FINANCIAL PERFORMANCE, FINANCIAL POSITION, LIQUIDITY, EARNINGS, AND DEBT IN TOURISM COMPANIES FROM ASIA AND EUROPE

Alin OPREANA
Lucian Blaga University of Sibiu, Romania
alin.opreana @ulbsibiu.ro
Simona VINEREAN
Lucian Blaga University of Sibiu, Romania
simona.vinerean@ulbsibiu.ro
Diana MIHAIU
Lucian Blaga University of Sibiu, Romania
diana.mihaiu@ulbsibiu.ro
Cosmin TILEAGĂ
Lucian Blaga University of Sibiu, Romania
cosmin.tileaga@ulbsibiu.ro
Radu ȘERBAN
Lucian Blaga University of Sibiu, Romania
radu.serban@ulbsibiu.ro

Abstract
The COVID-19 pandemic highlights the need to provide better understanding of drivers of financial performance in different challenging frameworks, with a key focus on financial position, liquidity, earnings, and debt. This study examines the financial performance of Hotels, Resorts, and Cruise Lines companies in Asia and Europe, using data from 2019 and 2023, with the scope of exploring clusters and longitudinal patterns. Based on two samples of tourism companies from these two regions and 13 financial factors, this research applies factor analysis and a two-step cluster analysis to explore patterns of financial performance. Considering the longitudinal perspective of this research, the study provides novel insights into companies' financial performance, considering the region of their headquarters and their ability to sustain growth and profitability.

Key words: *tourism, financial performance, COVID-19, financial position, liquidity, earnings, and debt*

JEL Classification: Z32

I.INTRODUCTION

COVID-19 pandemic has been one of the "most disruptive events of the 21st century" (Zenker & Kock, 2020), due to travel restrictions and lockdowns and their negative repercussions on the tourism industry (Poretti & Heo, 2022), including Hotels, Resorts, and Cruise Lines.

Certain types of organizations operating in the tourism industry (e.g., hotels, casinos, or airlines) have significant proportions of fixed costs and tangible assets (Poretti & Heo, 2022; Botta, 2019). As such, "high fixed costs with respect to total costs increase the degree of operating leverage, leading to higher sensitivity to revenue" (Poretti & Heo, 2022).

Considering these aspects, examining the financial performance of tourism companies is of paramount importance. Despite the wide range of literature related to COVID-19 in tourism (Poretti & Heo, 2022; Zhang et al., 2020; Zenker & Kock, 2020), additional studies are needed to explore financial performance and its key drivers from a longitudinal perspective. Financial performance, which showcases a company's growth ability and prospects of sustaining profitability, can be evaluated through various financial indicators, including financial position, liquidity, earnings, and debt. Each indicator can provide distinct insights and yield different estimations for a tourism company's strategic frameworks.

The scope of this empirical analysis is to provide a longitudinal perspective on the same companies, examining data from two years (2019 and 2023). The study aims to explore clusters of companies based on their financial performance indicators, focusing on samples of companies from Asia and Europe, operating in the Hotels, Resorts, and Cruise Lines sub-industry. This study focuses on investigating the evolution of these companies over the explored timeline, and on analyzing patterns across the identified clusters of tourism companies from Europe and Asia, in 2019 compared to 2023.

As such, this study anticipates key contributions by examining the financial performance of tourism

companies across two timeframes, with a focus on a set of 13 financial factors based on two key data analysis techniques: factor analysis and TwoStep cluster analysis. The role of these data analysis techniques is to showcase patterns and novel perspectives of companies' financial performance, considering the region of their headquarters and their ability to sustain growth and profitability. By investigating data from 2019 and 2023, the study provides insights into the drivers of financial performance, addressing a key literature gap in tourism research.

II. LITERATURE REVIEW

The tourism sector makes a major contribution to the world economy. In 2023, the contribution of the travel and tourism sector to the global GDP was 9.9 trillion U.S. dollars, representing 9.1% of global GDP (Statista, 2024). However, this value was 1.3% less of GDP than the pre-pandemic year 2019. Therefore, the financial performance of companies in the hospitality industry is of increased interest both at the company management level (microeconomic), but also at the macroeconomic level due to the contribution these tourism companies make to national and global GDP. However, the factors influencing the financial performance of companies in the hospitality sector are diverse. Nonetheless, these factors can be divided into two major categories: financial factors and non-financial factors, which can be further classified in internal or external to the company (Planinc et al. 2014).

Measuring the financial performance of a company

Specialized literature proposes several synthetic financial indicators to measure a company's financial performance, which are the result of the influence of several factors, namely:

- *Accounting based performance measurements*. This key aspects are reflected in:return on assets (ROA), return on equity (ROE), return on capital employed (ROCE), return on investment (ROI), return on sales (RS), profit margin (PM), profit growth rate (PGR), economic value added (EVA), earnings per share (EPS), operating cash flow (OCF) (Babajee et al., 2020; Karanovic, 2023; Tudose et al., 2022; Maeenuddina, et al, 2020; Keter et al., 2023; Al-Matari et al., 2014).
- *Market based performance measurements*. Based on this classification, it is important to note: stock return, Tobin's Q, market value added, market to book value, price per earnings ratio (Al-Matari et al., 2014; Singhal et al., 2016).

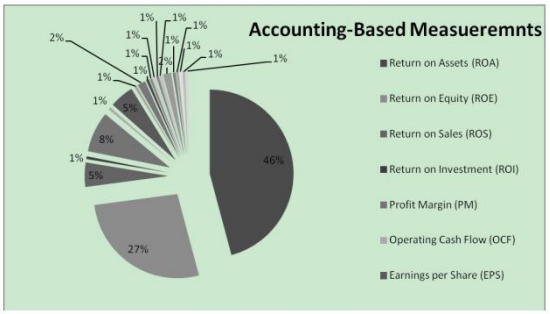

Figure 1 - The percentage of use of accounting-based performance measurements
Source: Al-Matari et al. (2014)

According to the study conducted by Al-Matari et al. (2014), the most used indicators to measure financial performance are ROA and ROE. Specifically, their study found that in 73% of the studies analyzed by them, 191 studies showed this conclusion (see figure 1). Considering this result, this study will also use ROA and ROE as indicators to measure the financial performance of companies in the hospitality sector.

The external factors of company performance

Considering prior studies, there are certain external financial factors of the company that are significant for the financial performance of a tourism company related to macroeconomic indicators: the degree of economic development (GDP/capita), inflation rate, unemployment rate (which has a direct influence on the demand for tourism services and an indirect impact on the financial performance of tourism companies (Brida et al., 2020), foreign direct investments (that increase the capital of companies by stimulating their investments; Mujačević & Elvis, 2023).

It has also been proven that economic and financial crises have an unfavorable impact on tourism and the hospitality sector. For example, a large study reflects that the recent crisis generated by the COVID-19 pandemic has affected tourism worldwide, generating a decrease in tourism companies' revenues, profits and financial performance (Nurwitasari et al., 2023), an aspect also confirmed by studies carried out by Cladera et al. (2021), by Hasnan Baber (2020), by Škare et al. (2021).

