Benefits from adopting technologies for the hotel's supply chain management

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Abstract: Information and communication technologies (ICTs) have a significant role in contemporary business activities, helping companies to improve quality, efficiency, flexibility and learning capacity, to reduce costs, and finally, to achieve competitive advantage. The aim of this paper is to examine the extent of implementation, as well as the benefits of ICTs used for the hotel supply chain management (SCM). A survey has been conducted involving 40 hotels in Serbia categorized as four- and five-star. The results reveal modest to scanty adoption of SCM-related ICTs among hotels in Serbia. Hotel managers find ICTs they use as very beneficial regarding: (1) more efficient and faster guest attraction, (2) more efficient communication with suppliers, (3) increased speed, (4) increased flexibility, (5) reduced costs and (6) improved guest services. It was also found that the size and affiliation of hotels do not impact the benefits, while the category is positively associated with benefits from using the SCM technologies.

Keywords: information and communications technologies (ICTs), supply chain management (SCM), hotel
JEL classification: M15, Z32

Koristi od korišćenja tehnologija za menadžment lancima snabdevanja u hotelskim preduzećima

Sažetak: Informaciono-komunikacione tehnologije (IKT) imaju značajnu ulogu u poslovnim aktivnostima, omogućavajući preduzećima da povećavaju kvalitet, efikasnost, fleksibilnost i sposobnost učenja, da smanjuju troškove i konačno, da dostignu konkurentsku prednost. Cilj rada je da se ispita u kojoj meri hoteli implementiraju i koje koristi ostvaruju od IKT za menadžment lancima snabdevanja. Sprovedeno je istraživanje u kome je učestvovalo 40 hotelskih preduzeća u Republici Srbiji kategorisanih sa četiri i pet zvezdica. Rezultati ukazuju na srednju do skromnu implementaciju IKT za menadžment lancima snabdevanja u hotelima u Republici Srbiji. Menadžeri percipiraju IKT koje koriste kao vrlo korisne za: (1) efikasnije i brže privlačenje gostiju, (2) efikasniju komunikaciju sa dobavljačima, (3)

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povećanje brzine, (4) povećanje fleksibilnosti, (5) smanjenje troškova i (6) poboljšanje usluge gostima. Takođe je utvrđeno da veličina i pripadnost hotela lancu ne utiču na korisnost tehnologija za menadžment lancima snabdevanja, dok je kategorija pozitivno povezana sa pomenutim koristima.

Ključne reči: informaciono-komunikacione tehnologije (IKT), menadžment lancima snabdevanja (MLS), hotel
JEL klasifikacija: M15, Z32

1. Introduction

Digital revolution can be considered as the most influential and widespread phenomenon in the contemporary business environment, challenging the traditional way of working and communicating. Information and communication technologies (ICTs) are intensively used in the hotel industry and various technological solutions have been developed to support activities, such as sales and marketing, communication, forecasting, planning, procurement, inventory control, etc. The purpose is to increase value added through enhanced visibility, accessibility, quality, efficiency, agility, safety and security. Not only activities within a hotel company are subject to technological innovation, but also those upstream and downstream its supply chain. A hotel's supply chain is a network including its suppliers, distributors and guests. The complexity of a supply chain may be different, depending on the number of participants. Short supply chains involve fewer members, whereas long supply chains contain multiple layers of suppliers and distributors, such as retail, wholesale, producer of specific products and producers of raw materials on the upstream side of the supply chain and tour operators, travel agencies, brokers, online portals, etc. on the downstream side, while transportation companies have important role both upstream and downstream a supply chain. ICTs are particularly important for managing long supply chains.

Supply chain management (SCM) involves integration of business activities intra-organisationally and inter-organisationally within a supply chain in order to exchange information efficiently, secure timely flow of products and services, and to react promptly to any request or change, with a goal to make the end-user satisfied. ICTs have enabled a real-time access to information between partners, contributing to greater visibility and more precise forecast, enabling in this way each participant to timely deliver products and services without keeping excessive inventories for unanticipated changes in demand. Additionally, integrated planning activities ensure alignment of goals and plans among supply chain partners. Such close cooperation is aimed at enhancing performance and competitive position of all supply chain members. Consequently, it can be argued that ICTs used for the SCM have a strategic importance. According to the Resource-based view, companies achieve competitive advantage based on superior resources, while distinction is made between physical, financial, human, and informational resources. ICTs therefore represent a company's informational resources, based on which a company may improve performance and competitive position.

