INNOVATION OF ECONOMIC SUSTAINABILITY AND ITS MEASUREMENT IN HOTEL INDUSTRY

Zuzana Tučková¹, and Zuzana Vaculčíková²
¹Tomas Bata University in Zlín, nám. T.G. Masaryka, Zlín
²tuckova@utb.cz
³Tomas Bata University in Zlín, nám. T.G. Masaryka, Zlín
³vaculcikova@utb.cz

Abstract

High competitiveness in tourism businesses puts a pressure on solving and improving financial results. One way how to reach economically stable tourism business is to concentrate on sustainability and its integration into planning and policy. By integrating sustainable elements, tourism businesses may be considered innovative and more competitive in the eyes of their clients and it can be helpful for the management, too. Thus, tourism management should solve innovation, competitiveness and sustainability in order to benefit tourism economy. The aim of this paper is to determine the relevance of the economic sustainability in the hotel industry in chosen region in the Czech Republic and to clarify indicators to monitor economic sustainability in the field of hotel facilities as a possible innovative element of economic side of hotels. Methodologically, Delphi study is used to gather opinions on economic sustainability and its measurement in the chosen hotels in the Czech Republic.

Keywords: competitiveness, economic sustainability, innovation, hotel, measurement

1. Introduction

Globalisation and its impact on travelling has influenced the form of supply and demand side which resulted in growing tendency of businesses to solve sustainability. As a result, globalisation has caused higher pressure on small and medium-sized enterprises in tourism in the big competition world (Smeral, 1998). Competition of destination or tourism industry is important also for single enterprises (e.g. hotels) because without competitiveness, it would be difficult for them to attract international visitors. (Crouch and Ritchie, 2003) This is especially true for destinations where tourism is the main source of income. In order to ensure long-term development and face the challenges in tourism, tourism businesses should integrate sustainability into planning and policy not only for reaching competitiveness but also to boost employment and social cohesion as “economic, social and environmental sustainability are key factors for the competitiveness of destinations and the welfare of their populations”. (Castellani and Sala, 2009, p.18) As it was already mentioned, destinations and tourism businesses should gain competitive advantage in order to attract tourists and this is possible through innovation since “innovation is linked to competitiveness in that innovation is necessary for maintaining competitiveness in an industry and competitiveness is a requirement for maintain or improving market standing.” (Artal-Tur and Kozak, 2015, p.19). Moreover, tourism is characterised as a part of the economy of experiences (Nagy and Piskóti, 2016) where according to Boswijk et al. (2005) the innovation has an important role. As stated by Nagy and Piskóti (2016, p.75), “culture, innovation and spatial development go hand in hand in creating tourism experience”. Even though, tourism product is connected with providing experiences more than with particular service (Najda-Janoszka and Kopera, 2014), however, reaching competitive advantage and sustainable growth is not only about innovative experiences but it is necessary to monitor also economic and financial perspective of tourism businesses and destinations. Hence, their
competitiveness should be measured also by “efficiency in resource allocation which produces long-term economic prosperity” (Hong, 2008, p. 46). As a matter of previously mentioned, this paper concerns innovation of economic sustainability that is not a subject of a lot of studies within tourism industry with the emphasis on hotel businesses. The study is held in the chosen region of the Czech Republic and its aim is to analyse the relevance of the economic sustainability in the hotel industry in chosen region in the Czech Republic and to clarify indicators to monitor economic sustainability in the field of hotel facilities as a possible innovative element of economic side of hotels.

2. Literature review

2.1. Interconnection between innovation and sustainability
Generally, innovation is characterised as “a new idea and its implementation into a new product, process or service, leading to the dynamic growth of the national economy and the increase of employment as well as to a creation of pure profit for the innovative business enterprise.” (Kuniyoshi, Child and Kagano, 1988, p.3). From the definition of innovation, one can observe its interconnection with economic growth as a main outcome of innovative process. This may be due to the fact that investments in innovative solutions may develop new technologies that can support sustainable development in any area of business (Commission of the European Communities, 2001) and reaching sustainability goal then leads to dynamic growth. To support this, innovation and entrepreneurship, according to Lisbon Agenda, should be taken into consideration as two key elements for defusing sustainability demands (Wagner, 2017).

