RESEARCH ARTICLE

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Business Excellence of Eco-Friendly Hotels in the Region of the Western Balkans: Case Study of Eco-Friendly Hotels in Serbia[1]

Abstract. Hotel industry, as a very dynamic activity within the tourism industry, applies innovations in business and develops voluntary eco-business standards for developing sustainable tourism. The paper aims to assess business excellence of hotels that are holders of the international eco-certificate Green Key in Serbia, a country in the Western Balkan region, by using the BEX model. The study reviews and presents the current situation when it comes to implementation and valorisation of eco-principles and standards in hotel business in Serbia, while examining their business excellence, as well as the opportunities for better positioning in the international tourism market. The research results show that the examined companies do not have poor ranks of business excellence. It is recommended for these hotels to continue with the current business while implementing innovations in sustainable business in order to improve business results. By monitoring the value of the BEX index, it is possible to avoid business risks, while expanding eco-awareness and implementing sustainable business policies, which would help hotel companies improve their business.

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Совершенствование бизнес-процессов в экологически безопасных отелях в западной части Балканского полуострова (на примере Сербии)

Аннотация. Гостиничный бизнес — динамичный вид деятельности в сфере туризма. В целях развития устойчивого туризма необходимо внедрять инновации и разрабатывать новые стандарты экобизнеса. Цель работы — оценить эффективность деятельности отелей, являющихся обладателями международного экосертификата «Зеленый ключ», в Сербии, одной из стран Западно-Балканского региона. Для этого была использована модель делового совершенства (BEX) и проанализирован соответствующий индекс. В статье рассмотрено внедрение экологических принципов и стандартов в гостиничном бизнесе Сербии, а также изучены бизнес-процессы экоотелей и возможности их позиционирования на международном туристическом рынке. Согласно результатам проведенного анализа, представленные отели в целом имеют удовлетворительные показатели индекса делового совершенства. Для дальнейшего улучшения результатов компаниям рекомендуется продолжить выполнение предусмотренных мероприятий, а также внедрить устойчивые инновации. Мониторинг индекса BEX может положительно повлиять на деятельность гостиничного бизнеса, позволив компаниям избежать рисков, повысить уровень экологической осведомленности и реализовать политику устойчивого развития.

Ключевые слова: модель BEX, экологически ответственный бизнес, экоотель, программа «Зеленый ключ», гостеприимство, Западные Балканы

Introduction

The implementation of a responsible business strategy is an important step in the good business of companies today and is a response to the various pressures present in the market. It is based on the principles of sustainable management and on the global Sustainable Development Goals (SDGs), and within its framework it most often defines the implementation of certain international voluntary standards in business processes. Such approach in modern business contributes to the competitive advantage in the market, and it is becoming not only desirable, but also a necessary form of activity.

The principle of sustainability implies the synergy of economic, socio-cultural, and ecological aspects, which Elkington (1998) named "triple bottom line". Sustainability is a major goal in many sectors, including the tourism industry, where sustainability is the main issue for further tourism development (Shen et al., 2020). Considering the importance of the principle of environmental sustainability for all economic activities, it is crucial to highlight the role of environmental protection in the function of preserving natural resources. The importance of this principle is observed through the reduction of resource waste and implementation of sustainable technological changes in order to enable better business performance and sustainable economic growth, which is significant for society as a whole (Yousaf et al., 2021).

Rapidly growing hotel business is an integral part of the tourism industry, bearing in mind the changing needs of tourism market, as well as the growing number of accommodation facilities in the world. According to Statista portal data[1] of May 2020, hotel industry globally realised total revenues of 1,211.21 trillion US $ in 2019, and the industry itself is recognised as one of the largest consumers of electricity and as a polluter at the destinations where it operates.

The concept of sustainable business in the tourism industry is grounded in the implementation of Agenda 21[2], based on which it is possible to see the principles of sustainable travel and good practice examples. Directly related to that is the philosophy of sustainable business which came to life in the hospitality in the early 90s. Sustainable hospitality operations or 'green hotels' aim to reduce their impact on the environment and society (Sloan et al., 2009). Hotel business applies a series of voluntary standards designed to implement business activities in ac-

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[1] Portal Statista, Retrieved from: https://www.statista.com/statistics/1186201/hotel-and-resort-industry-market-size-global/#statisticContainer (date of access: 14.05.2022).

