



MANAGEMENT OF ECOLOGICAL INNOVATIONS IN URBAN HOTELS

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ABSTRACT

Purpose: The purpose of paper is to determine the level of implementation of eco-innovations in urban hotels in the Bratislava region (Slovakia) reflecting the pandemic situation, as well as the level of motivation of hotels to invest in eco-innovations. The main objective is to identify the relationship between the motivation to implement the eco-innovations and their implementation in hotels.

Method: We used the method of expert survey, questionnaire form. The relationships are tested through Spearman's correlation coefficient.

Results and conclusion: Eco-innovations reduce the environmental burden on business by applying more efficient processes or by using alternative resources. The implementation of eco-innovations in hotels is often conditional on the use of progressive technological solutions. The results of this research confirm a moderately strong relationship between the motivation to introduce ecological innovations and their implementation.

Research implications: For managerial practice in hotels, it is important to monitor and evaluate the requirements of clients and actors on the accommodation services market in the field of ecology. On the basis of this knowledge, hotels should introduce eco-innovations for sustainable growth and competitiveness.

Originality/value: The results of the research are original in terms of the localization of expert research in the field of city hotels in Slovakia - the Bratislava region. The findings confirm the relationship between the motivation to innovate and the introduction of ecologically innovative solutions in the hotel industry. The study presents the main motivators of the ecological behaviour of hotels and the ecological innovations used in urban hotels in Slovakia.

Keywords: Service Innovations, Process Innovation, Motivation, Implementation, Eco-Innovations.

GESTÃO DE INOVAÇÕES ECOLÓGICAS EM HOTÉIS URBANOS

RESUMO

Objetivo: O objetivo deste artigo é determinar o nível de implementação de ecoinovações em hotéis urbanos localizados na região de Bratislava (Eslováquia) refletindo a situação de pandemia, bem como o nível de motivação dos hotéis para investir em ecoinovações. O objetivo principal é identificar a relação entre a motivação para implementar as eco-inovações e a sua implementação na indústria hoteleira.

Método: Foi utilizado o método de pesquisa com especialistas, formulário de questionário. As relações são testadas através do coeficiente de correlação de Spearman.

Resultados e conclusão: As eco-inovações reduzem a carga ambiental nos negócios, aplicando processos mais eficientes ou usando recursos alternativos. A implementação de ecoinovações em hotéis é muitas vezes condicionada ao uso de soluções tecnológicas progressivas. Os resultados desta pesquisa confirmam uma relação moderadamente forte entre a motivação para introduzir inovações ecológicas e sua implementação.

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Implicações da pesquisa: Para a prática gerencial em hotéis, é importante monitorar e avaliar as exigências dos clientes e atores do mercado de serviços de hospedagem no campo da ecologia. Com base neste conhecimento, os hotéis devem introduzir eco-inovações para um crescimento sustentável e competitividade.

Originalidade/valor: Os resultados da pesquisa são originais em termos de localização de pesquisas especializadas na área de hotéis urbanos na Eslováquia - região de Bratislava. Os resultados confirmam a relação entre a motivação para inovar e a introdução de soluções ecologicamente inovadoras na hotelaria. O estudo apresenta os principais motivadores do comportamento ecológico dos hotéis e as inovações ecológicas utilizadas em hotéis urbanos na Eslováquia.

Palavras-chave: Inovações de Serviço, Inovação de Processo, Motivação, Implementação, Eco-Inovações.

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1 INTRODUCTION

The concept of innovation, which first appears in the early 20th century, is linked to the work of Schumpeter (2017), who formulated the theory of innovation as a combination of developmental changes, in the sense of breaking through the renewal of systems and processes in a closed circle. In 1935, he introduced a new term for the field, 'innovation', defined as 'change in order to exploit new kinds of consumer goods, new means of production and transport, new markets and new forms of organisation of production and services'. Subsequent work by other authors Becker and Whisler (1967), Freeman (1974), Crawford (1996) and Cooper (1998) successfully developed the original concept of innovation.

