

## EFFECTS OF INCOMES ON DOMESTIC TOURISM: THE CASE OF TUKUMS MUNICIPALITY

**Aija Eglite**<sup>1</sup>, Dr.oec., professor; **Dace Kaufmane**<sup>2</sup>, Dr.oec., assoc. professor; **Marta Eglite**, MBA  
and **Signe Jekabsone**<sup>3</sup> Bc.oec.

<sup>1,2,3</sup>Latvia University of Life Sciences and Technologies

**Abstract.** Overall, tourism has grown considerably in Latvia, and employment in the tourism industry, the direct contribution of tourism to the gross domestic product of Latvia and tourism exports have increased year by year as well. As technologies and infrastructures get more advanced and incomes of the population rise, people travel more today. As a result of the mentioned trends, tourism can generate extra revenue for the country as a whole and the municipalities. The research aims to examine the responsiveness of demand for domestic tourism services to a change in incomes based on the case of Tukums municipality. The research is based on a theoretical literature review of income elasticity of demand for tourism and described the supply of tourism services in Tukums municipality. Based on statistical data, the research verified the responsiveness of demand for domestic tourism services to a change in incomes. The research employed document analysis and statistical analysis for verifying causal relationships and making forecasts. At a high rate of income growth, the residents of Latvia prefer traveling to more distant tourist destinations than Tukums municipality, which is located in the middle of Latvia. The lower the income growth rate is, the more local tourists stay overnight in Tukums municipality.

**Key words:** tourism economics, Tukums municipality, income elasticity of demand, tourism forecasting.

**JEL code:** Z30.

### Introduction

There are two key prerequisites for travel: free time and money. Today, an increase in the standard of living contributes to an increase in both disposable income and free time or vice versa. The world has never experienced as high a standard of living and as many new technological solutions used in daily life as today. This is supported by both studies of consumerism and daily experience. However, with the society developing and the standard of living rising, economic principles continue being effective, providing maybe not a 100 % guarantee, as it is with gravity in physics, that all individuals act the same way, yet the key principles are in force. Tourism became a mass phenomenon in the 20<sup>th</sup> century owing to the above-mentioned aspects. Tourism has become the object of interest for many researchers. From the economic perspective, tourism might be viewed as a macroeconomic phenomenon, which provides jobs, attracts investments, affects many industries and is accounted for in tourism satellite accounts. From the perspective of regional economics, the multiplier effect of tourism is very important, as tourism provides opportunities for economic growth in rural areas and reducing disparities between urban and rural areas. In microeconomics, income elasticity of demand allows forecasting the flow of tourists. Besides the economy, tourism is also associated with the society, government policies, ecology and leisure time (Freijers V., 2011).

In 2017, the tourism industry continued making life real for millions of people, promoting growth, creating new jobs, reducing poverty and contributing to overall development and tolerance. Over the last six consecutive years, tourism growth outpaced the growth of the global economy, demonstrating stability under geopolitical uncertainty and economic instability. In 2016, the contribution of tourism to the global economy totalled USD 7.6 trillion (10.2 % of the global GDP) and created 292 million jobs (one in ten jobs in the world) (*The Travel & Tourism...*, 2017).

The domestic demand for tourism has not been extensively researched despite the fact that it makes up a significant share of total tourism activities. The research aim is to examine the

---

<sup>1</sup> E-mail: aija.eglite@llu.lv

responsiveness of demand for domestic tourism services to a change in incomes based on the case of Tukums municipality. The specific research tasks are as follows: to make a theoretical literature review of income elasticity of demand for tourism; to describe the supply of tourism services in Tukums municipality; to analyse the responsiveness of demand for domestic tourism services in Tukums municipality to a change in incomes of the population of Latvia.

The research employed literature review and statistical analysis as well as used information and data provided by the Central Statistical Bureau of Latvia (CSB) and the Tukums Tourism Information Centre for analysis and identifying causal relationships.

### **Research results and discussion**

Travel destinations are important. According to Leiper (1990), a destination is where tourist activity occurs by offering services that are characteristic of the place. The selection of destinations is strongly influenced by pull and push factors (events, exhibitions).

