	30492	2,142	1,654	114.2	65.4
2008	43888	3,083	1,439	208.3	43.9
2009	49483	3,476	1,127	247.6	12.7
2010	61645	4,33	1,246	333	24.6
2011	67344	4,731	1,092	373.1	9.2
2012	66067	4,641	0,981	364.1	-1.9
2013	94092	6,609	1,424	560.9	42.4
2014	139155	9,775	1,479	877.5	47.9
2015	159803	11,225	1,148	1022.5	14.8

Analyzing fixed-base indexes, where in the initial stage year 2005 was accepted, it is possible to observe the very strong upturn. E.g. in 2015 the height of the number of tourists compared with 2005 was over 1000%. In case of variable-base indexes fluctuations between individual periods are noticeable. 2012 was characterized by a fall – compared with 2011 the number of tourists declined about 1.9%, in 2007 the greatest increase took place, it took out 65.4%. In final years the greatest increase was in 2014, it amounted to 47.9%.

On account of the great popularity of main Greek directions: Crete, Rhodes and the Continent stayed subjected to a detailed analysis. A size of tourist movement in years 2005-2015 years in exchanged directions of travel is presented in Figure 1.

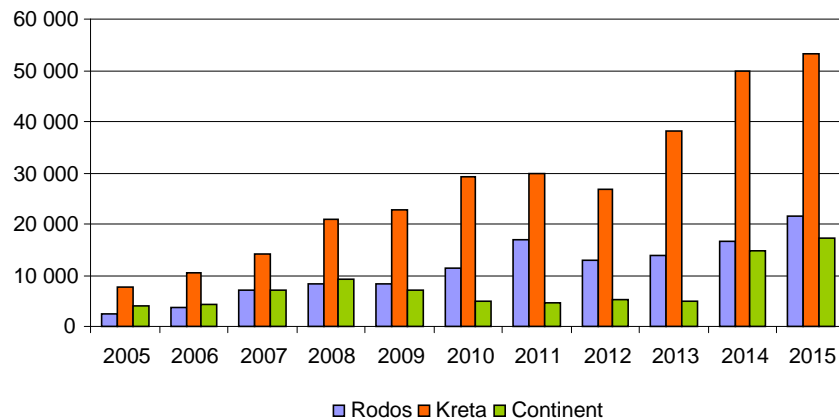


Figure 1. Tourist movement on island of Crete and Rhodes and the Continent in years 2005-2015

From all Greek tourist destinations, Crete invariably enjoys the greatest popularity among Polish tourists for years. As similarly as in case of other Greek tourist destinations a dominating tendency was a height of the number of tourists visiting Crete, with variation for the period, in which a national economic crisis spread through Greece, which one of essential consequences was a fall in the number of tourists. In this period number of tourists compared with 2011 diminished for 2 918.

In years 2005-2015 123 445 tourists of Itaka travel agency visited Rhodes. Amongst Greek tourist destinations this island takes second place in terms of the popularity. During indicated period a height of the number of tourists was a dominating tendency, with variation for 2012, in which the number of tourists diminished from 16 926 in 2011 to 12 886. This state stabilized only in 2015, when the number of tourists rose from 16 687 in 2014 to 21 513, what constituted the 17.4% of the whole of tourists visiting Rhodes in years 2005-2015. In years 2005-2015 83 526 tourists visited the Continent, over 20% of this volume constitute tourists visiting indicated above area in Greece in 2015. As can be seen on the graph from 2005 to 2008 an upturn dominated, however from 2008 to 2013 number of tourists visiting the Continent fell (with little variation for 2012) and in these years took out consequently: 9 218 (2008), 7 176 (2009), 4 818 (2010), 4 608 (2011), 5 294 (2012), 5 027 (2013). This number rapidly grew in 2014 and amounted 14 504 of persons, what constituted over 18% of the total number of tourists visiting indicated area in years 2005-2015.