The non-financial factors external to the firm that have a significant influence on the financial performance of firms in the hospitality sector are: government policies and regulatory frameworks (Campbell, F., & Khodadadi, M., 2024), competition and market structure (Tuyet and Ninh, 2023; Abubakar and Yet, 2023).

Internal factors of company performance

The internal factors of the firm that influence its financial performance are divided into two categories, *financial factors* and *non-financial factors*. Key

financial factors identified as exerting a significant influence on the financial performance of a firm are:
- total equity, trade receivable turnover, working capital turnover, long term debt, current ratio, debt to total assets ratio, solvency, debt to equity ratio, net sales revenue trend, total operating revenue trend, shareholders' equity trend, cash to total assets, current liabilities to total liabilities, liquidity (Karanović, 2023; Tudose et al., 2022; Ribeiro et al., 2019; Soni et al., 2022), as each factor has a positive or negative influence on a company's performance;
- Marketing expenditure with a positive influence (Nan et al., 2008).
- capital structure, financial independence index with a positive influence (Pavone et al., 2023).
- productivity, with a positive influence (Zhang & Enemark, 2015)
- size of the company, measured as the sales volume and the invested capital intensity both have a favorable influence on company financial performance (Pantea et al., 2014; Dewally et al., 2017).

Certain non-financial factors also exert a significant influence on the financial performance of the company, but their exhaustive identification has not been achieved and there are no unanimously accepted methods for measuring the impact of different non-financial factors. Identifying and proposing methodologies to measure these non-financial factors first and then determine their impact on the financial performance of the company is a subject in continuous development. However, up to this point there are studies that have documented the positive influence of certain non-financial factors, namely:
- Intellectual capital that influences long-term financial performance (Babajee et al., 2020; Sami, 2014).
- financial management competencies, revenue management practices including pricing strategies (Kapiki, S. T., 2012).
- customer satisfaction (Kala & Bagri, 2014)
- innovation and integration of new technologies (Kala & Bagri, 2014; Phan et al., 2021)
- corporate social responsibility (CSR) practices, the results show either a positive or neutral correlation between CSR score and financial performance (Uyar, 2020; Pantea et al., 2014).
- ownership structure, the results show an "inverted U-shaped effect of managers' and directors' shareholding" on the financial performance of the firm (Ming-Hsiang Chen et al., 2012)
- financial resilience especially during crisis (Watson & Deller, 2022).
- the efficient organization of the accounting and reporting system makes a positive contribution to the financial performance of the company (Avdylaj & Asllanaj 2023; Cruz, 2007).

Given this diversity of factors influencing financial performance, this study aims to focus on studying financial factors, internal to the company, on the financial performance of hospitality companies, including the geographical, regional dimension. The scope is to capture any differences in the influences of the factors that may also be determined by the regional criterion (this study aims to analyze tourism companies from Asia and Europe).

A key scope of this analysis is to provide a longitudinal perspective on the same companies, based on data analysis from these two years (2019 and 2023) and to explore clusters of companies considering their financial performance indicators, based on samples of Hotels, Resorts & Cruise Lines companies from Asia and Europe.

Financial performance is linked to an organization's potential for growth. However, different analysis may yield distinct perspectives. As such, this research will focus on ley financial factors, specifically: Revenue; Total Assets; Total Current Assets; Total Liabilities; Total Current Liabilities; Cash and Short Term Investments; Long Term Debt to Total Capital; Total Debt to Total Equity; ROA Total Assets; ROE Total Equity; Operating Margin; EBIT Margin; EBITDA Margin.

By exploring these factors, the research focuses on providing new outlooks on the financial performance of tourism organizations under extreme external conditions (i.e., COVID-19 pandemic) to reflect contrasting strategies.

Based on this scope, the research focuses on three main hypotheses:
H1: The COVID-19 pandemic had a notable impact on the financial performance of tourism companies in Europe and Asia.
H2: Financial performance reflected an association with a stronger financial position and liquidity, in both Europe and Asia.
H3: Financial performance reflected an association with higher scores for earnings, in both Europe and Asia.

III. DATA AND METHOD

For this empirical study, two main data analysis techniques will be used: Principal Component Analysis (PCA) and TwoStepCluster.

Principal Component Analysis (PCA)

Originated in 1901, Pearson (Pearson, 1901) proposed a new data research technique titled "Principal Component Analysis (PCA)" that is aimed to estimate a minimum number of factors that explain the highest variance level in a data set. As an interdependence technique, this analysis examines an entire set of interdependent relationships with the scope of data reduction and summarization (Jolliffe, 2002). These new factors are generated from "linear combinations of the original variables" (Abdi and Williams, 2010). The purpose of PCA is to utilize the newly established factors in other data analyses (Hair et al., 2017), while providing minimal information loss

to adequately reflect the original set of data (Widaman, 1993).

As explained by Malthotra (2020), PCA is recommended "when the primary concern is to determine the minimum number of factors that will account for maximum variance in the data for use in subsequent multivariate analysis. The factors are called *principal components*.". As such, this is the purpose of the PCA developed in this analysis, to further utilize the factors in other analysis.

To establish the accuracy of PCA, various tests are conducted: (1) Bartlett's test of sphericity, used to examine the hypothesis that the variables are uncorrelated in the population (Malhotra, 2020); (2) Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy to showcase the appropriateness of factor analysis if values above the 0.5 threshold are calculated (Kaiser, 1958; 1974; Malhotra, 2020); (3) Communality which showcases "the amount of variance a variable shares with all the other variables being considered"; (4) Eigenvalues greater than 1 (Hair et al., 2017); (5) total variance explained above the 70% threshold (Malhotra, 2020).

TwoStep-Cluster

A key scope of this analysis is to explore clusters of companies based on their financial performance indicators, based on samples of Hotels, Resorts & Cruise Lines companies from Asia and Europe. Thus, Two-Step Cluster is considered for application to establish groups of companies. This research method has the advantage of offering novel perspectives that help in understanding the financial performance determinants of these companies in the tourism sector.

As described by Popa et al. (2022), cluster analysis is a "tool used in the development of composite indicators to group information based on their similarity to different individual indicators". The Two-Step cluster analysis is considered a "hybrid approach which first uses a distance measure to separate groups and then a probabilistic approach (similar to latent class analysis)", aiming to choose the optimal subgroup model (Gelbard et al., 2007).

As an individual clustering method, two-step cluster has multiple benefits in terms of automatically determining clusters based on the "similarity criterion that involves the calculation of distances" (Popa et al., 2022).

Prior authors have emphasized the value of TwoStep cluster analysis (Norusis 2007, 2011), showcasing its reliability and accuracy when compared to more traditional clustering methodologies, such as k-means. By applying a segmentation technique, the analysis aims to reflect a better understanding of the similarities and differences between the examined companies in 2019, and in 2023, considering the same samples of companies from Europe and Asia, thus, portraying a longitudinal perspective of their financial performance. TwoStep Cluster Analysis is applied in IBM SPSS Statistics v.28.