The term eco-innovation was first used by Fussler and James in 1996 to refer to new products and processes that bring value to customers and enterprises but significantly reduce environmental impacts. Eco-innovations are associated with various concepts such as eco-efficiency and 'cleaner' production. Ecological innovations are manifested in all forms (product, process, organization, marketing). Their implementation has a positive effect on processes throughout the product's life cycle (Campos et al., 2010), which according to Alonso-Almeida, Rocafort and Borrajo (2016) also requires a specific management and interdisciplinary approach. Eco-innovations in tourism seek to “*balance business development and productivity with ecological concerns and respect for the environment*” (Alonso-Almeida et al., 2016, p.3). Thus, eco-innovation is no longer an option, but a necessity for development. Recent studies conducted in several countries or regions around the world show that, in general, around 55-60% of innovations implemented bring so-called environmental benefits, or benefits that contribute to sustainability and sustainable growth. In other words, all types of innovations can become eco-innovations if their environmental benefits can be demonstrated (Slovak Business Agency, 2018).

In monitoring the implementation of eco-innovations, Slovakia is below the EU average. It is among the countries defined as "Countries catching up Eco-I". Among the V4 countries, Slovakia is ranked second, followed by Poland and Hungary (European Commission, 2020). The Slovak business environment has responded to the ideas of greening consumption and production only to a limited extent so far. Social authorities influencing the promotion of issues and challenges related to responsible business conduct have been taking steps to popularize the issue (Slovak Business Agency, 2018). However, it is indisputable that Slovak social practice records gaps within the eco-innovation issue, both in the sphere of implementation, but also in the sphere of knowledge from the local environment.



Due to the topicality of the issue, we believe that theory has a relatively limited number of studies, specifically focused on the study of the implementation of ecological factors implemented in hotel and accommodation units. The aim of this study is to expand the existing knowledge base on this issue, through the identification of the relationship between motivation and the implementation of ecological innovations in hotel industry.

2 THEORETICAL FRAMEWORK

In line with the pursuit of a strategy of sustainable approaches, eco-innovations that are environmentally friendly are being promoted. The issue of research on eco-innovations in tourism establishments in the previous decades was oriented towards the investigation of its economic effect (Pereira-Moliner et al., 2012). Thus, the impact of eco-innovations was achieved through direct energy savings, thus allowing the establishment to achieve an image of an environmentally friendly facility, which represented a certain comparative advantage and allowed establishments to profile themselves as eco-friendly companies (Meade & Pringle, 2001; Molina-Azorín et al., 2009; Bagur-Femenias et al., 2013; Alonso-Almeida, 2012; Best & Thapa, 2013; Perramon et al., 2014; de Noronha et al., 2023). Eco-innovations are attributed to effects that positively affect the competitiveness of enterprises. This is related to the positively evolving attitude of consumers towards sustainable consumption and environmental protection. Consumers expect products with a new utility value that includes ecological aspects. A study by Sharma et al. (2020, p.919) states that *"many researchers are shifting from investigating consumers' general motivation for green practices towards focusing on actual consumer experience at green hotels, as well as the impact of green practices on the consumers"*. The focus is on expressing the correlations between consumers' environmental awareness and their actual green behaviour. These studies have often found contradictory results by examining only micro levels of consumer behaviour (Sharma et al., 2020).

Eco-innovations are also sources of cost reduction per unit of output and create new opportunities for business. *"Eco-innovation in companies leads to reduced costs, improves capacity to capture new growth opportunities and enhances their reputation among customers. Eco-innovation is therefore a powerful instrument to protect the environment with a positive impact on the economy and society."* (European Commission, 2016).