Innovation processes and its importance in sustainability of businesses was proved also by the global executive study of Kiron et al. (2013, p. 69) where “37% respondents of their survey from 2012 say their organizations profit from sustainable activities and 63% of those respondents say their organization has changed its business model in response to sustainability.”

Both of these concepts have few things in common when resulting from the definition of innovation:
- economic concept (in sustainability, not only economic concept is important but also social and environmental);
- long-term process;
- desire for growth or profit in market economy. (Kuniyoshi, Child and Kagano, 1988)

When interconnecting economic sustainability and innovation, one should bear in mind that dominant is process innovation as cost and productivity are more important than focusing on competitive advantage. (Kuniyoshi, Child and Kagano, 1988) Regarding the combination of sustainability and innovations, it “is indispensable to realize new combinations, which can lead to an innovation process tackling the current sustainability challenges.” (Stock et al., 2017, p. 217) According to Stock et al. (2017), the combination of innovation and sustainability resulted in three terms:
- Sustainable innovation – “Sustainable innovations not only comprise the environmental dimension but also economic, social and institutional aspects. They improve the realization of the aims of a sustainable development and represent a subset of all innovations” (Horbach, 2005) The focus of this sustainable innovation is nowadays concentrated to solutions and systems rather than products. (Murto, 2011)
- Sustainable-driven innovation – “the creation of new market space, products and services or processes driven by social, environmental or sustainability issues” (Little, 2005).
2.2. Innovations in tourism

Tourism as a phenomenon defined by immense innovativeness (Hjalager, 2009) is a topic of many practical and theoretical works. The theme of innovation in tourism used to be “a matter of limited research and political consideration” (Hjalager, 1997, p.35). This is confirmed also by Halkier, Kozak and Svensson (2013) who claim that tourism innovation is not a widely discussed topic. A fact that there is little knowledge about innovating in tourism may be caused by a lot of barriers such as lack of flexibility, lack of financial capital, weak management willingness to change, human resources barriers, protection of innovations or technical support (Najda-Janoszka and Kopera, 2014). However, nowadays, the issue of innovation in tourism is more elaborated. The main aim of innovation processes in tourism is to increase productivity, profitability and quality which means to concentrate on competitiveness of tourism economy. In more than any other business, tourism requires new trends, modern approaches and because of more demanding clients, it requires also development of new basis of tourism and new destinations. (Dias et al., 2018) This is proved also by other works on competitiveness and its connection to tourism innovations (e.g. Ionica, 2010; Hjalager, 2002; Parera et al., 2012) This is so because “innovation is one of the main determinants of competitiveness” (Orfila-Sintes and Mattsson, 2009, p.380). In the past, economics was based more on comparative advantage such as labour or production resources whereas now its concentration is on knowledge, developed infrastructure, technology and innovation. Thus, entrepreneurship in general shifted from the creation of profits and risk-taking policy to reduction of unemployment and highlighting competitive advantage. (Sladoljev, Sisara and Kardum, 2014) In other words, technology-based economy defined by industrialism has changed to a service economy regarding knowledge as a central source of innovation. (Hipp and Grupp, 2005).

The size of tourism businesses is an important determinant of implementing innovations because it represents one of the barriers that should be overcome. (Najda-Janoszka and Kopera, 2014) Some companies or its stakeholders regarding the major tourism companies such as e.g. the Hilton hotel chain or Disney World have stronger innovation capabilities than small and medium-sized enterprises that represents the core of local destinations and struggle with innovations. (McPhee, Guimont and Lapointe, 2016). In tourism sector, larger businesses tend to more likely accept changes and innovations than the smaller enterprises. This is due to the fact that larger enterprises are willing to implement new ideas much faster and smaller enterprises follows innovations only after they see innovations and particular investments are realizable. (Hjalager, 2002).

As stated in Hjalager (2002, p. 466, 467), Abernathy and Clark (1985) developed a model of innovations applied to different sectors and also to tourism. It includes four different types of innovations, namely:
- **Eco-innovation** – “Any form of innovation aiming at significant and demonstrable progress towards the goal of sustainable development. This can be achieved either by reducing the environmental impact or achieving a more efficient and responsible use of resources.” (European Commission, 2015)
- Niche innovations: franchiser or foreign investors entering the tourist sector as a supplement to existing companies, establishment of marketing alliances, new combinations of existing products in new ways
- Revolutionary innovations: diffusion of new technology in enterprises, introducing new methods that shift composition of staff, attachment to the same markets but with new methods
- Architectural innovations: creating new events and attractions that demand a reorganisation, redefining the physical or legal infrastructure, creating of other ways of accessing knowledge in centres of excellence.

