TOURISM DEMAND IN THE SOUTH-WEST PLANNING REGION OF MACEDONIA

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Abstract

The paper makes an attempt to forecast tourism demand in the South-west Planning Region (SWPR) of Macedonia. The author applies the trend analysis model and the simple linear regression model for that purpose. The linear regression model gave better and more accurate results. According to the ten-year-forecasts obtained from the linear regression results, it is expected an insignificant increase of tourism demand in the SWPR. Yet, according to the ten-year forecasts obtained from the trend analysis model, it is expected a great increase of tourism demand in this region. It should always have in mind that the forecasts can never be absolute accurate due to many influential factors. Regardless the applied method, it cannot explain the changes and reasons behind that.

Key words

Forecasting, Tourism demand, South-west Planning Region, Macedonia

INTRODUCTION

Tourism today is a global industry involving hundreds of millions of people in the international and domestic trips each year. The World Tourism Organization (WTO) estimated that in 2015 there were 1.184 million international travellers although some of this activity consists of the same travellers involved in more than one trip per year and the precise scale of the tourism industry is in doubt.

Tens of millions of people globally work directly in the industry and many more are employed indirectly. Hundreds of millions of people receive income from tourist activities because they live in so-called destination areas as "homely" population. Millions of dollars are spent each year to advertise and promote vacations and travel products. For much of recorded history, the journey was difficult, inconvenient, expensive, and often dangerous. However, journeys were undertaken and it suggests some strong motivating factors. In the last 150 years, travel has become more

affordable and not so hard, so that those who travel were prepared to admit that the pleasure was one of the motivations for their trip.

20 years ago, the key objectives of tourism planning were summarized as follows: "to ensure that visitors have a chance to gain a satisfactory and pleasurable experience and at the same time to provide funds to improve the lives of residents and areas of destination." Williams (Mason, 2016) suggested a number of overall objectives for tourism planning. He pointed out that can help to shape and control schemes for development, to save limited resources and provide a framework for active promotion and marketing destinations and can be a mechanism for integrating tourism with other sectors. He proposed a number of key objectives in tourism planning:

o Create a mechanism for structured commission for tourist facilities within the very large geographical areas;

o Coordination of the fragmented nature of tourism (especially in terms of accommodation, transport, marketing and human resources);

o Specific interventions to save resources and increase the benefits for the local community in an effort to achieve sustainability (usually through tourism development or management plan); and

o Distribution of tourism benefits (development of new tourism sites or economic regroupings of places that tourists began to leave).

The paper is structured in several parts. After the introductory section, it proceeds with a section that briefly describes tourism demand and explains the term 'tourism demand'. The third section is a background material on forecasting, which describes the phases of forecasting. After that, there is section with some basic information on the South-west Planning Region. The paper proceeds with explanation of methodology, while the final part is the conclusion.

TOURISM DEMAND

Tourism demand is a broad term that encompasses the factors that regulate the level of demand, the spatial characteristics of the demand, various types of demand and the reasons for making such requests. Cooper et al, (1998) define the demand as a "schedule of the amount of any product or service that people want and are willing to buy of each specific price in a set of possible prices during a period of time". Individuals known as tourists generate tourism demand. This happens to a certain place called "tourist destination". The scope and magnitude of demand vary over time, and sometimes with the seasons. Time demand for tourist services either promotes or changes. Such changes may be due to the emergence of so-called "new tourists" who

want to experience something new and expect high quality services and value for their money. New tourists carry different levels of demand.

There are three main types of demand: the real, hidden and latent demand. The real demand which is also called effective demand comes from tourists who are involved in the actual process of tourism. The second type of demand is the so-called repressed demand created by two categories of people who are usually able to travel due to circumstances beyond their control. The first group includes those sections of the population who would like to be involved in tourism, but for one reason or another cannot. Because they can participate at a later date, this situation is called potential demand. Delayed demand describes the second subcategory of suppressed demand that the trip was postponed due to problems of supply in the environment. The third type is latent demand. It refers to the spatial and temporal expression of the demand of a particular country, for example, demand for tourist accommodations or travel service to a particular destination. Tourism demand can be defined in different ways depending on the economic, political, psychological and geographical point of view of the author (Petrevska, 2014).