Galpin et al. (2015) and Reyes et al. (2017) focused their research on finding the relationship between eco-innovations and organizational culture in the hotel industry. However, research on the implementation of environmental management systems and resource efficiency measures in large, medium and small hotels has also received attention (Becken & Dolnicar, 2016). Other studies have evaluated, documented and summarized best sustainable practices in the hotel industry (Batle et al., 2018). Studies from the area of the application of eco-innovations in tourism link the issue not only to sustainable development but also to social responsibility, when the effects from eco-innovations are pursued not only on the side of tourists and nature, but also on the side of residents. The extent and success of the implementation of eco-innovations in hotels are conditioned by the authors Martínez-Pérez et al. (2015) on the presence of social capital and its ability to implement knowledge exploration strategy.

The idea of the interconnection of humanoid and non-humanoid, or technological and non-technological agents and related network effects for the implementation of eco-innovations is pursued by several authors (Buijtendijk et al., 2018; Sánchez-Ollero & García-Pozo, 2021; Ratten, 2018). It is indisputable that a logical expectation in eco-friendly production is the use of progressive technological solutions.

Despite the dynamic development of research, there is still a theoretical gap that has been widened by the impact of the Covid pandemic. The ambition of our paper is to contribute to existing studies and to strengthen research in this topical area.



3 METHODOLOGY

The aim of this paper was to investigate the current situation of the implementation of eco-innovations in the hotels located in the Bratislava region, to identify the relationship between the introduction and motivation to introduce of eco-innovations. In order to achieve the goal we built hypotheses:

H0: There is no relationship between the introduction and motivation to introduce ecological innovations into business processes in the Bratislava hotels.

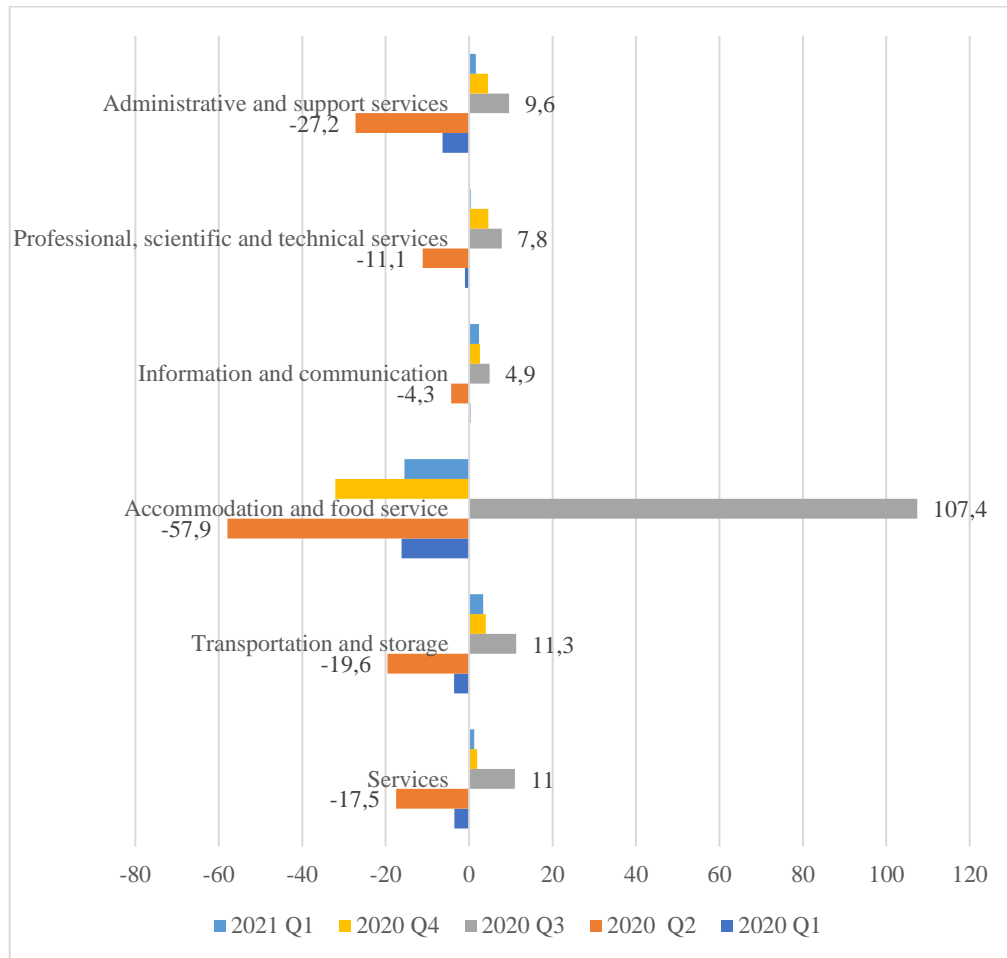
H1: There is a relationship between the introduction and motivation to introduce ecological innovations into business processes in the Bratislava hotels.