[2] Agenda 21. Retrieved from: https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf (date of access: 25.05.2022).

cordance with defined rules and principles, with the aim of conducting operations optimally and responsibly at the destination where the company operates, from economic, social and environmental aspects. Many hotels have adopted environmentally friendly practices to cater to their guests' pro-environmental attitudes (Xu & Pratt, 2018). Users of hotel services are now more environmentally conscious and demand more information about the sustainability of available products or services and their environmental characteristics (Mora et al., 2018). In relation to the eco hotel's commitment to sustainable business and the application of certain standards, the perception of tourists/guests about the hotel's commitment to sustainable and responsible business is formed (Merli et al., 2019). Given the growing environmental awareness of tourists, hotel companies must implement eco-standards and certificates in their business processes in order to better position themselves in the tourism market and respond to a number of business risks. The degree of business excellence of the company depends on the risk exposure and proper risk management (Regester & Larkin, 2012; Dzobelova et al., 2020).

According to Berk et al. (2018), it is important to opt for an appropriate model for monitoring and assessing risk and business excellence, and thus prevent negative business results. There are several models that are most commonly used: Zmijewski model, Altman model, Kraliček DF model, Quick Test model, BEX model. Business excellence of companies (BEX model) (Belak & Aljinović-Barać, 2008) from various industries in Serbia has been analysed in a number of published scientific papers so far (Bubić & Hajnrih, 2012; Alihodžić & Džafić, 2012; Knežević et al., 2014; Rajin et al., 2016; Radović & Milićević, 2020).

This paper's research subject is business excellence assessment of hotels in Serbia, a country in the Western Balkan region, which apply environmentally responsible business principles, have implemented eco-standards and are holders of the international eco-certificate/Green Key label.

The research results are of scientific and practical importance. Scientific contribution is reflected in the unification and application of representation analysis results of internationally eco-certified accommodation facilities in Serbia. It is also reflected in a business excellence survey of Green Key Hotels in Serbia, which is done for the first time, in reviewing and evaluating the current situation, along with suggestions for future business. Additionally, the following practical aspects can be identified:

— the findings can be used by both the management of the analysed hotels and stakeholders in order to devise certain policies that would contribute to hotel business improvement and timely assessment of business risks,

— the paper shows the importance of spreading eco-awareness and assessing the need to implement the principles and standards of environmentally responsible operations in hotels,

— the study highlights the need to monitor trends in tourism market with education and implementation of environmental principles in hotel accommodation facilities so as to develop tourism industry in Serbia.

Theoretical Framework

Fink (1998) believes that a theoretical framework is a systematic, explicit, and reproducible design for identifying, evaluating, and interpreting the existing body of recorded documents. In this paper, the theoretical framework focuses on the following two parts. The first part synthesises the state of the art in the field of environmentally responsible operations in hotel industry. The second part presents the BEX model for assessing the companies' business excellence.

Environmentally Responsible Operations in Hotel Industry

Today, in the literature one can see an increasing interest in monitoring sustainability in the hotel business, especially from the point of environmental responsibility and the operation of eco/green hotels (Kapiki, 2012; Aznar et al., 2016; Rahman & Reynolds, 2016; Ruepert et al., 2017; Font & McCabe, 2017; Horng et al., 2017; Nilashi et al., 2019; Kim et al., 2019; Gupta et al., 2019). Changes in the needs of tourists today, as well as the growth in the number of environmentally sensitive service users, have influenced the implementation of a number of innovations in the hotel business, with the focus on the formation and implementation of strategies and principles of environmentally responsible operations (Wang et al., 2018; Teng et al., 2018; Trang et al., 2019; Verma et al., 2019; Yadav et al., 2019; Yarimoglu et al., 2020). One of the segments of sustainable business is environmentally responsible operations in the hotel industry, which are based on activities that include: energy management, energy efficiency, waste management, environmental management, drinking water and wastewater management. What is more, employees are required to constantly improve knowledge and skills which they need for the mentioned activities in business processes.

It is important for managers and owners in the hospitality to be aware of the necessity of applying the principles of environmentally responsible business. According to Sloan et al. (2009), the application of sustainable strategies affects the realisation of better business opportunities and results primarily by reducing imputation, increasing operational efficiency income, as well as improving the image.