According to the authors' knowledge, there is a rather scarce research dealing with ICTs implementation for SCM purposes in hotel companies. Therefore, the aim of this paper is to examine to what extent hotel companies in Serbia implement SCM-related ICTs and how beneficial these prove to be. Attention is further paid to examining the influence of hotel characteristics, such as size, category and affiliation on the level of utility of these specific technologies. The paper starts with literature review, including formulation of research questions, and description of the research methodology. It continues with data analysis, results presentation and discussion. The final part of the paper is devoted to conclusions.

2. Literature review

2.1. Supply chain management: development and challenges

Ayers (2006) defines a supply chain as processes involving the flow of materials, information, knowledge, and money between supply chain participants in order to satisfy the needs of end-users. Similarly, Mentzer et al. (2001) perceive a supply chain as an organisation or a collection of people who actively participate in the upstream and downstream movement of goods, services, money, and/or data from a source to a consumer. Despite the fact that "supply chain management" is a term that is frequently used in both academia and industry, there are still many misconceptions about what it actually entails. According to Grant et al. (2017), SCM is "an integrating function with a primary responsibility for linking major business functions and business processes within and across companies into a cohesive and high-performing business model" (p. 9). Min (2015) asserts that SCM goes beyond inter-functional coordination to include inter-organisational integration and coordination throughout the supply chain, so as to grasp synergy and improve decision-making. Ilić and Tešić (2016) follow up this view, asserting that when managing a supply chain it is necessary to observe the effects of business decisions not just on a specific company, but on the whole supply chain. Thus, participants in the supply chain enter in partnership relationships, sharing activities such as forecasting, planning, inventory control and reacting to disturbances. In other words, SCM transforms relationships among supply chain participants from purely transactional to sophisticatedly collaborative (Wallner et al., 2015).

SCM is popular within the hotel industry for a variety of reasons. Specific drivers include global sourcing trends, a focus on time and performance competition, and efforts to overcome rising environmental ambiguity, particularly during pandemics. Global suppliers are increasingly important to multinational and chain hotels. Supplier innovativeness, being determined by trust and consequently by intensive information flow, impacts supply chain integration and sustainable performance in the hotel sector (Espino-Rodríguez & Taha, 2022). Globalization and steadily increasing performance-based competition, as well as rapidly evolving technologies, rising prices, and food supply circumstances, all add to market volatility (Abou Kamar, 2022). Individual hotels and supply chains therefore must be more flexible due to the uncertainty, which usually requires more efficient, effective, and flexible SCM. Supply chain challenges in the hospitality industry have become more taxing as a result of today's consumers' unanticipated requests, employing and maintaining a skilled labour, rising competition and customer service expectations.

Progressively, studies centred on evaluating hotel SCM performance and factors influencing better collaboration within the chain network, most notable being those by Shi and Liao (2013), Thomas-Francois et al. (2017), and Hatamifar et al. (2018). Customer orientation, the quality of supply chains leadership, quality of supply chains strategies, quality of supply chains information, and process design all directly result in a rise of supply chain quality, according to Hatamifar et al. (2018). The service-oriented approach, as per Thomas-Francois et al. (2017) study on fostering better commitment between farmers and hotels, focuses on strengthening agriculture and tourism linkages. Strengthened ties based on local food are expected to help resolve socioeconomic problems (unemployment rate, low income of farmers, food insecurity and indigence). According to Shi and Liao (2013), collaborative trust and inter-dependence have a major impact on joint cohesiveness. Understanding supply chain relationships in hospitality services, according to their research, could provide useful insight for hospitality firms to manage supply chains.

There are numerous benefits suggested by Stadtler (2008) of effective SCM, such as allowing businesses to optimise their product flow (through precise demand and sales planning, as well as enhanced inventory control); information flow (accurate, responsive, comprehensive, and relevant information flow to prevent overlooked risks); and financial flow (to address cash flow challenges). However, there has been little guidance from academia on how to better manage this complex integration of relationships in difficult times. The significance of corporate culture, its compatibility with various business units, business process types, and technical and technological support in supply chains were all largely neglected (Lambert & Cooper, 2000). As a result, supply chain process integration and technological reengineering should be managed to improve overall supply chain process efficiency and effectiveness. It is critical that the benefits derived are distributed equitably. However, recent cybersecurity incidents have brought to light the negative effects on the economy, politics, and society. These incidents show that supply chain security is now a concern (Melnyk et al., 2022).

