

ANALYSIS OF THE ECONOMIC TRENDS IN TOURISM BUSINESSES IN THE CZECH REPUBLIC

Zuzana Tučková^a, and Zuzana Vaculčíková^b

^aTomas Bata University in Zlín

^atuckova@utb.cz

^bTomas Bata University in Zlín

^bvaculcikova@utb.cz

Abstract

The rapid expansion of tourism over the past years mirrored clearly on economics in many tourism-oriented countries. In order to find out how tourism benefits economy, it must be measured, however, due to multidisciplinary character of tourism, it is not an easy task. Therefore, tourism statistics includes several variables out of which consumption is considered economically the most valuable. The main purpose of this research is to analyze the economic situation of chosen tourism economic activities in the Czech Republic and to predict the trends for future years so that entrepreneurs can adapt to expected or unexpected development in tourism businesses and become sustainable for future tourist generation. Secondary data of internal consumption of tourism in the Czech Republic from 2003 to 2015 were analyzed by using regression analysis for graphical depiction and by using average absolute growth and average growth rate.

Keywords: Consumption, Czech Republic, economy, tourism, trends

1. Introduction

The popularity of tourism has been increasing in the recent years due to the explosion of transportation and freedom of movement that has facilitated tourist movement across borders. This is true also for the Czech Republic that is said to be one of the main transit places in Europe as it lies in the middle of this continent. Bearing this in mind, Czech tourism economy and entrepreneurship especially needs to be prepared for a high number of national and foreign arrivals and transit tourists. Few years later, this resulted in uncontrolled building of new tourism facilities, many of which economically did not survive due to competition or bad financial management. Loss of sustainability of these facilities was one main reason why they did not survive also because managers did not follow general economic situation in the country.

Tourism is an important part of the Czech's economy, even though its share on GDP compared to other states is not as big, it represents 2,9% share in 2016. However, it still represents considerable economic value for the Czech Republic. When measuring one's well-being and standards of living, literature uses two main variables, i.e. income or consumption. However, as Bernini et al. (2016, p. 1158) states, income and consumption "are only partial measures of a wider concept of living standards, involving not simply material deprivation, but also the deprivation of health, education, labour and so on". When looking at tourism, tourist consumption on most used services such as hotel accommodation, food services, transportation, visitors' attractions or shopping contributes to economies of states by generating important variables to economic analysis such as gross domestic product, creation of employment etc. This

is possible due to increasing interest in tourism by both inbound and domestic tourists. From the economic point of view, inbound tourism consisting of foreign visitors was less than 58% (157 milliard CZK) in 2017 in the Czech Republic. The remaining two fifths of the financial means (115 milliard CZK) were generated by domestic visitors through domestic tourism. (Czech Statistical Office, 2018) As it is evident, tourism consumption to a destination's economy in general is of a very high importance and it is directly linked to the performance of tourism-related businesses. (Wu et al., 2012)

Thus, it is important to focus on the future prediction and forecast of the consumption growth to facilitate the future behavior of the sector important for further business planning of tourism-related businesses. For forecasting, it is very important to note that "income and price elasticities of tourism demand do not remain stable" and that it subjects to fluctuations in economic activity. (Smeral, 2017, p.913)

The aim of this paper is to analyze the economic trends in three main tourism economic activities in the Czech Republic by using internal consumption as the main measure of the economic state of tourism in the Czech Republic and to forecast its future development with regard to previous economic data. These main economic activities are namely accommodation, food and beverage and transportation. The data were collected from the Czech Statistical Office from 2003 to 2015 that was the latest reported year. The forecasting will be done through regression analysis and data will be analyzed by using average absolute growth and average growth rate. For better aiming of the prediction of future development of internal consumption, the data has been divided into two stages, before and after the economic crisis.

2. Literature review

Tourism is not "a single identifiable sector of the economy" nor "a single branch of a production" which can be easily defined. It consists of goods and services from different industries that are then sold to both tourists and residents. (Ekopress, n.d.) During travels, both tourists and residents spend their money usually on a goods and services such as accommodation, food and beverage, transport, communications, entertainment, retail outlet goods and travel services (Cooper et al., 2004). All these goods and services generate money to the economy. In order to find out how tourism benefits economy, it must be measured. The need for measurement of primary tourism data arose with higher volume of tourists in the early 20th century. (Bhatia, 2007) The statistical measurement in tourism is important for:

- evaluation of tourism's significance,
- planning and developing infrastructural requirements,
- marketing and promotion,
- understand change in tourist preferences and fashion,
- legislative and administrative purposes (Bhatia, 2007).

