PERCEIVED KPI IMPORTANCE AND MONITORING PRACTICES IN NAUTICAL CHARTER COMPANIES: EVIDENCE FROM CROATIA

Helga MAŠKARIN RIBARIĆ
University of Rijeka,
Faculty of Tourism and Hospitality Management,
Croatia
E-mail: helgam@fthm.hr

Lorena DADIĆ FRUK
University of Rijeka,
Faculty of Tourism and Hospitality Management,
Croatia
E-mail: lorenad@fthm.hr

Emanuel ŽIKOVIĆ
University of Rijeka,
Faculty of Tourism and Hospitality Management,
Croatia
E-mail: ps24981@fthm.hr

Abstract

Purpose – This study examines the perceived importance and monitoring of key performance indicators (KPIs) in nautical charter companies, aiming to better understand how performance measurement practices evolve in asset-intensive tourism service contexts.
Methodology/Design/Approach – Primary data were collected through a structured survey of 35 charter companies operating in Croatia. Respondents assessed the importance of 17 performance indicators and reported the extent to which these indicators are systematically monitored. Descriptive statistics and non-parametric tests (Spearman correlation, Mann–Whitney U, and Kruskal–Wallis) were used to examine importance–monitoring alignment and differences across organizational characteristics.
Findings – The results reveal a consistent gap between perceived KPI importance and monitoring intensity, particularly for customer value indicators. A strong positive correlation between KPI importance and monitoring intensity indicates substantial alignment between perceived performance priorities and KPI monitoring practices. Although descriptive differences in monitoring intensity are observed across firms with different strategic priorities, fleet sizes, and levels of involvement in strategic decision-making, none of these organizational characteristics emerges as a statistically significant determinant in this sample, although descriptive variation is observed.
Originality of the research – The study provides firm-level empirical insight into performance measurement maturity in nautical tourism by examining the alignment between perceived KPI importance and monitoring intensity as an observable performance management practice in a fragmented tourism segment characterized by shared operational constraints.
Keywords nautical tourism, charter companies, key performance indicators, performance measurement, monitoring practices

Preliminary communication
https://doi.org//10.20867/thi.28.13

INTRODUCTION

In nautical charter operations, performance measurement is closely linked to managing seasonal fleet utilization, pricing volatility, and service execution reliability, making KPI monitoring a practical managerial necessity rather than solely a strategic management concept. The highly seasonal nature of nautical tourism demand requires charter companies to continuously adjust capacity allocation, workforce planning and pricing strategies in order to maintain operational efficiency and financial sustainability (Russo & Rindone, 2022; Marušić et al., 2020). At the same time, competitive pressures and market homogenization in leading charter destinations further emphasize the importance of systematic performance monitoring to support managerial decision-making and resource optimization (Brnić et al., 2024).

Organizations in yacht charter and related maritime service sectors increasingly adopt multidimensional performance measurement approaches that integrate operational, customer-related and market-oriented indicators in order to evaluate service effectiveness and support continuous improvement (Paker & Gök, 2021; Choi, 2025). In dynamic tourism environments characterized by fluctuating demand and price seasonality, such structured KPI frameworks facilitate more informed planning decisions and contribute to maintaining service quality and competitiveness throughout peak and off-peak periods (Espinet-Rius et al., 2024).

The development of performance measurement thinking has been closely associated with the recognition that financial indicators alone are insufficient for capturing the multidimensional nature of organizational performance. Integrated approaches, such as the balanced scorecard, combine financial and non-financial indicators aligned with strategic objectives and organizational processes (Kaplan & Norton, 1996). This perspective is particularly relevant in service industries, where performance outcomes depend not only on operational outputs but also on service quality, customer relationships, and process reliability.

Tourism and hospitality provide a complex context for performance measurement due to strong seasonality, fluctuating demand patterns, and high dependence on customer perceptions. Service quality and customer satisfaction represent important determinants of competitiveness and long-term financial performance (Rust et al., 2004; Chen & Tsai, 2007), while demand volatility requires firms to continuously manage capacity utilization, pricing strategies, and operational efficiency (Baum & Lundtorp, 2001; Duro, 2016). Consequently, tourism organizations typically rely on a combination of financial, operational, and customer-related indicators when evaluating performance and supporting managerial decision-making.

Within this broader context, nautical tourism represents a specialized and asset-intensive segment characterized by strong interdependencies between marina infrastructure, charter operations, and destination-level service systems. Sectoral analyses emphasize the need for performance monitoring frameworks capable of capturing both financial outcomes and operational

efficiency in maritime tourism environments (Luković et al., 2021). Nautical tourism contributes significantly to the economic development of coastal regions and involves complex interactions among charter companies, marina operators, and destination service providers, suggesting that performance dynamics must be considered at both firm and market levels.

Charter companies play a central operational role by providing vessel rental services and coordinating customer experiences in maritime settings. Their performance is shaped by high capital intensity, logistical complexity, and exposure to seasonal demand (Luković et al., 2021; Diakomihalis, 2007). Financial sustainability depends largely on effective asset utilization, pricing effectiveness, and operational reliability, while customer satisfaction and perceived service quality influence repeat demand and competitive positioning (Rust et al., 2004; Chen & Tsai, 2007). These characteristics underline the relevance of performance measurement systems capable of capturing multiple performance dimensions in charter operations.