The size of demand for travel to a particular destination is very important for everyone involved in tourism. The vital data on demand include: (1) How many visitors arrived; (2) Means of transport; (3) Duration of stay and type of accommodation; and (4) Money spent. There are various measures of demand, some are very easy to obtain and are usually of a more general interest than others. There are also techniques for predicting the demand. Such estimates are of great interest to anyone involved in planning tourism development. More precisely, the demand for travel to a particular destination may be a function of the propensity of a person to travel and the resistance to travel.

$$D = f(propensity, resistance) \tag{1}$$

In equation (1) there are two arguments: the tendency that depends on the psychological profile, socio-economic status and resistance to marketing and travel-dependent economic distance, cultural distance, the cost of tourism services, service quality and seasonality. Propensity can be considered as a predisposition of a person to travel, in other words, if the person is ready to travel, what types of trips he/she wants, and what types of destinations are considered. Propensity of a person to travel, obviously, may be determined largely by its psychographic profile and motivation for the trip. In addition, the socio-economic status may have an important impact on the propensity to travel. It follows that to estimate the propensity for traveling, we must first understand the psychographic and demographic variables related to the personality. Propensity is directly linked to the demand. On the other hand, the resistance refers to the relative attractiveness of different destinations. This factor is a function of several variables, such as economic distance, cultural distance, the cost of tourist services in the destination, quality of service of destination, the effectiveness of

advertising and promotion and the season. Hence, the resistance is inversely related to demand.

The economic distance refers to the time and cost involved in traveling from the origin to the area of destination and back. The higher economic distance, the greater the resistance to that destination and consequently reduced demand. One may conclude that between any origin and destination point, if travel time or travel expenses can be reduced, demand will increase.

The cultural distance refers to the extent in which the culture of the region of origin of the tourist is different from the culture of the host region. In general, the greater the cultural distance,the greater the resistance is. The greater cost of tourist services, the greater the resistance to travel to the destination is and therefore we will have a reduction of tourist demand. This variable captures the famous inverse relationship between the price of a product or service and the demand for it (Goeldner and Ritchie, 2003).

The higher the quality of services is, there will be less resistance to travel to the destination. Although the relationship between quality of service and demand is clear enough, difficulties emerge in the interpretation and evaluation of quality. The assessment of quality is a very personal thing, and the quality for one tourist does not mean quality for another. Second, if the tourist has no previous experience with the travel destination, how can he accurately judge the quality of services there? In this case, the tourist should choose a destination based on the quality of service. Very often for the wrong ads or inaccurate information from the other, the perception of quality of tourist services cannot be reached within the destination. This situation has serious implications for establishing repeat customers, which is an important ingredient for success in tourism business. As a result, the destination must be accurate in projecting the correct image.

The effect of seasonality of demand is quite obvious. The relative attractiveness of a particular destination will depend on the time of year that the holiday is planned. For ski resort, for example, demand will be the highest during the winter months, while the resistance is the least at this season.

BACKGROUND MATERIAL ON FORECASTING

Scientific approach to tourism planning involves forecasting tourism demand as a starting point in the planning process. The forecast warns of useful actions to be taken to achieve the objectives. Success depends primarily on the accuracy of predictions. Although it is almost impossible to conduct accurate forecasting of tourism demand, it will greatly affect the reduction of uncertainty about the movements of a particular phenomenon or event in the future.

Given that demand is not stable on tourism market, well performed prediction is a key prerequisite for success. The tourism demand is characterized by large seasonal fluctuations that typically occur as a consequence of the change of season during the year, which is very notable in tourist destinations offering sun and beach. However, there are other factors that may cause cycles in tourist movements, such as school holidays, vacations, or special events in the tourist destination (festivals, exhibitions, sporting events, etc.). At the same time, the movement of tourist demand may affect both unpredictable and irregular elements, such as sudden changes in prices, epidemics, floods, war, etc. Therefore, when forecasting tourism demand, we must know the main methods of prediction and the advantages and disadvantages of each selected model.

