

Profitability management of tourism sector in AP Vojvodina

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Abstract

Tourism plays an increasingly important role in the economic flows of each country. Recognizing the tourist potential of AP Vojvodina is an important task for the creators of the economic policy of our country. In order to make a favourable tourism environment with quality tourist content and products, it is necessary for tourist entities to operate stably and successfully. The aim of this paper is to highlight the importance of financial performance of firms in tourism sector in terms of profitability. The subject of the paper is to analyse the effects of internal factors on profitability level of 3456 firms in tourism sector in AP Vojvodina for the period 2015-2019. The results of the analysis indicate that observed firms were profitable during the analysed period, where average ROA was 1.81% and average ROE was 3.4%. Empirical analysis shows that internal factors such as firm size, sales revenue, earnings before interest and taxes and financial stability have positive impact on profitability, while liquidity and debt negatively affect the profitability of firms in tourism sector.

Keywords

profitability, tourism, sector, AP Vojvodina

Introduction

The tourism sector has a significant role as a source of economic growth in most economies in the world (Dimitropoulos, 2017). Namely, tourism sector represents an important potential of any national economy where a positive trend in tourism revenue has a significant role in realizing macroeconomic goals and social welfare (Milenković, Andrašić & Kalaš, 2017). Rodríguez-Díaz and Rodríguez-Díaz (2018) indicate that governments favour this sector because of its significant contribution to the gross national product. Since an ever-increasing number of people wants to travel, primarily in foreign

country, tourism manifests one of the fastest-growing industry in the world (Pavković, Jević, Jević, Nguyen & Sava, 2021). Tourism industry is among the world fastest growing industries, generating substantial economic benefits, as well as contributing to employment and stimulating investments (Dimitrić, Tomas Živković, & Blečić, 2019). Similarly, Bazargani and Kiliç (2021) argue that this sector is one of the main sectors of the world economy that contributes to employment, higher revenue level and promotion of economic prosperity. Sharpley (2020) highlighted the position of tourism sector in economic structure and concept of sustainable development based on the premise of economic

growth. Tourism is an important economic engine and enables socioeconomic development, generating employment opportunities (Usmani, Akram & Praveen, 2020).

The structure of this paper is as follows. After the introduction, there is a literature review which includes previous theoretical and empirical studies that have analysed profitability determinants in the tourism sector. The second part presents the characteristics and state of tourism sector in AP Vojvodina from the aspect of tourist arrivals, number of employees and financial performance of the observed firms. The third segment indicates data and methodology, and includes variables and econometric procedures for adequately created regression model. The last segment reports empirical results in terms of estimating the impact of internal factors on profitability in tourism sector of AP Vojvodina for the period 2015-2019.

1. Literature review

There are many empirical studies that have analysed profitability determinants in tourism sector (Agiomirgianakis, Magoutas & Sfakianakis, 2013; Ben Aissa & Goaied, 2016; Mijić & Jakšić, 2017; Alarussi & Alhaderi, 2018). Profitability is often measured by return on assets (Macas Nunes, Serrasqueiro & Sequeira, 2009; Stierwald, 2010; Skuflić & Mlinarić, 2015; Tan, 2017, Dimitrić et al., 2019).

Agiomirgianakis et al. (2013) analysed the profitability of 134 hotels in Greece for the period 2006-2010. Their results identified size and leverage as two significant factors that have positive impact on profitability of firms in tourism sector. Ben Aissa and Goaied (2016) investigated 27 Tunisian hotels for the period 2000-2010 and their results showed positive relationship between efficiency and profitability for the observed period. Further, their analysis indicate that debt has positive impact on profitability, while size negatively affect the profitability measured by ROA. Mijić and Jakšić (2017) investigated the relationship between indebtedness and profitability for companies in the Republic of Serbia for the period 2009-2013. Their findings showed negative correlation between these variables. Alarussi and Alhaderi (2018) investigated 120 companies listed on Bursa Malaysia from 2012 to 2014. Their findings showed a strong positive relationship between size, company efficiency and profitability, as well as a negative relationship between debt to leverage ratio and profitability. Finally, variable