In tourism, there exist three main categories of statistics:

- volume statistics – the number of tourists visiting the given destination
- statistics of tourist characteristics – composition of the tourists (e.g. gender, age, attitude to destination etc.)

- expenditure statistics – economic significance for tourism through tourist flow (money).
(Boniface, Cooper and Cooper, 2012)

Some authors agree on the fact that tourism expenditure is one of the mostly measured and important variable in tourism statistics. Economic impact of tourism is mostly measured by “the sum total of all expenditures by all tourists” as stated by Theobald (1998, p. 26). It is important particularly because tourist expenditure and measurement of tourist flows represents “a basis for planning the future development”. (Bhatia, 2007, p. 54) Moreover, as concluded also by Thano and Kote (2015), “tourism spending is closely related to the economic cycle”. To measure tourism’s impact correctly, the emphasis should be put on both international and domestic tourists and their expenditures. At the same time, however, Cooper et al. (2004) warns that the sum of international and domestic tourist expenditure represent only a small economic impact. To asses economic impact of tourism fully, one must take into account aspects such as “leakages of expenditure out of the local economy, indirect and induced effects and displacement and opportunity costs.” Even though, tourism “is sensitive to the level of economic activity in the tourist-generating countries”, its income is a valuable source of fixed earnings more than primary products (Bhatia, 2007, p. 37).

However, since tourism has a multidisciplinary character (Ekopress, n.d.), the economic impact of tourism on economy is very demanding to measure. (Boniface, Cooper and Cooper, 2012) Its multidisciplinary and multidimensional character makes the analysis of supply and demand “a complex task” (Buhalis, 2005). It has two reasons. Firstly, it is so because it is difficult to distinguish between the consumption by tourists and the expenditure by residents (Holloway and Taylor, 2006). For example, Ekopress (n.d.) mentions only accommodation and services of travel agents and tour operators as the ones that are characteristic for tourism and should be a subject of tourism statistics. The output of other goods and services is not clear because it is consumed by both tourists and visitors as well as by local people. Secondly, in order to measure tourism systematically, it is important to differ between all its sectors. Various authors define basic economic tourism sectors differently. For example, see e.g. Ekopress (n.d.) or Bhatia (2007) who considers (1) accommodation, (2) transport, (3) attractions and (4) support services as the main tourism services. Theobald (1998) looks at tourism from the point of view of tourism consumption expenditures and believes that it should be created by (1) packaged travel, (2) accommodation, (3) eating and drinking establishments, (4) transportation, (5) recreation, culture and sport and (6) shopping. All these results from the multidisciplinary nature of tourism that should be respected while making statistical measurements. Diversity of tourism sectors and overlapping of some of them causes tourism to be based on association and interconnectivity (Bunghez, 2016) that must be respected in statistic measurement.

Tourism is a service and from its nature, it cannot be stored or consumed at a later time. This feature caused that the volume of tourism consumption is equal to the volume of tourism production (Languar, 1983, Fabre, 1979, Thano and Kote, 2015) It is due to the fact that tourism consumption is affected by demand and “the characteristics of the visitor (consumer) determine whether the consumption of a product is a tourism-related or not.” (OECD, United Nations and WTO, 2001) In other words, tourism consumption is an aggregate of visitors’ activities. Because

geographical location of consumption is important, Tourism Satellite Account divides tourism consumption into five main categories (OECD, United Nations and WTO, 2001, p.30):

- Domestic tourism consumption – the consumption of resident within the economic territory of the country of reference
- Inbound tourism consumption – the consumption of non-resident within the economic territory of the country of reference
- Outbound tourism consumption – the consumption of the economic territory of the country of reference and provided by non-residents
- Internal tourism consumption – the consumption of both resident and non-resident visitors within the economic territory of the country of reference and/or that provided by residents
- National tourism consumption the consumption of resident visitors, within and outside the economic territory of the country of reference

Because tourism consumption is interconnected with its production, important differences may occur with regard to the output of tourism activities in a country and its internal tourism consumption. According to OECD, United Nations and WTO (2001, p.41), the differences depend on these two elements:

- “the extent of the supply to visitors by producers that do not belong to the tourism characteristic activities category
- the extent of the supply to non-visitors by producers belonging to this category”.

