

## ENTERPRISE MANAGEMENT USING E-COMMERCE. CASE STUDY OF THE HOSPITALITY INDUSTRY

Agata KIELESIŃSKA

The Management Faculty, Czestochowa University of Technology; a.kielesinska@pcz.pl,  
ORCID: 0000-0001-9974-7961

**Purpose:** Recently, the importance of the Internet for the functioning of many enterprises, including entire sectors of the national economy, has been growing. The reason for this is primarily the fact that e-commerce is developing at a very fast pace, which is related to the development of technology, knowledge and innovation. What's more, the changes taking place on the market resulted in the emergence of a completely new participant in the market game, a new type of consumer, hereinafter referred to as e-consumer, which is a specific group of entities using the offers available on electronic markets. E-consumer, using electronic commerce, facilitates the consumption process: identifying needs, looking for solutions, purchasing products and services, answering questions and solving problems. In this context, the aim of the study is to attempt to assess the use of e-commerce in the hotel industry by customers of four hotels based in the city Czestochowa.

**Design/methodology/approach:** In order to achieve the aim of the study, a survey was conducted among 152 hotel customers. In the second place, the relationship between hotel management and e-commerce was examined using the  $\chi^2$  statistics, and to assess the strength of the relationship between the examined features, the T-Czuprow convergence was calculated.

**Findings:** The study showed that the e-commerce enjoys interest entrepreneurs, but also consumers, for whom it is an attractive and quick form of shopping. What's more, the study showed what factors are important when buying a hotel offer.

**Research limitations/implications:** The conducted study is a pilot study, therefore it requires a deeper study of the issues. Not only due to the number of entities covered by the study, but also factors in the field of e-commerce management.

**Originality/value:** The subject discussed in the study is a source of information for hotel managers, which aspects of e-commerce affect the decision to purchase an offer.

**Keywords:** e-commerce, e-consumer, hotel industry.

**Category of the paper:** Research paper.

## 1. Introduction

E-commerce has rapidly expanded around the world, entering some of society's most dynamic sectors. Over the last two decades, e-commerce has grown significantly, and the COVID-19 pandemic has increased the dynamics of the e-commerce environment (Kraenzlin et al., 2020; Satar et al., 2023). It can be said that e-commerce has become an important tool in today's economy, because it allows companies to reach a wide range of customers from around the world, without time and space restrictions. In addition, e-commerce can help companies reduce operational costs and increase business efficiency by automating sales and customer service processes (Yingzi, Zhaoji, 2022). Unlike traditional retail, most e-commerce activities take place virtually in the pre-purchase stages (i.e. information search), purchase and post-purchase (i.e. feedback and after-sales service) (Ayob, 2021). One of the most important challenges for e-commerce companies is ensuring the security of transactions and the protection of customer data. Companies must use appropriate technical safeguards and procedures to ensure the security of online transactions and protect the privacy of their customers (Moiseev et al., 2023).

Due to the fact that e-commerce is developing more and more, a number of companies, holdings, companies, etc., wanting to be successful, try to operate within this commerce. This is because e-commerce allows companies to achieve global reach and increase business efficiency. This, in turn, requires the right strategy and management to deliver positive results for customers and businesses. In view of the above, the purpose of this study is to determine an attempt to assess the use of e-commerce in the hotel industry. The study was of a practical and analytical nature and was carried out in the first half of 2023. The article aims to fill the gap in the use of e-commerce in the industry most affected by the COVID-19 pandemic, i.e. in the hotel industry. With regard to the issues adopted in this way, it was assumed that the use of e-commerce plays an important role in hotel management.

## 2. An overview of the literature

E-commerce is conceptually nothing new (Lin et al., 2015). As Shi (2021) argues, this trade broke the pattern and boundaries of the traditional exchange of goods, so there is no need for direct transactions between sellers and consumers. For this reason, e-commerce has become one of the most important sales channels for many enterprises, both for those that sell only online and for those that have traditional points of sale (Huang et al., 2007; Krzepicka, 2010).

In the narrow sense, e-commerce refers to the buying and selling of goods, services and information over the Internet. However, e-commerce also includes maintaining business relationships and collaboration, as well as serving customers and enabling various processes throughout the organization. Moreover, the concept has a broader scope and includes not only small e-businesses, but also large corporate entrepreneurship (Satar et al., 2023). Kanan and Glavee-Geo (2021, p. 4) define e-commerce as "the process by which entities and individuals exchange goods online using Internet systems with the support of both data transmission between Internet systems and electronic monetary systems".