We used the method of questionnaire survey to detect and identify the relationship. The questionnaire survey was conducted electronically through Google Forms, and was carried out in the months of February - April 2020. 68 three and four-star hotels were contacted and we recorded 41 responses and hence the response rate of the questionnaire survey is 60%. It is divided into two parts.

The study of the implementation of eco-innovations in hotels methodologically corresponds with the study aimed at evaluating the implementation of technological innovations in hotels in the Bratislava region (Benešová et al., 2022). It is divided into two parts. Both studies work with the data generated by a questionnaire survey. The respondents were professionals - managers of relevant hotels. Thus, these were expert statements.

In the first part, we examine the implementation of eco-innovations in the hotel, and thus whether the hotel introduced a particular innovation, plans to introduce it in the near future, or the innovation has not been introduced yet. The second part of the questionnaire survey examines the motivations for investing in eco-innovations in the hotel from different perspectives.

The baseline for the survey on the state of implementation of innovations reflects the pandemic situation caused by the spread of the Covid-19 virus in the reference year 2020, which affected not only Europe but gradually the whole world. Strict preventive measures caused a decline in economic activity in every sector of the EU-27, whether industry or services. The service industries were the hardest hit in the second quarter of 2020, with accommodation and food services having the biggest impact, with a 57.9% fall in production in the second quarter of 2020. Nevertheless, it was accommodation and food services that recorded the largest recovery in the third quarter of 2020, with a 107.4% increase, followed by a renewed decline in sales in the other quarters under review (Graph 1).



Graph 1 Development of sales in selected services during the crisis in the EU-27 (%)

Source: Eurostat, 2021

Table 1 Motivation for investing in ecological innovations

Motivation for investing in ecological innovations	Answer option
1. Guest appreciation	1 = disagree
2. Cost savings	2 = partially disagree
3. Possible competitive advantage	3 = partially agree
4. Increase in market value	4 = strongly agree
5. Necessary for market retention	

Source: Authors' own, 2020

Table 2 Adoption of eco-innovations in hotel

Eco-innovations in the hotel	Answer option
1. Installation of solar panels	0 = no action taken
2. Towel exchange only on request	1 = intended action
3. Use of eco-friendly cleaning products	2 = action taken
4. Waste sorting	
5. Healthy, special diets	
6. Thermal insulation of the building	

Source: Authors' own, 2020

Dependencies were tested by Spearman's correlation coefficient, which expresses the degree of dependence of two variables x and y . It can take values of -1 (negative correlation), +1 (positive correlation) and 0 (no relationship between the variables).

The Spearman correlation coefficient has the form:



$$r_s = 1 - \frac{6 \sum_{i=1}^n d_i^2}{n(n^2-1) - T_x - T_y} \quad (1)$$

Where:

d_i = difference between pairs of ranks

$\sum d_i^2$ = sum of the differences squared

n = range of the set

$T_x = \sum(t_x^3 - t_x)/2$, $T_y = \sum(t_y^3 - t_y)/2$, t_x , and t_y , are the number of equal values of the variable X and Y, respectively.