3. Methodology

The main purpose of this research is to analyze the economic situation of chosen tourism economic activities in the Czech Republic by using internal consumption of tourism as the main variable and to predict the trends for future years so that entrepreneurs can adapt to expected or unexpected development in tourism businesses and become sustainable for future tourist generation. In order to examine the relationship between individual economic activities of tourism, the selection of secondary data from the Czech Statistical Office was reduced to the consumption of internal tourism which is understood as a measure of economic benefit (Theobald, 2005). The consumption of internal tourism in the Czech Republic represents the expenditures of domestic and foreign tourists and it is stated in Tourism Satellite Account. This indicator was chosen also because expenditures of foreign tourists are perceived as an important economic indicator of the attractiveness of tourism (Houška, 2007). The most up-to-date data were available from 2003 to 2015 (the 2015 data is based on preliminary results). The Czech Statistical Office through CZ NACE defines seven basic tourism services for which the data were analyzed (see table 1). For better orientation, the data of internal consumption of tourism has been divided into two stages, before and after the economic crisis. According to Frechtling (2001), there exist two major approaches in tourism forecasting. One is “the linear regression method” and the second one is “a set of regression equations linked together by certain variables” often called as structural models. This research implies the first mentioned method and that is the linear regression method. It will be used for graphical analysis and future prediction. This research method will analyse the behaviour of chosen economic activities after

the crisis from 2009 to 2015 and its possible development for years 2016 and 2017 which has not been published by Czech Statistical Office yet.

The general form of a linear regression model according to Frechtling (2001) is:

$$Y = a + b_1X_1 + b_2X_2 + \dots + b_nX_n + e \quad (1)$$

where

Y = the dependent, or forecast, variable

a = the intercept constant

b = slope coefficients

X = independent, or explanatory, variables

n = number of explanatory variable

e = residual.

Data in regression analysis were analyzed through time-series analysis. The timeline represents comparable observations arranged from past through present to the future (Ramík, 2007). If we assume series y_t , $t = 1, \dots, T$ (number of periods), then the simplest rate of dynamics is the absolute growth (Artl, Artlová and Rublíková, 2002).

The absolute growth represents the change of value at time t against time $t-1$.

$$\Delta y_t = y_t - y_{(t-1)}, t = 2, 3, \dots, n$$

From the absolute growth, the average absolute growth is derived as it is stated in the calculation below. This parameter shows how much the indicator should be changed in absolute units so that the value of the indicator would change from the original value y_t to the last value y_n . (Ramík, 2007)

$$\bar{\Delta} = \frac{\sum \Delta y_t}{n-1} = \frac{(y_2 - y_1) + (y_3 - y_2) + \dots + (y_n - y_{n-1})}{n-1} = \frac{y_n - y_1}{n-1} \quad (2)$$

Another important parameter of time series dynamics is the growth coefficient (GC) which after multiplying by hundreds indicates at how many percentage in time $t-1$ has risen the value in time t . (Ramík, 2007)

$$k_{t=} = \frac{y_t}{y_{t-1}} \quad (3)$$

The average growth coefficient is the geometric mean of the individual growth coefficients and is also commonly used in time series analysis. Its formula is shown below. (Ramík, 2007)

$$\bar{k} = \sqrt[n-1]{k_1 k_2 \dots k_n} = \sqrt[n-1]{\frac{y_2}{y_1} \frac{y_3}{y_2} \frac{y_4}{y_3} \dots \frac{y_n}{y_{n-1}}} = \sqrt[n-1]{\frac{y_n}{y_1}} \quad (4)$$

4. Results

In the Czech Republic, there are seven main economic activities defined by CZ NACE that are connected with tourism activities. Tourism Satellite Account gathers information about internal consumption of tourists divided by the tourism main economic activity. Concrete information about internal consumption of tourism in the Czech Republic are seen in table 1.

