

The impact of Enterprise Resource Planning (ERP) on business process outcomes in tourism companies

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Abstract: Enterprise Resource Planning (ERP) is a system that allows managers to predict, plan, control, measure and analyze all resources within the business system. Such systems help companies improve their business, allowing them to create a single database for the realization of various business processes among different areas, such as production, finance, supply chain management, human resources, customer relationship management. Accordingly, the aim of this study is to test the relationship between the use of ERP and business process outcomes in tourism companies. Based on the DeLone and McLean (D&M) theoretical model, the paper identifies the key factors for the successful implementation of ERP systems in tourism companies. Research results show that ERP system quality, ERP information quality, ERP service quality, and external pressures positively influence the perceived usefulness and satisfaction of ERP system users. The organization factor, top management support, perceived usefulness and satisfaction of ERP system users have a positive effect on the outcomes of business processes.

Keywords: enterprise resource planning, business processes, tourism, business process outcomes, hotel industry

JEL classification: Z32

Uticaj sistema za planiranje resursa na ishode poslovnih procesa u turističkim kompanijama

Sažetak: Sistem za planiranje resursa (*Enterprise Resources Planning – ERP*) u preduzeću je sistem koji omogućava menadžerima predviđanje, planiranje, kontrolu, merenje i analizu svih resursa unutar poslovnog sistema. Takvi sistemi nude strateška i operativna unapređenja kompanijama tako što im pružaju mogućnost da kreiraju jedinstvenu bazu podataka za realizaciju različitih poslovnih procesa između različitih funkcionalnih oblasti, kao što su proizvodnja, finansije, upravljanje lancem snabdevanja, ljudski resursi, upravljanje odnosima sa kupcima. Shodno tome, focus ovog istraživanja usmeren je ka sistemima za planiranje resursa preduzeća i ishoda poslovnih procesa u turističkim kompanijama. Na osnovu teorijskog modela DeLone i McLean (D&M) u radu se identifikuju ključni faktori koji definišu uspešnu primenu ERP sistema u turističkim kompanijama. Rezultati istraživanja pokazuju da kvalitet ERP sistema, kvalitet ERP informacija, kvalitet ERP usluga i spoljni pritisci, pozitivno utiču na uočenu korisnost i zadovoljstvo korisnika ERP sistema. Organizacijski faktori, podrška top menadžmenta, uočena korist i zadovoljstvo korisnika ERP sistema pozitivno utiču na ishode poslovnih procesa.

Ključne reči: sistem za planiranje resursa, poslovni procesi, turizam, poslovni ishodi, hotelska industrija

JEL klasifikacija: Z32

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1. Introduction

In order to adapt to the complex and dynamic business environment, modern organizations have adopted one of the most prominent technological innovations, the enterprise resource planning (ERP) system. In the early 1990s, ERP system proved to be one of the largest IT investment ventures as the development model of the manufacturing resource planning system (MRP II) (Wibowo & Sari, 2018).

Today, ERP allows companies to integrate a multitude of different information, data and business processes into a single database, with the aim of improving business efficiency and productivity, which later brings companies a better market position. By integrating business processes, the ERP system simplifies the production of various type assets, which directly improves productivity, profitability, better resource management and accelerates business growth and development (Ahmadzadeh et al., 2021; Al-Okaily et al., 2021). Shakkah et al. (2016) point out “that the ambition of the ERP system is to integrate all sectoral areas in the enterprise into one common computer system” (p. 1921). Companies dealing with multi-million-dollar projects and complex business processes that require additional time and effort need cross-sector collaboration in order to successfully implement an ERP system (Vargas & Comuzzi, 2020). According to the latest 2022 Market Research Furniture reports, ERP system manufacturers generated revenue of \$50 billion and the revenue growth trend is expected to continue in the coming years. ERP Cloud has been particularly interesting in the last few years, allowing its users to access the platform anytime and anywhere with the help of an internet browser. Cloud computing is a software model that is implemented over the Internet and provides security at a privileged price. Implementing and running the ERP system over the cloud offers many advantages and opportunities, despite numerous difficulties and challenges (Abd Elmonem et al., 2017).