liquidity has no significant impact on profitability of the analysed firms in Malaysia for the observed period. Lado-Sestayo, Otero-González, Vivel-Búa & Martorell-Cunill, (2016) showed that profitability depends largely on the market structure and the level of demand of the tourist destination. Further, Lado-Sestayo and Vivel-Búa (2018) identified that higher profitability of hotels depend on characteristics, location, competitive environment and tourist destination. Menicucci (2018) researched 2366 hotels in Italy for the period 2008-2016 and found that business model, ownership structure and financial structure affect the profitability. Also, factors such as size, location, accommodation and internationalization have positive impact on profitability level.

2. Characteristics and state of tourism sector in AP Vojvodina

Tourism industry in Serbia and region countries such as Croatia, Hungary, Romania and Slovenia reflect great interest in business tourism development (Kalaš, Mirović & Pavlović, 2019).

Bearing in mind that tourism development requires natural resources, sustained environment, cultural and historic heritage, Serbia has a chance to improve competitive tourism position on the world level by developing tourism products (Pavlović & Đeri, 2016). For example, Markus, Perovic, Pekovic & Popovic (2019) indicate that from the earliest stages of tourism development, sport-recreational activities have a great role and significance in creating and designing tourist services. On the other hand, Moric, Pekovic, Vukčević, Perović & Grisbeck (2021) highlighted the importance of cultural tourism and community engagement. Development model of AP Vojvodina should focus on (Provincial Secretariat for Economy and Tourism, 2018):

a) agricultural production focused on high quality wine and other products with high added value in order to enable better position in tourism market at global level; b) develop brand elements, system of quality labels and protection mechanisms for all possible products in parallel; c) initiate urban rehabilitation and development of Novi Sad and other major urban centres of Vojvodina; d) improve the product of culture, presentation of cultural contents by applying modern technologies, and use national and EU funds; e) further develop the infrastructure and marketing of the navigable flows of the Danube, Sava, Tisa, Tamiš and canal network, because of their vitality for traffic access.

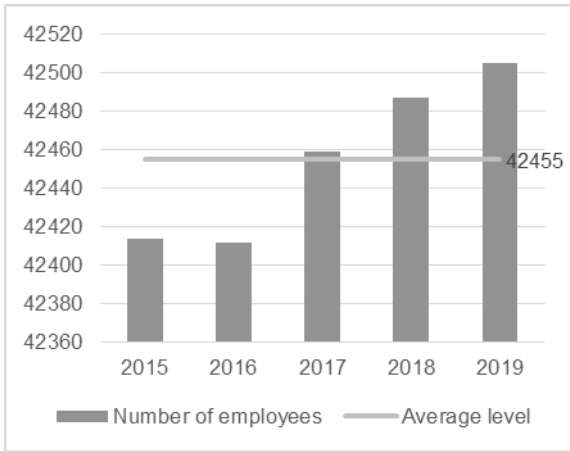


Figure 1 The number of employees in tourist sector in AP Vojvodina
Source: the authors

The average number of employees in tourist sector in AP Vojvodina is 42455 during the analyzed period 2015-2019. In last five years, the number of employees is increased by only 91 which is insignificant growth during the observed period.

Table 1 Tourist arrivals at regional level

Tourist arrivals	Belgrade region	Vojvodina region	Šumadija and Western Serbia region	South and East Serbia region
Domestic	201770	287419	950289	403954
Foreign	1056578	274238	309396	206339
Total	1258348	561657	1295685	610293

Source: the authors

Analyzing the number of tourist arrivals according to the regional approach, it is noticeable that the largest number of tourists visited Belgrade (1258348) in 2019. The next region is Šumadija and Western Serbia with 1295685 tourists, while the lowest number of tourists visited Vojvodina in the observed year. After presenting the position of tourist sector at the national level, the research analyzes two sector in tourism of AP Vojvodina: sector 55 (accommodation) and sector 56 (serving and preparing food and beverages).

