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THE IMPACT OF COVID-19 ON THE FINANCIAL PERFORMANCE OF SERBIAN LUXURY HOTELS: A COMPARATIVE ANALYSIS

Maja Kljajić[1]*,
Goranka Knežević[1],
Vule Mizdraković[1],
Blaženka Hadrović-Zekić[2]

[1]Singidunum University,
Belgrade, Republic of Serbia

[2]Faculty of Economics in Osijek,
Osijek, Republic of Croatia

Abstract:

This paper examines the impact of the COVID-19 pandemic on the profitability of luxury hotels in Serbia. Using a sample of 64 four- and five-star hotels and a dataset covering the period 2019–2024, the study applies profitability ratio analysis, including Net Margin, Gross Margin, ROA, and ROE. The findings reveal a sharp decline in financial performance in 2020, reflecting the severe disruptions caused by the pandemic. Although 2021 showed modest signs of stabilization, recovery was slow and uneven across the sample. From 2022 onwards, indicators gradually improved, with ROA and ROE returning to positive values and Net Margin strengthening, though Gross Margin remained volatile. The results suggest that even though Serbian luxury hotels have demonstrated resilience, full consolidation of profitability is still in progress. These insights contribute to the understanding of financial recovery in the hospitality sector and highlight the importance of resilience strategies in times of systemic disruption.

Keywords:

hospitality sector, profitability, financial reporting, COVID-19.

1. INTRODUCTION

The COVID-19 outbreak represents one of the most severe health and socio-economic disruptions of recent decades. Beyond its health consequences, the pandemic profoundly influenced the global economy, altering financial dynamics across virtually all industries. Widespread restrictions, disruptions in supply chains, and changes in consumer behaviour placed significant pressure on businesses, directly affecting their ability to maintain financial stability and ensure long-term operations. In this context, debt, liquidity, and profitability emerged as crucial indicators of financial health, resilience, and adaptive capacity. Comparing these indicators before and after the pandemic provides a valuable framework for understanding how organizations responded to the extraordinary challenges of the crisis. Such an analysis sheds light on shifts in capital structure, efficiency in the use of working capital, and the broader ability to generate profits under conditions of uncertainty. Furthermore, it offers insights that can inform managerial strategies, investment decisions, and policy frameworks aimed at strengthening financial resilience during times of systemic disruption.

Correspondence:
Maja Kljajić

e-mail:
mkljajic@singidunum.ac.rs

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On a global scale, the pandemic severely disrupted economic performance, international trade, and human mobility. According to Statista (2023), global GDP contracted by 3.4% in 2020, while world trade volumes fell sharply, with an 11.6% decline recorded in April of that year. Financial markets experienced extreme volatility, exemplified by the Dow Jones' historic one-day loss of nearly 3,000 points on March 16, 2020. The impact, however, was not uniform across industries. Travel and tourism were among the hardest hit due to restrictions on movement and social distancing requirements. Data from the World Tourism Organization (2020b) indicate that during the first four months of 2020, international arrivals declined by 44% compared to the same period in 2019, resulting in a reduction of 180 million visitors and an estimated revenue loss of $195 billion. The impact also varied across regions. Asia and the Pacific experienced the most pronounced decline, with more than half of tourist arrivals lost. Europe followed with a decrease of around 44%, while drops in the Middle East, the Americas, and Africa ranged between 35% and 40%. Serbia faced an even more dramatic situation, as tourist numbers in April 2020 were almost entirely wiped out, showing a 98% fall compared to the same month of the previous year (Fondacija za razvoj ekonomske nauke, 2020).