Sample

To assess the financial performance of tourism companies from Asia and Europe, the analysis focused on a set of thirteen indicators, specifically: Revenue (Consolidated, USD, Millions); Total Assets; Reported (USD, Millions); Total Current Assets (Consolidated, USD, Millions); Total Liabilities (Consolidated, USD, Millions); Total Current Liabilities (Consolidated, USD, Millions); Cash and Short Term Investments (Consolidated, USD, Millions); Long Term Debt to Total Capital, Percent; Total Debt to Total Equity, Percent; ROA Total Assets, Percent; ROE Total Equity, Percent; Operating Margin, Percent; EBIT Margin, Percent; EBITDA Margin, Percent.

The initial sample is composed of all firms in the travel and tourism industry available on Thomson Reuters Datastream, with data extracted for 2023 and 2019. Specifically, this analysis focused on Hotels, Resorts & Cruise Lines sub-industry. The scope is to provide a longitudinal perspective on the same companies, based on data analysis from these two years. Starting from a set of 473 Hotels, Resorts & Cruise Lines companies with headquarters from Europe and Asia, we remove companies that do not have complete sets of data from the chosen indicators, resulting in a set of 379 companies: 66 with headquarters in Europe and 313 with headquarters in Asia (Tables 1 and 2).

Table 1. Region of the headquarters

Region	Frequency	Percent
Asia	313	82.59%
Europe	66	17.41%
Total	379	100.0

Table 2. Country of headquarters

Europe			Asia		
Country	Fre-quency	%	Country	Fre-quency	%
Austria	1	1.5	Bahrain	2	0.6
Bulgaria	6	9.1	Banglades h	3	1.0
Croatia	8	12.1	China	33	10.5
Cyprus	10	15.2	Hong Kong	33	10.5
Finland	1	1.5	India	45	14.4
France	4	6.1	Indonesia	22	7.0
Germany	5	7.6	Israel	5	1.6
Greece	3	4.5	Japan	24	7.7
Ireland; Republic of	2	3.0	Jordan	8	2.6
Italy	1	1.5	Korea; Republic (S. Korea)	8	2.6
Lithuania	1	1.5	Kuwait	3	1.0
Luxembour g	1	1.5	Macau	1	0.3
Malta	1	1.5	Malaysia	8	2.6
Netherland s	2	3.0	Oman	6	1.9
Poland	1	1.5	Pakistan	2	0.6
Portugal	1	1.5	Philippine s	5	1.6
Romania	3	4.5	Saudi Arabia	3	1.0

Slovak Republic	1	1.5	Singapore	14	4.5
Slovenia	1	1.5	Sri Lanka	29	9.3
Spain	4	6.1	Taiwan	22	7.0
Sweden	2	3.0	Thailand	14	4.5
Switzerland	1	1.5	Turkey	10	3.2
United Kingdom	6	9.1	United Arab Emirates	2	0.6
			Vietnam	11	3.5
Total	66	100	Total	313	100

IV. Empirical Analysis

Asia and Europe Analysis for Year 2019

Descriptive statistics about the distribution of the samples from Asia and Europe for year 2019 showcase notable differences between the two continents in terms of their tourism performance (Tables 3 and 4).

Table 3. Descriptive Statistics - Asia 2019

Variable	Mean	Std. Deviation	Analysis N
Revenue[1]	223.956	682.112	313
Total Assets, Reported[1]	686.713	2151.928	313
Total Current Assets[1]	175.692	656.355	313
Total Liabilities[1]	363.037	1198.013	313
Total Current Liabilities[1]	141.401	619.373	313
Cash and Short Term Investments[1]	89.242	390.974	313
Long Term Debt to Total Capital[2]	18.379%	20.525%	313
Total Debt to Total Equity[2]	100.656%	330.477%	313
ROA Total Assets[2]	0.659%	7.911%	313
ROE Total Equity[2]	-0.928%	21.256%	313
Operating Margin[2]	-7.026%	72.034%	313
EBIT Margin[2]	-3.076%	57.961%	313
EBITDA Margin[2]	10.927%	52.254%	313

Notes: [1] reflects indicators showcased in USD, Millions; [2] reflects indicators in percentages

Table 4. Descriptive Statistics - Europe 2019

Variable	Mean	Std. Deviation	Analysis N
Revenue[1]	1034.446	3657.782	66
Total Assets, Reported[1]	2061.322	6375.135	66
Total Current Assets[1]	282.320	786.102	66
Total Liabilities[1]	1172.281	3257.810	66
Total Current Liabilities[1]	436.929	1537.156	66
Cash and Short Term Investments[1]	134.257	395.915	66
Long Term Debt to Total Capital[2]	25.899%	21.498%	66
Total Debt to Total Equity[2]	73.276%	86.555%	66
ROA Total Assets[2]	1.749%	7.289%	66
ROE Total Equity[2]	1.405%	27.161%	66
Operating Margin[2]	-56.770%	415.831%	66
EBIT Margin[2]	-52.535%	380.536%	66
EBITDA Margin[2]	-2.099%	150.475%	66

Notes: [1] reflects indicators showcased in USD, Millions; [2] reflects indicators in percentages

For empirical analysis, the first step was to apply principal components analysis. We utilized PCA to reduce our set of 13 variables to a minimal number of factors that could portray the highest level of variance observed in the empirical data (Hair et al, 2010; Jolliffe, 2002) for 2019, for tourism companies with headquarters in Europe and Asia. The PCA procedure was conducted in IBM SPSS Statistics v.28 (IBM Corp., Armonk, NY, USA).

To assess the adequacy of the PCA (Table 5), we explored the null hypothesis that the population correlation matrix is an identity matrix, based on Bartlett's test of sphericity. This null hypothesis is rejected by the Bartlett's test of sphericity (sig.<0.05), for European and Asian companies operating in the Hotels, Resorts & Cruise Lines subindustry.

Table 5. PCA adequacy testing for 2019

PCA adequacy testing		Asia 2019	Europe 2019
Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO)		0.787	0.627
Bartlett's Test of Sphericity	Approx. Chi-Square	5331.424	1527.719
	df	78	78
	Sig.	0.000	0.000

For Asian Hotels, Resorts & Cruise Lines companies, the approximate Bartlett's Test of Sphericity and its associated chi-square statistic is 5331.424 with 78 degrees of freedom, which is significant at the 0.05 level. The value of the KMO statistic (0.787) is also larger than the 0.5 recommended value (Malhotra, 2020). Moreover, the same interpretations apply for the European countries and their associated indicators for 2019, showcasing a value of 1527.719 for Bartlett's Test of Sphericity (significant at 0.05 level) and a KMO of 0.627(>0.5 threshold). Thus, factor analysis may be considered an appropriate technique for further analysis for both sets of data (Asia and Europe in 2019).