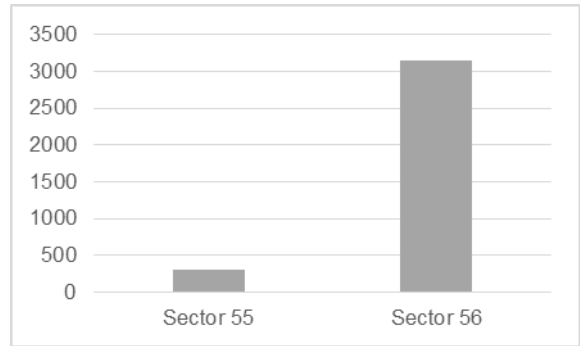


Figure 2 The number of employees by tourist sector structure AP Vojvodina
Source: the authors

Based on observed 3456 firms from tourism sector in AP Vojvodina, we can notice that sector 56 accounts for 3148 firms or 91.09% of the total number of firms in tourist sector.

2.1. Financial performance of tourism sector in AP Vojvodina

Profitability indicators are used to measure the ability of sale revenues and assets of the firms to achieve a positive business result. Profitability can be measured by gross profit margin, net profit margin, as well as return on assets and return on capital. Return on assets is an indicator of managerial efficiency that defines earning ability related to investment in total assets (Andrašić, Mijić, Mirović, & Kalaš, 2018).

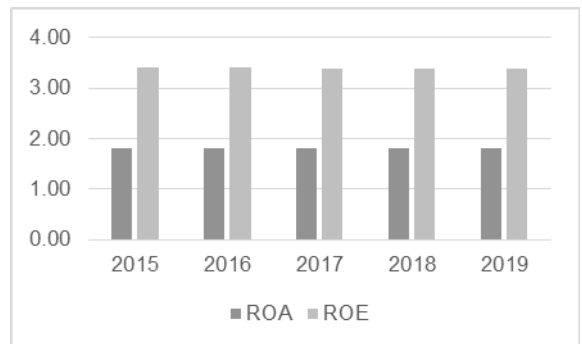


Figure 3 Profitability indicators of tourism sector in AP Vojvodina
Source: the authors

In order to define profitability level of firms from tourism sector in AP Vojvodina, we measured ROA and ROE as two most important indicators of profitability. The results of analysis manifest stable trend of both indicators, where ROA and ROE were at level of 1.81% and 3.4%.

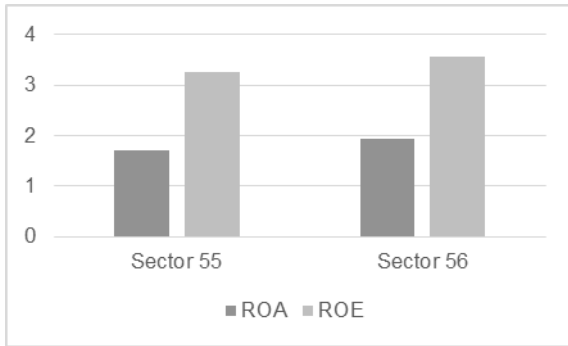


Figure 4 Comparative analysis of profitability in tourism sector in AP Vojvodina
Source: the authors

Figure 4 shows a comparative overview of companies from sector 55 and companies from sector 56 from the aspect of average profitability level. As it can be seen, firms from sector 56 were more profitable with average ROA of 3.56% and average ROE of 1.93%. On the other hand, firms from sector 55 had lower average return on assets and return on capital during the observed period.

3. Methodology and data

This study analyses 3456 firms from tourist sector in AP Vojvodina from 2015 to 2019. The sample of tourist sector includes firms from sector 55 (accommodation) and firms from sector 56 (serving and preparing food and beverages) which have the obligation to disclose their financial statements publicly.