Similarity of Structures of the Number of Tourists and the Forecast

Comparative study of structures of the number of tourists was conducted for islands of Crete, Rhodes, the Continent and the total number of tourists in years 2005-2015.

An indicator of resemblance of structures was used for the examination. In case of structures of the number of tourists for the island of Crete and the total number of tourists, the value of this indicator amounts $w_p \approx 0.94$ and is very close to the unity, what marks that structures of the analyzed community are very similar. For the island Rhodes and the total number of tourists the value of the indicator is $w_p \approx 0.89$, what also attests high resemblance of structures. Due to the fact that in years 2005-2015 the largest number of tourists visited Crete and Rhodes, a comparative study of structures of the number of tourists for these islands was conducted. In the considered case using data from the Table 1 his value amounts $w_p \approx 0.95$. The value of the indicator close to the unity means that structures of the analyzed community are very similar. Last comparison of structures of the number of tourists was conducted for the Continent and the total number of tourists in years 2005-2015. In the considered case the value of the indicator of resemblance amounts $w_p \approx 0.83$. Its value is not as so close to the unity, how in previous cases, however it also proves considerable resemblance of structures. It is worthwhile marking that on four islands – Rhodes, Corfu, Zakynthos and Kos, the average number of tourists in years 2013-2015 was on similar level (averagely 18 thousand tourists annually). On the basis of data from Table 1 for the total number of tourists visiting Greece in the discussed period a function of the trend was pointed. In this case it was a polynomial post of the third grade: $y = 288.12x^3 - 3899.6x^2 + 856x - 10158$, for which the rate of the similarity amounts $R^2 = 0.97$. Table 3 compares real data with data set with the function of the trend and a forecast of tourist movement for 2016 and 2017 was being set.

Table 3. Forecast for the total number of tourists of all Greek destinations

Year	Actual data	Theoretical data
2005	14237	10087
2006	18431	24261
2007	30492	34093
2008	43888	41312
2009	49483	47647
2010	61645	54826
2011	67344	64579
2012	66067	78633
2013	94092	98718
2014	139155	126562
2015	159803	163894
2016		212443
2017		273937

High compliance of the function of the trend with empirical results is being provided by the fact that in 2015 the actual number of tourists visiting Greece amounted 159 803, whereas theoretical (enumerated from the model) amounted 163 894. The difference between these sizes is slight and takes out about 2.5%.

This high consistency of actual and theoretical data gives the ground for setting the forecast of the number of tourists for 2016 and 2017. According to the set function of the trend the number of tourists in 2016 should take about 212 400, whereas in 2017 – 273 900.

Summary

Forming of the offer of tourist trips corresponding to the demand has key importance in activity of tour operators. Even the best offer, however concerning the place of the tourist reception, which is not pleased with an interest and a good opinion amongst customers, will not let the travel agency achieve the success. Admittedly, guiding the demand is possible from the position of the organizer of the tourism, however it results in considerable costs associated for instance with the marketing communication, the advertisement or price promotions. Therefore in managing the tourist offer extremely important are analysis of dynamics of the demand and its forecasting in the reference to individual tourist destinations. Offering customers the trip to places, to which they really want to go, allows among others for limiting costs of marketing referring to the creation of the demand for services offered by tour operator.

Comprehensive statistical analysis of data concerning tourists of Itaka travel agency Ithaca travelling to Greece conducted in this study demonstrated the permanent upturn of tourist movement on this destination. Only in 2012, because of an economic crisis recalled earlier, a fall in the number of tourists took place. Forecasts set for years 2016 and 2017 let to state that in these years even more tourists will arrive in Greece. Moreover examinations showed that the most popular direction was island of Crete, next island of Rhodes and the Continent, as well as that tourist movements on four islands i.e. Rhodes, Zakynthos, Corfu and Kos in years 2013-2015 was on similar level. Comparison of structures of tourist movement on Crete, Rhodes and the Continent with the structure of the whole number of tourists of this office on Greek destinations let for setting indicators of the resemblance of structures. These indicators assumed values close to the unity, what marks that structures of examined communities are significantly similar.