When we concentrate especially on hospitality sector, as said by Ottenbacher and Gnoth (2005), the research on innovation in hospitality is lacking, however in recent years few studies are devoted to innovations in hospitality (e.g. Trojan et al., 2014; Bilgihan and Nejad, 2015; Diaconu and Dutu, 2017; Horng et al., 2018). The shift in research of innovations in hospitality sector is caused by the changes in the economic and social environment that has caused the emergence of new aspects within the hospitality services. (Diaconu and Dutu, 2017)

According to Langvinienāa, and Daunoraviščinštāb (2015), innovation in hospitality industry is one of the key factors that can improve service quality, reduce costs and generally gain competitive advantage. Mostly, with regard to hotels, literature mentions innovations in information technologies that are helpful in increasing the competitiveness of companies and simplifies the communication between the hotel, its customers or suppliers. (Orfila and Mattsson, 2009).

3. Methodology

The aim of this paper is to determine the relevance of the economic sustainability in the hotel industry in chosen region in the Czech Republic and to clarify indicators to monitor economic sustainability in the field of hotel facilities as a possible innovative element of economic side of hotels. This will be achieved by qualitative method through Delphi study. In qualitative research, the nature of the problem, the causes and the attitudes of the respondent are examined. Research is carried out on a smaller number of samples and its results are generalized. (Gúčik, 2011)

Phillimore and Goodson (2004) use qualitative research directly in tourism and they argue that this type of research has an excellent potential for collecting data about activities, events and behaviours to achieve understanding of individual processes on a social scale. Therefore, this type of research was applied also in this study. As a form of qualitative research, Delphi study technique was applied and by which we were able to gain trustworthy views of a group of tourism experts through an intensive mixed questionnaire survey that had in this case two rounds. The application of the Delphi method to research should not be perceived as the main tool of research but as supporting and expanding method that gains reliable research opinions towards a research problem. (Ritchie et al., 2005)

The main steps of the Delphi method used for this research can be summarized as follows:

- defining the criteria for the evaluation of potential candidates for the setting up of an expert panel;
- identification of potential candidates;
- a request for their participation;
- defining the problem and creating the first version of the questionnaire;
- 1st round - spreading a questionnaire, individual interviews with the managers in all chosen hotels and collecting answers;
- creating a second questionnaire;
- 2nd round - distributing the questionnaire by email and collecting answers;
- considering other rounds if necessary;
- distributing the summary to all participants;
- application of results to solve a research problem (Ritchie et al., 2005)

In order to evaluate the relevance of the criteria for different economic sustainability indicators form Delphi method, multiple-criteria decision analysis (further as MCDA) was used. By the term variant, we understand specific decision making options that are feasible (in Delphi study, these are hotels A,B,C). The criterion is the point from which the variants are judged (in Delphi study, these are individual indicators of economic sustainability). These criteria are further subdivided according to maximization, i.e. the best values have the highest values and are objectively measurable. (Jihočeská univerzita v Českých Budějovicích, n.d.) Lastly, the preference of the significance of the criteria was determined according to the order of the individual criteria based on the final evaluation.

For assessment Likert scale was used in this meaning:
1 – do not use (disagree)
2 – rather not use (rather disagree)
3 – neutral
4 – rather use (rather agree)
5 – definitely use (completely agree)

As this is unique research, the main area of research for the purposes of qualitative data was Zlín region for the following reasons:
- the regional focus of research brings better added value for practical uses because of the diversity of each region;
- the intensity of tourism (number of nights spent/population in total) is highest in the Zlín region in 2016 from the whole Morava;
- local knowledge of surrounding collective accommodation facilities of the Zlín region enables better targeting and higher willingness to cooperate (Reichel, 2009).