2.2. The rise of technological applications in SCM

In response to the increasing request for cost-effectiveness and demanding response time, SCM has progressed from manual, and mechanization-focused maximisation to advanced, web-based, and automated synchronisation of the supply chain components (Ivanov, 2021; Lee at al., 2022), which is crucial in dealing with the increasing complexities of today's worldwide supply chains (Ma et al., 2021). It mainly enables an efficient flow of products, information, and finances, allowing businesses to increase the value of their relationships, while also improving overall operational efficiencies (Johnson, 2006; Kumar 2001; Patterson et al., 2003). This is possible because the digital economy removes geographical, time, communication and other sorts of barriers (Veselinović & Stanišić, 2021). Krivokuća et al. (2021) argue that digitalisation plays an important role in defining the business model in the contemporary globalised market, providing various opportunities, especially for entrepreneurial firms as the supply chain members.

The importance of technological integration in the supply chain system is emphasised by Luthra et al. (2022), who argue that it is necessary to improve capacity and optimise resource utilisation in order to develop effective SCM. State lawmaking and legislation, cooperative value capture models, and Industrial revolution 4.0 technologies are the most impactful strategies for managing SCM, according to their research. Radun et al. (2021) highlight characteristics of Artificial Intelligence (AI) that have brought about its extensive usage, such as "interconnectivity, ability of self-learning, continual improvement and adaptability" (p. 871). Dora et al. (2022) concluded that using AI in food systems (FSC) can resolve unique issues of food security, standard, and disposal by enhancing visibility and accountability. However, the study found that considerations including such technology acceptance, confidentiality, data protection, customer experience, purported value, requirement volatility, regulatory requirements, rival companies' pressure, and sharing of information among partners all influence technology adoption in SCM. Moving forward, the integration of circular economy concepts into the company's SCM strategy has been accelerated by the implementation of sustainable supply chain practices. According to Mastos et al. (2021), circular SCM can be enabled using Industry 4.0 technologies to redesign supply chains for the circular economy.

The literature (Johnson, 2006; Kumar, 2001; Patterson et al., 2003) suggested that proper use of information technologies is critical to achieving value and cost advantages in the continuously changing, compound world of local and global supply chains. Early efforts to gain a competitive advantage through information technology centred on the implementation

of model-driven, advanced forecasting systems to decrease volatility and optimise flows. Hotel SCM is typically dynamic and demand-driven, necessitating interconnection, cooperation, and coordination among business partners via information technology. Current and future studies will concentrate on systems that encompass highly complex and dynamic distribution networks, and provide immediate visibility across the supply chain as the notion of integration of digital SCM evolves (Kumar, 2001).

Patterson et al. (2003) and Johnson (2006) studies highlighted the importance and facilitating factors in applying technologies in SCM in the early days. Most industries now consider supply chain integration and the technologies that enable it to be a competitive necessity. However, the rate of technology adoption will be heavily influenced by the following factors: company size, company structure, previous financial results, and environmental uncertainty (Patterson et al., 2003). In addition, new information technologies such as radio frequency identification (RFID) and enterprise integration and collaboration tools have gained traction (Johnson, 2006). Sarac et al. (2010) find that RFID technologies have the ability to enhance the potential advantages of SCM by lowering warehouse losses, continuing to increase procedure speed and efficiency, and improving data accuracy.

According to more recent studies, as the worldwide ecological crisis worsens, consumers seem to be more eager to use environmentally friendly products, and hotel companies are more dedicated to digital innovation and investment to meet such preferences. A greater carbon reduction subsidy emboldens technology investments and boosts supply chain participants' earnings, according to the study of Ma et al. (2021) on the link between technology investment decisions, manufacturer-retailer cooperation, and government regulations. The study also discovered that when costs are shared and the government gets involved in, reducing emissions and supply chain performance are always superior than in other occasions. The 2019 pandemic, however, may have altered or added new considerations to such adoption. Ivanov (2021) asserts that the pandemic demonstrated that companies with end-to-end supply chain visibility, digital tech direction, and inbuilt versatility were capable of dealing with the pandemic's effects in a much more responsive, efficient, and resilient way, ensuring supply chain viability.