For larger samples $n > 30$, the probability distribution needs to be approximated by a t-distribution with $(n - 2)$ degrees of freedom. The test statistics takes the form:

$$t = r_s \sqrt{\frac{(n-2)}{(1-r_s^2)}} \quad (2)$$

We accept the hypothesis at the significance level $\alpha = 0,05$, if $|t| \geq t_{1-\alpha/2}$, where $t_{1-\alpha/2}$ is the critical value of the Student's t distribution with $(n - 2)$ degrees of freedom.

4 RESULTS AND DISCUSSION

4.1 Validating the Relationship between the Introduction and Motivation to Introduce Ecological Innovations in Hotels

Testing the hypotheses:

H0: There is no relationship between the introduction and motivation to introduce ecological innovations into business processes in the Bratislava hotels.

H1: There is a relationship between the introduction and motivation to introduce ecological innovations into business processes in the Bratislava hotels.

Table 3 Database for calculating the relationship between motivation and introduction of ecological innovations

Hotel	Motivation to invest in eco-innovations (x)	Introduction of eco-innovations (y)	Ranking x	Ranking y	Di	Di ²
H1	3,33	0,83	25	12,5	12,5	156,25
H2	2,83	0,83	12	12,5	-0,5	0,25
H3	2	0,17	2	2,5	-0,5	0,25
H4	2,67	0,5	9	7	2	4
H5	3	1,17	16,5	23	-6,5	42,25
H6	3,5	1,5	30,5	32	-1,5	2,25
H7	2	0,17	2	2,5	0,5	0,25
H8	2,17	0,67	4	9,5	-5,5	30,25
H9	3,83	1	35	17	18	324
H10	3	0,33	16,5	4,5	12	144
H11	2,83	1,17	12	23	-11	121
H12	4	1,5	38,5	32	6,5	42,25
H13	2,5	0,33	6	4,5	1,5	2,25
H14	3,5	1,17	30,5	23	7,5	56,25
H15	3	1	16,5	17	-0,5	0,25
H16	2,5	0	6	1	5	25
H17	2	1,83	2	39	37	1369
H18	3,33	1,33	25	28	3	9



H19	3,5	1,33	30,5	28	2,5	6,25
H20	3,5	1,17	30,5	23	7,5	56,25
H21	2,67	1,17	9	23	-14	196
H22	4	1,83	38,5	39	-0,5	0,25
H23	3	1	16,5	17	-0,5	0,25
H24	3,33	1,33	25	28	-3	9
H25	2,5	0,83	6	12,5	-6,5	42,25
H26	4	1,5	38,5	32	6,5	42,25
H27	3,33	1,5	25	32	-7	49
H28	3,67	1,5	33,5	32	1,5	2,25
H29	3,33	1,67	25	36	-11	121
H30	4	2	38,5	41	-2,5	6,25
H31	2,67	0,83	9	12,5	-3,5	12,25
H32	4	0,67	38,5	9,5	29	841
H33	3,33	1,83	25	39	-14	196
H34	3,33	1,17	25	23	2	4
H35	4	0,5	38,5	7	31,5	992,25
H36	2,83	1	12	17	-5	25
H37	3	1	16,5	17	-0,5	0,25
H38	3,17	1,17	20,5	23	-2,5	6,25
H39	3,67	1,67	33,5	36	-2,5	6,25
H40	3	1,67	16,5	36	-19,5	380,25
H41	3,17	0,5	20,5	7	13,5	182,25