Tourism plays an important role in fostering economic growth and regional development in Serbia (Jovancai Stakić & Stakić, 2020). In 2019, the sector contributed 5.9% to national GDP, but this dropped to 3.7% in 2020 as a result of the COVID-19 crisis. A slight recovery was observed in 2021, when tourism accounted for 3.6% of GDP (Statistical Office of the RS, 2023). Data from the OECD (2022) further show that in 2019, the industry supported 4.2% of overall employment, corresponding to 85,092 direct jobs. Despite the crisis, employment remained stable in 2021 at 4.3%, with the number of jobs even increasing to 99,216. Tourist arrivals followed a similar pattern: from 3.6 million in 2019, the number fell sharply to 1.8 million in 2020. Recovery began in 2021, with arrivals climbing to 2.5 million, and continued into 2022, reaching 3.8 million (WTTC, 2022). Within this recovery process, hotels play a pivotal role. They are not only essential providers of accommodation but also key contributors to the overall travel experience, shaping visitor perceptions, satisfaction, and loyalty (Jovanović & Ilić, 2017). Because the hotel industry is tightly linked to the success of Serbian tourism and the broader economy, strengthening its resilience is essential. Financial stability and reliable sources of funding are especially important in helping hotels withstand future shocks. Although both domestic and international tourism showed signs of recovery starting in 2021, concerns remain about whether the pace of rebound will be sufficient to offset the long-term financial damage inflicted by the COVID-19 crisis (Matejić *et al.*, 2022). Current forecasts by the OECD (2022) suggest that inbound tourism in Serbia may return to pre-pandemic levels only by 2025. In this context, (Crespí-Cladera *et al.*, 2021) stress that the financial resilience of hotels, particularly liquidity and profitability indicators, will be the decisive factor for their survival and long-term competitiveness during crises.

The primary aim of this research is to examine and compare the profitability of luxury hotels in Serbia in the periods before and after the COVID-19 crisis. The structure of the paper is as follows: first, a review of relevant literature on financial results in the hospitality sector and the impact of the pandemic on this sector are presented. This is followed by a description of the applied research methodology. In the final part, the key findings are summarized, along with recommendations for further studies.

2. LITERATURE REVIEW

Tourism is widely recognized as a key contributor to the global economy, yet it is highly vulnerable to disruptive events such as financial crises, epidemics, pandemics, natural disasters, and terrorism. In this context, Luković & Stojković (2020) focused on assessing the consequences of the COVID-19 outbreak for international tourism. In 2020, to limit the spread of the virus, most countries imposed restrictions on movement, closed borders and implemented various public health measures. The reviewed literature confirms that these interventions had strongly adverse effects on the hospitality, travel, and tourism sectors worldwide.

Bouarar *et al.* (2020) emphasize that the economic impact of COVID-19 on tourism revenues has varied depending on the extent to which national economies rely on this sector. For instance, Algeria experienced only a limited effect due to its relatively low dependence on tourism, while countries in the Pacific and Asia, including China, were hit much harder. Similarly, Al-Awadhi *et al.* (2020) confirmed substantial adverse effects on corporate returns in China, underscoring the vulnerability of businesses closely tied to the tourism sector.

Temelkov (2022) shows that the pandemic created numerous challenges for hotel operations across different regions, leading to sharp declines in revenue and reduced operational efficiency. For the purposes of the analysis, financial statements of hotel chains and resorts were reviewed, with 34 entities ultimately included in the sample. The selection was guided by the possibility of comparing key financial indicators, such as revenues, expenses, and net income. In some cases, revenue losses exceeded 70% compared to 2019 levels. Although government support programs played an important role in mitigating the negative consequences, most hotels still reported deteriorating financial results.

Rising expense-to-revenue ratios further illustrate the erosion of efficiency, underscoring the magnitude of the pandemic's impact on the hotel sector.

The study by Rizki *et al.* (2025) examined firms from the restaurant, hotel, and tourism sectors listed on the Indonesia Stock Exchange between 2018 and 2022, comparing their financial performance before and during the COVID-19 pandemic. The findings showed that profitability indicators, such as Return on Assets and Gross Profit Margin, remained relatively stable across the period. By contrast, liquidity and solvency measures – including the Current Ratio, Quick Ratio, Debt-to-Equity Ratio, and Fixed Charge Coverage – dropped significantly, highlighting the adverse impact of the pandemic on companies' financial stability.

Radivojević *et al.* (2023) explored how the COVID-19 crisis influenced the financial outcomes of the world's five largest hotel corporations, with particular attention to liquidity and profitability. Using financial ratio and comparative analysis of data from 2017 to 2022, the research covered the pre-crisis, crisis, and recovery phases. The results showed that, throughout the pandemic, hotels placed greater emphasis on maintaining liquidity than on generating profit. Several financial indicators reflected the severity of the disruption, suggesting that the path to recovery was both prolonged and challenging.