Further, it is important to explore the communalities. For PCA, a communality represents the "estimate of its shared, or common, variance among the variables as represented by the derived factors" (Hair et al., 2010). For each variable included in the PCA, the communality should adhere to a recommended threshold of 0.5 (Hair et al., 2010; Opreana et al., 2023).

As observed in Table 6, this condition is met as the lowest level of extracted communality is 0.653 for Revenue in Asia, and the lowest level for Europe was reported for Cash and Short Term Investments (0.611).

Table 6. PCA Communalities for Asia and Europe companies for year 2019

Variable	Asia - Extraction	Europe - Extraction
Revenue[1]	0.653	0.920
Total Assets, Reported[1]	0.917	0.861
Total Current Assets[1]	0.953	0.845
Total Liabilities[1]	0.899	0.963
Total Current Liabilities[1]	0.931	0.936

Cash and Short Term Investments[1]	0.917	0.611
Long Term Debt to Total Capital[2]	0.733	0.930
Total Debt to Total Equity[2]	0.766	0.935
ROA Total Assets[2]	0.892	0.874
ROE Total Equity[2]	0.909	0.872
Operating Margin[2]	0.931	0.933
EBIT Margin[2]	0.975	0.954
EBITDA Margin[2]	0.943	0.729

Notes: [1] reflects indicators showcased in USD, Millions; [2] reflects indicators in percentages

Based on these computations, the next step is to establish the principal components, specifically the newly developed factors. Prior studies have suggested that all factors with eigenvalues greater than 1 should be retained (Malhotra, 2020; Hair et al., 2017). Further, according to Malhotra (2020), it is it is recommended that the "factors extracted should account for at least 60 percent of the variance". Thus, by applying principal component analysis in IBM SPSS Statistics v.28 the following results were obtained for total variance explained, considering both samples for European and Asian companies operating in the Hotels, Resorts & Cruise Lines for year 2019.

Pertaining to the results presented in Tables 7 and 8, four factors resulted for both samples, showcasing Eigenvalues greater than 1 (Malhotra, 2020; Hair et al., 2017). The total variance explained was 87.832% for Asian companies (Table 7), and 87.416% for European companies (Table 8), which exceeded the accepted 60% threshold.

Table 7. Total variance explained for Asian companies - 2019

F.	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	%Var.	C.%	Total	%Var.	C.%
1	5.310	40.844	40.844	5.249	40.375	40.375
2	3.316	25.507	66.351	2.882	22.168	62.543
3	1.717	13.208	79.559	1.804	13.880	76.423
4	1.076	8.274	87.832	1.483	11.409	87.832

Notes: F.= Factor; Var.= Variance; C.= Cumulative

Table 8. Total variance explained for European companies - 2019

F.	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	%Var.	C.%	Total	%Var.	C.%
1	5.256	40.428	40.428	5.127	39.435	39.435
2	2.753	21.178	61.606	2.635	20.268	59.703
3	1.834	14.108	75.714	1.866	14.352	74.055
4	1.521	11.702	87.416	1.737	13.362	87.416

Notes: F.= Factor; Var.= Variance; C.= Cumulative

As such, four new factors are retained for each sample. After retaining the number of principal components, these new factors are rotated. Rotation "does not affect the communalities or the percentage of total variance explained" (Malhotra, 2020). The rotated versions of the factors showcase a significant pattern of the factors, which is accomplished by redistributing the variance from earlier components to subsequent ones (Hair et al., 2010; Opreana et al., 2023). A highly recommended rotation method is Varimax (Abdi and Williams, 2010; Harman, 1976). Varimax is an "orthogonal method of factor rotation that minimizes the number of variables with high loadings on a factor, thereby enhancing the interpretability of the factors" (Malhotra, 2020).

The rotated solutions of the newly developed factors are presented in Figures 2 and 3. All the factor loadings were higher than the proposed level of 0.6 (Hair et al., 2010), as the lowest value was 0.802 for the Asia sample (Figure 2) and for the Europe sample the lowest value was 0.780 (Figure 3).

As observed in these figures, for both samples, variables converged to the same factors. Based on the rotated solutions, one of the factors was named '*Financial Position and Liquidity'* because the following variables aided its formation: Total Current Assets, Total Current Liabilities, Cash and Short Term Investments, Total Assets, Total Liabilities, Revenue.

Another factor was named '*Earnings'* due to its contributing variables, specifically EBIT Margin (%), EBITDA Margin (%), Operating Margin (%).

The following factor, titled '*Financial Performance'* because ROE Total Equity (%) and ROA Total Assets (%) contributed to its estimation.

Finally, the factor titled '*Debt'* was estimated based on variables: Total Debt to Total Equity (%) and Long Term Debt to Total Capital (%). As noted in Figures 2 and 3 the structure of the factors is the same, only their order is different.

Rotated Component Matrix-Asia[a]

	Component			
	1-Financial Position and Liquidity-Asia	2-Earnings-Asia	3-Financial Performance-Asia	4-Debt-Asia
Total Current Assets	.976			
Total Current Liabilities	.965			
Cash and Short Term Investments	.956			
Total Assets, Reported	.955			
Total Liabilities	.937			
Revenue	.802			
EBIT Margin(%)		.976		
EBITDA Margin (%)		.963		
Operating Margin (%)		.940		
ROE Total Equity (%)			.931	
ROA Total Assets (%)			.896	
Total Debt to Total Equity (%)				.874
Long Term Debt to Total Capital (%)				.815

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 5 iterations.

Figure 2- Rotated Component Matrix- Asia, 2019

Rotated Component Matrix - Europe[a]

	Component			
	1 – Financial Position and Liquidity-Europe	2-Earnings-Europe	3-Debt- Europe	4-Financial Performance-Europe
Total Liabilities	.973			
Total Current Liabilities	.966			
Revenue	.958			
Total Assets, Reported	.924			
Total Current Assets	.917			
Cash and Short Term Investments	.780			
EBIT Margin(%)		.974		
Operating Margin(%)		.961		
EBITDA Margin(%)		.852		
Total Debt to Total Equity (%)			.966	
Long Term Debt to Total Capital(%)			.942	
ROA Total Assets(%)				.926
ROE Total Equity (%)				.921

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 4 iterations.

Figure 3 - Rotated Component Matrix- Europe, 2019

For the empirical analysis, the second step was to apply TwoStep-Cluster Analysis. These newly established factors for companies showcasing the subindustry of Hotels, Resorts & Cruise with headquarters from Europe and Asia, will be examined in a clustering analysis for year 2019.

For Asia (Figure 4), Cluster 1 represents 303 companies, or 96.8% of the total sample of Asian companies. Cluster 2 reflects 10 companies or 3.2% of the sample. The most important predictor for developing the clusters for the 2019 Asian sample was the 'Financial Position and Liquidity' factor (with a predictor importance of 1.00), and the least important predictor was 'Financial Performance' (with a predictor importance of 0.01).