Forecasting is the process of organizing the past data order to predict its future. Hence, the prediction process is created to predict future events. Moreover, when it comes to tourism demand as an event can be considered: the number of tourists in a particular tourist destination; number of overnight stays in a hotel or group of hotels; number of passengers traveling from one tourist spot; the number of tourist brochures distributed to potential tourists, etc. Each item, which is subject to prediction has two characteristics: the time dimension, and the result. This result shows the exact size of the demand. However, it may occur qualitative results, and then the predicted next year tourism demand will be higher, lower or the same than the previous.

The process of forecasting tourism demand consists of the following four main phases: (1) Preparation phase; (2) Phase of specification i.e. detailed description; (3) Implementation phase; and (4) Evaluation. They are aimed at establishing a system that is used continuously for prediction (Frechtling, 1996).

Phase 1. In the preparation phase, the planner chooses the appropriate method for prediction i.e. the technique for individual design of future events, and not the model. Thus, to successfully implement this stage, it is necessary to follow these steps:
  o Defining the problem;
  o Determining what is needed. Primarily relates to the basic required information;
  o Determining variables that shall be predicted;
  o Determining available resources;
  o Hypotheses;
  o Determining availability of data;
  o Listing available methods for prediction;
  o Application of preliminary selection criteria; and
  o Preliminary selection of method.

Phase 2. The second stage of forecasting tourism demand is the phase of specification, i.e. detailed description. Here actually it is selected the model for prediction, within the already defined method. So, after the chosen qualitative or quantitative method, it

follows the detailed analysis, testing and selection of the most appropriate model for prediction.

Phase 3. In the implementation phase, the prediction is implemented, documented and presented. If a quantitative method is used, then the selected model should import values necessary for calculations. If qualitative method is used, then the prediction is developed based on the responses received from experts involved. Next, if necessary, an adjustment is performed in the line of correction of the results. The next step is documenting the applied model. That means in a form of a written report to describe all previously implemented stages, which models have been tested, rejected and the reasons for that, and the need to correct the results if that was the case. Only then the results of the forecasting process can be presented.

Phase 4. Evaluation is the final phase. It begins by testing the accuracy of the forecasts. That actually means monitoring the ratio between the actual and predicted values. Thus, the evaluation can be measured by various commonly applied indicators, as: the Mean Absolute Error (MAE), the Mean Absolute Percentage Error (MAPE), the Root Mean Squared Error (RMSE), the Theil inequality Coefficient (TIC), etc. If the assessment shows that there are indeed differences, it is important to determine the cause (Frechtling, 2012).

The methods for forecasting tourism demand can be divided in two main categories: quantitative and qualitative. Quantitative methods organize information from the past phenomenon according to mathematical rules by using basic data patterns. These methods require objective numerical measurements that are consistent and valid for a certain historical period. These methods assume that some past patterns will continue in the future. The data for these methods requires can be obtained from primary or secondary sources.

There are two main subcategories of quantitative methods: methods of extrapolation and, the causal methods. The methods of extrapolation are also called methods of time series analysis and they assume that the movement of the variable in the past will appear in the future. Patterns in data during the past are used to design or extrapolate future values. Causal links are ignored. They are often used for tourism demand forecasting for products for which there is a relatively stable demand, but if they are not applicable for products with highly variable demand. These methods do not count the effects of various factors on the movement of tourism demand and still provide relatively good forecasts. Their results are particularly advantageous when the prediction is for a shorter period, and at the same time are cheaper than causal methods. Another subset of quantitative methods is causal methods. They are based on data from the past movement of tourism demand. Starting from the assumption that there is a relationship between the forecasting variable and other measurable

independent variables. The causal methods seek to determine the correct mathematical expression of this ratio.

The qualitative methods are also called "assessment methods". Previous information for forecasting variable are organized by experts using their judgment rather than mathematical rules. They are not necessarily cheaper or easier to implement methods but have an advantage because they do not require historical data series (Petrevska, 2014).