Transport development made tourism transcontinental, as it allowed reaching almost any destination in the world. Most of the populations of civilised countries conceptually accepted tourism and travel rules and contributed to the growth of this industry through their involvement (Kaufmane D., 2011).

Based on the findings of M. Marinin and J. Bleily, Birzakov (2003) came up with the following social development scenario, which affected the intensive growth of tourism over the last decades, for Europe: with the economies reviving after World War II, Europeans first experienced the wave of „being well fed“, followed by the wave of „being well dressed“, afterwards – „one’s own house and car“ and finally – the „wave of tourism“. With its supply of tourism, Latvia has also become a part of the mentioned developments.

Society might be considered an essential exogenous factor affecting tourism, and its effects on tourism could be viewed from a number of aspects. The dominant lifestyle and the attitude of society to tourism and tourists affect the attractiveness of tourism destinations. In a country of tourism, the mentioned factors could be analysed through the prism of social values – interests, travel prestige etc. (Pompl W., 1996; Kaufmane D., 2011). Travels are a component of the life quality of society.

Travels require funds; therefore, individuals being able to spend much money are important for tourism business (Mak J., 2004). The choice of individuals between leisure time and work affects the demand for tourism. The phenomenon of a „leisure time society“ has emerged. A leisure time society also lives 24 hours a day. The basic problem is how to allocate time between leisure and work. This involves leisure time costs. An opportunity cost of leisure time represents income lost while not working. An interesting question is how the allocation of time between work and leisure by individuals changes in response to a **change in their incomes**. Let us assume that incomes increase, thereby making two potential effects: the substitution and income effects. An increase in incomes leads to an increase in the opportunity cost of leisure time. In this case, one may expect consumers to demand less leisure time. This is called the substitution effect. Consumers tend to prefer work to leisure time, thus demonstrating the higher opportunity cost of their leisure time. Leisure time could be classed as a normal good or service, and an increase in income will result in a higher demand for the leisure time. This is called the income effect. The substitution and income effects could be regarded as two competing aspects. One of them, specific to the situation if incomes rise, is an increase in consumer satisfaction with leisure time (income effect). Satisfaction involves social and

psychological factors – some individuals enjoy their leisure time, whereas others are bored by it (Tribe J., 2016).

Higher incomes usually lead to a higher demand for travels for the purpose of entrainment. But how much higher? Let us analyse the types of elasticity, giving some examples regarding leisure time. Economists use income elasticity of demand to measure the responsiveness of market demand to a change in consumer incomes. This indicator could be calculated by Equation 1.1 (Mak J., 2004):

$$\text{income elasticity of demand for product } X = \frac{\% \text{ change in demand for product } X}{\% \text{ change in consumer incomes}} \quad (1.1.)$$

Income elasticity of demand is usually expressed in numerical terms. If the income elasticity of demand for product X is equal to 2, a one percent increase in consumer incomes increases the demand for product X by two percent. Demand could be income elastic (elasticity of more than 1) or income inelastic (elasticity of less than 1, but not below 0). Income inelastic products are very sensitive to changes in consumer incomes because a small percentage change in incomes results in a large percentage change in demand. The demand for products being income inelastic is not so sensitive to a change in consumer incomes. The demand for luxury goods is income elastic, whereas the demand for necessities is income inelastic (Mak J., 2004). The estimated income elasticity is greater than one, which suggests that domestic demand for tourism is a luxury good (Alvarez-Diaz M., D'Hombres B., Ghisetti C., 2017). A number of research studies done in Spain have shown that domestic tourism is affected not only by income elasticity of demand but also by distance (De la Mata T., Llano-Verduras C., 2011). In Latvia, any tourism object can be reached within a few hours; the distance therefore does not play a significant role.

Overall, tourism grew in Latvia. The numbers of accommodation facilities, bed-places, visitors to hotels and foreign tourists increased year by year. Employment in the tourism industry, the direct contribution of tourism to the gross domestic product of Latvia and tourism exports grew in Latvia as well. As technologies and infrastructures get more advanced and incomes of the population rise, people travel more today; accordingly, the tourism industry is expected to develop. Owing to the mentioned trends, tourism can generate extra revenue for the country as a whole and the municipalities.