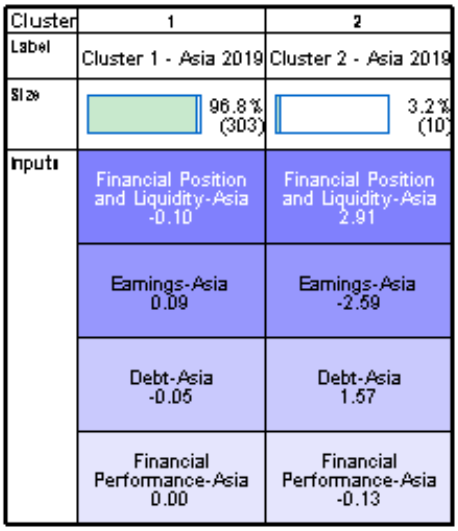

Figure 4 - Clusters resulted for Asia sample, 2019

For Europe (Figure 5), Cluster 1 represents 58 companies, or 87.9% of the total sample of European tourism companies. Cluster 2 reflects 8 companies or 12.1% of the total of 66 Europe sample. The most important predictor for developing the clusters for the 2019 European sample was the 'Financial Position and Liquidity' factor (with a predictor importance of 1.00), and the least important predictor was 'Debt' (with a predictor importance of 0.06).

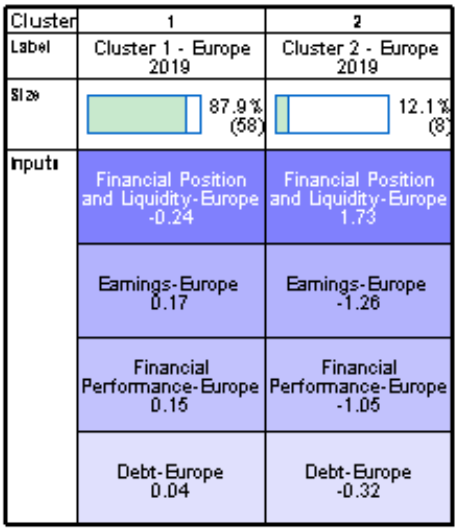

Figure 5 - Clusters resulted for Europe sample, 2019

Asia and Europe Analysis for Year 2023

Similar to the 2019 analysis, the 2023 study examined the differences between the two regions, considering descriptive statistics (Tables 9 and 10).

Table 9. Descriptive Statistics - Asia 2023

Variable	Mean	Std. Deviation	Analysis N
Revenue[1]	192.021	566.430	313
EBITDA Margin[2]	7.717%	77.217%	313
Total Assets, Reported[1]	715.567	2281.848	313
Total Current Assets[1]	183.828	773.350	313
Total Liabilities[1]	393.275	1270.533	313
Total Current Liabilities[1]	162.117	654.131	313
Cash and Short Term Investments[1]	99.709	506.680	313
Long Term Debt to Total Capital[2]	18.751%	20.265%	313
Total Debt to Total Equity[2]	121.267%	371.522%	313
ROA Total Assets[2]	2.375%	9.890%	313
ROE Total Equity[2]	8.761%	92.022%	313
Operating Margin[2]	-6.301%	102.499%	313
EBIT Margin[2]	-5.751%	85.771%	313

Notes: [1] reflects indicators showcased in USD, Millions; [2] reflects indicators in percentages

Table 10. Descriptive Statistics - Europe 2023

Variable	Mean	Std. Deviation	Analysis N
Revenue[1]	1134.819	3841.115	66
EBITDA Margin[2]	18.419%	35.218%	66
Total Assets, Reported[1]	2139.869	6734.354	66

Total Current Assets[1]	354.891	983.790	66
Total Liabilities[1]	1622.112	5669.636	66
Total Current Liabilities[1]	540.029	1854.962	66
Cash and Short Term Investments[1]	160.415	417.027	66
Long Term Debt to Total Capital[2]	29.532%	23.944%	66
Total Debt to Total Equity[2]	150.673%	328.188%	66
ROA Total Assets[2]	2.856%	6.588%	66
ROE Total Equity[2]	8.884%	20.959%	66
Operating Margin[2]	8.774%	49.637%	66
EBIT Margin[2]	7.360%	40.818%	66

Notes: [1] reflects indicators showcased in USD, Millions; [2] reflects indicators in percentages

To reflect the longitudinal scope of the study for years 2019 and 2023, the analysis developed the same analyses (PCA and TwoStep Cluster Analysis) for the year 2023.

Similarly to the prior 2019 PCA, the analysis explored the adequacy of PCA based on Bartlett's test of sphericity (sig.<0.05) and KMO (>0.5) (Malhotra, 2020). Based on calculations from Table 11, we note that the conditions for PCA adequacy are met for European and Asian companies operating in the Hotels, Resorts & Cruise Lines companies, based on their indicators from 2023.

Table 11. PCA adequacy testing for 2023

PCA adequacy testing		Asia 2023	Europe 2023
Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO)		0.797	0.711
Bartlett's Test of Sphericity	Approx. Chi-Square	5848.167	1669.219
	df	78	78
	Sig.	0.000	0.000

Next, the PCA was extended based on communalities. As previously mentioned, the communality should be higher than 0.5 (Hair et al., 2010; Opreana et al., 2023). As observed in Table 12, this condition is met as the lowest level of extracted communality is 0.658 for ROA Total Assets in Asia, and the lowest level for Europe was reported for Long Term Debt to Total Capital (0.815).

Table 12. PCA Communalities for Asia and Europe companies for year 2023

Variable	Asia - Extraction	Europe - Extraction
Revenue[1]	0.862	0.944
EBITDA Margin[2]	0.945	0.965
Total Assets, Reported[1]	0.950	0.946
Total Current Assets[1]	0.923	0.952
Total Liabilities[1]	0.871	0.937
Total Current Liabilities[1]	0.965	0.969
Cash and Short Term Investments[1]	0.883	0.926
Long Term Debt to Total Capital[2]	0.763	0.815
Total Debt to Total Equity[2]	0.740	0.855
ROA Total Assets[2]	0.658	0.904
ROE Total Equity[2]	0.785	0.954
Operating Margin[2]	0.894	0.904
EBIT Margin[2]	0.961	0.969

Notes: [1] reflects indicators showcased in USD, Millions; [2] reflects indicators in percentages

As previously established, PCA involved the analysis of total variance explained, which involved retaining factors based on eigenvalues higher than 1, and a minimum of 60% for the percentage of variance criterion (Hair et al., 2010; Opreana et al., 2023).

Based on the calculations from Tables 13 and 14, four factors resulted for both samples, showcasing Eigenvalues greater than 1 (Malhotra, 2020; Hair et al., 2017). For 2023, the total variance explained was 86.161% for Asian companies (Table 13) and 92.607% for European companies (Table 14), which exceeded the recommended 60% threshold.