Table 1 Internal consumption of tourists divided by the tourism main economic activity (2003-2015). Source: own processing based on Czech Statistical Office (2018)

Time Indicator	2003 - 2008		2009-2015		2003-2015	
	Average absolute growth	Average growth rate	Average absolute growth	Average growth rate	Average absolute growth	Average growth rate
Accommodation	1152,545	1,032	1406,117	1,035	970,970	1,025
Food and beverage	1227,637	1,030	1024,312	1,022	897,560	1,020
Passenger transportation	2313,456	1,064	1334,373	1,030	1422,646	1,036
Services of travel agencies and travel agents	416,996	1,065	-15,051	0,998	86,722	1,014
Cultural services	221,357	1,030	245,593	1,029	199,649	1,025
Recreation services and amusement	89,205	1,029	84,655	1,024	77,706	1,023
Other tourism services	29,353	1,037	-3,532	0,996	8,749	1,011

When comparing all seven tourism services listed in the Czech Tourism Satellite Account, several trends in the development of internal tourism in the three major tourist services sectors are visible. These three economic activities are also considered to be the main ones with regard to tourism. Therefore, this study is dedicated to analysis of future trends and consumption namely in accommodation, food and beverage and passenger transportation.

An interesting sector is the passenger transportation services which, before the crisis until 2008, showed the highest average growth rate of internal tourism and returned to this growth only from 2013 onwards. As it is evident from the table from the long-term view, the average growth rate was the most significant before the crisis and in the monitored period 2003-2015, this sector grew the most in average (by 3.6%). Modern technologies within this sector have reduced fuel consumption and although fuel prices are constantly oscillating, visitors still spend money on transport to reach their destination. Another reason for stability of this sector is the increasing competition in the form of new transport companies in the Czech Republic that are coming to the market. This evidently causes higher quality in this sector. (Stasiak-Betlejewska et al., 2016) As the passenger transportation include also transport by car, it is likely that this is the most used means of transportation in domestic tourism. However, this is not captured in official statistics. One more trend that can influence the future development of internal consumption of transportation can be the boom of sharing economy when tourists use shared transportation means, mostly taxis, instead of classic transportation services that are statistically monitored.

Figure 1 Development of internal consumption in transportation. Source: own processing based on Czech Statistical Office (2018)

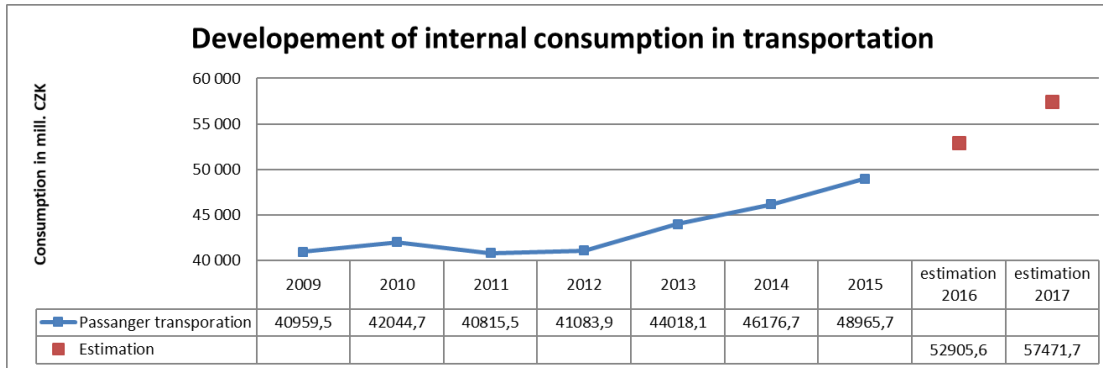
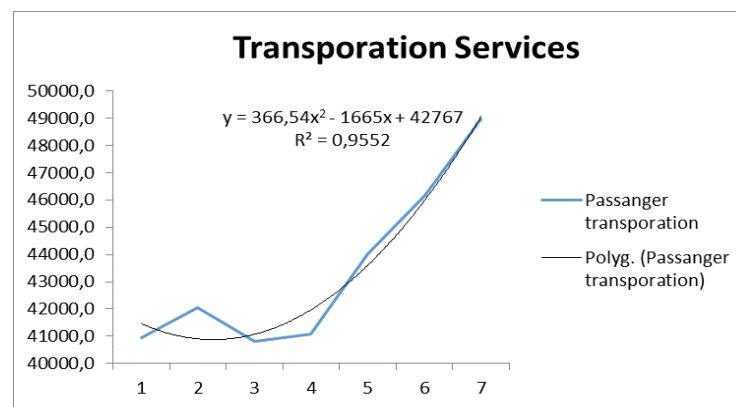