Despite many benefits and potential future prospects for adopting more technologically enabled applications for SCM, studies by Gurtu and Johny (2019), Almutairi et al. (2022), and Lee et al. (2022) have outlined some recent technological developments and barriers to such adoptions. Blockchain technology has the ability to improve trust by increasing the visibility within industries and across organisations. However, this technology is fraught with difficulties, such as "private" blockchain dependability, processing fees, energy usage, insurance costs, and governmental regulation (Almutairi et al., 2022; Gurtu & Johny, 2019). A major determinant of blockchain adoption in SCM is the existing number of players in a global supply chain. Each supply chain player has distinct capabilities and constraints that affect organizational effectiveness (Almutairi et al., 2022). While adoption of the Internet of Things (IoT) can improve performance of the supply chain, there will still be innumerable issues to overcome, significantly in relation of technical reliability and social-organizational adjustment (Lee et al., 2022).

2.3. Technology adoption in the hotels' SCM and the research gaps

Studies by Kothari et al. (2005) and Odoom (2012) suggested reasons why hotels should consider technological adoption in SCM. According to Kothari et al. (2005), information technology will automate all types of procurement procedures across entire hotel organisations. They contended that the fragmented nature of the hospitality industry creates inefficiencies in the purchasing process, necessitating the adoption of hospitality e-

procurement exchanges. Odoom (2012), on the other hand, proposed that technological application as cost-cutting strategies to numerous logistics and distribution functions, such as inventory control, logistics and distribution, is important for optimization of end-to-end costs and efficiency.

Though there have not been many studies on evaluating the benefits and effectiveness of various technologies in the hotel industry, there have been a few (Al-Aomar & Hussain, 2017; Alsetoohy et al., 2019) that introduce newer concepts in SCM for hotel players to consider. The study of Al-Aomar and Hussain (2017) confirmed hotels' familiarity with green practices and awareness of green value, with one example being the implementation of Green Practices in the hotel supply chain. However, there was a knowledge gap in terms of effective green technology implementation all through the supply chain.

Recent studies on hotels' SCM have clearly identified issues that are causing low technological adoption among hotels. Alsetoohy et al. (2019) published a study on the factors affecting hotel managers' sentiments toward artificial intelligence technology (AIT) implementation in the hotel food supply chain. According to their findings, AIT acceptance was extremely low in the hotels studied. Potential benefits, reliability, human capital quality, data intensity, and industry abilities each had a statistically significant positive effect on hotel managers' willingness to implement AIT. Tarofder et al. (2017) deduced that "Management Support" constitutes the most significant aspect for effective diffusion of internet technologies in SCM. Individual supply chain members may lack the resources to learn complex technologies, making complexity among the most substantial negative factors affecting technology adoption in the individual domain. From an economic standpoint, Shamout et al. (2022) show the link between both the cost of digitalization and the implementation of technological applications in SCM. Milovanović et al. (2021) find that the COVID-19 pandemic caused disruptions in hotels' SCM, and decelerated the implementation of SCM-related ICTs.

Despite research indicating that information technology adoption has a moderating role in procurement performance (Cho et al., 2018), low adoption of SCM-related ICTs persists. To better gauge current attitudes toward technological applications in hotel' SCM, it is necessary to investigate the specific benefits hotel companies experience by implementing various technological solutions, with a special emphasis on perceptions of benefits across different scales, business structures, size, star-rated categories, etc. Based on the presented theoretical background and identified research gaps, the current study aims to investigate the level and benefits of SCM-related ICTs implementation among hotels in Serbia. Consequently, the following research questions are formulated:

RQ1: To what extent are the SCM-related ICTs implemented in Serbian hotels?

RQ2: What are the benefits experienced by Serbian hotels from the SCM-related ICTs?

RQ3: Do hotel characteristics of size, category and affiliation affect the level of utility from introducing the SCM-related ICTs?

3. Methodology

In the first phase of empirical research a questionnaire was designed containing single-choice and multiple-choice questions, as well as open-ended questions. It was decided to focus on four- and five-star hotels in the Republic of Serbia based on assumption that these hotels are more prone to implement ICTs related to SCM than lower-category hotels. An invitation for participation in an online survey was sent in May 2021 to top managers of hotels falling into these two categories, who were also contacted by telephone in order to increase the response

rate. The final sample consisted of 40 hotels of different size (small, medium and large) and affiliation (chain or independent). Its characteristics are presented in Table 1. Respondents were asked which of the SCM-related technologies they implemented, if any, and whether and what kind of benefits they experienced by introducing these technologies. They were also asked to indicate the size, category and affiliation of their hotel. Descriptive statistics and multiple regression analysis (linear and non-linear) were employed for data analysis.