BACKGROUND MATERIAL ON THE SOUTH-WEST PLANNING REGION

The South-west Planning Region (SWPR) covers the Ohrid Lake and river Treska and covers an area of 3,340 km² or 13.4% of the territory of Macedonia. It is one of the eight planning regions in Macedonia and encompases 13 municipalities: Vevcani, Vraneshnica, Debar, Debarca, Drugovo, Zajas, Oslomej, Ohrid, Kicevo, Makedosnki Brod, Plasnica, Struga and Centar Zupa. The basic information on the SWPR is presented in Table 2.

TABLE 2. BASIC INFORMATION ON THE SWPR, 2011

Number of municipalities	13
Number of populated places	286
Estimation of population	10,83% of total population
Employment rate	27.7%
Unemployment rate	42.4%
GDP per capita	1,807 Euro

Source: State Statistical Office. (2011).

Tourism development is the most distinctive characteristic of the SWPR. This is due to the fact that it is the most developed region in tourism manner in Macedonia. Natural features, rich cultural heritage, protected spatial units and long tradition are the basis for dynamics in tourism. The region has a number of resources at the level of potential for inclusion in the tourism supply. Also thermal baths are of great importance for visiting and the development of tourism in this region, while the large number of churches and historical sites contribute to cultural tourism development.

TABLE 3. TOURISM STATISTICS FOR SWPR, 2014-2015

Item	2014	2015
Total number of tourists	269,547	298,057
Domestic tourists	125,320	136,637
Foreign tourists	144,227	161,420
Total overnights	1,095,452	1,201,927
Overnights of domestic tourists	694,229	745,473
Overnights of foreign tourists	401,223	456,454
Number of rooms	16,304	16,370
Number of beds	42,025	41,917

Source: State Statistical Office. (various years).

Based on Table 3 one may note in 2015, an increase in the total number of tourists as well as domestic and foreign, and the number of overnights. It mostly due to the promotion of Macedonia and Ohrid as a tourist destination, especially in the world through various advertisements, promotions, exhibitions, videos, programs, etc. Hence, the foreign tourists are informed and interested in Ohrid, Lake Ohrid and Macedonia in general, as a country rich with tourist attractions and natural beauties that are worth to visit. The SWPR has potentials for different types of tourism (Table 4).

TABLE 4. TOURISM POTENTIALS OF THE SWPR

Locality	Type of tourism
Ohrid and Lake Ohrid	Lake, cultural, fishing, transit, religious, city tourism
Debar	Lake, transit, thermal bath tourism
Galicica	Mountain, eco-tourism, hunting tourism
Vevcani	Rural, cultural tourism
Struga	Lake,cultural,fishing,city tourism,transit
Jablanica	Mountain,eco-tourism,hunting
Globocica	Lake tourism, fishing

Source: (Government of the Republic of Macedonia, 2012)

METHODOLOGY

The main aim of the paper is to predict tourism demand in the SWPR. For that purpose, two models are applied: the trend analysis model, and the linear regression model. The main variable is the data on tourist arrivals obtained from the State Statistical Office. The data set covers the period 2007-2015 (Table 5) for the trend analysis model, with a projection time 2015-2025. For the linear regression model, the data set spreads over the period from 2003-2013, with a projection interval 2013-2023.

TABLE 5. TOURIST ARRIVALS IN THE SWPR, 2007-2015

Year	Tourist arrivals
2007	255,257
2008	276,669
2009	257,480
2010	234,665
2011	249,746
2012	251,462
2013	264,826
2014	269,547
2015	298,057