Figure 2 Future development of internal consumption of transportation services by regression analysis. Source: own processing based on Czech Statistical Office (2018)



As far as accommodation services are concerned, it can generally be said that unlike other sectors, this sector does not have to worry about a major downfall despite the disruptive factors (Panayotis, 2017). This is also seen in figure 3. The first obstacle can be seen in economic crisis which has had an impact on the reduction of disposable income of households and their decision-making on the spending of leisure time outside their place of residence and therefore, it affects also the accommodation. This points to the fact that the economic stability of collective accommodation facilities depends on the overall economic situation and economic fluctuations in the service market. These can subsequently determine the preferences of demand in terms of the allocation of disposable income to leisure and the associated overall financial decision-making of the consumer at the tourism market. This dependence is also evident from data about internal tourism in times of crisis which indicates a reduction in demand for the supply of these services. Even though in 2009, there was a fall in internal tourism expenditures by 2 548 million Czech crowns compared to the previous year, the timeframe from 2009 to 2015 shows that this sector has the highest average growth rate from all three sectors. An interesting fact is that compared to other sectors, average growth rate of internal consumption in 2003-2008 is 1,032 and in 2009-2015 is 1,035. Compared to other sectors from table 1, this is the only sector where there is a significant positive change. Other sectors report lower values after the crisis period.

The graphical depiction of future development of internal consumption of accommodation services shows an increasing trend.

Figure 3 Development of internal consumption in accommodation. Source: own processing based on Czech Statistical Office (2018)

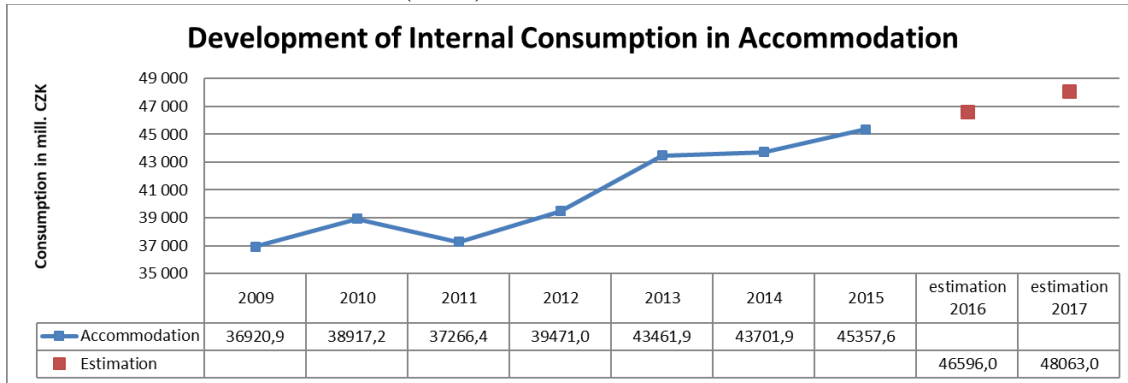
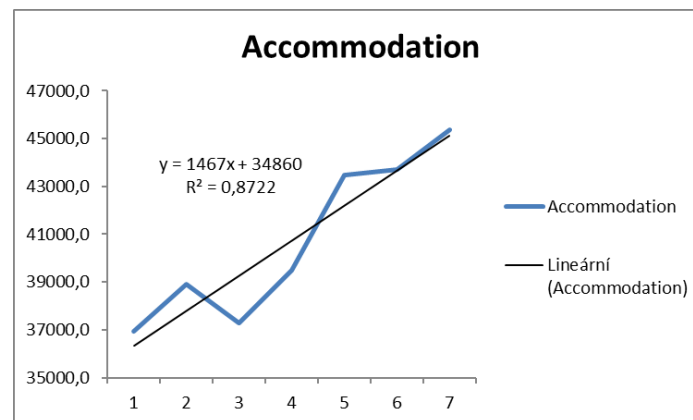