What is the situation in individual municipalities? Tukums municipality was chosen as the research object. Tukums municipality was established on 1 July 2009 by amalgamating 10 civil parishes: Degole, Dzukste, Irlava, Jaunsati, Lestene, Pure, Seme, Slampe, Tume and Zentene. The municipality borders on the municipalities of Roja, Talsi, Kandava, Jaunpils, Dobeles, Jelgava, Babite and Engure. The area of Tukums municipality is 1194 km<sup>2</sup>, and in terms of area it is the largest municipality in Riga region and the eleventh largest municipality in Latvia (Tukuma novads, [s.a.]). In terms of population, Tukums municipality is the third largest municipality in the country. According to the CSB, 28 thou. residents were registered in the municipality at the beginning of 2018, of which 17 thou. lived in the town of Tukums, meaning that the population was mainly concentrated in the town. (CSB, 2018).



Source: authors' calculations based on Google Map

Fig. 1. Tukums municipality

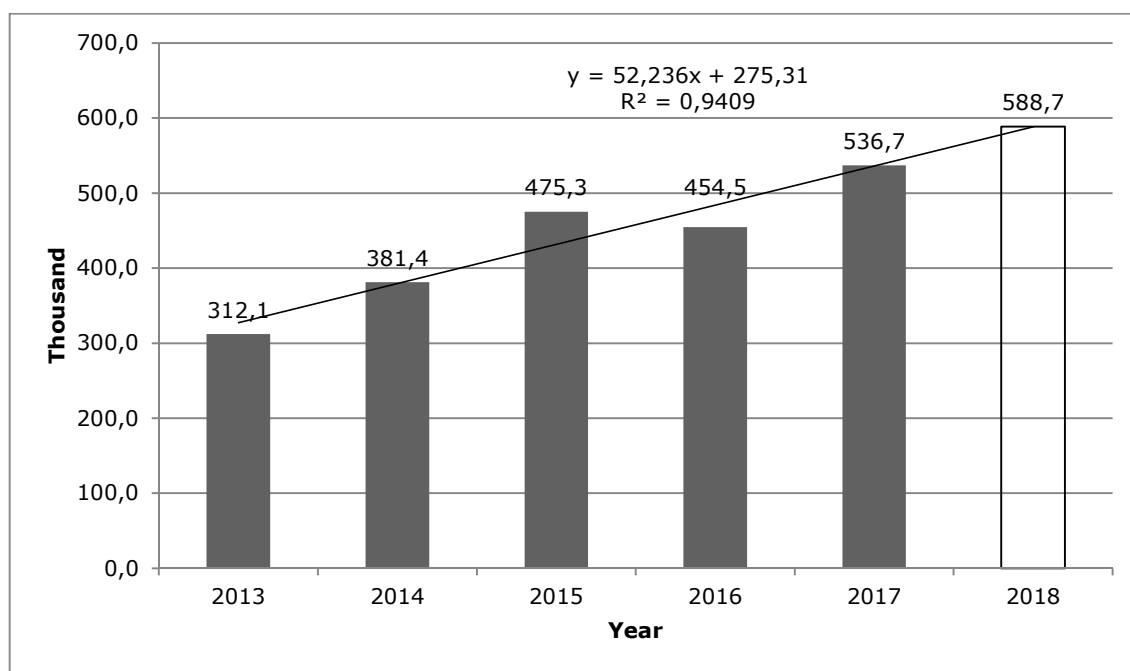
Tukums municipality has a lot to offer to tourists, beginning with sightseeing places through to bird observation sites, countryside goodies, various events, tourist accommodation facilities and catering services. According to Singh (2011), tourism could be classified as follows: 1) recreational tourism, 2) environmental tourism, 3) historical tourism, 4) ethnic tourism, 5) cultural tourism, 6) adventure tourism, 7) health tourism, 8) religious tourism, 9) musical tourism, 10) village tourism, 11) business tourism, 12) scientific or congress tourism. Tukums municipality can offer almost all of them: 1) recreational objects: the Square of Liberty with a fountain, the Cherry Garden, Durbe Palace and the Durbe Park, Jaunmoku Palace; 2) environmental tourism sites: the deer farm „Rudini“, the nature trail „Viesata River Curves“ and the Spunni Boulder, the Kaive Oak, the nature trail in Ruzciems, the Great Kemeru Bog Boardwalk and the Dunduri Meadows; 3) historical tourism: a fragment of the wall of the Livonian Order Castle and the historical museum Castle Tower, the museum „Pastarins“, the Sati Church and the Kuksi manor house; 4) ethnic tourism: Lestene Brothers' Cemetery; 5) cultural tourism: the Weaver Workshop of the Tukums Museum, the Smith Workshop of Gints Haneckis; 6) adventure tourism: Cinevilla, a golf court and a croquet court, entertainment on water, entertainment flights, distance skiing at the campsite „Sveikuli“, curling and skating at the Tukums Ice hall; 7) health tourism: the bathhouse „Amajas“ and Russian bathhouses; 8) religious tourism: the Lestene Lutheran Church; 9) musical tourism: the Tukums Cultural Centre building, the Durbe Open Air Stage; 10) village tourism is popularised by means of countryside goodies, thereby popularising not only the rural areas but also the town of Tukums; the horse farm „Skudru stalli“, the farm „Mengeli“ and the winery „Tevini“; 11) business tourism and 12) scientific or congress tourism services are not offered in Tukums municipality.