In turn, Chaffey (2016, p. 12) e-commerce refers to sales and purchases via the Internet, and in his opinion e-commerce should be considered all electronic transactions between an organization and a third party. Gibbs et al. (2003, p. 4), describe e-commerce as: using the Internet to buy, sell or service products and provide services, while e-commerce should not be limited only to financial transactions (buying and selling), but also to other activities such as information exchange, marketing and pre- and post-sales support. An interesting take on e-commerce is introduced by Kalakota and Whinston (1997), who define it through the prism of four perspectives, i.e.: communication, business process, transaction handling and online perspective.

In management and quality sciences, e-commerce is perceived mainly as: business processes, a global business network, platforms for internal and external cooperation of enterprises, a tool for providing broadly understood services (Turban et al., 2004; Awad, 2004). Liu et al. (2022) is of the opinion that e-commerce changes consumer behavior. In the authors' opinion, the development of e-commerce has enabled companies to contact potential consumers in new ways, while becoming a modern communication medium. According to Skare et al. (2023), e-commerce has gradually become a mechanism replacing many economic activities carried out in enterprises, and its initial function of an effective intermediary and information aggregator has become even more pronounced. For this reason, e-commerce also strongly supports the competitiveness of companies and the economic development of countries. It can be said that e-commerce includes a lot of content that keeps up with the times. Within recent two decades trade electronic evolved into different types: B2B (Business-to-Business), B2C (Business-to-Consumers), B2G (Business-to-Government), C2C (Consumer-to-Consumer), C2B (Consumer-to-Business) (Al-Bakri et al., 2010 Jain et al., 2021; Ho and Chen, 2023). E-commerce is undoubtedly a range of benefits for the entrepreneur and contractor. Compared to traditional trade, it has an advantage in many aspects, such as the chance to communicate remotely with virtually the entire world, as well as unlimited access to the global economy. E-commerce is also a series of savings when confronted with traditional trade. There is no need to employ a person whose task would be to provide direct service to the contractor, and above all, there is no obligation to rent or purchase premises for business activity (Bartczak, 2016; Kawa, Dziura, 2022). It should be mentioned that the dynamically developing electronic economy allows entrepreneurs to run an e-commerce business in a flexible and even

more effective way. E-commerce has gained tremendous importance as a technological medium that enables businesses to serve consumers, expand geographic reach, respond to external pressures and reduce spending (Martin, Matlay, 2003). What is more, the improvement speaks for the superiority of e-commerce management process, building a positive image of the company, improving supply chain management, saving time, efficient financial service, increasing employee productivity, and improving customer service (Makowiec, 2008). Studies by Islam et al. (2021), Zhou et al. (2022) suggest that in the emerging digital economy, the adoption of an e-commerce platform significantly impacts transaction costs, speed of delivery, customer satisfaction and subsequent company performance. According to research by Andonov et al. (2021), enterprises are able to significantly increase their level of productivity due to an increased market, better growth opportunities, lower operating costs, less investment requirements. The literature on the subject also discusses issues regarding the negative impact on the functioning of e-commerce. Among those that are discussed most often, there are issues related to the security of transactions on the Internet, trust in sellers, high costs incurred by entrepreneurs in connection with the need to have extensive computer and Internet tools, applications and programs, as well as the lack of appropriate legal regulations on e-commerce (Flis, 2009; Wiczerzycki, 2013; Rodrigues et al. 2023).

It should be mentioned that the high competitiveness of the e-commerce sector forces managers to search for and implement innovations, personalize activities and communication channels, especially in individual industries. Due to the changing values of modern society, technological development and generational changes, tourism should follow the expectations of modern - sophisticated consumers (Polasik, 2016; Mróz-Gorgoń, Szymański, 2017). For this reason, tourism enterprises wanting to develop their activities more and more often use the Internet as an additional distribution channel (Marek, 2011). The effective use of e-commerce – where transactions and other activities take place entirely via the internet – is widely regarded as a key competency required for growth and an important way to gain a sustainable competitive advantage. That is why many hotels are integrating more and more IT capabilities into their core business, aiming not only to improve customer satisfaction, but also to increase operational efficiency by streamlining processes, creating a communication and transactional channel. Such activities can strengthen online customer engagement, communicate product offerings and provide a platform for customer service (Hua et al., 2019). In this way, through technology, the consumer forced to choose from among similar products/offers available to him, turned into a new consumer, referred to as an e-consumer (Skorupska, 2017). The benefits that companies can obtain thanks to high customer satisfaction are difficult to overestimate and usually impossible to achieve in other ways. A satisfied customer is an informal and thus the most reliable source of information about the organization and its products.