Table 13. Total variance explained for Asian companies - 2023

F.	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	%Var.	C.%	Total	%Var.	C.%
1	5.447	41.900	41.900	5.408	41.603	41.603
2	3.048	23.447	65.346	2.885	22.189	63.792
3	1.556	11.969	77.315	1.575	12.117	75.909
4	1.150	8.845	86.161	1.333	10.251	86.161

Notes: F.= Factor; Var.= Variance; C.= Cumulative

Table 14. Total variance explained for European companies - 2023

F.	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	%Var.	C.%	Total	%Var.	C.%
1	5.889	45.297	45.297	5.660	43.542	43.542
2	3.511	27.004	72.301	3.089	23.759	67.301
3	1.583	12.173	84.474	1.682	12.937	80.239
4	1.057	8.133	92.607	1.608	12.369	92.607

Notes: F.= Factor; Var.= Variance; C.= Cumulative

Figures 6 and 7 present the matrix of rotated factors (using Varimax rotation). Similar to the 2019 analysis, the 13 variables included in the PCA converged to the same structure of the resulting factors. As such, the new principal components were named in the same manner: *Financial Position and Liquidity*, *Earnings*, *Debt*, *Financial Performance* for both samples (Europe and Asia for the year 2023).

All the factor loadings were higher than the proposed level of 0.6 (Hair et al., 2010), as the lowest value was 0.700 for the Asia sample (Figure 6) and for the Europe sample the lowest value was 0.764 (Figure 7).

Rotated Component Matrix - Asia[a]

	Component			
	1 - Financial Position and Liquidity - Asia	2 - Earnings - Asia	3 - Debt - Asia	4 - Financial Performance - Asia
Total Current Liabilities	.982			
Total Assets, Reported	.972			
Total Current Assets	.959			
Cash and Short Term Investments	.936			
Revenue	.923			
Total Liabilities	.917			
EBIT Margin (%)		.978		
EBITDA Margin (%)		.971		
Operating Margin (%)		.912		
Long Term Debt to Total Capital (%)			.867	
Total Debt to Total Equity (%)			.860	
ROE Total Equity (%)				.881
ROA Total Assets (%)				.700

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.[a]

a. Rotation converged in 4 iterations.

Figure 6 - Rotated Component Matrix- Asia, 2023

Rotated Component Matrix[a]

	Component			
	1 - Financial Position and Liquidity - Europe	2 - Earnings - Europe	3 - Debt - Europe	4 - Financial Performance - Europe
Total Current Liabilities	.976			
Total Current Assets	.969			
Total Assets, Reported	.961			
Cash and Short Term Investments	.960			
Revenue	.958			
Total Liabilities	.953			
EBITDA Margin (%)		.977		
EBIT Margin (%)		.973		
Operating Margin (%)		.932		
Total Debt to Total Equity (%)			.921	
Long Term Debt to Total Capital (%)			.850	
ROE Total Equity (%)				.958
ROA Total Assets (%)				.764

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.[a]

a. Rotation converged in 5 iterations.

Figure 7- Rotated Component Matrix- Europe, 2023

To explore the scope of our longitudinal analysis, the analysis proceeded to TwoStep-Cluster Analysis. The newly established principal components (the new four factors) reflecting Hotels, Resorts & Cruises companies with headquarters from Europe and Asia, will be examined in a clustering analysis for year 2023. This analysis was used to identify homogenous groups of tourism companies, based on their financial performance in terms of four dimensions: *Financial Position and Liquidity*, *Earnings*, *Debt*, *Financial Performance* for both samples (Europe and Asia for the year 2023).

Considering the results of the TwoStep Cluster analysis for the tourism companies from Asia (Figure 8), Cluster 1 represents 289 companies, or 92.3% of the total sample of Asian companies. Cluster 2 reflects 24 companies or 7.7% of the sample. The most important predictor for developing the clusters for the 2019 Asian sample was the 'Earnings' factor (with a predictor importance of 1.00), and the least important predictor was 'Financial Performance' (with a predictor importance of 0.09). The values in the TwoStep Cluster figures reflect the mean values for each factor included in the analysis. These values are used to interpret the clustering results and are addressed further in the Discussion section.

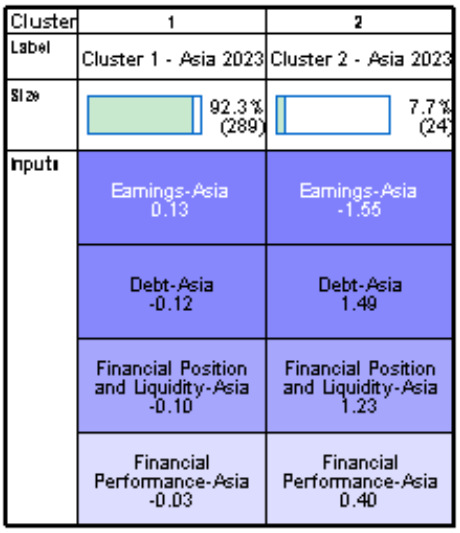

Figure 8 - Clusters resulted for Asia sample, 2023

For Europe (Figure 9), Cluster 1 represents 60 companies, or 90.1% of the total sample of European tourism companies. Cluster 2 reflects 6 companies or 9.1% of the total of 66 Europe sample. The most important predictor for developing the clusters for the 2023 European sample was the 'Financial Position and Liquidity' factor (with a predictor importance of 1.00), and the least important predictor was 'Debt' (with a predictor importance of 0.01).

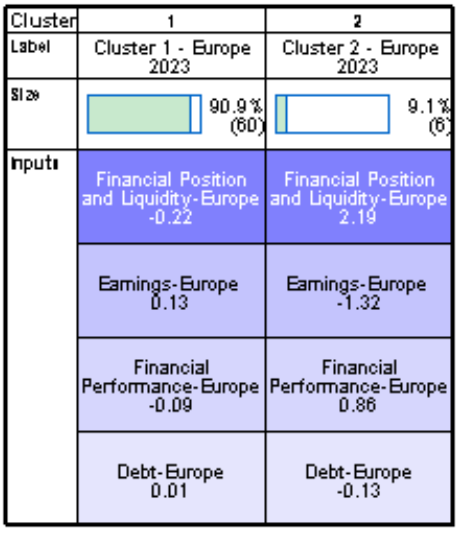

Figure 9 - Clusters resulted for Europe sample, 2023

Table 15 showcases the summarizing perspectives of both analyses, for Europe and Asia, considering the longitudinal framework for the selection of variables and companies from the Hotels, Resorts, and Cruises tourism industry. These aspects are addressed in the discussion section.