The sector is also structurally fragmented, with numerous micro and small firms operating alongside a smaller number of larger organizations with more developed managerial capabilities. Such heterogeneity may influence both the adoption and the scope of systematic KPI monitoring practices. Larger firms typically possess greater access to analytical tools, financial resources, and managerial expertise required for systematic performance monitoring, whereas smaller firms may rely more on informal management approaches and monitor a narrower set of indicators (Garengo et al., 2005; Bititci et al., 2012). In addition, the limited availability of consolidated financial and operational data in nautical tourism complicates benchmarking and strategic planning (Luković et al., 2021; Garengo and Bititci, 2007).

Recent developments in digital distribution channels and revenue management systems have increased the availability of transactional and behavioural data in tourism industries, enabling more data-supported approaches to performance monitoring and pricing optimization (Mariani et al., 2018; Fähndrich, 2023). Nevertheless, the operationalization of customer-related KPIs remains challenging due to fragmented data environments, variability in customer behaviour, and pronounced seasonality. As a result, the extent to which theoretically relevant performance indicators are systematically monitored may vary across organizations depending on managerial priorities, resource constraints, and strategic orientation.

Despite the recognized importance of performance measurement in service industries, empirical evidence on KPI implementation in nautical charter companies remains limited. Existing tourism performance research has predominantly focused on efficiency modelling and benchmarking in hotels, destinations, and broader tourism systems, while internal managerial performance measurement practices in maritime tourism organizations have received comparatively less scholarly attention (Hodap & Šimunić, 2025; Assaf & Tsionas, 2019; Nurmatov et al., 2021). Consequently, there is limited understanding of how charter company managers perceive the importance of specific KPIs, to what extent these indicators are systematically monitored in practice, and whether monitoring practices differ across organizations with different structural characteristics. More broadly, empirical evidence remains limited on how the perceived importance of performance indicators translates into systematic monitoring practices at the firm level in asset-intensive and operationally constrained tourism segments such as nautical charter.

The Croatian nautical tourism sector provides a relevant empirical setting for examining these issues. Croatia is one of the leading nautical tourism destinations in the Mediterranean, supported by extensive coastline, developed marina infrastructure, and strong international demand. At the same time, industry stakeholders highlight challenges related to identifying the population of actively operating charter companies, as official statistical classifications may include formally registered firms that are not consistently active in charter markets. These conditions underscore the importance of empirical research focused on actual managerial practices within operational firms.

Against this background, the present study aims to empirically examine how managers in Croatian nautical charter companies evaluate the importance of selected key performance indicators and to what extent these indicators are systematically monitored in everyday managerial practice. Using primary survey data collected from actively operating firms, the study adopts an exploratory analytical approach focused on identifying patterns of alignment and divergence between perceived KPI importance and reported monitoring intensity. In addition, the analysis investigates whether KPI monitoring practices differ in relation to selected organizational characteristics, including company size (fleet size), strategic orientation, and participants' involvement in decision-making processes. By providing firm-level empirical evidence on the alignment between perceived KPI importance and monitoring intensity in a fragmented and seasonal tourism segment, the study contributes to a more practice-oriented understanding of how performance measurement systems are implemented in nautical charter operations.

1. METHODOLOGY

This study adopts an exploratory quantitative survey design to examine the perceived importance and monitoring of key performance indicators (KPIs) in nautical charter companies operating in Croatia. The research is based on primary data collected through a structured questionnaire targeting firms actively engaged in vessel charter operations. The main analytical focus is on assessing how charter company managers and employees evaluate the importance of selected KPIs and to what extent these indicators are systematically monitored (KPI monitoring intensity) in managerial practice. In addition, the study explores whether KPI importance and monitoring practices differ in relation to selected organizational characteristics, including company size, strategic orientation, and managerial involvement in decision-making.

A survey-based approach was considered appropriate for collecting standardized data across multiple organizations and enabling comparative quantitative analysis of performance measurement practices. Survey research is frequently used in performance management studies to capture managerial perceptions and organizational routines within heterogeneous industry settings.

1.1. Population and sampling

The target population consisted of nautical charter companies operating in Croatia. The sampling frame was established in cooperation with the Croatian Chamber of Economy (CCE), specifically the Charter Activities Group within the Tourism Sector. This professional association represents companies registered under the National Classification of Activities NKD 77.34 (rental and leasing of water transport equipment).

An official invitation to participate in the survey was distributed via email by the Croatian Chamber of Economy to all active association members. The invitation was sent to 147 companies. Using an industry association as the distribution channel increased research credibility and facilitated access to relevant managerial respondents.

A total of 35 valid responses were obtained, corresponding to a response rate of 23.8%. While the achieved sample size reflects the structural constraints typical of research in specialized industry segments, it provides a diverse cross-section of actively operating charter firms in terms of fleet size and strategic orientation.