Due to respecting anonymity (Ritchie et al., 2005) which is typical for Delphi method, the expert panel will be further referred to as hotels A, B and C.
Hotel A is a 4* hotel located in Zlín with 101 and more rooms. It is a privately owned hotel with mostly business clients.
Hotel B is a 4* hotel located in spa town Luhačovice with 25 rooms. It is a privately owned hotel that focuses on wellness clients.
Hotel C is a 4* hotel located in Velké Karlovice It has 130 rooms. It is also a privately owned hotel and its main clients are primary wellness visitors.

4. Results

1st round of the Delphi research method
The first round of Delphi research was focused on introducing the research issue, the relevance of solving the issue of economic sustainability in practice and practical experience with economic sustainability in managing the economic aspects of the hotel facility. Responses were due to vastness of the topic and subsequent responses evaluated by Likert scale from 1 to 5. Likert
scale was designed to measure the attitudes of managers of hotel facilities. The results are seen in table 1.

### Table 1 Results of the first round of the Delphi research (own processing)

<table>
<thead>
<tr>
<th>The main goal</th>
<th>Hotel A</th>
<th>Hotel B</th>
<th>Hotel C</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Knowledge of economic sustainability with regard to work in the hotel</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2.66</td>
</tr>
<tr>
<td>b) Use of the evaluation system of economic sustainability in current practice</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2.66</td>
</tr>
<tr>
<td>c) Measurement of economic sustainability in current practice</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>3.66</td>
</tr>
<tr>
<td>d) The need to unify the system of economic indicators of sustainability in the future</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>e) Willingness to implement a system of sustainability indicators</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>f) Use of selected specific indicators</td>
<td>3.4</td>
<td>3.0</td>
<td>3.3</td>
<td>3.23</td>
</tr>
</tbody>
</table>

The conclusions of the first part of the Delphi research show that measurement of economic sustainability and its use in practice is a relatively unknown term. However, this does not correspond to the results of point f) which consists of 10 selected specific indicators of economic sustainability (number of tourist nights per month, average length of stay of tourists, daily spending, price of the room in destination, percentage relative contribution of tourism to destination economy as a % of GDP, occupancy rate of commercial accommodation per month and its average per year, % of repeated tourist visits, evaluation in tourist guides or websites, sales from accommodation services per year, % of tourist to local residents at events, festivals etc.). Here, even after a more detailed personal interview with hotel managers, it is believed that the knowledge about specific indicators among expert panel was, however not directly linked to the concept of economic sustainability. At the same time, there was a consensus on the need to unify indicators to measure economic benefits (point d). All three hotel facilities did not agree with uniform and practical implementation of economic sustainability indicators. The reasons were, in particular, the differences in the supply and demand side of tourism in individual regions, the location and aim of hotel facilities, the demographics and the level of difference of people’s disposable income.

2nd round of the Delphi research method

After evaluation and processing of the results from the first round, it was possible to modify the questionnaire and further target the research in the second round. From the results in the first round, it was said that from 10 economic sustainability indicators, only few of them were used (see table 1, point f). As a consequence of this, the aim of the second round was to aim at concrete indicators of economic sustainability that are used in practice when managing financial side of hotels. Thus, the second questionnaire included indicators of economic sustainability as described in the theory of three major publications on measurement sustainability, namely WTO (2004), the Association for the Development of Municipalities and Regions (2007) and the European Union (2013). The second part of the Delphi method research was aimed at assessing the attitudes toward the presented economic sustainability indicators presented by theory. The aim was to find out the real indicators which are used by hotel facilities when measuring economic aspects of hotels.
Table 2 Results of the second round of the Delphi research (own processing)