Figure 4 Future development of internal consumption of accommodation by regression analysis. Source: own processing based on Czech Statistical Office (2018)



With the increasing living standards, both residents and non-residents use a part of their disposable incomes to visit destinations associated with the need of accommodation (unless it is a one-day visitor). The highest share of overnight visits was recorded in domestic tourism (64%) in 2016 (Czech Statistical Office, 2016). For support of the tourism economy, only tourist, who spends at least one night in a given destination, is important. However, the trend is changing over the last period as well as is changing the length of stay of tourists in the Czech Republic which is getting shorter even though the number of tourists is growing. Another very discussed and disruptive factor is the trend of sharing economy that can influence the development and prosperity of classic collective accommodation facilities such as hotels, motels, camps, cottages etc. The preferences of tourists can lead to accommodation in shared private flats that are not statistically or legally registered in terms of travel and tourism receipts in the Czech Republic yet. However, in general, it is still the trend of increasing consumption in collective accommodation facilities in individual destinations (O' Connel, 2017) even despite a number of digital trends and hotelier competition (e.g. in the form of sharing economy). For example, in the Czech Republic, the number of Airbnb tourists increased by 52% and in 2017, it was one million tourists. However, this is still the trend of foreign visitors mostly Germans, the USA, British and

French tourists whereas Czech tourists are accommodated through Airbnb only by 7%. (Forbes, 2018).

Growing competition and rapidly evolving global market forces managers of accommodation facilities to actively and practically manager internal processes so that they can reduce costs and improve service quality (Vij, 2016). This is the reason why accommodation facilities should be managed also in terms of sustainability. Moreover, the fact, that the negative impact on the environment is the highest among hotel facilities from the previously mentioned tourism services (Sloan et al., 2013), contributes to starting implementing sustainability solutions. Within accommodation services, it is necessary to take into account the limits of statistics in the form of accommodation for relatives especially for domestic tourism which are not included in the statistics. These trends are very likely to continue also because of the higher number of domestic tourists than foreigners (in 2016 except the capital city of Prague and the Karlovy Vary region).

Figure 5 Development in internal consumption of food and beverage. Source: own processing based on Czech Statistical Office (2018)

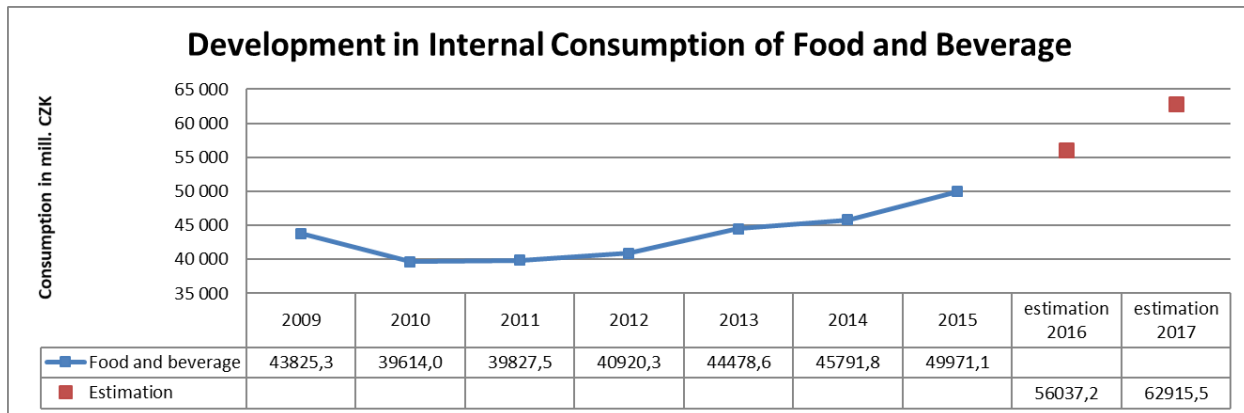
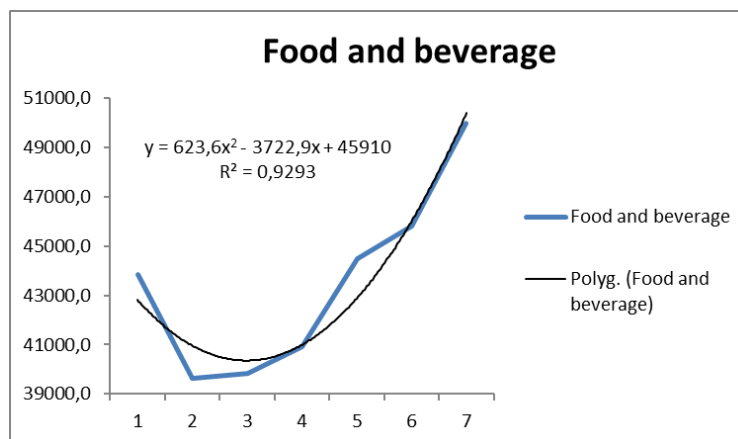