A recent study investigated the credit risk of Serbian luxury hotels in the period before and during the COVID-19 pandemic, with the aim of emphasizing the importance of government support and proactive financial strategies to maintain resilience in the sector (Jovancai Stakić *et al.*, 2023). The findings indicate that credit risk increased notably in 2020 due to the pandemic, but signs of recovery and improved resilience were observed in 2021. On the other hand, Knežević *et al.* (2022), focusing on hotel companies in the Republic of Serbia, examined whether the outbreak of the pandemic led to changes in profitability levels. The research covered 100 hotel enterprises, comparing their business performance between 2019 and 2020. Profitability was measured through indicators such as Operating Profit Margin, Net Profit Margin, Return on Assets, and Return on Equity. The findings revealed that most of the analyzed companies recorded a decline across all four measures in 2020. Furthermore, statistical testing using the Wilcoxon rank test and paired-sample t-test confirmed that these declines were statistically significant.

3. METHODOLOGY AND RESEARCH RESULT

To support the research aim presented in the Introduction, a research was conducted. The main objective of this study is to perform a comparative examination of the profitability of luxury hotels in Serbia contrasting the period before the COVID-19 pandemic with the period after the pandemic.

The research sample consists of 64 Serbian luxury hotels (four- and five-star), generating a total of 384 observation units. The period under review spans six consecutive years, from 2019 to 2024, which is considered sufficient to capture the variations of profitability of the selected entities. Since the COVID-19 pandemic was officially declared in Serbia in March 2020, financial data from 2019 serve as a benchmark for the pre-pandemic period, while the years from 2020 to 2024 reflect the first and subsequent waves of pandemic-related effects.

The dataset was compiled using financial statements obtained from the Serbian Business Registers Agency (SBRA), where hotels were identified based on their registration numbers. To ensure comparability across periods, the same entities were observed throughout the research horizon. Luxury hotels were identified using Booking.com, one of the largest global tourism platforms. The selection was limited exclusively to four- and five-star hotels, as other types of accommodation are not obliged to register as business entities and therefore are not required to publish financial statements. Within the chosen sample, most of the hotels are categorized as four-star, while approximately one-quarter operate as five-star establishments.

Profitability ratios were employed as one of the most commonly applied tools in financial performance analysis (Srebro *et al.*, 2021). The analysis for the selected sample was conducted using the following financial ratios:

$$Net\ margin = \frac{\text{Net income - Net loss}}{Total\ revenue} \tag{1}$$

$$Gross\ margin = \frac{\text{Operating profit - Operating loss}}{Total\ revenue} \tag{2}$$

$$Return\ of\ \ Assets\ (ROA) = \frac{\text{Operating profit - Operating loss}}{Total\ assets} \tag{3}$$

$$Return\ of\ \ Equity\ (ROE) = \frac{\text{Operating profit - Operating loss}}{Total\ equity} \tag{4}$$

The following table shows descriptive statistics of profitability ratios for the period during and after the COVID-19 (2024-2020) and the period before the COVID-19 (2019).

