Economic and Practical Aspects of the Use of Modern Management Methods in Hotels. A Case Study

Ľubica Šebová[1], Klára Chovanová[2], Radka Marčeková[3], Adrián Švec[4]

[1]Department of Tourism, Faculty of Commerce,
University of Economics in Bratislava, Slovak Republic
lubica.sebova@euba.sk
[2,3,4]Department of Tourism, Faculty of Economics,
Matej Bel University in Banská Bystrica, Slovak Republic
[2]klara.chovanova@umb.sk
[3]radka.marcekova@umb.sk
[4]adrian.svec@student.umb.sk

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Abstract: Modern management methods have been extensively studied in the hospitality sector; however, empirical evidence from Central European post-transition economies remains limited. Recent studies from the region have examined general performance measurement practices or process management orientation, yet systematic data on the implementation of specific management tools in hotels have been largely absent. This study addresses this gap by investigating the adoption of five modern management methods - Benchmarking, Balanced Scorecard, Total Quality Management, Six Sigma, and Lean - in Slovak hotels. Based on a questionnaire survey of 56 hotels across different categories, ownership types, and sizes, the study employs non-parametric statistical methods (Kruskal-Wallis and Mann-Whitney tests) using SPSS software. The findings reveal that 38% of surveyed hotels actively use at least one modern management method, 41% plan to implement such methods, while 21% neither use nor plan to adopt them. Benchmarking emerges as the most widely adopted method (30%), followed by Balanced Scorecard (19%) and TQM (17%), whereas Six Sigma adoption remains marginal (9%). Statistical analysis found no significant differences in adoption rates across hotel categories, ownership types, or size classifications ($p > 0.05$). The study provides the first systematic empirical evidence on management method adoption in Slovak hotels and offers practical implications for hospitality managers and policymakers in the region.

Keywords: management methods; hotel; Central Europe; benchmarking; balanced scorecard; TQM.

JEL Classification: L83; M10; M11; C00.

Introduction

Modern management methods have been extensively studied in the hospitality sector; however, empirical evidence from Central European post-transition economies remains limited. While methods such as Balanced Scorecard, Benchmarking, Total Quality Management, Six Sigma and Lean Management have become established tools for performance improvement in Western European and North American hotels (Elbanna *et al.* 2022; Gierczak-Korzeniowska and Gołembski, 2018), their adoption in Central and Eastern European (CEE) hospitality contexts has received considerably less scholarly attention.

Despite their theoretical and practical relevance, empirical evidence suggests that the adoption of modern management methods in hotels is uneven and context dependent. Previous studies indicate that while large or chain-affiliated hotels tend to adopt formalized management tools more frequently, small and independent hotels often rely on intuitive or informal management practices, citing constraints related to time, knowledge and financial resources (Elbanna *et al.* 2022; Knižka, 2015). Moreover, existing research has largely focused on individual methods or specific national contexts (Fatima and Elbanna, 2020; Perdomo-Verdecia *et al.* 2022; Alphun *et al.*

2023), leaving room for further investigation into how different management methods are used in practice and how hotel characteristics influence their adoption.

Recent research from the CEE region has begun to address this gap. Jugović, Štavljanin and Kostić Stanković (2022) examined performance measurement practices in CEE winter destination hotels, while Sebova, Svec and Chovanova (2025) investigated the role of business process management in Slovak hotels, finding that only 12% of establishments apply process-oriented approaches. However, these studies focused on general performance measurement or process management orientation rather than on the adoption of specific management tools. Systematic empirical data on the implementation of Benchmarking, Balanced Scorecard, TQM, Six Sigma or Lean methodologies in Slovak hotels have not been available until now.

In the Slovak context, the hotel industry is dominated by small and medium-sized, predominantly independent hotels. Understanding how these hotels perceive, implement or reject modern management methods is therefore essential for both managerial practice and policy support aimed at improving sectoral competitiveness.

Against this background, the aim of this paper is to analyze the current use of modern management methods in hotels in Slovakia and to assess their economic and practical implications for hotel performance. The study examines which methods are most frequently applied, which are planned for future implementation, what benefits hotels associate with their use and what barriers hinder their adoption. Furthermore, the paper investigates whether differences in adoption patterns can be observed according to hotel characteristics such as category, size and ownership structure.

By combining a literature-based conceptual framework with primary data obtained through a questionnaire survey, this study contributes to the existing field of hospitality management research in three ways. First, it provides updated empirical evidence on the adoption of modern management methods in Slovak hotels. Second, it offers a structured comparison of adoption patterns across different hotel profiles. Third, it translates empirical findings into application-oriented insights that may support hotel managers in selecting and implementing management methods aligned with their strategic objectives and organizational capabilities.