Source: Authors' own, 2020

$$\Sigma d_i^2 = 5\,505,5$$

$$T_X = 462$$

$$T_Y = 375;$$

$$r_s = 1 - \frac{6 \cdot 5505,5}{41(41^2 - 1) - 462 - 375} = 0,5145$$

Since $n > 30$, we use a t-distribution with $(n - 2)$ degrees of freedom:

$$t = r_s \sqrt{\frac{(n - 2)}{(1 - r_s^2)}}$$

$$t = 0,5145 \sqrt{\frac{(41 - 2)}{(1 - 0,2647)}} = 3,7470$$

Since $3.7470 > 2.021 = t_{0,975}(40)$, significance level $\alpha = 0.05$, we accept hypothesis *H1* and reject hypothesis *H0*. Hypothesis testing confirmed a *moderately strong relationship* between introduction and motivation to invest in ecological innovations in the hotels in the Bratislava region.

Several researchers address the issue of eco-innovation and knowledge management. According to Wang et al. (2022), the interconnectedness of ecological knowledge management in the enterprise and the introduced ecological innovations is highly relevant. In-enterprise ecological knowledge management can help achieve sustainability goals in small and medium-sized enterprises as well as in large corporations, meaning that all service enterprises benefit from the effective implementation of this new type of management.

It is important for the management of the enterprise to create a platform of ecological knowledge accessible to its employees, in order to create a sustainable organization generating higher revenues and minimizing negative environmental impacts. Fostering an environmentally



friendly culture in enterprises strengthens the individual capabilities of employees leading to environmentally friendly behaviour.

Based on the results of our survey, it can be concluded that hotels in the Bratislava region not only have a high motivation to introduce eco-innovations, but also to implement these innovations in their business processes. This is confirmed by the results of hypothesis testing, which verified the existence of a positive relationship between the introduction of eco-innovations and the motivation to invest in them.

Bratislava hotels perceive the need to introduce eco-innovations mainly to gain competitive advantage and appreciation from guests. A significant starting point for tourism enterprises to decide on the introduction of any innovation is knowledge of clients' requirements, their needs, demands and interaction with them. The redesign of business processes must be in line with clients' expectations, enterprises identify information and analyse customer insights to enhance customer satisfaction (Mohan et al., 2022; Rodrigues de Matos et al., 2023). Environmentally friendly practices have also been increasingly demanded by tourism clients.

Influenced by escalating environmental challenges, more and more enterprises and accommodation establishments within them have been applying green ambitions in their practices for the purpose of competitiveness and sustainability (Ahmed, 2022). Enterprises are increasingly focusing on new industry knowledge, quality of production and eco-innovations, which they are incorporating into their processes in order to gain a competitive advantage in the marketplace (Al-Qudah et al., 2022; Guimarães Aragão et al., 2022).

The survey results showed that hotels are adopting less costly eco-innovations that do not require significant change. Their implementation does not involve stimulating other types of innovations or complex ones. The installation of solar panels was more financially demanding measure, which is the least implemented by the hotels. On the positive side, the motivation of hotels to invest in eco-innovations was high. According to Dhakal et al. (2022), specifically SMEs are vulnerable if they lack the financial resources needed to implement eco-innovations. Therefore, this barrier strongly reflects the opportunities that accommodation establishments may encounter at the frequented level, as the share of SMEs in the accommodation market is prevalent.

Other external barriers are complicated and constantly changing legislation, bureaucratic approach on the part of state institutions, long payback period for investments in eco-innovations, and also incomplete information about the possibilities of introducing eco-innovations. Of the internal barriers perceived by the hotels, the most prominent is the lack of equity capital.

An important aspect is that despite the pandemic situation and the resulting measures, the application of which in the first half of 2020 most affected tourism enterprises of the EU countries and therefore also Slovak tourism enterprises, hotel managers in the Bratislava region are aware of the importance of introducing eco-innovations and their impact on the sustainability and competitiveness of enterprises.