### 3. Research methods

In order to achieve the main goal of the study, the author conducted a diagnostic survey aimed at examining opinions in terms of attitudes, social norms, aspirations, etc. by means of interviews with specific respondents, most often using a previously prepared questionnaire (Shapiro, 2001) regarding the use of e-commerce in the hospitality industry.

The characteristics of the study environment showed that 152 people participated in the study, and:

- 44% were women, 56% were men,
- the average age of study participants was 41 years old with a range of 25 to 65 years,
- the average monthly gross income per person in the household is PLN 6,626.95,
- the vast majority of respondents are people with higher education, with 48% of the respondents having full higher education, 29% reported that they have an engineer or bachelor's degree,
- 64% of the respondents came from cities with more than 100,000 inhabitants, 31% from the city of 50-100 thousand. people from small towns and towns, 13 people (25%) from rural areas, and 5 respondents (10%).

The choice of such a research group was not accidental. Namely, efforts were made to ensure that the study yielded the most representative results. It was satisfactory that as a result of the data analysis, the structure of respondents due to these demographic and social factors turned out to be diverse. What's more, the people participating in the study are people who use hotel services using e-commerce channels.

To examine the relationship between hotel management and e-commerce, the  $\chi^2$  statistic was used, and T-Czuprow convergence was calculated to evaluate the strength of the relationship between the selected features.

### 4. Results and discussions

Based on the data obtained through the survey, correlation tables were built for factors evaluating the use of e-commerce in hotel management, thanks to which it was possible to determine: is there a relationship between hotel management ( $y_i$ ) and individual variables (aspects) characterizing e-commerce (individual  $x_i$  variables) (Table 1).

**Table 1.**

*Value of  $\chi^2$  statistic and the T-Czuprow coefficient of variables characterizing e-commerce*

	Variable	Statistic value $\chi^2$	T-Czuprow convergence coefficient
$x_1$	Page content management	48,78	0,41
$x_2$	Transaction conditions	120,47	0,7
$x_3$	Preparation for special offers	34,29	0,37
$x_4$	Personalized promotions	55,73	0,46
$x_5$	SMS campaigns	20,9	0,29
$x_6$	Social media presence	64,10	0,49
$x_7$	Offer distribution via the welcome page of the hotel	10,77	0,28
$x_8$	Online purchase process	73,61	0,6
$x_9$	Photos of the facility and its surroundings on the website	36,88	0,38

Source: Own calculations.

Analyzing the data presented in Table 1, it can be concluded that the value of the chi-square statistic after calculating the values of theoretical numbers  $n_{ij}$ , and auxiliary activities takes the form: for  $x_1$ - $\chi^2 = 48,78$ ,  $x_2$ - $\chi^2 = 120,47$ ,  $x_3$ - $\chi^2 = 34,27$ ,  $x_4$ - $\chi^2 = 55,73$ ,  $x_5$ - $\chi^2 = 20,9$ ,  $x_6$ - $\chi^2 = 64,10$ ,  $x_7$ - $\chi^2 = 10,77$ ,  $x_8$ - $\chi^2 = 73,61$ ,  $x_9$ - $\chi^2 = 36,88$ .

Since the  $\chi^2$  value for individual variables characterizing e-commerce in hotel management is different from zero ( $\chi^2 \neq 0$ ) it can be concluded that there is a relationship between the examined  $x_i$  and  $y_i$  values. Analyzing the value of the T-Czuprow coefficient, it can be seen that it ranges from 0.7 to 0.28. This means that the selected factors, in the opinion of hotel customers, have a diverse impact on the e-commerce of the facility. Hotel managers should certainly pay attention to two key variables for which there was a strong relationship. This concerns variable  $x_2$  (transaction conditions) and the online purchase process, where the convergence coefficient was at a level of  $T = 0,7$  and  $T = 0,6$  respectively. An average relationship was noted for three features, i.e.:  $x_1$  (page content management),  $x_4$  (personalized promotions) and the  $x_6$  variable (social media presence) the T-Czuprow convergence coefficient reached a level of  $x_1$   $T = 0,41$ ,  $x_4$ - $T = 0,46$ ,  $x_6$   $T = 0,49$ . The remaining variables identified in the course of the research achieved a weak dependence on the level from  $T = 0,28$  to  $T = 0,38$ . The study confirmed (Abebe, 2014; Gao et al., 2023) that the adoption of electronic commerce facilitates the functioning of enterprises from the SME sector, including the hotel, improving its functioning, and thus its management.