<table>
<thead>
<tr>
<th>Indicator of economic sustainability</th>
<th>Hotel A</th>
<th>Hotel B</th>
<th>Hotel C</th>
<th>Number of points</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of total occupancy in the season</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>Occupancy rate in accommodation establishments</td>
<td>1</td>
<td>5</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>The ratio of the number of tourists in the main and weak season</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>% of budget spent for high season and off season promotion</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>% of facilities open all year round</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Number of employees in the tourism sector</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>% of full-time and part-time jobs</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>Employee satisfaction</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>Level of employees’’ income</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Complaints</td>
<td>4</td>
<td>5</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>% of imported work from other regions or countries</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Average length of stay</td>
<td>3</td>
<td>5</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>% of accommodation facilities open all year-round (regardless of seasonality)</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Unemployment rate (in accommodation facilities) regardless of seasonality</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>% of the budget invested in promotional activities in low and off-season areas</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Number of accommodation facilities in the given territory</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Number of tourist nights per month</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Daily spending on tourist (accommodation, food, other services)</td>
<td>1</td>
<td>2</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>Occupancy of commercial accommodation capacities per month and their average per year</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>Direct employment in tourism as % of total employment</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>% of enterprises in tourism sector for which the fire control was carried out in the last year</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>% of enterprises in the tourism sector that actively take steps to use local and sustainable goods and services as well as goods and services certified as fair trade</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>GDP per capita at current prices per year or constant prices per inhabitant</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Share of total net investment to gross investment</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>The difference between the revenue and expenditure of public budgets to GDP</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>The difference between the total value of goods and services exported and imported to GDP</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Share of GDP to the number of employees in current prices per year or at constant prices over a longer period</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Domestic material consumption to GDP</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Total energy consumption to GDP</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>7</td>
</tr>
</tbody>
</table>
5. Conclusion

Tourism plays a significant role in many economies where tourism is a main source of income. These economies should bear in mind that it is necessary to improve and develop their services in order to remain competitive. Innovation in tourism industry is a key element to reach competitive advantage, sustainable growth and satisfaction of customers’ needs. One of the methods how to innovate in tourism facilities is through knowledge in any area. One of these, so far, uncharted areas of knowledge is innovation of economic sustainability and its management. The concept of sustainability is nowadays a topic of many recent debates in tourism businesses and also it is a part of Agenda 2030 that emphasizes the need of economic growth and innovation. In order to be considered sustainable, innovation in the form of economic sustainability requires, first of all, education and knowledge of financial managers. Because this is not very elaborated theme throughout literature and practice, this research offers unique insight into assessment of economic sustainability of hotels through using economic sustainability indicators. The indicators were created as a mix of three major publications on sustainability, namely WTO (2004), the Association for the Development of Municipalities and Regions (2007) and the European Union (2013) and the results were processed by using Delphi method with expert panel consisting out of three hotels and their managers. The financial managers had the opportunity to indicate concrete real usage of individual indicators. It is noteworthy that expert panel knew and used most of the mentioned indicators, however they did not know these were the indicators of economic sustainability. Interviewed financial managers of hotels (i.e. the expert panel) concluded that economic sustainability is not a solved concept in the hotel sphere, however after mentioning chosen economic sustainability indicators, they admitted their usage in practice. By Delphi method, it was proved that hotels really solve financial side of the business but not through the assessment of economic sustainability indicators. This unique study brought interesting results in terms of usage concrete economic sustainability indicators and its implementation in practice. Throughout years, in tourism and especially in hotel industry, more attention has been paid to environmental or social sustainability with little or no concentration on economic sustainable well-being of businesses in practice. Even though control of financial side of business has always been crucial for managers, this area is not as elaborated compared to innovations in social or environmental sustainability. A lot of tourism businesses either struggle with implementation of economic sustainability concept into their businesses or they deny to implement it at all because the metrics of measurement of economic sustainability does not correspond to actual needs of hotels.

Respecting the results from this research, most used indicators for assessment of economic sustainability were total occupancy, occupancy rate, employee satisfaction, complaints and average length of stay. The changing role of traditional economy to the economy emphasizing knowledge is evident. Interesting fact is that two indicators out of five mostly used and seen as important were not of economic nature in the true meaning of this word and were intangible. Satisfaction of employees as well as complaints or customers’ opinions in general have a big impact on financial side of the hotel and its long-term sustainability because although satisfied customer deals with his/her experience with others, unsatisfied customer tends to talk about his/her experience even more. Therefore, innovation of economic side of the hotel in terms of applying sustainability indicators should be considered by managers in the future. This is very important to consider while planning future strategy because nowadays, customers in hotels requires more demanding approach. Thus, the role of hotel managers is to keep up with the
trends, keep prices competitive and keep clients satisfied. The limitation of this research is seen in the sample that was tested and interviewed but because this was unique research in the Czech Republic, these few hotels served as a sample to prove whether the research on economic sustainability is meaningful in hotel sphere.

References