1. Literature Review

1.1 Modern Management Methods in a VUCA Environment

The contemporary business environment is increasingly characterized by volatility, uncertainty, complexity and ambiguity. Globalization has intensified competitive pressure and contributed to the emergence of new customer segments, while consumption patterns and customer expectations originating in advanced economies are gradually spreading to developing and post-transition countries, including Central and Eastern Europe (Szabo and Nemeth, 2017). At the same time, the rapid development of digital technologies has expanded the range of tools available for optimizing organizational processes and enhancing decision-making across industries (Peng *et al.* 2024).

The hospitality industry, and hotels in particular, operate in an environment that is highly sensitive to external shocks, demand fluctuations and changes in customer behavior. This makes the adoption of modern management methods especially relevant, as hotels must simultaneously manage service quality, cost efficiency, human resources and customer experience. The literature increasingly emphasizes the need for integrated management approaches that combine strategic orientation with operational excellence in order to enhance both economic performance and long-term competitiveness (Molina-Azorín *et al.* 2015; Tarí *et al.* 2022).

1.2 Fundamental Management Approaches and the Shift Towards Process Orientation

The shift from traditional functional management towards process-oriented approaches has been widely recognized as a response to the limitations of departmentalized organizational structures, including fragmentation of responsibilities, weak cross-functional coordination and a limited focus on customer value (Závadská and Korenková, 2017). Business Process Management (BPM) focuses on the identification, analysis, modelling and continuous improvement of organizational processes, with the primary objective of eliminating non-value-adding activities, optimizing resource utilization and enhancing overall performance (Hurzhyi *et al.* 2025; Jugović *et al.* 2022).

In the hospitality sector, where service delivery depends on the coordination of multiple interrelated activities, the process approach is particularly relevant. Empirical studies have confirmed that process and quality management contribute to cost reduction, improved service quality and stronger competitive advantage in hotels (Molina-Azorín *et al.* 2015; Tarí *et al.* 2022). Furthermore, recent research from the Central European hotel industry has demonstrated practical applications of BPM, including process modelling and reengineering aimed at improving direct sales and operational efficiency (Chalupa, Petříček and Ulrych, 2021; Sebova, Svec and Chovanova, 2025).

1.3 Contemporary Trends in Modern Management Methods

The growing interest in modern management methods reflects the increasing complexity of organizational environments and the need for continuous improvement and innovation. Management practices are no longer static; instead, they evolve in response to new challenges related to digitalization, sustainability and changing customer expectations. Managers are required not only to implement effective tools but also to continuously develop their competencies and align organizational performance with long-term strategic objectives (Záležáková and Vogl, 2015).

Among the most widely applied modern management methods are Balanced Scorecard, Benchmarking, ISO 9000 quality management systems, Kaizen, Lean Management, Six Sigma and Total Quality Management (TQM). These methods differ in their focus and scope, but they share a common objective: improving organizational performance through systematic measurement, analysis and continuous improvement.

The Balanced Scorecard (BSC), introduced by Kaplan and Norton in 1992, is a strategic performance management system based on four interconnected perspectives: financial, customer, internal business processes, and learning and growth. Unlike traditional performance measurement systems that focus primarily on financial indicators, the BSC provides a balanced view by integrating financial and non-financial measures. Its application enables organizations to translate strategy into measurable objectives, align operational activities with strategic goals and improve communication across the organization (Kumar *et al.* 2024). The successful implementation of BSC requires a clearly defined strategy, appropriate performance indicators and continuous monitoring of results (Rigby, 2017).

Benchmarking represents another widely used management method aimed at improving performance through systematic comparison with best practices within or outside the industry. Since the 1980s, benchmarking has been recognized as an effective tool for cost reduction, quality improvement and innovation (Madsen, Slåtten and Johanson, 2017). By identifying performance gaps and learning from industry leaders, organizations can enhance customer satisfaction, employee motivation and competitive advantage (Wang and Huang, 2021; Buhalis, 2022).

Quality management standards, particularly the ISO 9000 series, provide internationally recognized guidelines for ensuring consistent quality in products and services. These standards help organizations build customer trust by demonstrating their ability to meet defined quality requirements. ISO 9000 is applicable across industries, including hospitality, where service quality plays a crucial role in customer satisfaction and loyalty (Vohra *et al.* 2024).