## 5. Conclusions

The COVID-19 pandemic has posed many challenges for entrepreneurs, as well as for consumers. The physical limitations associated with the COVID-19 pandemic meant limited mobility. This resulted in a change in many shopping habits, shifting them from traditional channels to online channels. In view of the above, the e-commerce industry has become the

most modern and popular industry around the world. The increased use of the internet by people during this period has encouraged them to shop online more often, where they can avoid wasting time and energy (Nanda, Patnaik, 2023). This is also reflected in the hotel industry. Constantly increasing requirements and expectations of guests as well as growing competition force hoteliers to look for the most effective methods of maintaining and strengthening on the market. Research shows unequivocally that the level of services is, apart from the price, the basic criterion determining the choice of a hotel by a guest, and a wealthy guest will usually choose a more expensive but reputable hotel. Therefore, the quality of services is increasingly perceived as a key factor for the success of a hotel on the modern tourist market. In the conditions of increasing competition, the fight for guests, the level of services and the richness (attractiveness) of the service and commercial offer will be the main priority for hotel enterprises. In order to stay on the market in the long term, hotels must expand and make their offer more attractive. Accommodation and meals plus connectivity is not enough and guests are not satisfied. The analysis of the collected material leads to the following conclusions:

- the area of e-commerce in the hotel industry is becoming more and more popular, not only from entrepreneurs, but also from consumers, for whom it is an attractive and quick form of shopping,
- modern hotels try to provide their guests with the widest possible range of services related to recreation, while looking for an attraction that would distinguish it from other hotel establishments of this type and attract customers.

It should be remembered that no enterprise will survive on the market only because the quality of services and customer service by competitors will be even worse. Customer orientation will become more common as companies finally understand that partnership is the key to success in these difficult economic conditions.

## References

1. Abebe, M. (2014). Electronic commerce adoption, entrepreneurial orientation and small- and medium-sized enterprise (SME) performance. *J. Small Bus. Enterp. Dev.*, 21, 100-116.
2. Al-Bakri, A., Cater-Steel, A., Soar, J. (2010). The influence of B2B e-commerce on SMEs' performance and efficiency: a review of the literature. *International Journal of Liability and Scientific Enquiry*, 3(3), pp. 213-224.
3. Andonov, A., Dimitrov, G.P., Totev, V. (2021). Impact of E-Commerce on Business Performance. *TEM J.*, 10, pp. 1558-1564.
4. Awad, E.M. (2004). *Electronic Commerce from Vision to Fulfillment*. Prentice-Hall.
5. Ayob, A.H. (2021). E-commerce adoption in ASEAN: who and where? *Future Bus. J.*, 7(4), 1.

6. Bartczak, K. (2016). *Bariery rozwojowe handlu elektronicznego*. Wrocław: Exante.
7. Chaffey, D. (2016). *Digital Bussiness i E-commerce Management*. Warszawa: PWN.
8. Flis, R. (2009). Perspektywy rozwoju e-biznesu. In: A. Żołnierski (ed.), *Raport o stanie sektora małych i średnich przedsiębiorstw w Polsce w latach 2007-2008*. Warszawa: Polska Agencja Rozwoju Przedsiębiorczości.
9. Gao, J., Siddik, A.B., Khawar Abbas, S., Hamayun, M., Masukujjaman, M., Alam, S.S. (2023). Impact of E-Commerce and Digital Marketing Adoption on the Financial and Sustainability Performance of MSMEs during the COVID-19 Pandemic: An Empirical Study. *Sustainability*, 15(2), 1594.
10. Gibbs, J., Kraemer, L.K., Dedrick, J. (2003). Environment and Policy Factors Shaping Global E-Commerce Diffusion: A Cross-Country Comparison. *The Information Society*, 19. California, 5-18.
11. Higuera-Castillo, E., Liébana-Cabanillas, F.J., Villarejo-Ramos, Á.F. (2023). Intention to use e-commerce vs physical shopping. Difference between consumers in the post-COVID era. *Journal of Business Research*, Vol. 157.
12. Ho, S.Ch., Chen, J.L. (2023). Developing the e-commerce competency for entrepreneurship education from a gamified competition. *The International Journal of Management Education*, Vol. 21, Iss. 1, 100737.
13. Hua, N., Hight, S., Wei, W., Ozturk, A.B., Zhao, X.(R)., Nusair, K., DeFranco, A. (2019). The power of e-commerce: Does e-commerce enhance the impact of loyalty programs on hotel operating performance? *International Journal of Contemporary Hospitality Management*, Vol. 31, No. 4.
14. Huang, J., Zhao, C., Li, J. (2007). An empirical study on critical success factors for electronic commerce in the Chinese publishing industry. *Front. Bus. Res. China*, 1.
15. Islam, M.M.O., Haque, A.K.M.K., Barua, B. (2021). Current Status of E-Commerce Adoption by SMEs in Bangladesh: An Empirical Study. *AIUB J. Bus. Econom.*, 18.
16. Kalakota, R., Whinston, A.B. (1997). *Electronic Commerce: A Manager's Guide*. Reading, MA: Addison-Wesley.
17. Kanani, R., Glavee-Geo, R. (2021). Breaking the uncertainty barrier in social commerce: The relevance of seller and customer-based signals. *Electronic Commerce Research and Applications*, 48.
18. Kawa, M., Dziura, D. (2022). Tendencje rozwoju handlu elektronicznego. *Przedsiębiorczość – Edukacja*, 18(1).
19. Kraenzlin, S., Meyer, C., Nellen, T. (2020). COVID-19 and regional shifts in Swiss retail payments. *Swiss J. Economics Statistics*, 156, 14.
20. Krzepicka, A. (2010). Modele handlu elektronicznego. In: W. Gonciarski, *Zarządzanie w warunkach gospodarki cyfrowej*. Warszawa: WAT.