Figure 6 Future development of internal consumption of food and beverage by regression analysis. Source: own processing based on Czech Statistical Office (2018)

Error!



By their nature, internal consumption in accommodation services is very similar to that in food and beverage services however, the crisis has gone less grammatically and their future is more stable. Food and beverage services behave steadily both before and after the economic crisis. This is also evident from figure 5 and 6. However, from all three mentioned sectors, food and beverage has the lowest average growth rate throughout 2003 to 2015. It must be also noted that food and beverage is a sector that is very difficult to depict with respect to tourism internal expenditures as it is not clear what percentage of consumption is represented by locals (not tourists). Today's trend towards high-quality gastronomy attracts not only tourists but also local residents who connect the need for food with the cultural experience and social function even without leaving their home of residence.

5. Conclusion

Tourism is multidisciplinary economic field that consists of diverse sectors that sometimes overlap. This causes that the measurement of its economic impact is demanding and difficult. One of the major statistical variables that depict the economy of tourism is consumption, i.e. expenditures of international and domestic tourists. Primarily, internal consumption of tourism along with income of tourists belong to one of the main indicators for monitoring past, present and future sustainable growth of tourism activities in today's competitive world. To measure tourism's impact correctly, the emphasis should be put on both international and domestic tourists and their expenditures.

The contribution of this study to the literature and science is in depicting real and future development of internal consumption of tourism in three main tourism activities, i.e. transportation, accommodation and food and beverage in the Czech Republic. Its importance also lies in showing importance in measuring of this variable in tourism statistics and prediction. Development of internal consumption in past years as well as the prediction of future consumption can serve as an important reference for further planning and should lead to competitive advantage for entrepreneurs.

The analysis of internal consumption from the Czech Statistical Office by using regression analysis showed the trends of consumption of both visitors and residents of the Czech Republic. All three above described economic activities succumb to trends of modern demand of tourists and should behave accordingly. An interesting sector was the passenger transportation services which, before the crisis until 2008, showed the highest average growth rate of internal tourism and returned to this growth only from 2013 onwards. The highest average growth rate after the crisis from 2009 to 2015 is seen in accommodation sector. This is also caused not only by the increasing living standards but also by higher disposable income of tourists. More and more tourists prefer high-quality accommodation services, of course, proportionate to their income. This forces accommodation facilities to higher their standards and offer better services compared to previous years before the crisis. Traditional competition but also competition in the form of sharing economy also caused accommodation facilities to improve their standards so nowadays tourists do not take accommodation only as a place to stay but more like an experience, that creates the atmosphere of the whole stay. In food and beverage sector, crisis has not caused big fluctuations and it is considered to be a stable sector. However, one must keep in mind that statistics of food and beverage include also expenditures of local people and thus, these data

differences can give a distorted picture of economic impact of this sector on tourism. Particularly, there exist so called food travellers who visit food and beverage facilities due to experience such as for example visiting cooking classes, food festivals or others - these can be locals but also tourists. This modern trend can also affect the future statistics in a positive way. Generally, it can be concluded that previously mentioned trends can have a positive effect on internal consumption in future years because tourists no longer look at the cheapest possible variety but they are willing to pay more money for quality and experience.

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