Table 2 Variable definition

Variable	Note	Calculation
Dependent variable		
Return on assets	ROA	Net income/Total asset
Independent variables		
Firm size	SIZE	Logarithmic value of the total assets
Sales revenue	SR	(Sales revenue _t – Sales revenue _{t-1}) / Sales revenue _{t-1}
Earnings before interest and taxes	EBIT	Operating revenues – Operating expenses
Current liquidity	CL	Current assets/Current liabilities
Debt	DBT	Total liabilities/Capital
Financial stability	FS	Long-term assets/Long-term debts

Source: the authors

The model can be presented as:

$$ROA_t = \beta_0 + \beta_1 SIZE_t + \beta_2 SR_t + \beta_3 EBIT_t + \beta_4 CL_t + \beta_5 DBT_t + \beta_6 FS_t + e_t$$

where:

ROA – return on assets; SIZE – firm size; SR – sales revenue; EBIT – earnings before interest and tax; CL – current liquidity; DBT – debt; FS – financial stability; β_0 – the constant term; β – the coefficient of the independent variables; e – the error term of the equation

4. Empirical analysis and results

Before regression analysis, the study includes descriptive statistics of explanatory variables, as well as correlation analysis in order to determine the character and intensity of their relationship.

Table 3. Descriptive statistics

Variable	Mean	Maximum	Minimum	Std. Dev.
SIZE	28225	1288963	10	8.433
SR	16921.5	744814.01	4	4.577
EBIT	673.744	134972.52	-64495.01	7.156
CL	1.951	4.692	0.833	6.166
DBT	0.621	1.122	0.464	0.535
FS	0.200	0.719	0.006	2.813
ROA	1.81	7.661	-4.181	0.396

Source: the authors

Table 3 shows descriptive analysis of selected variables (company size, sales revenues, earnings before interest and taxes, current liquidity, debt, financial stability and profitability) for 3456 firms from the tourism sector in AP Vojvodina. Based on descriptive analysis, we can see that observed companies are liquid, with average current liquidity ratio 1.95. Also, observed firms had mean profitability level of 3.4%, while average values of debt and financial stability are below 1. This means that these companies do not have problems with debt and financial stability. Further, the highest standard deviation is identified at variables SIZE, EBIT and CL, which implies the largest oscillations in values for the selected period 2015-2019.

Table 4 Correlation matrix

Var.	ROA	SIZE	SR	EBIT	CL	DBT	FS
ROA	1.000	0.364*	0.359*	0.212*	-0.158*	-0.223*	0.135*
SIZE	0.364*	1.000	0.086*	0.032	0.077*	-0.001	0.027
SR	0.359*	0.086*	1.000	0.123*	-0.064*	-0.163	0.002
EBIT	0.212*	0.032	0.123*	1.000	-0.037*	-0.051*	0.249
CL	-0.158*	0.077*	-0.064*	-0.037*	1.000	-0.518*	0.086*
DBT	-0.223*	-0.001	-0.163	-0.051*	-0.518*	1.000	-0.099*
FS	0.135*	0.027	0.002	0.249	0.086*	-0.099*	1.000

Source: the authors

Table 4 presents the correlation between explanatory variables for companies from the tourism sector in AP Vojvodina. The results of correlation analysis show a statistically significant relationship between internal factors such as firm size, sales revenue, EBIT, liquidity, debt and financial stability and profitability measured by return on assets. Analysing the character of their relationship, we can see that company size, sales revenue, EBIT and financial stability are positively correlated with profitability, while the relationship between liquidity, debt and profitability is negative.

The application of the model should reveal how internal factors affect the profitability of companies from the tourism sector in AP Vojvodina. In order to ensure adequate modelling, it is necessary to perform testing potential multicollinearity, heteroscedasticity and model specification.