Identifying the active population of charter companies presents methodological challenges. Industry representatives indicate that official registries may include firms formally registered for charter activity but not consistently operating in the market or treating charter services as a secondary activity. This structural characteristic complicates precise population definition and highlights the relevance of empirical data collection based on direct industry participation.

1.2. Data collection procedure

Data were collected using an online questionnaire developed specifically for this research and implemented via the Google Forms platform. The questionnaire was distributed through the Croatian Chamber of Economy during February 2026.

Participation was voluntary and anonymous. No personally identifiable information was collected, and responses were analysed in aggregated form. Respondents were informed about the academic purpose of the study and the confidentiality of their responses.

1.3. Questionnaire design and measures

The questionnaire consisted of three sections. The first section captured organizational characteristics, including respondent position, involvement in strategic decision-making, fleet size, years of operation, fleet ownership model, and strategic priorities. These variables were used to examine differences in KPI monitoring practices across organizational contexts.

The second section assessed perceived KPI importance using a five-point Likert scale ranging from “not important at all” (1) to “critical for management” (5). The third section examined KPI monitoring practices. Respondents indicated whether their company monitors each indicator using a three-point ordinal scale ranging from “not monitored” (1) to “systematically monitored” (3), to enabling an assessment of KPI monitoring maturity.

The questionnaire followed a fixed order, with respondents first evaluating the importance of KPIs and then indicating the extent to which these indicators are monitored in their companies. Although the questions were organised into separate sections, this order may have influenced the responses, as the evaluation of one aspect could have affected the assessment of the other.

The questionnaire included 17 KPIs selected through a theory-informed and context-sensitive process combining insights from performance measurement literature with sector-specific operational considerations. For analytical purposes, the indicators were grouped into four performance domains reflecting key managerial areas in charter operations:

(1) **Revenue management and sales effectiveness** (revenue per available charter day – RevPAD, average annual revenue per vessel, fleet occupancy rate, average charter price per day – ADR, inquiry-to-booking conversion rate, direct booking share);
(2) **Customers, market position and long-term value** (customer acquisition cost – CAC, customer lifetime value – CLV, repeat guest share, customer satisfaction/willingness to recommend – Net Promoter Score);
(3) **Fleet operational excellence** (on-time departure rate, average vessel turnaround time – TAT, lost charter days per vessel, total damage cost per vessel);
(4) **Financial and investment efficiency** (EBITDA margin, return on assets – ROA, vessel depreciation per charter week).

The KPI selection process was additionally informed by consultations with industry stakeholders and reflects performance indicators commonly used in operational decision-making in nautical charter businesses. In line with pragmatic approaches to KPI framework development in applied performance management contexts (Parmenter, 2015), the grouping of KPIs into performance domains is conceptual rather than psychometric and was intended to support sector-specific interpretation of performance measurement patterns.

1.4. Variable operationalization and data analysis

Perceived KPI importance was operationalized using numerical values from 1 to 5, allowing calculation of mean scores and relative importance rankings for individual indicators and performance domains. KPI monitoring intensity was coded on a three-point ordinal scale (1 = not monitored; 2 = partially monitored; 3 = systematically monitored). Higher values therefore indicate more structured and systematic KPI monitoring.

Descriptive analysis included frequency distributions, mean values, and standard deviations. Inferential analysis employed non-parametric statistical techniques appropriate for ordinal data and a relatively small sample size. Spearman rank correlation analysis was used to examine the relationship between perceived KPI importance and KPI monitoring intensity. The Mann–Whitney U test assessed differences related to managerial involvement in decision-making, while the Kruskal–Wallis test examined differences across companies of different sizes and strategic orientations.

In addition, to assess the overall difference between perceived KPI importance and monitoring intensity, a Wilcoxon signed-rank test was conducted using respondent-level aggregated scores. To ensure comparability between variables measured on different scales, both importance and monitoring values were linearly normalized to a common range prior to analysis.

Content validity was supported through literature-informed KPI selection and sector expert input. Construct validity was addressed by grouping indicators into theoretically consistent performance domains. External validity was strengthened through the use of an industry-based sampling frame, increasing the likelihood that respondents represent actively operating charter companies.

Given the exploratory nature of the study and the relatively small sample size, the inferential results should be interpreted with caution. The applied non-parametric techniques are appropriate for ordinal data and limited sample conditions; however, the statistical analyses are primarily intended to identify indicative patterns and potential group differences rather than to support strong generalizable causal inferences. Accordingly, the findings are interpreted as context-specific empirical insights into performance measurement practices in Croatian nautical charter companies, providing a basis for further research with larger samples and longitudinal designs. In addition, as both KPI importance and monitoring intensity were collected from the same respondents within a single survey instrument, the possibility of common method bias cannot be fully excluded and should be considered when interpreting the results. In addition to statistical significance, effect sizes are considered in order to provide a more comprehensive interpretation of the practical relevance of the findings.

2. RESULTS

2.1. Sample characteristics

A detailed overview of sample characteristics is presented in Table 1. The sample comprises 35 nautical charter companies operating in Croatia and represents a heterogeneous set of organizations in terms of fleet size, strategic orientation, and managerial structure. Respondents occupy a range of organizational roles, with operational and commercial positions most strongly represented, while owners and senior managers also account for a substantial share of participants.