Results of conducted analysis allow to express the opinion that development of the offer of Greek destinations is a good solution for Itaka travel agency. Practically every place of the tourist reception entered into this offer meet customers' interest, which with time only grows up. The demand is more and more great; in response to it Itaka should increase cooperation with local suppliers of tourist services in order to be able to satisfy this increasing demand. Results of the present analysis are curiously corresponding with many other examinations concerning tourist trips of Poles, or residents of the European Union. Year to year Greek destinations of Itaca travel agency attract more and more large crowd of tourists (except for 2012, when the slight decline of the sale was noted), while how Luberda shows (2014), for instance in 2009 the number of Poles going to rest to Greece fell in the relationship up to the previous year. It marks that despite of the general fall in

an interest in this direction; specific tour operator (in this case Itaka) was able to increase a demand for services of this type. Even the world economic crisis in 2008 did not harm the popularity of Greek destinations amongst customers of Itaka travel agency, although at that time total tourist demand in Greece diminished. Examinations, which Parzych and Zienkiewicz conducted (2012), as well as Kurek and Waclawik (2013) confirm that – they show that the crisis disadvantageously affected the number of tourist arrivals in this country. A comparison to results concerning turnovers tour operators acting in Poland (Kotra and Ruskowski, 2012) is also interesting. Because it turns out that Itaka is one of two big tour operators, which increased their turnovers in years 2007-2010. Greek destinations, which gain more and more popularity, are for sure responsible for it to a great extent. However, one should notice the fact that greater turnovers not always must result from larger number of tourists (because they can be associated with higher prices of tourist parties). Yet, a statement that Itaka travel agency is able to manage its offer of Greek destinations correctly, appropriately fitting it to the tourist demand and also to create this demand competently.

References

- Bačík, R., Mudrik, M., Štefko, R., Kot, S., 2016, *Analysis of tourism travel trends after 2014*. "Journal of Environmental Management and Tourism", 7 (1)
- Chancharat S., Somsawas J., 2015, *Economics impacts of cross-border tourism*, "Journal of Environmental Management and Tourism", 1(11).
- Dziedzic E., Skalska T., 2012, *Ekonomiczne uwarunkowania rozwoju usług turystycznych w Polsce*, Warszawa, Stowarzyszenie na Rzecz Badania, Rozwoju i Promocji Turystyki.
- Fedorko R., Bacík R., Kot S., Kakalejčík L., 2015, *The Analysis of Blog Use as a Marketing Communication Tool by the Selected Target Group in the Conditions of the Slovak Market*, "Journal of Advanced Research in Law and Economics", 6(1).
- Font X., Tapper R., Schwartz K., Kornilaki M., 2008, *Sustainable Supply Chain Management in Tourism*, "Business Strategy and the Environment", 17.
- Frolova E.V., Kabanova E.E., Medvedeva N.V., 2016, *The Development of Inner Tourism: Problems and Prospects under the Modern Russian Conditions*, "Journal of Environmental Management and Tourism", 1(13).
- Gaworecki W.W., 2010, *Turystyka*, Warszawa: PWE.
- Harasarn A., Chancharat S., 2014, *International tourism and economic growth in Thailand: Co-integration and the Granger causality test*, "Journal of Environmental Management and Tourism", 2(10).
- Kotra K., Ruskowski J.M., 2012, *Popyt turystyczny w Polsce w obliczu światowego kryzysu finansowego w latach 2007-2010*, "Zeszyty Naukowe Uniwersytetu Szczecińskiego. Ekonomiczne Problemy Usług", 82.
- Kurek S., Waclawik P., 2013, *Zróżnicowanie zagranicznej turystyki przyjazdowej w Unii Europejskiej w czasach kryzysu gospodarczego*, "Prace Komisji Geografii Przemysłu Polskiego Towarzystwa Geograficznego", 24.
- Luberda M., 2014, *Uczestnictwo Polaków w krajowych i zagranicznych wyjazdach turystycznych i ich kierunki*, "Rozprawy Naukowe Akademii Wychowania Fizycznego we Wrocławiu", 47.