Kaizen, originating from Japan, emphasizes continuous, incremental improvement involving all employees. Rather than relying on radical changes, Kaizen focuses on gradual enhancements of processes and work practices, fostering a culture of quality, innovation and employee engagement (Androniceanu *et al.* 2023). Similarly, Lean Management aims to eliminate waste and maximize value for the customer by optimizing processes and reducing inefficiencies. Originally developed in the Japanese automotive industry, Lean principles have been successfully applied in service sectors, including hotels, to improve efficiency and reduce costs (Perdomo-Verdecia, Sacristán-Díaz and Garrido-Vega, 2022)

Six Sigma is a data-driven methodology focused on reducing process variability and defects through statistical analysis and structured problem-solving, typically following the DMAIC cycle. Its implementation has been associated with improved quality, higher productivity and increased profitability, although it often requires significant organizational commitment and specialized expertise (Ferizi and Broum, 2024). Total Quality Management represents a holistic approach that integrates quality improvement across all organizational functions, aiming to enhance customer value, reduce waste and strengthen long-term competitiveness (Dale, Bamford and Van der Wiele, 2016).

1.4 Application of Modern Management Methods in Hotel Practice

Empirical studies have increasingly examined the application of modern management methods in the hotel industry and their impact on organizational performance. Elbanna *et al.* (2022) analyzed the use of the Balanced Scorecard in hotels operating in the United Arab Emirates and Qatar, focusing on the relationships between the four BSC perspectives. Their findings indicate that learning and growth indirectly influence financial performance through improvements in internal processes and customer satisfaction, highlighting the importance of non-financial indicators in achieving long-term success.

Benchmarking in hotel operations has been explored by Gierczak-Korzeniowska and Gołembski (2017) in a study of hotels in the Polish city of Poznań. The authors found that benchmarking was widely used, particularly to improve service quality, reduce costs and enhance competitive advantage. However, the study also emphasized

the need to integrate benchmarking into long-term strategic planning rather than using it solely for addressing operational issues.

Lean Management applications in hotels have demonstrated significant potential for cost savings and efficiency improvements. Rauch *et al.* (2016) present examples from Japanese and international hotel chains, illustrating how process optimization, workforce flexibility and waste reduction can lead to substantial operational benefits without compromising service quality. Similarly, Six Sigma implementation in the German hotel A-ROSA resulted in improved service quality, reduced complaints and enhanced profitability through systematic process analysis and improvement (Mitreva, Lazarovska and Filiposki, 2018).

In the Slovak context, Knižka (2015) and Slivkova (2025) investigated the use of modern management methods in hotels and identified a preference for relatively simple relationship-oriented practices, such as customer and supplier relationship management. More advanced methods, including Balanced Scorecard and Six Sigma, were largely absent, mainly due to limited knowledge, lack of experience, time constraints and insufficient managerial support. These findings suggest a significant gap between theoretical recommendations and practical implementation, highlighting the need for further research and tailored managerial guidance. Sebova, Svec and Chovanova (2025) found that only 12% of hotels in Slovakia apply process-oriented management, with the primary barriers being lack of information and resistance to change.

While these studies provide valuable insights into the application of modern management methods in hotels, empirical evidence from Central and Eastern European (CEE) post-transition economies remains limited. The present study addresses this gap by providing empirical evidence on the adoption of five modern management methods in Slovak hotels, analyzing adoption patterns across hotel categories, ownership types, and size classifications. By doing so, it contributes to the limited body of knowledge on management practices in CEE hospitality sectors and offers practical implications for hotel managers and policymakers seeking to enhance competitiveness in this economically significant industry.

2. Material and Methods

2.1 Research Focus, Aim and Research Questions

Building on the reviewed literature, this study focuses on the adoption of modern management methods in the hotel industry and on their economic and practical implications for hotel performance. The object of the research is the population of hotels operating in Slovakia. The overall aim is to assess the current level of implementation of selected modern management methods in Slovak hotels and based on the empirical evidence, to formulate practical recommendations for their more effective use with regard to the specific characteristics and strategic objectives of hotels.

To operationalize the aim, the study addresses the following research questions: RQ1: What are the key characteristics of the surveyed Slovak hotels (*e.g.*, size, category, type, and region)? RQ2: Which modern management methods are currently used by Slovak hotels and to what extent? RQ3: Are there differences in the implementation of modern management methods across hotels with different characteristics (*e.g.*, size and category)? RQ4: Which management methods appear most suitable for strengthening the effectiveness of hotel management given the specific context of Slovak hotels?