Table 1: **Sample characteristics (N = 35)**

Position in company	**n**	**%**
Owner / co-owner	9	25.7
Director / board member	8	22.9
Operations / fleet management / other	4	11.4
Sales / reservations / marketing	14	40.0
Involvement in strategic decision-making		
Regularly involved	22	62.9
Occasionally involved	8	22.9
Not involved	5	14.3
Fleet size (number of vessels)		
Up to 5 vessels	6	17.1
6–10 vessels	5	14.3
11–20 vessels	10	28.6
21–40 vessels	8	22.9
More than 40 vessels	6	17.1
Years of operation		
Up to 5 years	4	11.4
6–10 years	9	25.7
11–20 years	12	34.3
More than 20 years	10	28.6
Fleet ownership model		
Predominantly owned fleet	15	42.9
Predominantly managed fleet	8	22.9
Mixed ownership structure	12	34.3
Strategic priority		
Improving service quality	12	34.3
Increasing profitability	10	28.6
Business stabilization	7	20.0
Fleet expansion	2	5.7
Undefined strategic focus	4	11.4

Source: Authors' research

Most respondents report regular involvement in strategic decision-making processes, suggesting that the data reflect informed managerial perspectives on performance measurement practices. The sample includes companies ranging from very small operators managing only a few vessels to large charter firms operating extensive fleets.

Companies also differ in years of operation and fleet ownership structures, indicating variation in market experience, investment intensity, and organizational maturity. Strategic priorities vary across firms, with service quality improvement and profitability enhancement emerging as the most frequently reported focus areas. A smaller number of companies emphasize business stabilization or fleet expansion, while some report an undefined strategic focus.

2.2. Importance of Key Performance Indicators

Importance rankings for the analysed KPIs are presented in Table 2.

Table 2: **Importance ranking of key performance indicators (N = 35)**

Rank	KPI	Group	Mean	SD
1	Customer satisfaction / willingness to recommend (NPS)	C	4.54	0.51
2	Average annual revenue per vessel	RM	4.37	0.49
3	Fleet occupancy rate	RM	4.20	0.58
4	Return on assets (ROA)	FIN	4.06	0.73
5	On-time departure rate	OP	4.03	1.01
6	Average vessel turnaround time (TAT)	OP	4.00	0.77
7	Repeat guest share	C	3.97	0.71
8	Direct booking share	RM	3.83	0.98
9	Total damage cost per vessel	OP	3.80	0.90
10	Lost charter days per vessel	OP	3.77	0.84
11	Average charter price per day (ADR)	RM	3.71	0.99
12	Customer acquisition cost (CAC)	C	3.69	1.11
13	EBITDA margin	FIN	3.69	1.13
14	Vessel depreciation per charter week	FIN	3.60	0.85
15	Inquiry-to-booking conversion rate	RM	3.54	0.85
16	Revenue per available charter day (RevPAD)	RM	3.23	0.94
17	Customer lifetime value (CLV)	C	3.20	1.21

Legend: RM – Revenue management and sales effectiveness; C – Customers, market position and long-term value; OP – Fleet operational excellence; FIN – Financial and investment efficiency
Source: Authors' research

The results indicate that charter companies assign the highest importance to performance indicators associated with customer satisfaction, revenue productivity, and operational reliability. Customer satisfaction measured through Net Promoter Score (NPS) emerges as the most important performance indicator, followed by average annual revenue per vessel and fleet occupancy rate. Return on assets (ROA), as well as operational execution measures such as on-time departure rate and vessel turnaround time (TAT), are also evaluated as highly important. These findings suggest that managerial performance perceptions extend beyond short-term revenue outcomes to include service delivery consistency and overall asset efficiency.

Revenue management indicators such as direct booking share and average charter price per day (ADR) occupy mid-level positions in the ranking, indicating their relevance for commercial decision-making without dominating managerial evaluation frameworks. In contrast, marketing efficiency and long-term customer value indicators — particularly customer lifetime value (CLV) and customer acquisition cost (CAC) — receive comparatively lower importance ratings. Although still perceived as relevant, these measures appear less central to performance assessment practices than indicators capturing operational execution and financial productivity.

Overall, the ranking structure suggests that charter companies prioritize performance drivers related to service reliability, utilization efficiency, and financial effectiveness, while indicators reflecting longer-term market development and customer portfolio management receive relatively less emphasis.

2.3. KPI Monitoring Practices and Importance–Monitoring Alignment

Results related to KPI monitoring practices and the importance–monitoring gap are presented in Table 3.