Mensah and Mensah (2013) point out that the hotel industry is targeted as the most responsible for exacerbating environmental problems from a global perspective, given the amount of water and electricity that hotel facilities consume, as well as the amount of waste they generate. Asadi et al. (2020) pointed out the importance and potential of green innovations in promoting sustainable performance in the hotel industry, as well as the impact of green innovations that help hotel managers understand and adopt these practices in the hotel industry. In their study, Sajjad et al. (2018) pointed out that sustainable business in Pakistani hotels is partially integrated and a systemic approach is lacking. By using a systemic approach and analysing the obtained data, Pamfilie et al. (2018) argue that the hotel industry in Romania is not yet sufficiently prepared to adopt the sustainable green principles in business. Kapiki (2012) believes that the main motives for implementing eco-standards in Greek eco-hotels are financial benefits and economic support through operational programs. The environmental costs of the adaptation in Greek eco-hotels are low, they are amortised for up to two years, the operating costs of the business are reduced, and there is a higher level of guest satisfaction and an increase in reservations by about 30 %.

The Western Balkan region consists of the following countries: Serbia, North Macedonia, Albania, Montenegro and Bosnia and Hertzegovina. Radović and Čerović (2021) indicate that when evaluating the application of ecological principles within the framework of the analysed region, awareness of the use of renewable energy sources, as well as waste management, are at a very low level.

In this regard, the implementation of ecological principles of sustainable business and segments of sustainable tourism indicate the necessity to educate and direct the population to apply waste management in all spheres of the environment and all economic activities, to implement renewable energy sources and the process of protecting and reserving space in order to preserve biodiversity, minimise negative impacts, etc.

Horváth and Jónás-Berki (2018) note that when it comes to environmental and social sustainability, a comprehensive approach and the implementation of standards are required in the entire hotel sector, with the aim of achieving better results. There are some ideas that could be used to reduce costs: using automatic energy control, saving water, reducing plastic waste, starting with keycards, cutting food waste and reusing it, etc. (Sloan et al., 2009). When hotels implement sound environmental programs, they have the possibility to market such initiatives to their customers and be more competitive in the modern tourism market.

Environmentally responsible operations in hotel chains are part of the company's business policy, in accordance with global principles of corporate business, and have a significant impact both on financial business results and the image of corporate brand, i. e. hotel corporation brand. The reason behind the application of green business strategies is to attain sustainability by reaching competitiveness and ecological improvement (Milovanović, 2015).

Green motives are based on ensuring sustainable business and development through saving resources, improving efficiency and virtuous behaviour, all mentioned in terms of moral, instrumental and related motives. The application of green motives implies the development of an affinity for environmental protection among stakeholders (Yousaf et al., 2021; Thongplew et al., 2017). Additionally, the application of green motives supports the company in acquiring sustainability by responding to the natural protection of the environment, contributing to reduce material waste and minimise risks, thus laying a solid foundation for sustainable development (Chang et al., 2019).

Relationships between the company and consumers are very important for success in the tourism market. Thongplew et al. (2017) point out that the participation of two strategic intermediaries is of particular importance: on the one hand, there are green information providers and activities, and on the other hand, market-oriented green certification and associations with the regulation role. The idea is to engage these strategic intermediaries to promote green products and services in order to activate and intensify the interest of users. In this regard, Leonidou et al. (2015) believe that better achievement/fulfilment of sustainable development goals can be realised precisely through the synergy of green motives and the application of green business strategies.

At the global level, standards, guidelines and criteria have been defined that must be met in or-

der for certain hotel companies to be considered eco-friendly from a social point of view. In order to meet the expectations of its guests, the hotel management must follow the events and trends in the global tourism market, as well as the processes of sustainable hotel management in order to permanently implement innovations and be competitive on the market (Radović & Čerović, 2021). There is a niche in the tourism market of sustainably educated tourists who practice activities related to environmentally sustainable engagement in their daily lives, which brings them benefits from the economic aspect. With already established activities, they expect that the accommodation facilities in which they stay practice this type of activity, so when searching for a facility at a destination, this dimension of environmental responsibility contributes to the hotel company being shortlisted by tourists.