2.2 Research Design and Data Collection

The empirical part of the study is based on primary data collected through a questionnaire survey. A structured questionnaire was selected as the main data-collection instrument due to its suitability for obtaining comparable information across hotels of different categories, sizes and ownership or management structures. The survey was administered electronically and distributed via e-mail to hotels operating in Slovakia.

The questionnaire survey targeted hotels operating in Slovakia (category Hotels, motels, botels according to national statistics). The population size for 2024 was 747 hotels. The questionnaire was distributed by e-mail to 577 hotels, and 56 valid responses were obtained, resulting in a 9.7% response rate.

In the sample, small hotels (10–100 beds) dominated (71%), followed by medium-sized hotels (101–250 beds) (23%) and large hotels (>250 beds) (6%). By category, 3-star hotels were most represented (59%), followed by 4-star hotels (32%); 2-star and 5-star hotels accounted for 4% and 5%, respectively. Independent hotels represented 86% of respondents, while chain hotels accounted for 14%. The sample included hotels from all Slovak regions, with the highest shares from the Žilina region (21%) and the Banská Bystrica and Prešov regions (16% each).

To assess geographic representativeness, a chi-square goodness-of-fit test compared the regional distribution in the sample with the national regional distribution of hotels. The test result ($\chi^2 = 2.526$; $p = 0.903$)

indicates no significant deviation, suggesting that the sample can be considered geographically representative at the regional level.

2.3 Measures and Questionnaire Structure

The questionnaire was designed to capture the practical use of modern management methods as they are typically discussed in the hospitality management literature (*e.g.*, performance management systems, process and quality management approaches, continuous improvement tools, and relationship-oriented practices). The key measured constructs included:

Implementation status and scope: whether the hotel uses selected methods and the perceived depth of implementation (*e.g.*, basic vs. advanced use).

Method portfolio: identification of specific methods used (*e.g.*, Balanced Scorecard, benchmarking, ISO-based quality systems, Kaizen/continuous improvement, Lean tools, Six Sigma, Total Quality Management, and related practices).

Implementation horizon: approximate time since adoption (*e.g.*, recent implementation vs. longer-term use).

Perceived benefits: operational and economic outcomes (*e.g.*, improved process efficiency, reduced costs, improved service quality, customer satisfaction).

Perceived barriers: internal and external constraints (*e.g.*, limited knowledge or experience, time constraints, insufficient top management support, resistance to change, data availability).

Future plans: intended expansion or introduction of additional methods.

Where appropriate, response formats were structured to enable quantitative analysis (*e.g.*, categorical options, ordinal scales). This design allowed the study to compare patterns across hotel groups and to identify tendencies relevant to both economic and operational performance.

2.4 Data Processing and Analytical Procedures

Data were coded and cleaned in Microsoft Excel prior to analysis. The statistical analysis was conducted in SPSS, using descriptive statistics and comparative analysis. Descriptive methods were applied to summarize the prevalence of individual management methods and to describe perceived benefits and barriers. Comparative analysis was used to examine differences in implementation patterns across hotel segments.

Specifically, the study compares the use and intensity of modern management methods across hotels by category/class, type, and size. This approach reflects the assumptions supported by the literature - that adoption of management methods may vary depending on organizational resources, managerial focus and operational complexity. The analysis is therefore oriented toward identifying practically meaningful patterns that can inform tailored recommendations for hotels with different profiles.

2.5 Validity Considerations and Limitations

Several methodological considerations apply to the interpretation of results. First, the data are self-reported by hotel representatives, which may introduce subjective bias in the assessment of method implementation or perceived outcomes. Second, the sample is based on voluntary participation, which may result in selection effects (*e.g.*, hotels more interested in management innovation could be more likely to respond). Third, the study is cross-sectional and therefore captures adoption at a specific point in time; it does not allow causal inference regarding the impact of management methods on financial performance. Nevertheless, the research design is adequate for the study's purpose: to map current practices in Slovak hotels, identify differences across hotel segments, and develop evidence-based recommendations relevant for managerial decision-making.

3. Research Results

3.1 Sample Characteristics and Representativeness

The sample characteristics are summarized in Table 1. The survey yielded 56 valid responses from 577 contacted hotels (response rate: 9.7%).

Table 1. Sample characteristics (n = 56)

Characteristic	Category	N	%
Size (beds)	Small (10–100)	40	71
	Medium (101–250)	13	23
	Large (>250)	3	6
Category (stars)	2-star	2	4
	3-star	33	59
	4-star	18	32
	5-star	3	5
Type	Independent	48	86
	Chain	8	14

Source: Authors' survey, 2025.