Table 3: **KPI monitoring implementation and importance–monitoring gap (N = 35)**

Rank (gap)	KPI	Group	Monitoring mean	Importance mean	Gap
1	Customer satisfaction / willingness to recommend (NPS)	C	2.86	4.54	1.69
2	Customer acquisition cost (CAC)	C	2.11	3.69	1.57
3	Return on assets (ROA)	FIN	2.60	4.06	1.46
4	Average charter price per day (ADR)	RM	2.29	3.71	1.43
5	Average vessel turnaround time (TAT)	OP	2.63	4.00	1.37
6	Average annual revenue per vessel	RM	3.00	4.37	1.37
7	Customer lifetime value (CLV)	C	1.89	3.20	1.31
8	Lost charter days per vessel	OP	2.46	3.77	1.31
9	Fleet occupancy rate	RM	2.91	4.20	1.29
10	On-time departure rate	OP	2.74	4.03	1.29
11	Repeat guest share	C	2.71	3.97	1.26
12	Vessel depreciation per charter week	FIN	2.34	3.60	1.26
13	Inquiry-to-booking conversion rate	RM	2.31	3.54	1.23
14	Revenue per available charter day (RevPAD)	RM	2.09	3.23	1.14
15	Total damage cost per vessel	OP	2.66	3.80	1.14
16	EBITDA margin	FIN	2.60	3.69	1.09
17	Direct booking share	RM	2.80	3.83	1.03
-	**Overall Mean**	**…**	**2.53**	**3.84**	**1.31**

Legend: RM – Revenue management and sales effectiveness; C – Customers, market position and long-term value; OP – Fleet operational excellence; FIN – Financial and investment efficiency
Source: Authors' research

Higher monitoring index values indicate more systematic and structured KPI monitoring. The analysis indicates that the most systematic monitoring practices are associated with performance indicators directly linked to revenue productivity and fleet utilization. Relatively high monitoring intensity is observed for average annual revenue per vessel and fleet occupancy rate, while operational execution indicators such as on-time departure rate and vessel turnaround time (TAT) are also monitored in a structured manner. Revenue-related indicators including ADR and direct booking share also demonstrate relatively consistent monitoring. This pattern may reflect a managerial emphasis on performance measures that support operational coordination, capacity management, and short-term revenue optimization in asset-intensive charter operations.

Operational performance indicators overall display a relatively high level of monitoring intensity. However, indicators capturing operational disruptions, such as lost charter days per vessel and total damage cost per vessel, are monitored less consistently, suggesting variability in performance measurement routines across firms.

Customer-related indicators reveal more heterogeneous monitoring patterns. Although customer satisfaction (NPS) is evaluated as the most important KPI, its monitoring is comparatively less systematic relative to its perceived importance. Similar tendencies are observed for CAC and CLV, indicating that while managers recognize the strategic relevance of customer-oriented performance metrics, their formal integration into performance monitoring systems remains uneven. Repeat guest share demonstrates relatively more structured monitoring compared to other customer value indicators, suggesting that relational performance measures directly linked to repeat demand may be more operationally embedded.

Financial and investment efficiency indicators are monitored at moderately systematic levels overall. Profitability measures such as EBITDA margin and ROA are monitored more consistently than capital-based indicators such as vessel depreciation per charter week. This pattern suggests that financial metrics closely tied to operational outcomes receive greater managerial attention than indicators reflecting longer-term investment horizons.

Across all indicators, the mean monitoring index equals 2.53, while the mean perceived importance equals 3.84, resulting in an overall gap between perceived importance and monitoring levels. This pattern indicates that performance indicators are generally perceived as important but are not always monitored with the same degree of systematic intensity. It should be noted that the reported gap values are based on the original measurement scales and serve descriptive comparison purposes, while scale normalization was applied only in the context of inferential testing.

To complement the descriptive analysis of the importance–monitoring gap, a Wilcoxon signed-rank test was conducted using aggregated respondent-level scores. The results indicate a statistically significant difference between perceived KPI importance and monitoring intensity ($W = 0.00$, $Z = -5.16$, $p < 0.001$). The median difference indicates that KPI importance is consistently rated higher than monitoring intensity, and the large effect size ($r = 0.87$) further confirms that this difference is not only statistically significant but also practically substantial. These findings provide strong statistical support for the existence of a systematic gap between perceived importance and the extent of KPI monitoring.

To further examine the relationship between perceived importance and monitoring practices, a Spearman rank correlation analysis was conducted at the KPI level. The results reveal a strong and statistically significant association between mean importance scores and the monitoring index (Spearman's $\rho = 0.884$, $p < 0.001$). Since the correlation is calculated across KPI indicators rather than across firms, it should be interpreted as an aggregate pattern of alignment at the indicator level rather than as direct evidence of firm-level behavioural consistency. The strong positive correlation suggests that KPIs perceived as more important by managers also tend to be monitored more systematically, indicating a substantial degree of alignment between managerial priorities and KPI monitoring practices. Nevertheless, the persistence of notable gaps for selected customer-related and financial indicators indicates uneven maturity of performance measurement practices across specific managerial domains.

2.4. Differences in KPI Monitoring by Organizational Characteristics

Differences in overall KPI monitoring intensity across organizational characteristics are presented in Table 4.