However, the implementation of various information system models often has a high failure rate. Some studies reveal that the implementation of information systems in American firms was unsuccessful in more than 50% of cases (Umble, 2003). Also, a large number of authors find that the implementation of ERP systems in various companies was either difficult or unsuccessful (Costa et al., 2020). A typical example is Dell, a company that wrote off 115 million euros for an ERP system investment due to doubts about whether the system would be able to calculate its sales volume (Al-Okaly et al., 2021; Nkasu, 2020). Due to inadequate leadership in transformation, lack of material and non-material resources and complex organizational problems such as centralized organizational structure and inflexible organizational culture, the implementation of ERP systems in transition countries is difficult (Amid et al., 2012). Over time, ERP systems developed and improved for greater functionality and more integration possibilities. ERP manufacturers and vendors such as “Oracle, SAP, PeopleSoft, J. D Edward, etc. developed different modules to cover and support all functional units of the enterprise” (Abd Elmonem et al., 2017, p. 2).

The ERP system provides an opportunity for tourism companies (hotels and travel agencies) to incorporate almost all data, information and business processes to improve their business efficiency, productivity and profitability. Beldona et al. (2001) point out that the application of a resource planning system in tourism enterprises significantly improves business given the volume of information that the system offers. Through the ERP system, hotel companies automate certain business activities and thus provide users of the system with a timely overview of their operations.

The research subject in this paper is the application of the ERP system, as well as the influence of various factors of the system on business processes in tourism companies. The aim of the study is to test the relationship between the use of ERP systems and business

process outcomes in tourism companies. Bearing in mind the research subject and objective, qualitative and quantitative methodology is applied. Qualitative methodology is primarily applied, as it provides a theoretical view of the identified research subject through a review of relevant literature, thus creating the basis for the application of quantitative methodology, used to test the research hypotheses. Studies on ERP system emphasize quantitative methodology and the unified theory of acceptance and use of technology, since it allows analyzing the relationship between different independent and dependent variables. Empirical research was conducted in the Republic of Serbia, where employees of tourism companies expressed their views on the questions in the defined survey questionnaire.

2. Literature review

The ERP system is defined as a business strategy that enables the integration of production, finance, and distribution, with the aim of dynamic balancing and optimization of enterprise resources (Singh & Singh, 2013). According to Molina-Castillo et al. (2022), “ERP is a software package that is able to identify, collect, integrate, structure, store and process data of different types of departments within the company, and to provide employees with the information they need in an appropriate and timely manner” (p. 1). ERP systems allow organizations to define sales prices, create financial reports and manage tangible and intangible resources (human, financial, etc.), based on the previous integration of data on finance, sales and human resources (Singh & Singh, 2013; Vogt, 2002). By implementing an ERP system, managers make timely decisions based on a lot of meaningful data organized through the system.

In its first years, the ERP system focused mainly on manufacturing enterprises. Over time, as various ERP systems developed with the support of information and communication technology and Internet-oriented solutions, other industries got the opportunity to start implementing the system. In recent years, organizations in the tertiary sector have invested significant financial resources in order to implement an ERP system and achieve better cost efficiency and provide top-quality services (Mohamed & Farahat, 2020). The dominant factor in the tertiary sector is tourism, including companies that provide tourist services such as travel agencies, hotels, city tourism organizations, museums, etc.

Effective ERP systems today are the primary tools which employees use to perform daily business activities. ERP and business process improve systems integrating corporate data, especially inventory management (Oliverio et al., 2023). According to Lin (2010), “the success of ERP system implementation partly depends on the intensity of use, which can be indirectly related to system quality, information quality, service quality, perceived usefulness and user satisfaction” (p. 339). The dominant factors that can influence the implementation of ERP systems in tourism companies are external pressure and support from top management (Wibowo & Sari, 2018). Accordingly, this study is based on the extended model of ERP system success conceived by DeLone and McLean (D&M) (2003).