Table 5. Validity tests of model specification

Variable	VIF	1/VIF
SIZE	1.11	0.887
SR	1.36	0.726
EBIT	1.02	0.981
CL	1.38	0.727
DBT	1.01	0.988
FS	1.36	0.726
Mean VIF test	1.21	
Breusch-Pagan/Cook-Weisberg test	Chi2 (1) = 0.32	
	Prob > chi2 = 0.148	
Ramsey RESET test	F (3,3447) = 3.04	
	Prob > F = 0.2080	

Source: the authors

The results of multicollinearity, heteroscedasticity and model specification show that the presented model is adequately developed. The average value of VIF test is 1.21, which means that there is no problem of multicollinearity between selected variables. Also, the results of BP/CW test manifest that the null hypothesis

about residual heteroscedasticity as well as the presence of a serial correlation between observed variables can be rejected. Finally, the results of the RR test demonstrate that regression model is properly specified since the value is above 0.05.

Table 6. Multiple regression model

Source	SS	df	MS	Number of observations	3456	
Model	51.492	5	10.298	F (5,3450)	72.15	
Residual	492.440	3450	0.143	Prob > F	0.000	
Total	543.932	3455	0.157	R-squared	0.494	
				Adj R-squared	0.487	
				Root MSE	0.378	
ROA	Coef.	Std. Err.	T	P> t	[95% Conf. Interval]	
SIZE	0.235	0.036	4.49	0.000	0.001	0.004
SR	0.111	0.002	2.56	0.001	0.002	0.003
EBIT	0.013	0.003	11.97	0.000	0.002	0.003
CL	-0.007	0.002	3.17	0.000	0.003	0.011
DBT	-0.256	0.026	-9.61	0.000	-0.307	-0.203
FS	0.001	0.003	0.44	0.659	0.004	0.007
C	0.271	0.021	13.02	0.000	0.229	0.311

Note: return on assets - ROA, company size - SIZE, sale revenues - SR, earnings before interest and taxes - EBIT, current liquidity - CL, debt - DBT, financial stability - FS

Source: the authors

The results of multiple regression model show that all explanatory variables, except variable FS, have a statistically significant impact on profitability of firms from the tourism sector in AP Vojvodina. Namely, variables SIZE, SR and EBIT have a positive effect on the ROA of observed firms, while CL and DBT negatively affect the profitability level measured by ROA. Analysing the intensity of the impact, the change in variables SIZE and DEBT leads to the largest change in ROA during the observed period. More

precisely, the growth of variable SIZE by 1% causes an increase in ROA by 0.23%, where higher level of debt by 1% leads to decrease in ROA by 0.26%. Further, the growth of variables such as SR and EBIT by 1% increase profitability by 0.11% and 0.01% respectively. On the other side, if firms increase liquidity level by 1%, their profitability will be smaller by 0.07%.

Conclusion

The subject of paper includes the analysis of tourist sector in AP Vojvodina for the period 2015-2019. The tourism sector covers sector 55 (accommodation) and sector 56 (servicing and preparing food, beverages) and includes 3456 firms. The sector 56 (accommodation) covers 3148 firms or 91.09% of the total number of observed firms, while sector 55 (servicing and preparing food and beverages) covers 308 firms or 8.91% of the total number of analysed firms. This research implies descriptive analysis of profitability of the observed firms during last five years. Also, correlation analysis and multiple regression are applied in order to identify potential relationship between internal factors and profitability, as well as their effects on business success. It can be noticed that firms from tourist sector were profitable, where average ROA was 1.81%. Further, the results revealed that firms from sector 56 were more profitable with average ROA of 3.56% and average ROE of 1.93%. The correlation analysis shows a statistically significant relationship between internal factors such as firm size, sales revenue, EBIT, liquidity, debt and financial stability and return on assets as a proxy for profitability. Results of multiple regression model show that growth of firm size by 1% increases profitability by 0.23%. Similarly, sales revenue and earnings before interest and taxes affect profitability positively. On the other hand, debt and liquidity have negative impact on profitability, where their growth by 1% decreases profitability by 0.26% and 0.07%. These results confirm interdependence between liquidity and profitability, where higher level of liquidity implies lower profitability. The contribution of this paper is to enable IT support to management of firms in tourism sector, whose internal factors are significant for profitability level in the tourism sector. **SM**

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