21. Lin, Z., Whinston, A.B., Fan, S. (2015). Harnessing Internet finance with innovative cyber credit management. *Financial Innovation*, 1, 5.
22. Liu, X., Tong, D., Huang, J., Zheng, W., Kong, M., Zhou, G. (2022). What matters in the e-commerce era? Modelling and mapping shop rents in Guangzhou, China, Land Use Policy. *Elsevier*, vol. 123(C).
23. Makowiec, M. (2008). Przeobrażenia w funkcjonowaniu przedsiębiorstw uwarunkowane technologią teleinformatyczną. *Zeszyty Naukowe Uniwersytetu Ekonomicznego w Krakowie*, nr 765.
24. Marek, R. (2011). *Marketing społecznościowy w hotelarstwie. Praktyczny poradnik hotelarza*.
25. Martin, L.M., Matlay, H. (2023). Innovative use of the Internet in established small firms: The impact of knowledge management and organisational learning in accessing new opportunities. *Qual. Mark. Res.*, 6.
26. Moiseev, N., Mikhaylov, A., Dinçer, H. et al. (2023). Market capitalization shock effects on open innovation models in e-commerce: golden cut q-rung orthopair fuzzy multicriteria decision-making analysis. *Financ. Innov.*, 9, 55.
27. Rodrigues, V.F., Policarpo, L.M., da Silveira, D.E., da Rosa Righi, R., da Costa, C.A., Barbosa, J.L.V., Antunes, R.S., Scorsatto, R., Arcot, T. (2022). Fraud detection and prevention in e-commerce: A systematic literature review. *Electronic Commerce Research and Applications*, Vol. 56.
28. Satar, M.S., Alarifi, G., Alrubaishi, D. (2023). Exploring the entrepreneurial competencies of E-commerce entrepreneurs, *The International Journal of Management Education*, Vol. 21, Iss. 2.
29. Satar, M.S., Alarifi, G., Alrubaishi, D. (2023) Exploring the entrepreneurial competencies of E-commerce entrepreneurs. *The International Journal of Management Education*, Vol. 21, Iss. 2.
30. Shapiro, R.Y. (2001). Polling. In: J. Neil, P. Smelser, B. Baltes (eds.), *International Encyclopedia of the Social & Behavioral Sciences*. Pergamon.
31. Shi, W. (2021). Research on the influence of accounting computerization and networking on E-commerce. *J. Wireless Com. Network*, 148.
32. Skare, M., Gavurova, B., Rigelsky, M. (2023). Innovation activity and the outcomes of B2C, B2B, and B2G E-Commerce in EU countries. *Journal of Business Research*, Vol. 163.
33. Skorupska, J. (2017). *E-commerce. Strategia. Zarządzanie. Finanse*. Warszawa: PWN.
34. Turban, E., King, D., Lee, J., Viehland, D. (2004). *Electronic Commerce: A Managerial Perspective*. Prentice-Hall.
35. Vipin, J., Bindoo, M., Satyendra, A. (2021). An Overview of Electronic Commerce (e-Commerce). *Journal of Contemporary Issues in Business and Government*, Vol. 27, No. 3.

36. Wiczerzycki, W. (2013). Istota e-logistyki. In: W. Wiczerzycki (ed.), *E-logistyka*.
37. Yingzi, Z., Zhaoji, Y. (2022). Research on user trust evaluation of social e-commerce platform based on artificial neural network. *Optik, Vol. 271*.
38. Zhou, L., Mao, H., Zhao, T., Wang, V.L., Wang, X., Zuo, P. (2022). How B2B platform improves Buyers' performance: Insights into platform's substitution effect. *J. Bus. Res., 143*.