Many success models underlying the application of information systems was the reason to carry out a detailed review of the literature and develop a multidimensional model, which would integrate a large number of these individual measures into one comprehensive model. In that first version of the D&M model, information obtained from information systems, their quality as well as the quality of the system itself are relevant factors that influence the overall satisfaction of their users. On the other hand, user satisfaction and system usage directly affect the companies’ business process outcomes (DeLone & McLean, 1992; Karimi et al., 2007). A few years after the creation of the first version of the model, it faced numerous criticisms and one of them highlighted the importance of service quality and the necessity of including it in the model (Pitt et al., 1995). In addition, the dimension related to system usage

implies its mandatory character, which indirectly affects user dissatisfaction. Therefore, the dimension related to the use of an information system should have a voluntary character (Seddon, 1997). Comments, criticisms and numerous research papers gave rise to an improved version of the model, which included the following success factors: system quality, information quality, service quality, perceived usefulness, user satisfaction and net benefits. The model itself was widely accepted from the very beginning, especially for evaluating the success of ERP implementation. Previous studies rarely used this model to evaluate the success of ERP system implementation in the organizational context of tourism companies (Mohamed & Farahat, 2020).

3. Research model and hypotheses

Literature points to several different methods to test the connection between the success factors of the ERP system implementation and to identify the factors that ultimately have an impact on the efficiency of business processes in tourism companies (Hart & Snaddon, 2014). This research presents a theoretical model with thirteen research hypotheses. In this model, ERP system quality refers to system flexibility and reliability in use (DeLone & McLean, 1992). Information quality refers to data timeliness and usefulness that an ERP system offers (Okaily et al., 2021). According to Petter et al. (2008), service quality refers to the support of internal and external experts in the field of integrated information systems to the final users of the ERP system. The level of service reliability, speed of response, amount of knowledge and skills and empathy towards system users affects the level of service quality. The implementation of ERP systems in tourism companies is significantly influenced by factors such as the degree of technological changes, external support, legal and state regulations, competitive pressures, market instability (Anaya & Qutaishat, 2022; Ojiabo & Ojiabo, 2016). Some authors believe that external pressures from the environment are strategically important for the adoption and implementation of innovations in companies. Competitive pressures are relevant primarily because they restructure the industry and thus influence market participants to implement modern technology in their operations in order to increase competitive advantage (Chauhan & Singh, 2017; Jeyaraj et al., 2006). Some authors believe that the usefulness of the ERP system is a key determinant that influences positive attitudes about the application of technologies in tourism. In tourism companies, during the implementation and adaptation of the ERP system, the quality of the ERP system, the quality of ERP information and the quality of ERP services are crucial in successful implementation (Mohamed & Farahat, 2020). It is assumed that an ERP system with high technical-technological performance, together with accurate and timely ERP information and excellent ERP support and numerous competitive pressures, can probably affect the perceived usefulness of the ERP system and user satisfaction when using it. Accordingly, the following hypotheses were formulated:

- H1a: ERP system quality has a statistically significant positive impact on the perceived usefulness of the ERP system in tourism companies.
- H1b: ERP system quality has a statistically significant positive impact on user satisfaction when using ERP systems in tourism companies.
- H2a: Quality of ERP information has a statistically significant positive impact on the perceived usefulness of the ERP system in tourism companies.
- H2b: Quality of ERP information has a statistically significant positive impact on user satisfaction when using ERP systems in tourism companies.
- H3a: Quality of ERP services has a statistically significant positive impact on the perceived usefulness of ERP systems in tourism companies.
- H3b: Quality of ERP services has a statistically significant positive impact on user satisfaction when using ERP systems in tourism companies.

- H4a: External pressure has a statistically significant positive impact on the perceived usefulness of ERP systems in tourism companies.
- H4b: External pressure has a statistically significant positive impact on user satisfaction when using ERP systems in tourism companies.