Besides the mentioned tourism places, various events are traditionally held to attract tourists in Tukums municipality. In 2017, the largest events in terms of number of visitors were as follows: the Awakening of the Fountain, the Long Night of Museums, the evening market in Pure, traditional wedding games in Tukums and the New Year's Eve Festivities in Tukums (Turisms. Tukuma turisma..., 2018). Of the five most popular events, four are held in the town of Tukums. Two events are held in

Pure rural territory and one in Tume rural territory. The other events held in Tukums municipality, according to the Tukums Tourism Information Centre (TIC), are not among the most popular and visited events.

The supply of tourism services is very broad in Tukums municipality, beginning with sightseeing places through to environmental tourism services and various activities and events in both summer and winter. Most of the tourist accommodation facilities and catering businesses are located and the most popular events are held in the town of Tukums; the Tourism Information Centre, which is the local government's institution is also located there. After examining and describing the supply of tourism services in Tukums municipality, one can conclude that the municipality is a responsible and sustainable municipality with regard to tourism, as it preserves its cultural and historical objects as well as natural objects and nature. The Tourism Information Centre is located in the town of Tukums, yet it also offers the information through the mobile application Visit Tukums. The application provides all the basic information needed for tourists: sightseeing places, activities, events, accommodation facilities and the best places where to eat and drink in Tukums municipality and its vicinity.

Characteristics of tourism in Tukums municipality.