The hotel industry must act eco-friendly not only to protect the environment, but also to ensure the future viability and growth of this industry, because this industry is particularly relying on landscapes and see-sights that need to be preserved (Graci et al., 2008). According to Legrand et al. (2017), eco-labels have three key functions for companies: setting eco-standards, independent certification of these standards, and value-added marketing. The concept of sustainable development undoubtedly embodies a universal call to pursue responsible innovation for a green future (Lavrikova et al., 2021).

Supporting local economy and community, like having "buy local" policies, also makes a hotel more environmentally sustainable. Travellers are gravitating towards hotels that source local ingredients, have partnerships with sustainable farms and highlight indigenous cuisine and tastes, along with developing awareness and management of food waste. Hotels can also offer guest activities using low-impact transport like electric vehicles, (e)bikes or (e)scooters.

The Foundation for Environmental Education (FEE)[1] (Denmark, Copenhagen) has 81 member states and is involved in promoting sustainable development through environmental education in its programs: Blue Flag, Eco School, Young Reporters, Learning about Forests and Green Key International, with a non-profit goal. The Green Key program is certainly the most important for the hotel business. Green Key is a label for companies from the tourism industry that meet strict criteria of environmental responsibility and sustainable business. Companies from six categories — hotels and hostels, small accommodation facilities, campsites, restaurants, amusement parks, congress centres — can voluntarily apply for this designation, with the fulfilment of thirteen criteria.[2]

The criteria are based on the activities of: corporate social business, environmentally sustainable business in the facility, maintenance of the facility environment, employee training, management of various types of waste, energy and water management in the facilities, equipping and maintaining accommodation units, food and beverage preparation. Criteria related to the provision of services in the hotel industry include prescribed amounts of water used in accommodation units and operational activities (eg. l/min), as well as that water consumption and electricity must be monitored on a monthly basis. Chemical means for maintenance of space and laundry, as well as paper accessories must be made from eco-raw materials.[3] All waste management must be treated in accordance with local and national legislation. It is necessary that 75 % of the lighting are LED bulbs which are energy efficient, and it is desirable to use automatic, i. e. sensor lighting. Heating and cooling systems must be monitored according to seasonal needs.

In addition to the stated standards, there are other criteria and guidelines that should be met in the operational part of the Green Key application. By obtaining the right to use the Green Key label, the facilities are obliged to their guests to apply all standards related to environmentally responsible business and environmental protection. In this way, eco-tourists form a loyal attitude towards hotel companies and mostly revisit the facilities. Currently, in the world, the Green Key sign is present in 60 countries, in 3700 different facilities, and according to the ranking of the countries, the situation is dynamic and is as follows: 668 places in the Netherlands, 614 in France, 517 in Greece, 284 in Belgium, 205 in Finland, 153 in Mexico, 165 in Sweden, 197 in Denmark, 219 in Portugal, 114 in Turkey, 98 in Slovenia, 51 in Norway, 38 in Germany.

Analysing the Western Balkan region, we have come to the conclusion that only two countries have accommodation facilities with Green Key certificate (Fig. 1). Serbia is in the 36th place with

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[1] The Foundation for Environmental Education. Retrieved from: https://www.fee.global/our-mission-and-history (date of access: 16.05.2022).

[2] The Green Key award. Retrieved from: https://www.greenkey.global/ (date of access: 16.05.2022).