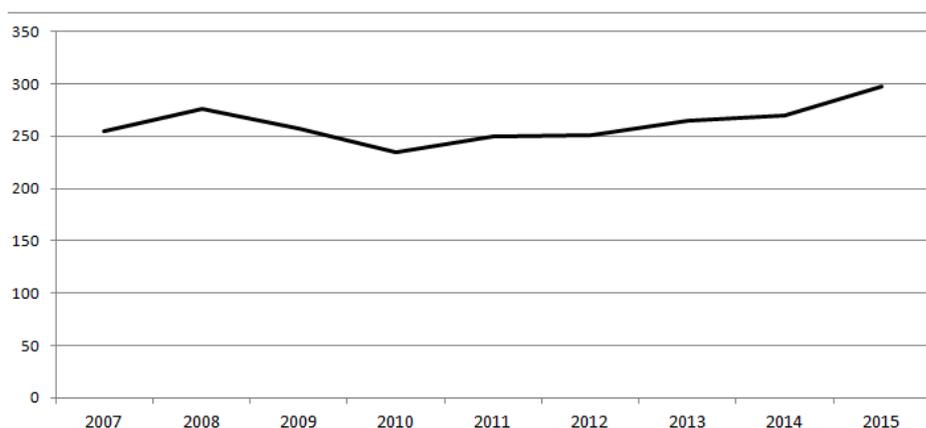*Source*: State Statistical Office. (various years).

FIGURE 3. TOURISM DEMAND IN THE SWPR, 2007-2015

Figure 3 visually presents tourists demand for the period 2007-2015. Based on that, the type of trend is determined that best presents the changes. Whence by continuing the trend line, we get the forecasted tourism demand by 2025 (Figure 4).
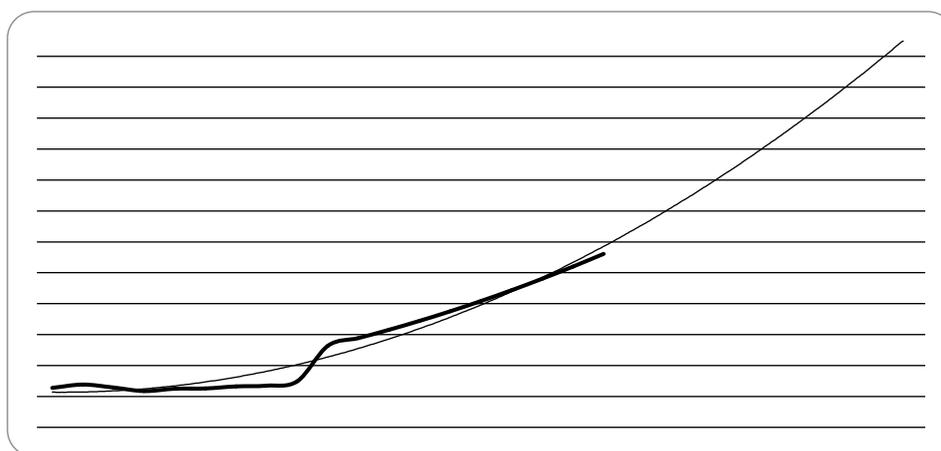

FIGURE 4. FORECASTED TOURISM DEMAND FOR THE SWPR, 2015-2025

On Figure 4 we can see that the trend line is parabolic and for each subsequent year increases to higher values. If we carefully take a look at the past data (2007-2015), we may notice that by 2008 there was a growth of tourism demand, followed by a significant decrease in 2008 and reaching the lowest value of 234,665 arrivals in 2010. This significant decrease is due to many reasons out of which the most important is the world economic crisis. The crisis provoked negative impacts in all industries, including tourism industry, thus provoking drastically decrease in tourism demand. Then in 2011, a slight increase in noted when tourism demand is getting back on track, and then it stagnated in 2013, followed by an increase in 2014 and 2015. As reasons for this drastic increase we can mention the re-commissioning of the airport in Ohrid. This was followed by many subventions for low-budget flights which resulted in increased number of passengers, thus boosting development. There was also development of infrastructure for easier access to tourist resorts. The general promotion of Macedonia as a tourist destination, also played a major role in increasing tourism demand.