5 CONCLUSION

Innovations in tourism are essential for the future competitiveness and economic survival of tourism. At the same time, innovations can address systemic failures and barriers to the uptake of innovations in tourism. Innovation is then particularly important when we see the scale of changes facing the sector. Change that ranges from environmental sustainability requirements and preparing for climate change, to technological changes affecting both industry and consumers, to competition from other economic sectors. The interconnection of ecological



and technological innovations is an important and essential element of sustainable development efforts in tourism.

Awareness of the importance of greening production is evident. This is largely related to the involvement of multinational hotel chains in the Bratislava region environment. The management and operations of multinational enterprises in the hotel industry bring in ecological standards to quality standards, which encourage the introduction of eco-innovations. The presence of these renowned hotel systems reinforces the need to present the interest in eco-friendly solutions, as well as their implementation, in the accommodation services market. The interest in eco-friendly solutions is also supported by consumption and its sustainable ambitions.

The research was conducted in the early stages of the pandemic period. Our effort in future research is to find out how environmental innovations are being promoted in the hotel industry reboot. Will they become a tool for its sustainable renewal? Financial instruments that support sustainable solutions are also available for tourism entrepreneurs (Recovery Plan, European Structural Funds). In the current energy crisis, several of the environmental solutions support not only environmental but also economic sustainability. The focus is on water conservation measures, the use of solar, geothermal and wind energy. The promotion of alternative energy sources certainly has its place in the hotel industry in the Slovak Republic.

CONFLICT OF INTEREST

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REFERENCES

- Ahmed, S., Naz, F., Abbas, Z., & Batool, K. H. (2022). Impact of green innovation on sustainable development with mediating effect of knowledge management. *Journal of Business Management Studies-JBMS*, 1(01), 1-16.
- Alonso-Almeida, M.M. (2012). Water and waste management in the Moroccan tourism industry: The case of three women entrepreneurs. *Womens Studies International Forum*, 35(5), 343–353. <https://doi.org/10.1016/j.wsif.2012.06.002>
- Alonso-Almeida, M.M., Rocafort, A., & Borrajo, B. (2016). Shedding Light on Eco-Innovation in Tourism: A Critical Analysis. *Sustainability*, 8(12:1262). <https://doi.org/10.3390/su8121262>
- Al-Qudah, A.A., Hamdan, A., Al-Okaily, M. & Alhaddad, L. (2022). The impact of green lending on credit risk: evidence from UAE's banks. *Environ Sci Pollut Res*, 30, 61381–61393. <https://doi.org/10.1007/s11356-021-18224-5>
- Bagur-Femenias, L., Llach, J., & Alonso-Almeida, M.M. (2013). Is the adoption of environmental practices a strategical decision for small service companies? An empirical approach. *Management Decison*, 51(1), 41–62. <https://doi.org/10.1108/00251741311291300>
- Batle, J., Orfila-Sintes, F., & Moon, C. J. (2018). Environmental management best practices: Towards social innovation. *International Journal of Hospitality Management*, 69, 4-20. <https://doi.org/10.1016/j.ijhm.2017.10.013>



- Rev. Gest. Soc. Ambient. | Miami | v.17.n.8 | p.1-12 | e03727 | 2023.