Table 4: **Differences in overall KPI monitoring intensity across organizational characteristics (N = 35)**

Strategic priority	n	Median monitoring index
Improving service quality	12	2.62
Increasing profitability	10	2.38
Business stabilization	7	2.59
Fleet expansion	2	2.56
Undefined strategic focus	4	2.24

Grouping variable	Test	Test statistic	p-value	Effect size
Fleet size	Kruskal–Wallis H	6.58	0.16	$\varepsilon^2 = 0.09$
Managerial involvement in strategic decision-making (regular vs occasional/none)	Mann–Whitney U	116	0.35	$r = 0.16$
Strategic priority	Kruskal–Wallis H	4.04	0.40	$\varepsilon^2 = 0.00$

Source: Authors' research; Note: ε^2 calculated as $(H - k + 1) / (N - k)$

To examine contextual variation in monitoring practices, an overall KPI monitoring index was calculated as the mean monitoring score across all 17 indicators for each respondent. Higher index values represent more structured and systematic KPI monitoring.

Descriptive comparisons indicate moderate variation in median monitoring index values across strategic priority groups, although these differences remain limited in magnitude. Firms primarily focused on improving service quality and business stabilization display relatively higher monitoring intensity, while companies emphasizing profitability improvement or reporting an undefined strategic focus exhibit comparatively lower median values. However, the Kruskal–Wallis test does not reveal statistically significant differences in KPI monitoring intensity across strategic orientations ($H = 4.04$, $p > 0.05$), and the associated effect size is negligible. This suggests that although strategic positioning may be reflected in subtle differences in monitoring routines, such variation is not sufficiently pronounced to indicate systematically differentiated performance measurement practices across strategic groups. However, these findings should be interpreted with caution given the relatively small sample size and limited statistical power.

A somewhat more differentiated descriptive pattern emerges with respect to fleet size. While firms operating medium and larger fleets report somewhat higher monitoring intensity, the Kruskal–Wallis test does not indicate statistically significant differences across fleet size categories ($H = 6.58$, $p > 0.05$), although the associated effect size suggests a small-to-moderate practical differentiation. These findings suggest that organizational scale does not emerge as a statistically significant determinant of monitoring intensity in this sample. However, given the limited statistical power, the absence of statistical significance should not be interpreted as evidence of no relationship, particularly in light of the observed descriptive variation.

Differences in monitoring intensity were also examined in relation to respondents' reported involvement in strategic decision-making. Respondents who reported regular involvement in strategic processes were associated with marginally higher monitoring index values than those who reported only occasional or no involvement. Nevertheless, the Mann–Whitney test does not confirm this difference as statistically significant ($U = 116$, $p > 0.05$), and the observed effect size is small. This suggests that more direct participation in strategic decision-making may be associated with somewhat more structured KPI monitoring, but the relationship is not sufficiently strong to indicate a consistent pattern across the sample.

Overall, the results point to a relatively homogeneous landscape of KPI monitoring practices among charter companies. Although descriptive tendencies indicate that strategic orientation, operational scale, and respondents' involvement in strategic decision-making may shape monitoring routines to a limited extent, none of the examined organizational characteristics emerges as a statistically robust determinant of monitoring intensity in this sample. However, these findings should be interpreted cautiously, as the relatively small sample size limits statistical power and the ability to detect potentially meaningful differences. At the same time, moderate variation associated with fleet size suggests that monitoring practices may become somewhat more structured as operational complexity increases. This pattern may reflect a growing similarity in performance management practices within the charter sector, where firms operate under similar capacity constraints, seasonal demand structures, and competitive pressures that encourage the adoption of comparable KPI monitoring frameworks.

3. DISCUSSION

The results highlight the coexistence of relatively high perceived KPI importance and only moderately systematic KPI monitoring intensity across performance domains. The findings provide empirical insight into how surveyed charter companies approach performance measurement and suggest that managerial attention is distributed across multiple performance dimensions rather than concentrated exclusively on short-term financial outcomes. The ranking of KPI importance indicates a strong emphasis on customer satisfaction, asset productivity, and operational reliability. Indicators such as average annual revenue per vessel, fleet occupancy rate, on-time departure rate, and vessel turnaround time are evaluated as highly important alongside Net Promoter Score (NPS), suggesting that performance perceptions in charter operations reflect a combination of service quality considerations, utilization efficiency, and financial effectiveness.

This importance structure provides an important reference point for interpreting the observed monitoring patterns. At the same time, the analysis of KPI monitoring practices reveals a consistent difference between perceived KPI importance and the degree of systematic monitoring across performance domains. Although monitoring intensity can generally be described as relatively structured, discrepancies exceeding one scale point for most indicators indicate that KPI monitoring routines remain unevenly formalized. The most pronounced differences are observed for customer-related metrics, particularly NPS and customer acquisition cost. This suggests that strategic awareness of customer value does not always translate into structured measurement practices, which is consistent with broader tourism research emphasizing the operational complexity of measuring customer-centred performance in seasonal and service-intensive environments (Baum & Lundtorp, 2001; Duro, 2016; Faerber et al., 2021).