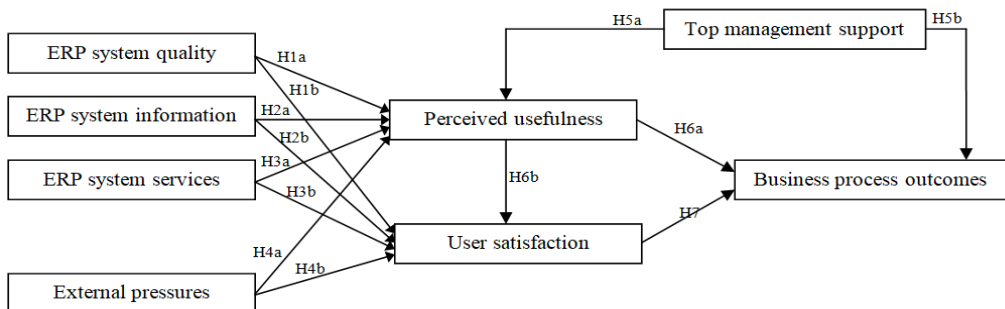
Successful implementation of the ERP system in tourism companies also depends on several different stakeholders, mostly on top management. If a strategically important project appears in the company, its successful implementation mostly depends on the support of the top management. One of the company's strategic projects is the implementation of the ERP system. Top management support refers to the support of the top management and the degree of participation of the management in the implementation of the ERP system (Nah et al., 2006). This research proposes the following hypotheses:

- H5a: Top management support has a statistically significant positive impact on the perceived usefulness of ERP systems in tourism companies.
- H5b: Top management support has a statistically significant positive impact on business process outcomes in tourism companies.

Perceived usefulness of the ERP system refers to improving business skills and individual performance, which later leads to their satisfaction when using the given system (Seddon, 1997). Cheng (2019) provides evidence that there is a greater chance that the user will be satisfied with the ERP system if he previously found that the same ERP system improves business performance in the company. In the context of the relationship between perceived usefulness and business process outcomes, some empirical studies, such as Rajan and Balan (2015) and Okaily et al. (2021), find that perceived usefulness has an impact on business process outcomes. Therefore, it is assumed that in tourism companies ERP systems correspond to the set tasks and consequently increase user satisfaction and improve the operational performance of those companies. Accordingly, the following hypotheses are set:

- H6a: Perceived usefulness of the ERP system has a statistically significant positive impact on business process outcomes in tourism companies.
- H6b: Perceived usefulness of the ERP system has a statistically significant positive impact on user satisfaction in tourism companies.
- H7: User satisfaction with the use of ERP systems has a statistically significant impact on business process outcomes in tourism companies.

Figure 1: Research model



Source: Authors' research

4. Research methodology

With the aim of conducting research on the impact of the ERP system on the business process outcomes, an empirical study was conducted that included users of the ERP system in tourism companies in the Republic of Serbia. In order to obtain relevant answers, the questionnaire was distributed only to respondents with experience in using different resource planning systems in the period from February to June 2023. That is, when sending the questionnaire, it was clearly indicated in its description that only those who actively use or once used the resource planning system in tourism companies should fill it out. The adapted questionnaire included items described by a five-point Likert scale (1 – I do not agree at all, 5 – I completely agree), and items referring to the quality of the ERP system (adapted from: Okaily et al., 2021), information quality obtained from the ERP system (adapted from: Ouidad et al., 2020), service quality provided by the ERP manufacturer (adapted from: Ifinedo et al., 2010), external pressures from the environment (adapted from: Ghobakhloo et al., 2011), perceived usefulness of ERP system implementation (adapted from: Rezvani et al., 2017), ERP system user satisfaction (Frejik & Powell, 2015), top management support for ERP system use (adapted from: Zhu et al., 2010), business process outcomes in tourism companies (adapted from: Karimi et al., 2007), as well as general data on respondents related to gender and age, level of education, years of service, working position and years of work with the ERP system.

Table 1: Structure of the sample (Users)

Characteristics of the respondents (Users)		Frequency	Percentage
Gender	Men	50	45.9%
	Women	59	54.1%
Age	<26	24	22%
	25-35	61	56%
	36-45	19	17.4%
	>45	5	4.6%
Education	High school	4	3.7%
	Faculty	63	57.8%
	Master	42	38.5%
	PhD	0	0%
Work experience	<5	40	36.7%
	5-10	26	23.9%
	11-20	41	37.6%
	>20	2	1.8%
Working position	Operational level	60	55%
	Managerial level	49	45%
ERP experience	<1	32	29.4%
	1-3	12	11%
	4-6	45	41.3%
	>6	20	18.3%
Total		109	100%

Source: Authors' research

The sample included 109 respondents, ERP system users, employed in the tourism sector. In the research, the tourism companies were hotels, travel agencies and city tourism

organizations. The survey questionnaire was distributed to 430 different addresses where 112 respondents responded and filled out the questionnaire. Of the 112 respondents who responded to the questionnaire, 109 of them filled it out completely. The percentage of responses to the distributed questionnaire is 25.34%.