- Murali J., Poyyamoli G., 2010, *Developing Indicators for Monitoring Tourism and Sustainability in Rameswaram, a Buffer Area in the Gulf of Mannar Marine Biosphere Reserve, India*, "Journal of Environmental Management and Tourism", 1(1).
- Ouerfell C., 2008, *Co-integration analysis of quarterly European tourism demand in Tunisia*, "Tourism Management", 29(1).
- Palusiński R., 2008, *Gospodarcze aspekty turystyki*, [In:] Kurek W. (Ed.), *Turystyka*, Warszawa: PWN.
- Parzych K., Zienkiewicz A., 2012, *Dynamika zróżnicowania przestrzennego ruchu turystycznego w krajach europejskich w latach 1995-2010*, "Zeszyty Naukowe Uniwersytetu Szczecińskiego. Ekonomiczne Problemy Usług", 82.
- Pyke S., Hartwell H., Blake A., Hemingway A., 2016, *Exploring well-being as a tourism product resource*, "Tourism Management", 55.
- Ślusarczyk B., Smolag K., Kot S., 2016, *The Supply Chain of a Tourism Product*, "Aktual'ni Problemy Ekonomiki", (Actual Problems in Economics), 179.
- Song H., Li G., Witt S.F., Fei B., 2010, *Tourism demand modelling and forecasting: how should demand be measured?*, "Tourism Management", 16(1).
- Song H., Witt S.F., 2011, *Tourism demand modelling and forecasting. Modern Econometric Approaches*, London & New York, Routledge.
- Song H., Witt S.F., Li G., 2009, *The Advances Econometrics of Tourism Demand*, London & New York: Routledge.
- UNTWO, *Tourism Highlights*, 2016 Edition.
- Zhang X., Song H., Huang G.Q., 2009, *Tourism supply chain management: A new research agenda*, "Tourism Management", 30.

ZARZĄDZANIE OFERTĄ OŚRODKÓW TURYSTYCZNYCH W OPARCIU O DYNAMIKĘ I PROGNOZY RUCHU TURYSTYCZNEGO

Streszczenie: Celem niniejszego artykułu było zbadanie dynamiki ruchu turystycznego greckich destynacji biura podróży Itaka w latach 2005 - 2015 jako jednego z czynników wpływających na tworzenie i zarządzanie ofertą touroperatora. Analiza statystyczna wykazała trwałe ożywienie liczby turystów tego biura podróżujących do Grecji w omawianym okresie i oznacza podobieństwo struktur niektórych destynacji. Na podstawie obserwacji statystycznej, wywnioskować można, że ożywienie to będzie stabilne w ciągu najbliższych kilku lat. Jako potwierdzenie wykonana została prognoza liczby turystów w latach 2016 i 2017.

Słowa kluczowe: turystyka, dynamika ruchu turystycznego, podaż turystyczna, popyt turystyczny, zarządzanie ofertą turystyczną

基於動力學和旅遊運動預測的旅遊目的地提案管理

摘要：本文的目的是檢查2005-2015年伊塔卡旅遊機構的希臘目的地的旅遊運動的動態作為影響其旅遊經營者的提議的創建和管理的因素之一。統計分析顯示，在所討論的時期，這個辦公室到希臘旅行的遊客人數永久性上升，意味著某些目的地的結構相似。在統計觀察的基礎上，可以推斷，上漲在未來幾年內將是穩定的。對2016年和2017年遊客人數的預測是作為確認。

關鍵詞：旅遊，旅遊運動動態，旅遊供給，旅遊需求，管理旅遊報價