The strong correlation between perceived KPI importance and monitoring intensity indicates substantial alignment between managerial priorities and KPI monitoring practices at the aggregate indicator level. This pattern suggests that indicators regarded as strategically important are also more likely to be monitored more systematically. At the same time, the persistence of notable differences across selected performance domains points to differentiated levels of measurement maturity. Indicators directly supporting short-term operational coordination and revenue optimization appear to be most deeply embedded in managerial routines, while long-term customer value and selected capital efficiency measures remain less consistently integrated into formal monitoring frameworks.

Contrary to initial expectations, the analysis of organizational characteristics does not reveal statistically significant differences in monitoring intensity across firms with different strategic priorities, fleet sizes, or levels of involvement in strategic decision-making, although moderate descriptive variation is observed in relation to fleet size. However, this finding should be interpreted with caution, as the relatively small sample size reduces statistical power and may limit the ability to detect potentially meaningful differences. Although descriptive tendencies suggest moderate variation in monitoring practices, these differences are not sufficiently pronounced to indicate systematically differentiated performance measurement regimes based on the available data. This finding may reflect the tendency of firms operating in asset-intensive and seasonally volatile service industries to adopt similar monitoring practices, as they face comparable capacity constraints, demand fluctuations, and competitive pressures.

Overall, the findings suggest that performance measurement practices among surveyed charter companies combine growing analytical awareness with uneven levels of formalization. Firms appear to recognize the relevance of a broad set of performance drivers and demonstrate general alignment between perceived importance and monitoring behaviour. However, the uneven integration of selected performance domains indicates that KPI monitoring systems are still evolving toward greater formalization and strategic integration, while moderate differences associated with fleet size suggest that monitoring practices tend to become more structured as operational complexity increases. This suggests that performance measurement maturity in the charter sector is shaped more by shared operational conditions than by firm-specific structural characteristics.

CONCLUSION

This study examined the perceived importance and monitoring of key performance indicators in nautical charter companies operating in Croatia in order to better understand how performance measurement practices develop in an asset-intensive tourism service context. The results indicate that managerial attention is primarily directed toward performance dimensions related to customer satisfaction, operational reliability, and asset productivity, while indicators reflecting long-term customer value and selected aspects of financial efficiency receive comparatively less emphasis. Although KPI monitoring can be described as relatively systematic overall, the persistent difference between perceived importance and monitoring intensity suggests that performance measurement systems remain only partially formalized and still evolving toward greater analytical integration.

The findings further indicate that KPI monitoring practices are broadly similar across firms with different organizational characteristics. Neither strategic orientation nor respondents' involvement in strategic decision-making emerges as a statistically significant determinant of monitoring intensity in this sample, while differences related to fleet size represent the most visible descriptive source of variation. However, these findings should be interpreted with caution, as the relatively small sample size constrains statistical power and the ability to detect potentially meaningful relationships. This suggests that performance measurement maturity in nautical charter companies may evolve less as a function of structural or strategic differentiation and more as a response to shared operational challenges, although moderate variation associated with fleet size indicates that monitoring practices may become more structured as operational complexity increases.

By providing firm-level empirical evidence on the relationship between perceived KPI importance and monitoring behaviour in a fragmented tourism segment, the study contributes to a more practice-oriented understanding of how performance measurement systems are operationalized in nautical charter operations. The results suggest that while firms demonstrate awareness of a wide range of performance drivers, monitoring routines remain selectively embedded in managerial practice, particularly in areas supporting short-term operational coordination and revenue optimization.

From a managerial perspective, the findings highlight the importance of strengthening the systematic monitoring of customer value metrics and integrating longer-term financial efficiency indicators into performance management routines. Enhancing the analytical use of such indicators may support more forward-looking decision-making in areas such as pricing strategy, fleet investment planning, and customer relationship management.

The study is subject to several limitations. The relatively small sample size limits statistical power and constrains broader generalizability, particularly with respect to detecting subtle differences across organizational subgroups. The analysis relies on perceptual measures of KPI importance and monitoring intensity rather than objective performance data, and the cross-sectional design does not allow direct observation of how monitoring capabilities evolve over time. In addition, the research focuses on a single national context characterized by pronounced seasonality and specific market structures. Furthermore, the sequential measurement of KPI importance and monitoring within the same survey instrument may have introduced consistency bias or common method effects, which should be taken into account when interpreting the observed alignment between these constructs.

Future research could address these limitations by employing larger samples, comparative cross-country designs, and longitudinal approaches examining how KPI monitoring practices develop as firms grow, digitalize operations, and refine strategic priorities. Integrating perceptual measures with operational and financial performance data would further strengthen understanding of the role of KPI monitoring systems in supporting organizational effectiveness in nautical tourism. Overall, the study points to an emerging but still unevenly institutionalized performance measurement logic in nautical charter companies operating under shared operational constraints.

DECLARATION OF GENERATIVE AI AND AI-ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

In preparing this paper, the authors used ChatGPT (OpenAI) for language editing and text structuring support. Following the use of this tool, the authors reviewed and edited the content as necessary and take full responsibility for the content of the published article.