Table 1: Sample characteristics

	Hotel category		Hotel size			Chain affiliation		Total
	4-star	5-star	Small	Medium	Large	Yes	No	
Number	32	8	18	18	4	7	33	40
Percent	80	20	45	45	10	18	82	100

Source: Authors' research

4. Results and discussion

Regarding the RQ1, it can be argued that implementation of the SCM-related ICTs in Serbian hotels is modest. The most dominant ICTs are IoT, implemented by the majority of hotels, while e-commerce, cloud computing, Customer Relationship Management (CRM), AI, bar code system and big data fall far behind (Table 2). Other technological solutions for SCM represent less than 10% each.

Table 2: Popularity of specific SCM-related ICTs among hotels in Serbia

SCM-related ICT	Frequency	Percentage
Internet of Things (IoT)	30	75
E-commerce	12	30
Cloud Computing	11	27.5
Customer Relationship Management (CRM)	10	25
Artificial Intelligence (AI)	8	20
Barcode system	4	10
Big Data	4	10
Enterprise Resource Planning (ERP)	3	7.5
Computer-aided design (CAD)	3	7.5
Blockchain	3	7.5
Geographic Information System (GIS)	2	5
Intelligent Transportation System (ITS)	2	5
Supply Chain Planning (SCP)	2	5
Demand Forecasting Model (DFM)	1	2.5
Supply Chain Event Management (SCEM)	1	2.5

Source: Authors' research

When it comes to the number of SCM-related ICTs used by a single hotel (Table 3), most of hotels use only one or two ICTs, while two hotels use even six and seven ICTs, these being 5-star medium size independent hotels.

Table 3: The level of SCM-related ICT usage among hotels in Serbia

	Number of SCM-related technologies implemented						
	1	2	3	4	5	6	7
Number of hotels	10	7	2	2	0	1	1

Source: Authors' research

As for RQ2, all respondents claim that SCM-related ICTs proved significantly beneficial for their hotel's business. The introduction of the aforementioned technologies enabled hotels to achieve the following specific benefits: (1) more efficient and faster guest attraction, (2) more efficient communication with suppliers, (3) increased speed, (4) increased flexibility, (5) reduced costs and (6) improved guest services. The greatest benefit provided by the mentioned technologies to hotels is the improvement of guest services. Namely, 12 out of a total of 40 hotels state that thanks to some of the mentioned technologies, they significantly improved the services they provide to their guests. As there is no other scientific research related to evaluation of benefits achieved through adoption of SCM-related ICTs in hotels, to some extent a comparison may be conducted with studies dealing with hotels' benefits from implementation of ICTs in general. Perhaps more similar is the research of Jaremen (2016), concluding that only a half of the examined hotels implement ICTs, and in particular websites, hotel reservation systems, front office computer systems and social media. Further, the author finds that hotels achieve the following benefits from adopting ICTs: (1) improved service quality, and particularly speed of customer service; (2) higher number of guests and increased guests' satisfaction; (3) reduced operating costs; and (4) improved image and income. Thus, what is common to both studies is: (1) relatively low level of ICT implementation, (2) most of hotels implement only ICTs related to communication and service to guests, and (3) common advantage from ICTs are increased speed and number of guests, improved service, and reduced costs.

Finally, regarding RQ3, linear probability and probit models were used to determine if a hotel's category, size or affiliation influence the level of utility of SCM-related ICTs in Serbian hotels. Table 4 shows the results of the linear probability model. Breusch-Pagan/Cook-Weisberg test was used for testing the assumption of homoskedasticity. It was concluded that heteroskedasticity was not a problem since the test result ($\chi^2(1) = 1.12$, $p = 0.29$) was not statistically significant.

Table 4: Determinants influencing benefits of SCM-related ICTs

Dependent variable: Benefits	Linear probability model			
	Coef.	Std. Err	t	Sig.
Medium	-0.02	0.17	0.09	0.93
Large	0.41	0.29	1.39	0.17
Category	0.36	0.21	1.72	0.09*
Chain	-0.15	0.22	-0.70	0.49
Constant	0.42	0.12	3.43	0.00***
F	2.85			
Prob > F	0.038**			
R2	0.1201			

N=40, *p < 0.10, **p < 0.05, ***p < 0.01
Source: Authors' research

The results indicate that the variable Category is statistically significant at the 0.10 level, meaning that five-star hotels are 36% more likely to benefit from adoption of SCM-related ICTs than four-star hotels. Small, medium and large hotels benefit equally from introducing new technologies, as well as independent and chain hotels.