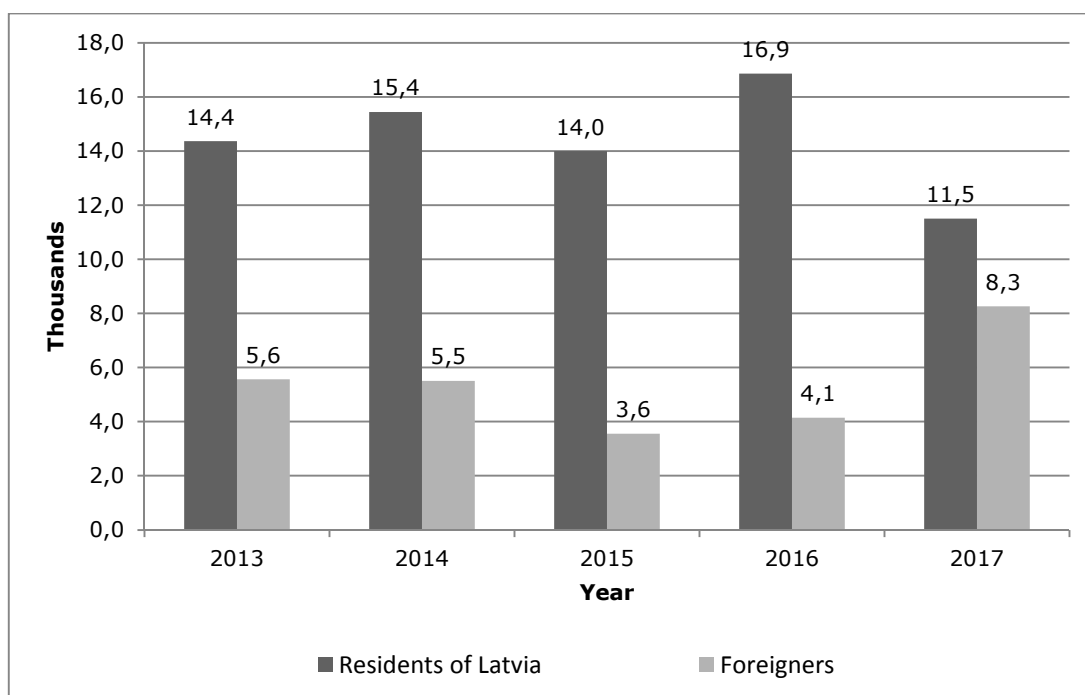


Source: authors' calculations based on Turisms. Tukuma turisma..., 2018

Fig. 2. Number of tourists in Tukums municipality in the period 2013-2017, thou.

In the period 2013-2017, the number of tourists rose by 224.6 thou. or 41.8 %. Such a significant increase could be explained by cooperation between the Tukums TIC and the municipalities of Engure, Jaunpils and Kandava and the Kurzeme Tourism Association, making joint efforts to popularise tourism in Tukums municipality and the entire region of Kurzeme (Tukums Municipality Council, 2014). A trendline for the data processed in MS Excel showed that an increase in the number of visitors could be expected in 2018. The determination coefficient  $R^2 \sim 0.9$ , which indicated that the approximation function was of high quality. The annual number of visitors identified by means of the MS Excel trendline equation for 2018 was forecasted to increase by 52 thou. or 8.8 %. However, every travel-related activity cannot be accounted for, and at least once a year it is possible to aggregate data on tourism objects and events where tourists are registered.

The attractiveness of a region is characterised by the number of visitors to tourist accommodation facilities. The number of overnight visitors was variable in Tukums municipality in the period 2013-2017, as in the period 2013-2015 their number decreased by 2.4 thou. or 12.06 %, whereas in the period 2015-2015 their number increased by 3.51 thou. or 16.7 %. It was followed by a decrease by 1.21 thou. or 5.8 % in 2017. This indicates that the number of overnight visitors in Tukums municipality was unsteady. The total number of overnight visitors in 2013 compared with 2017 was almost the same, whereas within this period it both decreased and increased. In contrast, the annual number of foreign visitors demonstrated a positive trend.



Source: authors' calculations based on *Turisms. Tukuma turisma...*, 2018

Fig. 3. Number of overnight visitors in Tukums municipality in the period 2013-2017, thou.

In the period 2013-2017, the number of overnight visitors – residents of Latvia – in Tukums municipality rose by 2.5 thou. or 14.8 %, while in the period 2016-2017 it declined by 5.4 thousand or 31.9 %. The decline could be explained by the fact that Riga is located near Tukums municipality, and many individuals went by train to Tukums municipality, yet No entertainment was offered in the municipality in evenings. The number of foreign overnight visitors rose by 2.3 thou. or 32.5 % in the period 2013-2017. One of the reasons of the rise might be the mobile application provided by the Tukums TIC, which facilitated tourist daily life by means of information available in Latvia, Russian and English. Nevertheless, the total number of overnight visitors – residents of Latvia – was larger than that of foreign overnight visitors. In 2017, the total number of domestic overnight visitors was larger than that of foreign overnight visitors by 3.2 thou. or 27.83 %. As incomes rise, individuals use their short holidays to travel across their country. Financial wellbeing is strongly associated with economic growth. An increase in financial wellbeing, which manifests itself as an increase in income and consumption, could be interpreted as a factor contributing to the standard of living, as the population can afford to spend more on recreation and travel during their free time.