Table 2: Structure of the sample (Tourism companies)

Characteristics of the respondents (Tourism companies)		Frequency	Percentage
Type of tourism company	Hotel	28	77.8%
	Travel Agency	6	16.67%
	City tourism organization	2	5.56%
Years of company using ERP	Under 2 years	7	19.44%
	2-10 years	20	55.56%
	Above 10 years	9	25%
Number of employees	Under 20	4	11.11%
	20-100	22	61.11%
	Above 100	10	27.78%
Geographical regions in the Republic of Serbia	Belgrade Region	7	19.44%
	Region of Vojvodina	12	33.33%
	Region of Šumadija and Western Serbia	10	27.78%
	Region of Southern and Eastern Serbia	7	19.44%
	Region of Kosovo and Metohija	0	0%
Total		36	100%

Source: Authors' research

The collected data were analyzed in a statistical package SPSS, version 23.0. The Cronbach Alpha coefficient was used to measure the reliability and internal consistency of variables. Descriptive statistical analysis was used to measure the arithmetic mean and standard deviation of the analyzed variables. Research hypothesis testing was conducted using multiple regression analysis.

5. Results and discussion

In order to examine the agreement of the answers and the homogeneity of their attitudes by calculating the values of the arithmetic mean and standard deviation, it is necessary to conduct a descriptive statistical analysis. Based on the calculated arithmetic mean shown in Table 3, it can be concluded that respondents agree most with Quality of ERP information. On the other hand, respondents agree least with External pressures. The results of reliability and internal consistency analysis of variables show that all variables have a high level of reliability and internal consistency, since the acceptable values of the Cronbach's Alpha coefficient are above 0.6 (Robinson et al., 1991). The highest degree of reliability is characteristic of business process outcomes ($\alpha = 0.961$) and perceived usefulness ($\alpha = 0.956$), with other variables also showing high level of reliability (top management support: $\alpha = 0.942$, quality of ERP services: $\alpha = 0.912$, ERP information quality: $\alpha = 0.888$, user satisfaction: $\alpha = 0.836$, ERP system quality: $\alpha = 0.822$).

Table 3: Arithmetic means, standard deviations and Cronbach’s Alpha coefficients of the analyzed variants

Variables	Mean	Std. Dev.	Cronbach’s Alpha
ERP system quality	4.11	0.66	0.822
Quality of ERP information	4.19	0.75	0.888
Quality of ERP services	3.99	0.76	0.912
External pressures	3.83	0.81	0.766
Perceived usefulness	4.17	0.84	0.956
User satisfaction	4.03	0.66	0.836
Top management support	3.86	0.96	0.942
Business process outcomes	4.15	0.78	0.961

Source: Authors’ research

To test the strength of the correlation between the variables, a correlational statistical analysis was conducted, the results of which are shown in Table 4.

Table 4: Correlational statistical analysis

Variables	ERP system quality	Quality of ERP information	Quality of ERP services	External pressures	Perceived usefulness	User satisfaction	Top management support	Business process outcomes
ERP system quality	1							
Quality of ERP information	0.603**	1						
Quality of ERP services	0.615**	0.709**	1					
External pressures	0.619**	0.624**	0.677**	1				
Perceived usefulness	0.718**	0.757**	0.855**	0.782**	1			
User satisfaction	0.771**	0.831**	0.856**	0.763**	0.904**	1		
Top management support	0.509**	0.615**	0.691**	0.709**	0.804**	0.749**	1	
Business process outcomes	0.673**	0.671**	0.723**	0.709**	0.835**	0.859**	0.851**	1

Source: Authors’ research

The correlation analysis findings indicated a significant correlation between all pairs of variables. The highest degree of linear dependence is present between user satisfaction with the ERP system and the perceived usefulness when using the ERP system (0.904**), while the lowest degree of linear correlation is between the quality of ERP information and the quality of the ERP system ($r = 0.603^{**}$). Between other pairs of variables, there is a strong correlation, because the value of the Pearson coefficient between those variables is on average above 0.6.