Table 1. Descriptive statistics of profitability ratios for the period 2024-2019

Period	Year	Statistics	Net margin	Gross margin	ROA	ROE
Period during and after the COVID-19	2024	Mean	0.291419193	-0.181075757	0.039508458	0.063441371
		Median	-0.045070257	0.088622906	0.04774135	0.041971049
		Standard Deviation	2.147144405	2.032464494	0.145884432	0.23393515
		Minimum	-0.866167549	-16.08888889	-0.34608184	-1.358681378
		Maximum	16.41111111	0.594348383	0.869383387	0.837470413
		Count	64	64	64	64
	2023	Mean	0.68236731	-0.544104925	0.047014288	0.175454206
		Median	-0.058537775	0.075425391	0.039529647	0.042393881
		Standard Deviation	4.542336238	3.441780807	0.147022826	0.631159177
		Minimum	-2.191920797	-22	-0.29255567	-0.570741138
		Maximum	32.34453782	0.397060911	0.981650089	4.860833098
		Count	64	64	64	64
	2022	Mean	0.109010384	-0.128171402	0.054223543	0.191379318
		Median	-0.065038097	0.078989709	0.039194865	0.05030347
		Standard Deviation	1.482192623	1.483379091	0.179481123	1.336160507
		Minimum	-1.086824848	-11.63846154	-0.52877129	-5.590537015
		Maximum	11.63846154	0.361045832	1.119234148	8.70674264
		Count	64	64	64	64
	2021	Mean	-0.307668255	-0.234380838	0.01834996	0.044785927
		Median	0.030609416	0.068632734	0.019481131	0.016723633
		Standard Deviation	1.557801115	1.52503228	0.116219859	0.278019209
		Minimum	-11.28946178	-11.28946178	-0.36965015	-0.650726423
		Maximum	0.371653213	0.75183177	0.445350706	1.286671446
		Count	64	64	64	64
	2020	Mean	-9.537891436	-4.898025299	-0.08978839	-0.263539068
		Median	-0.163657065	-0.171208805	-0.030809	0
		Standard Deviation	50.55318936	34.67563102	0.265312024	1.762300887
		Minimum	-334.1362504	-277.3253291	-1.45758774	-13.97344719
		Maximum	0.313048748	0.348651499	0.273444871	0.694075869
		Count	64	64	64	64
Period before the COVID-19	2019	Mean	0.108984037	-0.771797607	-0.01162435	-1.385209923
		Median	0.042283653	0.060232202	0.020290283	0.023659759
		Standard Deviation	6.048286302	3.675259047	0.282857922	12.04943442
		Minimum	-20.97456572	-21.16999477	-2.0176402	-96.18586228
		Maximum	41.28597015	0.440968956	0.670668382	3.748753158
		Count	64	64	64	64

Source: Authors' data.

The pre-pandemic period (2019)

In 2019, the average values of the indicators suggest relatively modest performance of Serbian luxury hotels. Namely, most hotels earned 4 cents of net profit for every €100 of total revenue, while on average they earned 10 cents. This indicates the presence of outliers – some hotels earn significantly more than the majority. The net margin and ROA were close to zero, while ROE even recorded a negative mean value, indicating that some hotels failed to generate a positive return on equity. The high standard deviations across all measures highlight significant heterogeneity within the sample, with some hotels reporting solid profitability, and others facing substantial losses.

The pandemic period (2020-2021)

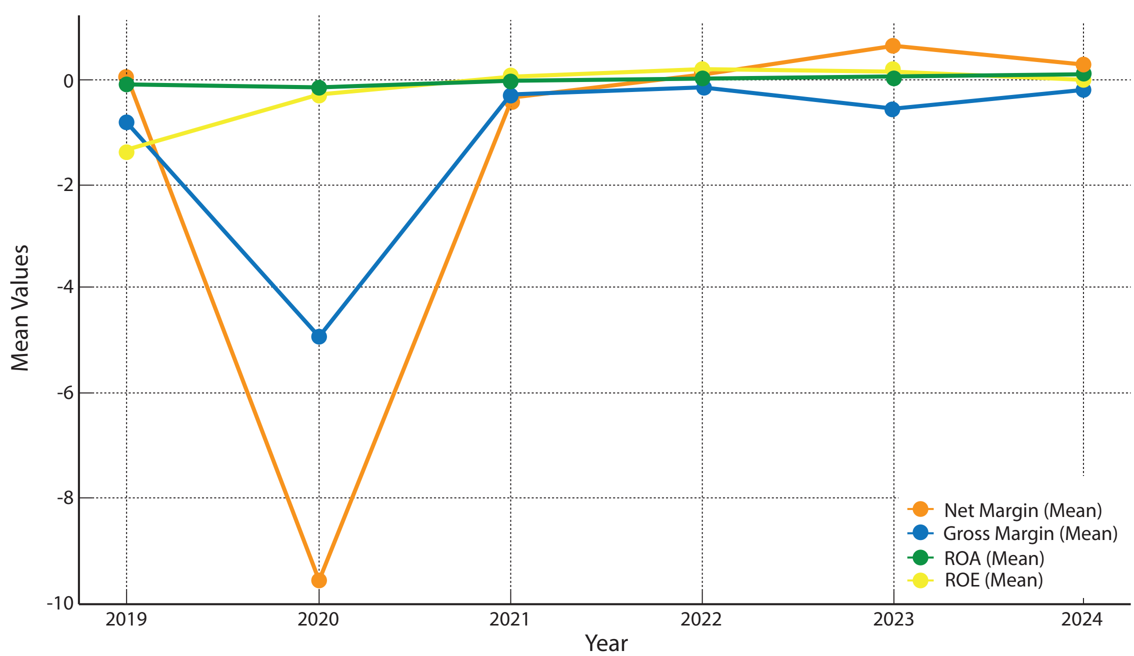
The year 2020 reflects the severe shock brought by the COVID-19 crisis. Both net and gross margins dropped dramatically, with strongly negative averages, while ROA and ROE also turned negative. The extremely low minimum values demonstrate that certain hotels suffered exceptionally poor results, which contributed to high variability in the sample. By 2021, the situation showed signs of stabilization – average ROA and ROE returned to slightly positive values, though still at very low levels, indicating a slow and uneven recovery.