[3] Green Key Criteria. Retrieved from: https://www.greenkey.global/criteria (date of access: 16.05.2022).
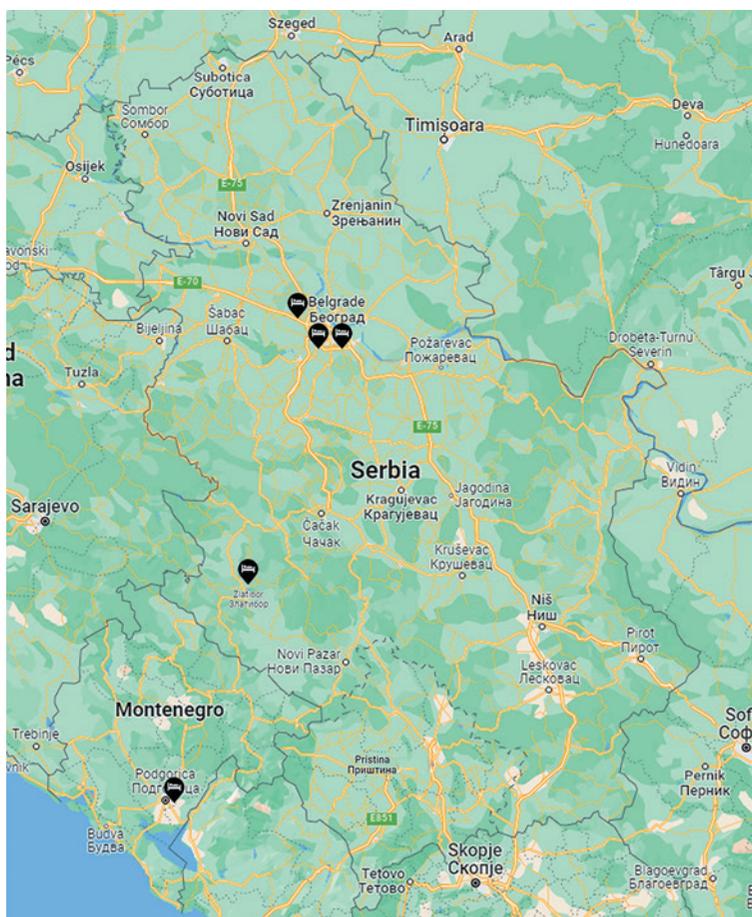
Fig. 1. *Green Key hotels in the Western Balkans countries (source: MyMaps app)*

four hotel facilities. All four Serbian accommodation facilities have four-star labels, one facility is in a mountain tourist centre (Mona Plaza Zlatibor Hotel[1]), and three hotels are located in the city of Belgrade (IN Hotel[2], Radisson Collection Old Mill Hotel Belgrade[3] and Hilton Hotel Belgrade[4]).

Montenegro has one hotel with Green Key certificate, CUE Hotel in Podgorica[5].

BEX Model for Assessing the Companies' Business Excellence

Models for the assessment of business excellence are used to examine business indicators of companies, weaknesses in business, as well as the bad trends which can cause business crises (Radović & Milićević, 2020). In this paper, the BEX model will be applied to assess business excellence of eco-friendly hotels with the Green Key label. When designing the BEX model, Belak and Aljinović-Barać (2008) were applying logical selection and criteria of compatibility and sustainability in the business presentation, based on information from 1600 financial statements of Croatian companies operating in the Croatian capital market in the period from 2000 to 2008.

The designed model is relatively easy to use because fourteen indicators are formed, of which five indicators are from the group of structural in-

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[1] Confirmation that Hotel Mona Zlatibor has received the Green Key eco-certificate, Retrieved from: https://ambassadors-env.com/blog/2019/07/29/hotel-zlatibor-mona-prvi-hotel-van-beograda-dobio-medjunarodnu-ekosertifikaciju-zeleni-kljuc/ (date of access: 16.05.2022).

[2] Confirmation that Hotel In Belgrade has received the Green Key eco-certificate, Retrieved from: http://ambassadors-env.com/blog/2015/12/26/in-hotel-iz-beograda-dobio-zeleni-kljuc-kao-nagradu-za-visegodisnju-posvecenost-ocuvanju-zivotne-sredine-i-odrzivom-koriscenju-resursa/ (date of access: 16.05.2022).

[3] Confirmation that Hotel Radisson Collection hotel Belgrade has received the Green Key eco-certificate, Retrieved from: https://ambassadors-env.com/gallery/radisson-blue-green-key-2015/ (date of access: 16.05.2022).

[4] Confirmation that Hotel Hilton Belgrade has received the Green Key eco-certificate, Retrieved from: https://www.green-key.global/stories-news-1/2019/1/31/hotel-hilton-belgrade-joins-the-large-network-of-green-key-awarded-establishments (date of access: 16.05.2022).

[5] Confirmation that CUE Podgorica has received the Green Key eco-certificate, Retrieved from: https://www.cue-podgorica.com/sustainability/ (date of access: 16.05.2022).

dicators, five are from the group of financial performance, and four are indicators of investment efficiency in the capital market.