REFERENCES

Assaf, A. G., & Tsionas, M. G. (2019). A review of research into performance modeling in tourism research. *Annals of Tourism Research, 76*, 266–277. https://doi.org/10.1016/j.annals.2019.04.010

Baum, T., & Lundtorp, S. (Eds.). (2001). *Seasonality in tourism*. Routledge. https://doi.org/10.4324/9780080516806

Bititci, U. S., Garengo, P., Dörfler, V., & Nudurupati, S. (2012). Performance measurement: Challenges for tomorrow. *International Journal of Management Reviews, 14*(3), 305–327. https://doi.org/10.1111/j.1468-2370.2011.00318.x

Brnić, I., Jugović, A., & Aksentijević, D. (2024). Comparative analysis of chartering in nautical tourism in the Republic of Croatia and competitive countries of the European Union. Pomorstvo, 38(2), 188–199. https://doi.org/10.31217/p.38.2.2

Chen, C.-F., & Tsai, D. (2007). How destination image and evaluative factors affect behavioral intentions? *Tourism Management, 28*(4), 1115–1122. https://doi.org/10.1016/j.tourman.2006.07.007

Choi, E. Y. (2025). Key attributes driving yacht tourism: Exploring tourist preferences using conjoint analysis. Sustainability, 17(8), 3336. https://doi.org/10.3390/su17083336

Diakomihalis, M. N. (2007). Greek Maritime Tourism: Evolution, Structures and Prospects. *Research in Transportation Economics*, 21(1), 419-455.

Duro, J. A. (2016). Seasonality of hotel demand in the main Spanish provinces: Measurement and decomposition exercises. *Tourism Management, 52*, 52–63. https://doi.org/10.1016/j.tourman.2015.06.013

Espinet-Rius, J. M., García-Sánchez, A., & Gassiot-Melian, A. (2024). Seasonality in the cruise industry: Activity, prices and regionality. European Journal of Tourism Research, 38, 3810. https://doi.org/10.54055/ejtr.v38i.3481

Faerber, L. S., Hofmann, J., Ahrholdt, D., & Schnittka, O. (2021). When are visitors actually satisfied at visitor attractions? What we know from more than 30 years of research. Tourism Management, 84, Article 104284. https://doi.org/10.1016/j.tourman.2021.104284

Fähndrich, J. (2023). A literature review on the impact of digitalisation on management control. Journal of Management Control, 34(1), 9–65. https://doi.org/10.1007/s00187-022-00349-4

Garengo, P., & Bititci, U. (2007). Towards a contingency approach to performance measurement: An empirical study in Scottish SMEs. *International Journal of Operations & Production Management,* 27(8), 802–825. https://doi.org/10.1108/01443570710763787

Garengo, P., Biazzo, S., & Bititci, U. S. (2005). Performance measurement systems in SMEs: A review for a research agenda. *International Journal of Management Reviews, 7*(1), 25–47. https://doi.org/10.1111/j.1468-2370.2005.00105.x

Hodap, B., & Šimunić, M. (2025). A comparative analysis of automated and on-demand berth booking systems in nautical tourism ports. *ToSEE – Tourism in Southern and Eastern Europe*. https://doi.org/10.20867/tosee.08.5

Kaplan, R. S., & Norton, D. P. (1996). Using the balanced scorecard as a strategic management system. *Harvard Business Review, 74*(1), 75–85.

Luković, T., Piplica, D. & Hruška, D. (2021). Comparative performance analysis of the marina and charter service industries in Croatia. *Pomorstvo, 35* (2), 318-326. https://doi.org/10.31217/p.35.2.14

Mariani, M., Baggio, R., Fuchs, M., & Höepken, W. (2018). Business intelligence and big data in hospitality and tourism: A systematic literature review. *International Journal of Contemporary Hospitality Management*, 30(12), 3514–3554. https://doi.org/10.1108/IJCHM-07-2017-0461

Marušić, E., Šoda, J., & Krčum, M. (2020). The three-parameter classification model of seasonal fluctuations in the Croatian nautical port system. Sustainability, 12(12), 5079. https://doi.org/10.3390/su12125079

Nurmatov, R., Fernández-López, X. S., & Coto-Millán, P. P. (2021). Tourism, hospitality, and DEA: Where do we come from and where do we go? *International Journal of Hospitality Management, 95*, 102883. https://doi.org/10.1016/j.ijhm.2021.102883

Paker, N., & Gök, O. (2021). A comprehensive evaluation of yacht charter service concept: Influence of voyager-to-voyager interaction on service satisfaction. Journal of ETA Maritime Science, 9(3), 157–167. https://doi.org/10.4274/jems.2021.94834

Parmenter, D. (2015) Key Performance Indicators-Developing, Implementing, and Using Winning KPIs. 3rd Edition, Wiley, Hoboken. https://doi.org/10.1002/9781119019855

Russo, F., & Rindone, C. (2022). Aggregate models for planning nautical tourism: Basic, trend and seasonal demand. Case Studies on Transport Policy, 10(4), 1980–1987. https://doi.org/10.1016/j.cstp.2022.08.008

Rust, R. T., Lemon, K. N., & Zeithaml, V. A. (2004). Return on marketing: Using customer equity to focus marketing strategy. *Journal of Marketing*, 68(1), 109–127. https://doi.org/10.1509/jmkg.68.1.109.24030