Table 1

**Disposable income per household member in Latvia (EUR per month) and the number of domestic overnight visitors in Tukums municipality**

Year	Disposable income per household member (EUR per month)	Change, %	Number of domestic overnight visitors in Tukums municipality (thou.)	Change, %	Income elasticity
2013	353.99		14.4		
2014	386.91	9	15.4	7	0,8
2015	416,5	8	14.0	-9	0,1
2016	437,11	5	16.9	21	4,2
2017	488,84	12	11.5	-32	0,1
				Average	1.3

Source: authors' calculations based on *Turisms. Tukuma turisma...*, 2018, CSB 2019

The calculations of income elasticity of demand revealed that tourism services in Tukums municipality were worth spending on and consuming. The average income elasticity of demand was more than one, which proved that for domestic tourists, tourism was a normal luxury product. It was particularly true for the year 2016 when domestic tourism was very attractive to the residents of Latvia. For the population of Latvia, tourism was a valuable service. However, in view of increases in income, more distant tourist destinations than Tukums could get attractive to the population of Latvia. Nevertheless, the given data are sufficient for making a forecast of demand for tourism.

The latest research studies have found the behaviour of tourists to be asymmetric, and this allows enhancing tourism forecasts. Unlike conventional demand models, the Smeral model divides economic growth into two stages: fast-growth periods and slow-growth periods. Both stages are processed separately by the Smeral model. The authors conclude that income elasticity of demand changes at both stages, whereas price elasticity of demand does not change considerably. In view of the asymmetric effects observed in simulations, the forecasts could be enhanced. This conclusion could contribute to further research on tourism forecasting and take into account the nonlinear demand for tourism. In the world (e.g. in Austria), big data are employed in forecasting, e.g. Google Trends data and the „LIKES” of Facebook posts of destinations (Li G., Wu D. C., 2018). Tourists could be counted more accurately in the territory of Latvia by means of big data of mobile communication operators, yet the legal framework of the EU prohibits the use of big data.

The methodology for tourism forecasting gets more advanced. Empirical research studies show that combined forecasting performance is superior to single models. Finally, both artificial intelligence models and hybrid models are growing in the tourism forecasting literature. The second trend is the use of big data and search engine data-based research methods. Tourism forecasting employs innovative, state-of-the-art forecasting techniques, applies online tourist behaviour data, takes account of asymmetric tourist behaviours, moves from destination-level demand forecasting to attraction site visit forecasting and integrates judgmental forecasting with statistical forecasting (Li G., Wu D. C., 2018).

**Conclusions, proposals, recommendations**

- 1) The domestic demand for tourism is very important for the national economy of Latvia with regard to economic growth and employment. However, despite the economic role it plays, the number of research investigations into factors affecting the flow of domestic tourists in Latvia is very

small. The estimated elasticities provided by researchers are essential for policy-makers and tourism manager.

- 2) As technologies and infrastructures get more advanced and incomes of the population rise, people travel more today. As a result of the mentioned trends, tourism can generate extra revenue for the country as a whole and the municipalities. High-quality forecasts based on the latest technologies and big data, providing researchers with access to the big data, are needed to plan tourism development.
- 3) Even though Tukums municipality is not among the main tourist destinations in Latvia, the assortment of tourism services supplied in the municipality is diverse and appropriate for medium-income tourists of various categories. In Tukums municipality, the tourism services are mainly supplied in the town of Tukums, yet there are some opportunities as well as personalised tourist routes are designed, beyond the administrative territory of the municipality too, in cooperation with the neighbouring municipalities.
- 4) At a high rate of income growth, the residents of Latvia prefer traveling to more distant tourist destinations than Tukums municipality. At a low rate of income growth, the residents of Latvia prefer traveling to the nearest tourist destinations, e.g. Tukums municipality. Higher incomes allow making more expensive travels.