According to Belak and Aljinović-Barać (2008), the BEX model has the following structure:

$$BEX = 0{,}388ex_1 + 0{,}579ex_2 + 0{,}153ex_3 + 0{,}316ex_4. \quad (1)$$

The indicators which are part of the model are as follows: ex_1 — profitability, ex_2 — value creation, ex_3 — liquidity, ex_4 — financial strength, and they are calculated using the following formulas:

$$ex_1 = 1 - \left(\frac{EBIT}{Total\ Assets} \right). \quad (2)$$

$$ex_2 = \left(\frac{Net\ Business\ Profit}{Equity}\ Price \right), \quad (3)$$

$$ex_3 = \left(\frac{Working\ Capital}{Total\ Assets} \right), \quad (4)$$

$$ex_4 = \left(\frac{5 \cdot EBITDA}{Total\ Liabilities} \right). \quad (5)$$

Indicator ex1 is excellence measured by the earnings ratio (which consists of interest and profit before taxes) and capital measured by total assets.

The indicator ex2 is based on economic profit — profit that exceeds the cost of own capital. In the calculation, the business profit category is used in order to avoid the effects of extraordinary events on the result of business. The cost of own capital is calculated from the owner's multiple of capital and the cost of capital that the owners could obtain from alternative, relatively risk-free invest-

Overview of the BEX business excellence index value

BEX index	Business excellence BEX rank
> 1,0	Good company
0–1	Necessary business upgrades
< 0	Threatened existence

Source: Adapted from Belak and Aljinović-Barać (2008).

ments. Owner's capital means subscribed capital, increased for eventualities gains and reserves.

To measure liquidity ex3, the classic indicator of the ratio of working capital to the total assets is used. Working capital is calculated as the difference between current assets and current liabilities.

Indicator ex4 is based on the ratio of theoretically free money from all activities, which is profit increased for amortisation and depreciation and covering all obligations with that money.

After applying the formula and calculating the value for the BEX index using the values from Table 1, the rank of business excellence is determined.

On the basis of the scales given in Table 2 according to Belak and Aljinović-Barać (2008), values are determined and business success ranks are defined, and then a forecast of the future business of the analysed companies is formed.

Methodology

The aim of this research is to examine the business excellence of hotels in Serbia which apply the principles of environmentally responsible business and hold the international Green Key label, using the BEX model and presenting the business excellence assessment based on the defined theoretical framework. Excellence assessment re-

Determining the rank of business success and forecasts for future business

BEX index	Business excellence rank	Future forecast
Higher than 6.01 for 4 years consecutively	World class	Company operates with top results, if the management continues to upgrade, the business will be successful for the next four years
Higher than 6.01	World class candidate	Company has excellent business results, if the management continues with the upgrade, the business will be successful for the next three years as well
4.01–6.00	Excellent	Company has excellent business results, if the management continues with the upgrade, the business will be successful for the next three years as well
2.01–4.00	Very good	Company has very good business results, if the management continues with the upgrade, the business will be successful for the next two years as well
1.01–2.00	Good	According to the business results, the company is doing well, this will continue only if the management makes upgrades
0.00–1.00	Limited area between good and poor	Business excellence is positive, but not satisfactory. It is necessary to make serious upgrades
Lower than 0 (negative)	Poor	Existence and survival of the company are threatened (over 90 %) and restructuring and upgrading is necessary

Source: Adapted from Belak and Aljinović-Barać (2008).

Overview of the BEX index value of hotel business excellence for 2017, 2018 and 2019, respectively

Hotel	BEX17	Rank BEX17	BEX18	Rank BEX18	BEX19	Rank BEX19
A	0.33013	Limited area between good and poor	0.15759	Limited area between good and poor	3.23839	Very good
B	1.30254	Good	1.19516	Good	1.31295	Good
C	1.10898	Good	0.06079	Limited area between good and poor	−0.11874	Poor

Source: Author's calculation.

search is based on the collected data by applying desk research method from financial reports on business entities' operations from Serbia in the 2017, 2018 and 2019 business year, whose activity code is 5510 — Accommodation and food services.