In order to verify the previously stated hypotheses, the paper used a multiple regression analysis that examines the influence of several independent variables on the dependent

variable, and the results are shown in Table 5. First of all, it is necessary to fulfill the condition of multicollinearity in order to successfully conduct a multiple regression analysis. According to the obtained results, ERP system quality, ERP information quality, ERP service quality, external pressures and top management support predicted and described 87.7% ($R^2 = 0.877$) of the variability of the perceived usefulness of the ERP system in the tourism sector. The first regression analysis in the paper shows that the quality of the ERP system ($\beta = 0.194$, $p < 0.01$), the quality of ERP information ($\beta = 0.137$, $p < 0.01$), the quality of ERP services ($\beta = 0.351$, $p < 0.01$), external pressures ($\beta = 0.141$, $p < 0.05$) and top management support ($\beta = 0.277$, $p < 0.1$) significantly affect the perceived usefulness of ERP systems in tourism companies, which confirms hypotheses **H1a**, **H2a**, **H3a**, **H4a**, **H5a**. The second regression model indicates the existence of a statistically significant influence of ERP system quality ($\beta = 0.222$, $p < 0.01$), ERP information quality ($\beta = 0.285$, $p < 0.01$), ERP service quality ($\beta = 0.241$, $p < 0.01$), external pressure ($\beta = 0.082$, $p < 0.1$) and perceived usefulness ($\beta = 0.259$, $p < 0.01$) on user satisfaction with ERP systems in tourism companies, which proves the research hypotheses **H1b**, **H2b**, **H3b**, **H4b**, **H6b**. Based on the analysis, it can be seen that the coefficient of determination is 0.911, which means that 91.1% of the variability of user satisfaction with the ERP system is explained by a specific regression model. According to the last regression model, it can be concluded that the perceived usefulness of ERP system, user satisfaction with ERP system and top management support in tourism organizations have a statistically significant impact on the final outcomes of business processes in tourism companies. 83.6% of the dependent variable, business process outcomes, is explained by a specific regression model, according to the coefficient of determination, which is 0.836.

Table 5: Regression statistical analysis

	Hypothesis	B	t	p	R ²	
H1a	QS → PU	0.194	4.090	0.000***	0.877***	Accepted
H2a	QI → PU	0.137	2.622	0.010**		Accepted
H3a	QS → PU	0.351	6.035	0.000***		Accepted
H4a	EP → PU	0.141	2.525	0.013**		Accepted
H5a	TM → PU	0.277	5.119	0.000***		Accepted
H1b	QS → US	0.222	5.176	0.000***	0.911***	Accepted
H2b	QI → US	0.285	6.179	0.000***		Accepted
H3b	QS → US	0.241	4.166	0.000***		Accepted
H4b	EP → US	0.082	1.722	0.088*		Accepted
H6b	PU → US	0.259	3.450	0.001***		Accepted
H6a	PU → BO	0.245	4.142	0.002***	0.836***	Accepted
H5b	TM → BO	0.474	7.108	0.000***		Accepted
H7	US → BO	0.511	5.494	0.000***		Accepted

Source: Authors' research

Research results point to the conclusion that the quality of ERP services is the strongest indicator of the perceived usefulness of the ERP system in tourism companies while the support of top management, the quality of the ERP system, the quality of ERP information and external pressures follow it in terms of influence intensity. Several previous research studies (Chen et al., 2015; Floropoulos et al., 2010; Karimi et al., 2007; Okaily et al., 2021; Seddon, 1997; Wibowo & Sari, 2018;) confirm a statistically significant impact of ERP system quality, quality of ERP information and quality of ERP services on the perceived usefulness of ERP systems in tourism companies. When the ERP system in a tourism