- Fussler, C., & James, P. (1996). *Driving Eco-Innovation: a breakthrough discipline for innovation and sustainability*. London: Pitman Publishing.
- Galpin, T., Whitttington, J. L., & Bell, G. (2015). Is your sustainability strategy sustainable? Creating a culture of sustainability. *Corporate Governance*, 15(1), 1-17. <https://doi.org/10.1108/CG-01-2013-0004>
- Guimarães Aragão, H., Pereira, V. A., & Florencio da Silva, R. (2022). Free Geotechnologies Applied to Basic Sanitation Management: a Case Study at the Empresa Baiana de Águas e Saneamento. *RGSA–Revista de Gestão Social e Ambiental*, 16(2), 1-16.
- Martínez-Pérez, A., García-Villaverde, P.M., & Elche, D. (2015). Eco-innovation antecedents in cultural tourism clusters: External relationships and explorative knowledge. *Innovation Organization & Management*, 17(1), 41-57. <https://www.tandfonline.com/doi/abs/10.1080/14479338.2015.1011058>
- Meade, B., & Pringle, J. (2001). Environmental management systems for Caribbean hotels and resorts: A case study of five properties in Jamaica. *Journal of Quality Assurance in Hospitality & Tourism*, 2(3-4), 149–159. https://doi.org/10.1300/J162v02n03_09
- Mohan, J., Rathi, R., Kaswan, M.S., & Nain, S.S. (2022). Green lean six sigma journey: Conceptualization and realization. *Materials Today: Proceedings*, 50(5), 1991-1998. <https://doi.org/10.1016/j.matpr.2021.09.338>
- Molina-Azorín, J.F., Claver-Cortes, E., Pereira-Moliner, J., & Tarí, J.J. (2009). Environmental practices and firm performance: an empirical analysis in the Spanish hotel industry. *Journal of Cleaner Production*, 17(5), 516–524. <https://doi.org/10.1016/j.jclepro.2008.09.001>
- Pereira-Moliner, J., Claver-Cortés, E., Molina-Azorín, J.P., & Tarí, J.J. (2012). Quality management, environmental management and firm performance: Direct and mediating effects in the hotel industry. *Journal of Cleaner Production*, 37, 82–92. <https://doi.org/10.1016/j.jclepro.2012.06.010>
- Perramon, J., Alonso-Almeida, M.M., Llach, J., & Bagur-Femenías, L. (2014). Green practices in restaurants: Impact on firm performance. *Operations Management Research: Advancing Practice through Theory*, 7(2–12). <https://doi.org/10.1007/s12063-014-0084-y>
- Ratten, V. (2018). *Sport Entrepreneurship: Developing and Sustaining an Entrepreneurial Sports Culture*. Springer.
- Reyes-Santiago, M. R., Sánchez-Medina, P. S., & Díaz-Pichardo, R. (2017). Eco-innovation and organizational culture in the hotel industry. *International Journal of Hospitality Management*, 65, 71-80. <https://doi.org/10.1016/j.ijhm.2017.06.001>
- Rodrigues de Matos, M. L., Nepomuceno Nobre, L. H., de Souza Galvão, L. G., & Chaves Nobre, F. (2023). Relationships between Consumer Engagement and Purchase Intention of Ecological Products. *Environmental & Social Management Journal/Revista de Gestão Social e Ambiental*, 17(1).



Sánchez-Ollero, J.L., García-Pozo, A., & Mondéjar-Jiménez, J. (2021). Impacts of environmental sustainability measures on rural accommodation. *Journal of Hospitality & Tourism Research*, 46(7). <https://doi.org/10.1177/1096348020986914>

Schumpeter, J. A. (2017). *Essays: On entrepreneurs, innovations, business cycles and the evolution of capitalism*. Routledge. New Brunswick: Transaction Publishers.

Sharma, T., Chen, J., & Liu, W.Y. (2020). Eco-innovation in hospitality research (1998-2018): a systematic review. *International Journal of Contemporary Hospitality Management*, 32(2), 913-933. <https://doi.org/10.1108/IJCHM-01-2019-0002>

Slovak Business Agency (2018). *Analýza využívania eko-inovácií a obehovej ekonomiky v prostredí MSP*. http://www.sbagency.sk/sites/default/files/7_analyza_vyuzivania_eko-inovacii_a_prvkov_obehovej_ekonomiky_v_prostredi_msp.pdf

Wang, S., Abbas, J., Sial, M.S., Álvarez-Otero, S., & Cioca, L. I. (2022). Achieving green innovation and sustainable development goals through green knowledge management: Moderating role of organizational green culture. *Journal of Innovation & Knowledge*, 7(4), 100272. <https://doi.org/10.1016/j.jik.2022.100272>