However, specific problems are associated with using the linear probability model with binary data, the most important being that the predicted probabilities are not limited between zero and one. For that reason, non-linear models such as the probit model are also used before final conclusions are drawn. Table 5 shows the results of the probit model where the coefficients are estimated using the maximum likelihood method.

Table 5: Determinants influencing benefits of SCM-related ICTs – Probit

Dependent variable: Benefits	Probit model			
	Coef.	Std. Err	z	Sig.
Medium	-0.04	0.46	-0.09	0.93
Large	1.12	0.77	1.47	0.14
Category	0.97	0.55	1.76	0.08*
Chain	-0.44	0.64	-0.68	0.50
Constant	-0.19	0.32	-0.61	0.55
Wald $\chi2(4)$	9.64			
Prob > $\chi2$	0.047**			
Pseudo R2	0.0914			

N=40, *p < 0.10, **p < 0.05, ***p < 0.01
Source: Authors' research

As in the linear probability model, in this model only the variable Category is statistically significant at the 0.10 level, meaning that five-star hotels are more likely to benefit from adopting SCM-related ICTs than four-star hotels. However, in the probit model, the magnitude of the coefficient estimate cannot be interpreted. It can only be concluded whether the effect is positive or negative. For that reason, average marginal effects are presented in Table 6.

Table 6: Average marginal effects for probit model

Variables	Average marginal effects			
	dy/dx	Std. Err	z	Sig.
Medium	-0.02	0.16	-0.09	0.93
Large	0.40	0.25	1.58	0.11
Category	0.35	0.18	1.99	0.05**
Chain	-0.16	0.23	-0.69	0.49

N=40, *p < 0.10, **p < 0.05, ***p < 0.01
Source: Authors' research

Based on the marginal effects, it can be inferred that five-star hotels are 35% more likely to benefit from introducing SCM-related ICTs than four-star hotels, which is almost identical result to the one obtained using the linear probability model. These results also suggest that small, medium and large hotels benefit equally from adoption of these ICTs, and the same is true with independent and chain hotels.

5. Conclusions

ICTs have become a necessity for everyday business operations and they also find application in SCM. The importance of SCM is reflected in its potential to capture synergy from close cooperation between supply chain participants, leading to the higher responsiveness to the needs of final customers, flexibility, resilience, reduced costs, innovativeness, and finally, to better competitive position and profitability. Since there are technological solutions aimed at supporting SCM, it is valuable to empirically estimate their effects. Nevertheless, according to the authors' knowledge, there is no research evidence of their utility. The current study attempts to fill this research gap by investigating to what extent hotels in Serbia implement these technologies and what benefits are experienced by their implementation. Theoretical foundation of the study can be found in the Resource-based view, as SCM-related ICTs represent a company's informational resources that can be employed for improving business performance and achieving competitive advantage. The research results reveal the modest implementation of ICTs related to the SCM in Serbian hotels. Those hotels implementing technologies consider them very beneficial for guest attraction and service, as well as for increased speed and flexibility, cost reduction and communication with suppliers. Although it was assumed that hotel size and affiliation impact benefits from using ICTs, the results do not support such assumption. On the other hand, in line with expectations, it was found that hotel category is positively associated with ICTs' utility.

The current study contributes to the SCM literature by demonstrating to what extent hotel companies in Serbia implement SCM-related ICTs, and what are the effects from that implementation. It also provides valuable practical implications by showing what type of benefits hotels usually achieve by adopting the mentioned technologies, which may have a motivational role for adopting SCM-related ICTs among hoteliers. Since the study provides evidence that ICTs utility is not dependent upon hotel size or affiliation, it is supposed to motivate smaller and independent hotels which were previously reluctant to adopt these technologies. By showing that the benefits increase with the hotel category, it is expected that higher category hotels become more interested in implementing SCM-related ICTs.

The main limitation of the study is related to the problem of generalization of results. Therefore, future studies are invited, especially in other countries, to enable the comparison of results. Additionally, it would be valuable to identify supporting and limiting factors for adoption of SCM-related ICTs.

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Conflict of interest

The authors declare no conflict of interest.

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