company is of high quality, when it provides up-to-date, accurate and timely information to users, when it provides the possibility of 24/7 system support for its users, when the top management supports the implementation of the ERP system in the company and when the environment exerts partial pressure on the implementation of the ERP system, the perceived usefulness of the ERP system in tourism companies will be at a high level. From the organizational perspective, the positive perceived usefulness of the ERP system in tourism companies has a positive statistically significant impact on user satisfaction with the ERP system, as is the case with [Cheng \(2019\)](#). However, the impact of technology and environment is inevitable in defining the overall impact on ERP system user satisfaction. Therefore, the quality of the ERP system, together with the quality of ERP information and the quality of ERP services, has a positive statistically significant impact on user satisfaction in tourism companies, while external pressure has a somewhat weaker statistical impact ([Ouiddad et al., 2020](#); [Wibowo & Sari, 2018](#)). Users of the ERP system in hotels will be more satisfied if the ERP system is of higher quality, confidential and accurate with the information it provides and if it provides technical and customer support in the use and implementation of the system.

As for the results of business processes, user satisfaction from working in an ERP system ensures not only improved individual performance, but also greater productivity, organizational efficiency and effectiveness, and overall business performance. The support of top management when using the ERP system leads to improved business process outcomes ([Harr et al., 2019](#); [Lin, 2010](#)). ERP software tools can help tourism companies develop and reduce their costs, increase operational efficiency and increase guest loyalty. The importance of integration information system is reflected in its potential to achieve synergy with all participants in business, which leads to greater satisfaction of customers, flexibility, reduced costs, innovation and finally, to a better response to the needs of end customers. In this way, the company achieves a better competitive position and higher profitability ([Milovanović et al., 2022](#)). ERP systems in tourism companies integrate various business operations, allowing management to control the movement of financial resources in a simpler way ([Chou & Hong, 2013](#); [Okaily et al., 2021](#)).

6. Conclusion

The aim of the paper was to examine the influence of ERP system implementation factors on business process outcomes in tourism companies. The application of this research approach, which is not frequently employed, is important because it can ensure the benefits of ERP system implementation in tourism companies. Based on the conducted empirical research, the conclusion is reached that the success of ERP is determined by the quality of the ERP system, the quality of ERP information, the quality of ERP services, external pressures from the environment, the perceived usefulness of the ERP system, user satisfaction with the ERP system, top management support and the outcomes of business processes in tourism organizations. The research model in this paper included additional variables such as top management support and external pressures and confirmed the impact on perceived usefulness of ERP users and business process outcomes.

The special contribution of this paper is reflected in the analysis of the impact of resource planning systems in tourism companies on their business process outcomes, which enables a deeper analysis of the observed research area. According to the abovementioned, it can be concluded that the paper offers a holistic view of the relevant factors that influence primarily the perceived usefulness and user satisfaction with the ERP system in tourism companies, and later the final results of business processes.

This work has important implications for producers of resource planning systems and for the management of tourism enterprises. First, according to the research findings that the quality of the ERP system positively affects its perceived usefulness, it is recommended that manufacturers create an ERP system that will be simplified with the ability to adapt to the end user's requirements. Second, the management of tourism companies should implement ERP systems, as their use in the tourism industry contributes to increasing productivity and business efficiency. Third, the management of tourism companies should support employees to use the ERP system considering its benefits.

As with any study, there are some significant limitations to this analysis. First, the research was conducted exclusively in the Republic of Serbia and it is assumed that the countries of the Western Balkans recorded significant results in the application of the resource planning system in tourism enterprises. Subsequent research on this topic should analyze other countries of the Western Balkans. Second, insufficient sample size may affect the reliability of the results and conclusions. Directions for future research indicate the necessity of including a larger number of respondents, especially users with more work experience in the ERP system. Third, the research did not analyze the influence of moderator variables, such as gender, age, job position, and work experience in the ERP system between independent and dependent variables. It is assumed that focus on the influence of gender, age, work position and work experience when analyzing the determinants of resource planning systems in tourism companies in the Republic of Serbia and their impact on the outcomes of their business processes would significantly enrich the study. Accordingly, future research directions may include these analyses.

Conflict of interest

The authors declare no conflict of interest.

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