The criterion in forming the sample is that the selected business entities are engaged exclusively in the provision of accommodation and food services, meaning that the main business activity is under the code 5510, as well as that they are holders of the Green Key label. There are some limitations in the research because out of four hotels that are holders of the Green Key label in Serbia, one hotel operates within a holding company whose main activity is another business activity, and therefore it is not possible to analyse financial data because they are given through consolidated financial statements. Financial reports for the period 2017–2019 were downloaded from the Serbian Business Registers Agency (BRA) website[1]. Hotels' financial reports have been taken for the BEX model analysis and in the interest of transparency within the tables of the paper they are named as follows: hotel A — IN Hotel, hotel B — Mona Plaza Zlatibor Hotel, hotel C — Hilton Hotel.

Also, the financial reports for the period 2017–2019 were taken as a sample for data calculation, because in 2020, under the influence of the SARS-CoV-2 pandemic, the continuous operation of hotels was disrupted, so the financial reports for that year are not suitable for analysis. After downloading financial statements, a database of necessary data/indicators was formed, and then the BEX business excellence model was calculated for each hotel separately. The obtained values are presented in Table 3 and the results obtained are analysed and elaborated using a comparative method.

Research Results and Discussion

Table 3 was formed after calculating business excellence using the BEX model. It presents the

obtained values of the BEX business excellence index of the hotels with the Green Key label for the 2017, 2018 and 2019 business years, for each hotel, respectively.

Based on the obtained results of the BEX index, and after analysing the data from financial statements, it is possible to see: in 2019, hotel A entered the rank of Very good from the rank of Limited area between good and poor in 2017 and 2018, with the index value growth. When it comes to hotel B, there was a constant movement of the BEX index value within the rank of Good business, while the BEX index value of hotel C was declining, so from the rank of Good in 2017 it went to the rank of Poor index value in 2019.

Namely, the obtained values in the ranking of BEX models for 2017 are assessed as good for two hotels, and as limited for one, which is logical after business situation analysis of the hotel sector with an increase in visitors in Serbia according to the analysed year. What is more, according to the data from the income statement in 2017, all hotels worked with a positive business result, i. e. with the net profit. However, hotel C was in the pre-opening phase so it did not receive guests in 2017.

As for the values in the ranking of BEX models for 2018, the obtained index value of hotel B is 1.19516, indicating that the company's business is in the rank of Good index value, whereas the index values of hotels A and C are in the rank of Limited area between good and poor. Having in mind the obtained results, and analysing the data from the balance sheet, it can be seen that hotels A and C operated with a net loss in 2018, which confirms calculated values of the BEX index.

The obtained BEX index value for hotel A in 2019 was 3.23839. Therefore, in accordance with the data on the analysed companies' business and pursuant to the rank of business excellence, it entered the group of companies that have very good business. The management received a recommendation for the future to maintain this level of business and strive to improve business processes and even the value of indicators for the coming years. The calculated index for hotel B is in the rank of
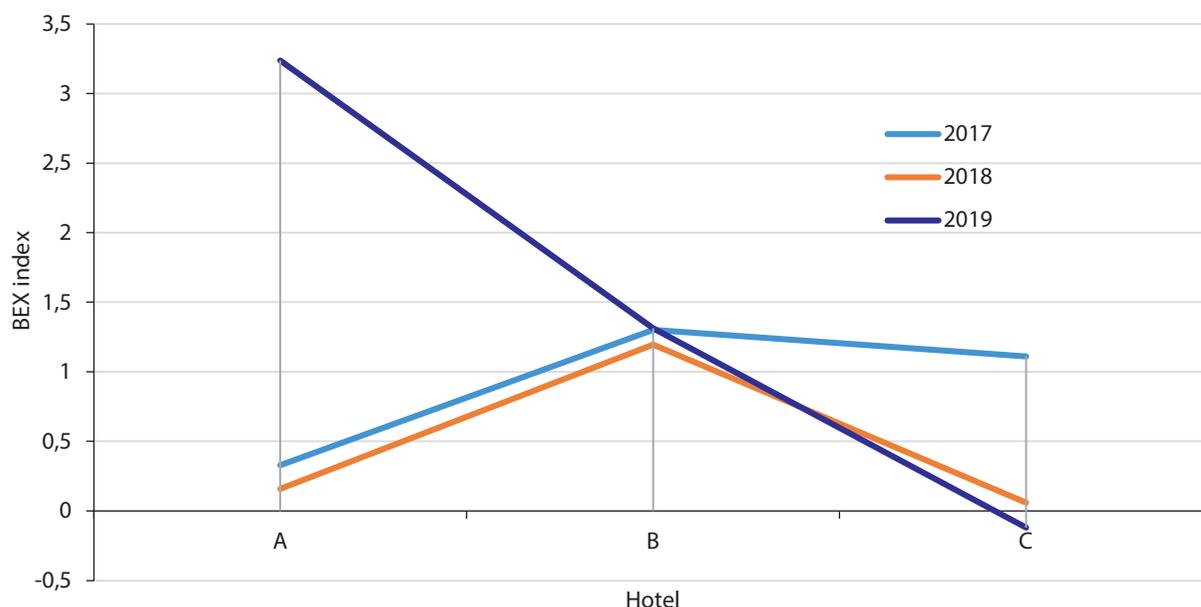
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[1] Financial reports for the period 2017-2019 business year, which were used to calculate BEX values, were downloaded from The Serbian Business Registers Agency. Retrieved from: https://pretraga2.apr.gov.rs/unifiedentitysearch (date of access 10.05.2022).