Table 15. Summarizing perspectives on the empirical analysis for 2019 and 20223

Year	Region	Variable	Cluster 1	Cluster 2
2019	Asia	Size	303	10
2019	Asia	Financial Position and Liquidity	-0.1	2.91
2019	Asia	Earnings	0.09	-2.59
2019	Asia	Debt	-0.05	1.57
2019	Asia	Financial Performance	0	-0.13
2023	Asia	Size	289	24
2023	Asia	Financial Position and Liquidity	-0.1	1.23
2023	Asia	Earnings	0.13	-1.55
2023	Asia	Debt	-0.12	1.49
2023	Asia	Financial Performance	-0.03	0.4
2019	Europe	Size	58	8
2019	Europe	Financial Position and Liquidity	-0.24	1.73
2019	Europe	Earnings	0.17	-1.26
2019	Europe	Debt	0.04	-0.32
2019	Europe	Financial Performance	0.15	-1.05
2023	Europe	Size	60	6
2023	Europe	Financial Position and Liquidity	-0.22	2.19
2023	Europe	Earnings	0.13	-1.32
2023	Europe	Debt	0.01	-0.13
2023	Europe	Financial Performance	-0.09	0.86

V. DISCUSSION

As observed from the empirical data, there are two clusters for both samples (Europe and Asia), and for the two analyzed years (2019 and 2023), specifically, the following aspects are important to note:

- Cluster 1 showcasing the most predominant segment of companies is characterized by low scores registered for Financial position and liquidity, high scores for Earnings (for both regions, in both years), and low values for Debt in Asia, and high levels of Debt in Europe.

- Cluster 2 showcasing a smaller segment of companies is characterized by a strengthened financial position, lower earnings (for both regions, in both years), higher debt in Asia and lower debt in Europe.

In 2019, the most predominant clusters resulted in both regions reflected better levels of financial performance, compared to smaller clusters. However, in 2023, the COVID-19 pandemic impacted both regions, and the financial performance registered for the predominant clusters was drastically reduced. In 2023, the smaller clusters improved their financial performance, compared to the predominant clusters, for both regions.

Considering the most recent framework analyzed of 2023, indicators from Cluster 1 (reflecting the most predominant clusters) registered better values in Asia compared to Europe. Contrastingly, the resulting cluster with fewer observations from Europe (Cluster 2) showcased better values compared to Asia's Cluster 2 (the smaller sized cluster), in 2023.

Based on these aspects, H1 was accepted because the COVID-19 pandemic impacted the financial performance of tourism companies in Europe and Asia. Moreover, the analysis proposed the examination of H2, exploring the premise of financial performance and its association with a stronger financial position and liquidity, in both Europe and Asia. Based on the computations of the analysis, H2 is rejected for 2019 and is confirmed for 2023, after COVID-19, for both regions.

Additionally, the study examined H3 related to the financial performance and its association with higher scores for earnings. Considering the results, H3 is accepted for 2019 and is rejected for 2023, for both regions.

VI. CONCLUSIONS

This research focused on an empirical analysis and its associated cluster analysis applied in two different samples of companies operating in the Hotels, Resorts, and Cruise Lines industry, with headquarters in Europe and Asia, explored in two different years (2019 and 2023) to offer longitudinal perspectives before and after COVID-19. Based on the results, notable differences are observed with regard to financial performance and financial risks taken by companies in these explored regions. Notably, Asian companies tend to have a clear focus on rapid expansion, implying a more prominent predisposition to invest and assume financial risks. In contrast, European tourism companies have a more conservative and balanced approach to capital management, due to their registered lower scores for Debt.

On one hand, tourism companies from Asia (especially the organizations that were assigned to the lower-risk cluster) tend to have a higher predisposition to use external loans. On the other hand, companies from Europe have a focus on market consolidation and financial stability, engaging in more cautious strategies in terms of risk and emphasizing long-term profitability.

The conclusions of this empirical research show that geographical factors, exceptional events (COVID-19 pandemic) and economic factors have a significant impact on the financial performance of tourism companies. Also, companies in different regions adopt different strategies to address key factors and events. As such, Asia has a more dynamic and risk-taking approach in financial decisions, whereas Europe has a key focus on risk minimization and long-term financial perspective.