The post-pandemic period (2022-2024)

Following the initial shock, a gradual recovery can be observed. In 2022 and 2023, the average values of ROA and ROE improved, while the net margin returned to the positive zone. However, the median values suggest that most hotels were still operating with low profitability, and that the averages were raised by a smaller group of better-performing hotels (same as before, during non-pandemic period). In 2024, the positive trend continued: net margin reached more stable levels, and ROA and ROE further strengthened, signaling partial consolidation and adaptation to new market conditions.

The following chart shows the comparative trends for the four indicators (Net Margin, Gross Margin, ROA, ROE) displayed together for the period 2019–2024.

Figure 1. Comparative indicators trends for the period 2019-2024



Source: Authors' data.

The comparative chart of financial indicators (Net Margin, Gross Margin, ROA, and ROE) clearly demonstrates the profound disruptions caused by the COVID-19 pandemic and the gradual recovery that followed. In 2019, most indicators were close to zero, reflecting modest profitability levels among Serbian luxury hotels. The year 2020 marks the most critical downturn, with profit and Gross Margin falling sharply into negative territory, while both ROA and ROE also recorded negative averages. This confirms the severe financial shock experienced at the onset of the pandemic.

In 2021, the negative trend moderated, with profitability ratios showing a slight return to positive values, although Gross Margin remained weak. This indicates that the sector was beginning to stabilize, but recovery was still fragile and uneven. From 2022 onwards, a clearer upward trajectory is visible. ROA and ROE improved steadily, while Net Margin also turned positive again. Although Gross Margin stayed below zero in some years (particularly 2023), the overall trend suggests a slow but consistent financial recovery. By 2024, all indicators had improved compared to the pandemic years, pointing to a gradual consolidation of hotel performance and the development of greater resilience.

4. CONCLUSION

The comparative analysis of profitability indicators clearly demonstrates the profound financial disruptions experienced by Serbian luxury hotels during the COVID-19 pandemic. The pre-pandemic period (2019) was marked by modest profitability, but 2020 reflected an unprecedented collapse across all measures, with both margins and returns turning strongly negative. In 2021, some stabilization occurred, although profitability remained fragile. From 2022 onward, a gradual recovery was evident, with improvements in Net Margin, ROA, and ROE, while Gross Margin remained inconsistent. These results confirm that the pandemic's impact was both severe and prolonged, requiring hotels to prioritize survival strategies over growth. Nevertheless, the observed upward trend in the post-pandemic period indicates that Serbian luxury hotels are adapting to new conditions and progressively restoring financial stability. Future efforts should focus on strengthening resilience, improving cost efficiency, and developing long-term strategies to mitigate the risks of future crises. Further studies should expand the analysis by including other segments of the hospitality industry or by conducting cross-country comparisons to provide better understanding of differences in financial resilience.

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