TABLE 6. FORECASTED TOURISM DEMAND IN THE SWPR, 2016-2025

Year	Total tourist arrivals
2016	527,679
2017	577,467
2018	631,321
2019	689,242
2020	751,230
2021	817,284
2022	887,405
2023	961,593
2024	1,039,847
2025	1,122,168

Table 6 presents the forecasted values for tourism demand in the SWPR, in terms of total tourist arrivals for the period 2016-2025. It is expected the demand continuously to increase, if the past and current measures that assist tourism development continue. In 2019, it is expected the total number of tourists that visit the SWPR to reach 689,242 tourists, which is almost additional 100,000 tourists compared to 2015. Up to 2025, it is expected the demand to reach up to 1,122,168 which, at a first glance looks overestimated, having in mind that that is the number for Macedonia as a country and it is very hard to be achieved by the SWPR.

Although estimating extremely positive values, the trend analysis model does not give any clarification about the figures, but only determines the direction of change. The second model that was applied for forecasting tourism demand in the SWPR is the simple (linear) regression model. This model requires to possess data on tourism demand in recent years as the first variable, and the income per capita (Table 7). The dependence of the applied variables is graphically presented on Figure 5. The method of least squares is applied which resulted in a straight line ("best fit") explaining the inter relation between tourism demand and income per capita (Figure 6).

TABLE 7. TOURIST ARRIVALS AND PER CAPITA INCOME IN THE SWPR, 2003-2013

Year	Tourist arrivals	Per capita income (MKD)
2003	241,380	86,479
2004	222,950	95,209
2005	236,434	97,861
2006	233,218	106,970
2007	255,257	115,083
2008	276,669	150,771
2009	257,480	140,262
2010	234,665	161,492
2011	249,746	174,509
2012	251,462	170,493
2013	264,826	178,726

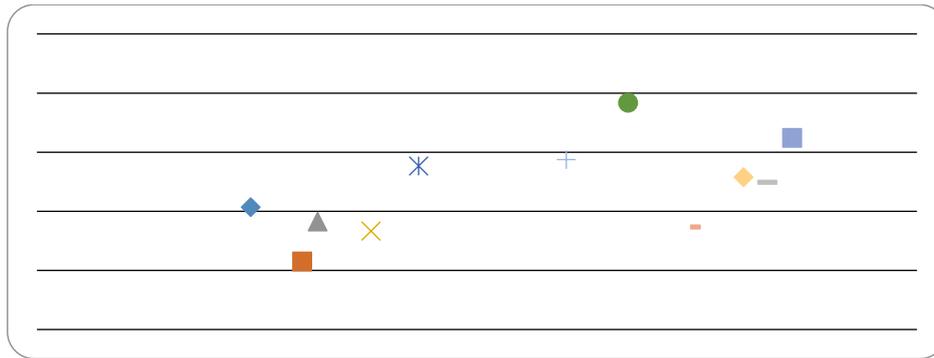*Source*: State Statistical Office. (different years)
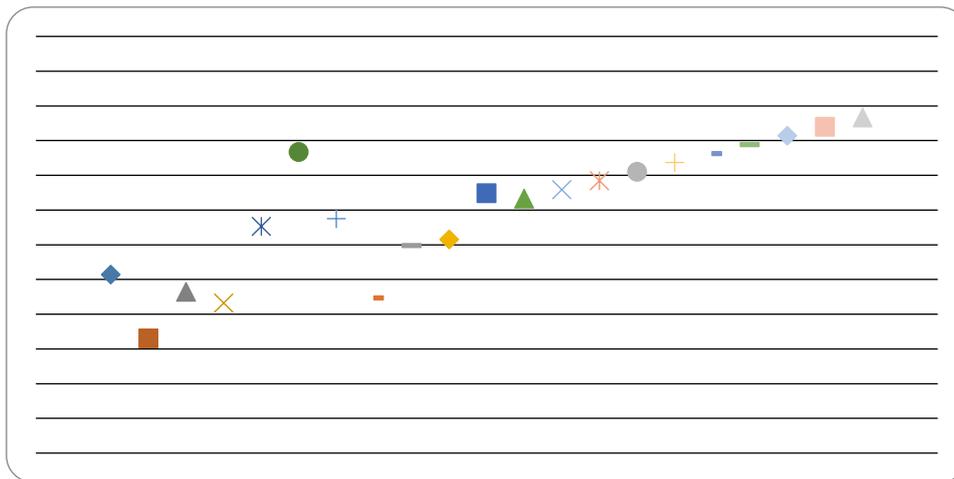
FIGURE 5. TOURIST ARRIVALS AND INCOME, 2003-2013