Fig. 2. *Overview of BEX index ranking trends (source: Author's calculation)*

Good value, whereas the index value for hotel C is negative and belongs to the rank of Poor value. Taking into account business results from the income statement of the analysed companies, hotels A and B ended the business year 2019 with a net profit, whereas business result for hotel C is a net loss and is correlated with the Poor rank of the BEX index. An overview of the obtained BEX indices trends for the 2017, 2018 and 2019 business years for the IN Hotel — hotel A, Mona Plaza Zlatibor Hotel — hotel B and Hilton Hotel — hotel C, is given in Figure 2.

According to the data from the financial reports, certain analysed hotel companies have investment activities through borrowed funds. This can result in problems in current business if a certain volume of business and income is not realised. At the same time, a newly opened hotel first needs a kind of adaptation in the market, and only then the formation of business continuity, which will result in better business results in financial statements, and thus in the continuation of monitoring the BEX index and a better rank.

Conclusion

In the process of collecting data for the analysis and calculation of the BEX model, two criteria were used: that the company deals exclusively with accommodation and food services (activity code 5510 — Accommodation and food services) and that it is the holder of the global tourist superstructure Green Key eco-label.

After processing and analysing the data on the business of eco-hotels, it is important to point out the specificity of business in the hotel industry, namely extremely high fixed costs and necessary maintenance. The obtained results signal that it is desirable to improve the business of the examined hotels in order to preserve and/or increase the level of business excellence. Some of the companies from the sample whose data were analysed have a good ranking of business excellence. These companies are doing business well and can be expected to improve in the forthcoming period with some innovation and investment. One of the obtained results shows a very good rank of business excellence of the company which is expected to do a very good business in the next two years, with the recommendation that the management continues to innovate and improve operations, in accordance with the interpretation of the BEX index value and rank. For some companies, the analysis showed that business is good, but not satisfactory, so it is necessary to correct business processes in order to improve business results.

This paper makes a scientific and practical contribution through research results. Namely, the scientific contribution is present and is reflected in the comprehensiveness of the approach to analysis, collection and unification of the results of analyses done in the process of researching the degree of representation of internationally eco-certified accommodation facilities in Serbia. It is also reflected in a survey of Green Key Hotel business excellence in Serbia, which is done for the first time, with an assessment of the current situation and recommendations for future operations. Namely, considering hotel business specificities and having in mind constant pressure within the positioning on the tourism market, both within the mountain centre, where one of the hotels operates, and in the city, business challenge

is to minimise the expenses and increase profitability. It is possible to avoid business risks by monitoring the BEX index value.

The possibility of reviewing the obtained research results is significant both for the management of the analysed hotels and for other interested parties in order to form plans for overcoming business problems, and this is a significant practical contribution of this paper.

Research results can contribute to the spread of eco-awareness and the need to implement the principles and standards of environmentally responsible operation of hotels located in the destinations of the Western Balkan region. It is necessary to monitor trends in the tourism market, educate and implement the environmental principles in business processes in hotel accommodation facilities so that tourism industry in Serbia could be improved and so that it could become a better positioned destination in the global tourism market.

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