VII. REFERENCES

1. Abdi, H., & Williams, L. J. (2010). Principal component analysis. *Wiley interdisciplinary reviews: computational statistics*, *2*(4), 433-459.
2. Abubakar, F., & Yet, C. E. (2023). The impact of competition and market structure on the financial performance and integrity of the Nigerian commercial banks. *International Journal of Advanced Research in Economics and Finance*, *5*(3), 155–171.
3. Al-Matari, E. M., Al-Swidi, A. K., & Fadzil, F. H. B. (2014). The measurements of firm performance's dimensions. *Asian Journal of Finance & Accounting*, *6*(1), 24.
4. Avdylaj, A., & Asllanaj, R. (2023). The impact of accounting on business decision-making: A case study of the hotel industry in Kosovo. *Multidisciplinary Science Journal*, *6*(6), 2024100. https://doi.org/10.31893/multiscience.2024100
5. Babajee, R. B., Seetanah, B., & Nunkoo, R. (2020). The determinants of hotel financial performance: An intellectual capital perspective. *Journal of Hospitality Marketing & Management*. https://doi.org/10.1080/19368623.2020.1703870
6. Baber, H. (2020). Spillover effect of COVID-19 on the global economy. *Transnational Marketing Journal*, *8*(2), 177–196. https://doi.org/10.2139/ssrn.3743111
7. Botta, M. (2019). Financing decisions and performance of Italian SMEs in the hotel industry. *Cornell Hospitality Quarterly*, *60*(4), 335–354.
8. Brida, J. G., Matesanz Gómez, D., & Segarra, V. (2020). On the empirical relationship between tourism and economic growth. *Tourism Management*, *81*, 104131. https://doi.org/10.1016/j.tourman.2020.104131
9. Campbell, F., & Khodadadi, M. (2024). Regulatory challenges and impacts on hospitality: A case study of Scotland's self-catering sector. *Current Issues in Tourism*, 1–6. https://doi.org/10.1080/13683500.2024.2388793
10. Chen, M.-H., Hou, C.-L., & Lee, S. (2012). The impact of insider managerial ownership on corporate performance of Taiwanese tourist hotels. *International Journal of Hospitality Management*, *31*(2), 338–349. https://doi.org/10.1016/j.ijhm.2011.05.005
11. Cladera, R., Martín-Oliver, A., & Pascual-Fuster, B. (2021). Financial distress in the hospitality industry during the COVID-19 disaster. *Tourism Management*, *85*, 104301. https://doi.org/10.1016/j.tourman.2021.104301
12. Cruz, I. (2007). How might hospitality organizations optimize their performance measurement systems? *International Journal of Contemporary Hospitality Management*, *19*(7), 574–588. https://doi.org/10.1108/09596110710818310
13. Dewally, M., Flaherty, S. M., & Shao, Y. (2017). Determinants of financial policy in the hospitality sector in the United States. *Tourism Economics*, *23*(3), 523–542.
14. Gelbard, R., Goldman, O., and Spiegler, I. (2007). Investigating diversity of clustering methods: an empirical comparison. *Data Knowl. Eng.* 63, 155–166. doi: 10.1016/j.datak.2007.01.002
15. Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E., & Tatham, R.L. (2010). *Multivariate Data Analysis*. Prentice Hall: Upper Saddle River, NJ, USA.
16. Harman, H. H. (1976). *Modern factor analysis*. University of Chicago Press: Chicago, IL, USA.
17. Hua, N., O'Neill, J., & Mattila, A. S. (2008). More marketing expenditures, better hotel financial performance? *The Journal of Hospitality Financial Management*, *16*(1), 88–88. https://doi.org/10.1080/10913211.2008.10653854
18. Jolliffe, I. T. (2002). *Principal component analysis for special types of data* (pp. 338-372). Springer New York.
19. Kaiser, H. F. (1958). The varimax criterion for analytic rotation in factor analysis. *Psychometrika*, *23*(3), 187-200.
20. Kaiser, H. F. (1974). An index of factorial simplicity. *Psychometrika* , *39*(1), 31-36.
21. Kala, D., & Bagri, S. C. (2014). Key performance indicators for hospitality industry: A study from the tourist state of Uttarakhand, India. *Tourismos*, *9*(1), 187–206.
22. Kapiki, S. T. (2012). Factors enhancing economic performance in hospitality: The paradigm of Greek hotel companies. *Journal of Tourism, Hospitality & Culinary Arts (JTHCA*, *4*(2), 7–18.
23. Karanovic, G. (2023). Exploring the intrinsic factors influencing return on assets: A case study of the hotel industry in selected EU countries. *International Journal of Business and Economic Sciences Applied Research*, *16*(1), 54–61.
24. Keter, C. K. S., Cheboi, J. Y., Kosgei, D., & Chepsergon, A. K. (2023). Financial performance and firm value of listed companies: Financial performance measure ROA versus ROE. *Journal of Business, Economics and Management Research Studies*, *1*(4), 1–11.
25. Maeenuddina, R. B., Hussain, A., Hafeez, M., Khan, M., & Wahi, N. (2020). Economic value added momentum & traditional profitability measures (ROA, ROE & ROCE): A comparative study. *Test Engineering and Management*, *83*(April), 13762–13774.
26. Malhotra, N.K. (2020). *Marketing Research: An Applied Orientation*, 7th ed. Pearson Education: Harlow, UK.
27. Mujačević, E. (2023). An overview of foreign direct investments in tourism and hospitality industry. *ERAZ Conference Proceedings*, 335–344. https://doi.org/10.31410/ERAZ.2023.335
28. Norusis, M. J. (2007). SPSS 15.0 advanced statistical procedures companion. Prentice Hall: Chicago, IL, USA.
29. Norusis, M. J. (2011). IBM SPSS statistics 19 procedures companion. Reading, MA: Addison-Wesley.
30. Nurwitasari, A., Waspada, I., & Sari, M. (2023). Comparison of tourism and hospitality industry financial performance before and after COVID-19: A systematic literature review. *NHI Hospitality International Journal*, *1*(2), 64–74. https://doi.org/10.34013/nhij.v1i2.950
31. Opreana, A., Vinerean, S., Mihaiu, D. M., Barbu, L., & Șerban, R. A. (2023). Fuzzy analytic network process with principal component analysis to establish a bank performance model under the assumption of country risk. *Mathematics*, *11*(14), 3257.
32. Pantea, M., Gligor, D., & Anis, C. (2014). Economic determinants of Romanian firms' financial performance. *Procedia-Social and Behavioral Sciences*, *124*, 272–281.
33. Pavone, P., Migliaccio, G., & Simonetti, B. (2023). Investigating financial statements in hospitality: A quantitative approach. *Quality & Quantity*, *57*(Suppl 3), 383–407.
34. Pearson, K. (1901). LIII. On lines and planes of closest fit to systems of points in space. *The London, Edinburgh, and Dublin philosophical magazine and journal of science*, *2*(11), 559-572.
35. Phan, T. K., Nguyen, T. H. T., Dang, T. H., & Le, K. N. (2021). Non-financial factors affecting the operational performance of hospitality companies: Evidence from Vietnam. *Problems and Perspectives in Management*, *19*(4), 48.
36. Planinc, T., Ivankovič, G., Jerman, M., & Uran Maravić, M. (2014). Corporate social responsibility as a part of benchmarking analysis: Case study of the Slovenian and Croatian hotel industry. *WIT Transactions on Ecology and the Environment*, *191*, 477–486. https://doi.org/10.2495/SC140401
37. Popa, D. N., Bogdan, V., Sabau Popa, C. D., Belenesi, M., & Badulescu, A. (2022). Performance mapping in two-step cluster analysis through ESEG disclosures and EPS. *Kybernetes*, *51*(13), 98-118.
38. Poretti, C., & Heo, C. Y. (2022). COVID-19 and firm value drivers in the tourism industry. *Annals of Tourism Research*, *95*, 103433.
39. Ribeiro, M. L., Vasconcelos, M. L., & Rocha, F. (2019). Monitoring performance indicators in the Portuguese hospitality sector. *International Journal of Contemporary Hospitality Management*. https://doi.org/10.1108/IJCHM-03-2017-0178

40. Sami, B. A., & Mohamed, G. (2014). Determinants of tourism hotel profitability in Tunisia. *Tourism and Hospitality Research, 14*(4), 163–175.
41. Singhal, R., Fu, L., & Parkash, M. (2016). Tobin's Q ratio and firm performance. *International Research Journal of Applied Finance, 7.*
42. Škare, M., Soriano, D. R., & Porada-Rochoń, M. (2021). Impact of COVID-19 on the travel and tourism industry. *Technological Forecasting and Social Change, 163*, 120469.
43. Soni, T. K., Arora, A., & Le, T. (2022). Firm-specific determinants of firm performance in the hospitality sector in India. *Sustainability, 15*(1), 554.
44. Tudose, M. B., Rusu, V. D., & Avasilcai, S. (2022). Financial performance – Determinants and interdependencies between measurement indicators. *Business, Management and Economics Engineering, 20*(1), 119–138. https://doi.org/10.3846/bmee.2022.16732
45. Tuyet, N. L. H., & Ninh, L. K. (2023). Competition and firm performance: Evidence from Vietnam. *RAUSP Management Journal, 58*(2), 111–124.
46. Uyar, A., Kilic, M., Koseoglu, M. A., Kuzey, C., & Karaman, A. S. (2020). The link among board characteristics, corporate social responsibility performance, and financial performance: Evidence from the hospitality and tourism industry. *Tourism Management Perspectives, 35*, 100714. https://doi.org/10.1016/j.tmp.2020.100714
47. Watson, P., & Deller, S. (2022). Tourism and economic resilience. *Tourism Economics, 28*(5), 1193–1215. https://doi.org/10.1177/1354816621990943
48. Widaman, K. F. (1993). Common factor analysis versus principal component analysis: Differential bias in representing model parameters?. *Multivariate behavioral research, 28*(3), 263-311.
49. Zenker, S., & Kock, F. (2020). The coronavirus pandemic–A critical discussion of a tourism research agenda. *Tourism Management, 81*, 104164.
50. Zhang, H., Song, H., Wen, L., & Liu, C. (2021). Forecasting tourism recovery amid COVID-19. *Annals of Tourism Research, 87*, 103149.
51. Zhang, J., & Enemark, A. E. (2015). Factors influencing business performance in hotels and restaurants. *Asia-Pacific Journal of Innovation in Hospitality and Tourism, 5*(1), 1–20