## Bibliography

1. Alvarez-Diaz, M., D'Hombres, B., Ghisetti, C. (2017) Modelling Inter- and Intra-regional Tourism Flows in Spain – a spatial econometric approach. *Regional Statistics*, Vol. 7. No. 2. 2017. pp. 3–34.
2. Birzakov, M.B. *Introduction to Tourism*. Fifth ed. Saint Petersburg: Publishing house Gerda. 320 p.
3. CSB (2018) ISG020. *Population Number and Its Change by Statistical Region, Cty, Town and County*. Retrieved: [http://data1.csb.gov.lv/pxweb/lv/iedz/iedz\\_\\_iedzskaits\\_\\_ikgad/ISG020.px/table/tableViewLayout1/?rxid=f1079a5f-ef71-48f1-9755-a4dd79c2cac3](http://data1.csb.gov.lv/pxweb/lv/iedz/iedz__iedzskaits__ikgad/ISG020.px/table/tableViewLayout1/?rxid=f1079a5f-ef71-48f1-9755-a4dd79c2cac3) Access: 17.11.2018.
4. CSB. (2019) IIG040. *Households Disposable Income (euro, per month)*. Retrieved: [http://data1.csb.gov.lv/pxweb/lv/sociala/sociala\\_\\_mb\\_\\_ienakumi/IIG040.px/?rxid=6745fda6-3aec-448b-aab4-8c7bdf67cf74](http://data1.csb.gov.lv/pxweb/lv/sociala/sociala__mb__ienakumi/IIG040.px/?rxid=6745fda6-3aec-448b-aab4-8c7bdf67cf74) Access: 22.01.2019.
5. De la Mata, T., Llano-Verduras, C. (2011). Spatial Pattern and Domestic Tourism: An Econometric Analysis using Inter-Regional Monetary Flows by Type of Journey. *Papers in Regional Science*, Volume 2, Number 4, pp. 1-34.
6. Freijers, V. (2011) *Turisma marketings (Tourism Marketing)*. Riga: Turiba University. 621 p.
7. Kaufmane, D. (2011). *Cooperation Systems in Tourism: the Case of Zemgale Region*. Doctoral dissertation. Jelgava. 174 p.
8. Leiper, N. (1990). *Tourism systems*. Occasional Paper 2. Department of Management Systems, Massey University, Auckland, New Zealand. 382 p.
9. Li, G., Wu, D. C. (2018). Introduction to the Special Focus: Tourism Forecasting—New Trends and Issues. *Tourism Economics*, 1-4. Retrieved: [https://www.academia.edu/38197969/Introduction\\_to\\_the\\_Special\\_Focus\\_Tourism\\_forecasting\\_New\\_trend\\_s\\_and\\_issues?email\\_work\\_card=view-paper](https://www.academia.edu/38197969/Introduction_to_the_Special_Focus_Tourism_forecasting_New_trend_s_and_issues?email_work_card=view-paper) Access: 25.01.2019.
10. Mak, J. (2004) *Tourism and the Economy: Understanding the Economics of Tourism*. Retrieved: <https://books.google.lv/books?id=B6EYxvSvW20C&pg=PA26&lpg=PA26&dq=tourism+income+elasticity&source=bl&ots=lw8Muif94n&sig=sa63KdRtRYLHNUCV-L1QRJAPsq0&hl=lv&sa=X&ved=2ahUKEwj-67Wc-ZreAhULXCwKHewWAJEQ6AEwA3oECAUQAQ#v=onepage&q&f=false> Access: 22.01.2019
11. Pompl, W. (1996) *Touristikmanagement/ Beschäftigungsmanagement*. Sprinder Verlag. 341 S.
12. Singh, I. (2011) *What is Tourism and its Types?* [Retrieved: <https://www.indiastudychannel.com/resources/140791-What-is-tourism-and-its-types.aspx> Access: 07.09.2018.
13. *Travel & Tourism* (2017) Retrieved: <https://www.wttc.org/-/media/files/reports/economic-impact-research/countries-2017/latvia2017.pdf> Access: 22.01.2019.
14. Tribe, J. (2016). *The Economics of Recreation, Leisure and Tourism*. Fifth edition. London and New York: Routledge. 459 p.
15. *Tukuma novads (Tukums municipality)*. Retrieved: <https://www.tukums.lv/lv/tukuma-novads>. Access: 16.11.2018.
16. *Turisms. Tukuma turisma regions* (2018) (Tourism. Tukums Tourism region). Tukums: Tukums TIC. 34 p.