FIGURE 6. FORECASTED TOURISM DEMAND FOR THE SWPR, 2013-2023

Data presented in Figure 6, show the annual observations of pairs of two variables and the line is actually the line of "the best alignment". So, past data start in 2003 when the travel demand is 241,280 tourists and per capita income is 86,479 denars, and ends in 2013 with 264,825 tourists and an income of about 178,726 denars.

TABLE 8. FORECASTED VALUES FOR TOURISM DEMAND IN SOUTH-WEST REGION 2014-2023

Year	Income (MKD)	Tourist arrivals
2014	195,794	263213.6202
2015	206,035	265807.6655
2016	216,276	268401.7108
2017	226,517	270995.7561
2018	236,758	273589.8014
2019	246,999	276183.8467
2020	257,240	278777.892
2021	267,481	281371.9373
2022	277,722	283965.9826
2023	287,963	286560.0279

Table 8 shows the projected values of tourism demand in the SWPR from 2014 to 2023. The results were gotten using calculations in excel, based on the values of history from previous years. From the data obtained it can be noted that in the first three years of

the forecasted period (2014-2017), there are not some significant changes in the demand, and it ranges between 260,000 to about 290,000 tourists. As of 2018, the demand starts to grow from 273,589 tourists to 286,560 in 2023. The similar dynamics may be observed in the income, which starts with 195,794 denars in 2014, and reaches 287,963 denars in 2023. From these results it may be concluded that tourism demand in the SWPR will grow slightly from year to year and it will move in the same direction. Some major downs and increases are not expected in the next 10 years, which means that tourism demand will stagnate. The number of tourists is expected to grow for around 1% from year to year. The income is also expected to grow for average 4.5 % which is a significant percentage. From this information can be concluded that for income growth of 4.5% is expected increase of tourism demand for about 1% based on the data for previous years (2003-2013).

Taking in consideration that recently Skopje (the capital of Macedonia) has become an attractive tourist destination, slowly Ohrid (as the leading tourist destination in the SWPR) is losing the dominant position. Skopje received additional value with the construction of various monuments, museums and national landmarks, and all that supported with promotion in foreign countries, contributed Skopje to be more visited than Ohrid. Tourists whose main destination or only a transit destination is Skopje, visit the city and various tourist attractions, sites and landmarks there. All these factors allow us to expect to have reduced tourism demand compared to the past and on behalf of that we have increased tourism demand. We can expect the future increase in tourism demand in the region of Skopje. The line of best fit is a straight line where there are no sharp downs and increases, so we can conclude that tourism demand as the first variable and income as the second variable has insignificant increases in their values or stagnate for these reasons. Because disposable income is significant variable for tourism demand, the simple regression model clarifies demand. Hence, we conclude that this model has more advantages than other more sophisticated models, such as multiple regression and computer simulation.

CONCLUSION

Demand is undoubtedly a major measure of success for any region in attracting visitors. Introduction of methods for measuring or evaluating the current and future demand, as described in this article, should enable producing accurate data that can later be used for further research and forecasts. When it comes to tourism demand forecasting, there are many methods and models that can be applied. However, which one to use, depends on the available data. Yet, forecasts of tourism demand can never be 100% accurate because regardless of the model used to process them, they can always be affected by some external factors that are not in their scope of research so the method cannot explain the changes and the reasons for that. The South-west

planning region of Macedonia has the potential to grow into even more attractive tourism area, if some measures and activities are introduced in the line of supporting tourism development. The main intention of this article was to portray the current tourism development in the SWPR, and to present some expectations for the future, which are satisfactory.

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