A chi-square goodness-of-fit test confirmed geographic representativeness at the regional level ($\chi^2 = 2.526$; df = 7; p = 0.903).

3.2 Adoption Level of Modern Management Methods

Hotels were first asked whether they use modern management methods in their operations. Responses formed three adoption groups: active adopters (regular use), prospective adopters (not currently used but planned), and non-adopters (neither used nor planned). The distribution shows that 38% of hotels (n = 21) reported regular use, 41% (n = 23) planned implementation, and 21% (n = 12) neither used nor planned these methods.

3.3 Prospective Adopters: Drivers, Barriers, and Planned Methods

For hotels that planned future adoption (n = 23), the dominant motivations were operational and customer-oriented, led by increasing operational efficiency and improving service quality (Table 2, Panel A). The most frequently reported barriers were limited awareness of benefits, lack of financial resources, time constraints and uncertainty about return on investment (Table 2, Panel B). Regarding planned tools, prospective adopters most often indicated Total Quality Management and Benchmarking. while more technically demanding methods such as Six Sigma were planned only rarely (Table 2, Panel C). Overall, prospective adopters tended to favour broad, widely known approaches, while more resource-intensive methods were less preferred.

Table 2. Prospective adopters: motivations, barriers, and planned methods (n = 23)

Item	n	%
A. Motivations for future implementation		
Increasing operational efficiency	16	32
Improving service quality	16	32
Strengthening competitiveness	9	18
Lower implementation costs	5	10
Positive experience of other hotels	4	8
B. Barriers to implementation		
Limited awareness of benefits	13	20
Lack of financial resources	11	17
Time constraints	10	16
Uncertainty about ROI	10	16
Insufficient expertise	8	13

Item	n	%
Limited top-management support	6	9
Difficulty of practical application	4	6
Fear of failure	2	3
C. Methods planned for implementation		
Total Quality Management	12	36
Benchmarking	8	24
Balanced Scorecard	4	12
Kaizen	4	12
Lean Management	4	12
Six Sigma	1	3

Note: Multiple responses allowed. Source: Authors' survey, 2025.

3.4 Active Adopters: Methods, Benefits, and Barriers

Among hotels reporting regular use (n = 21), Benchmarking, Balanced Scorecard and Total Quality Management were the most frequently used methods (Table 3, Panel A). Approximately half of active adopters reported implementation within six months. The most frequently perceived benefits related to operational efficiency, competitiveness and service quality (Table 3, Panel B). Despite adoption, hotels still reported barriers, most notably time constraints, insufficient expertise and difficulty of practical application (Table 3, Panel C). This suggests that adoption does not eliminate capability constraints; rather, hotels may continue to experience operational and knowledge-related challenges during implementation and routinization.

Table 3. Active adopters: methods, benefits, and barriers (n = 21)

Item	n	%
A. Methods regularly used		
Benchmarking	14	30
Balanced Scorecard	9	19
Total Quality Management	8	17
Kaizen	6	13
Lean Management	6	13
Six Sigma	4	9
B. Perceived benefits		
Higher operational efficiency	16	21
Improved competitiveness	15	20
Improved service quality	15	20
Higher guest satisfaction	12	16
Cost reduction / resource optimisation	11	15
Better team and employee management	7	9
C. Perceived barriers		
Time constraints	10	19
Insufficient expertise	10	19
Difficulty of practical application	10	19

Item	n	%
Limited awareness of benefits	8	15
Uncertainty about ROI	7	13
Lack of financial resources	6	11
Limited top-management support	2	4
Fear of failure	1	2

Note: Multiple responses allowed. Source: Authors' survey, 2025.

3.5 Non-Adopters: Reasons for Non-Adoption

Hotels that neither used nor planned adoption (n = 12) most often cited insufficient expertise, limited awareness of benefits and uncertainty about ROI (Table 4). The pattern indicates constraints related to knowledge and perceived feasibility rather than a single dominant reason. When asked about interest in external training, the most frequent answer was negative, indicating relatively low immediate openness to capacity-building in this subgroup.

Table 4. Reasons for non-adoption (non-adopters, n = 12)

Reason for non-adoption	n	%
Insufficient expertise	5	17
Limited awareness of benefits	5	17
Uncertainty about ROI	5	17
Limited top-management support	4	14
Difficulty of practical application	4	14
Lack of financial resources	3	10
Time constraints	2	7
Fear of failure	1	3

Note: Multiple responses allowed. Source: Authors' survey, 2025.

3.6 Comparisons by Hotel Profile

3.6.1 Adoption Level by Category, Type, and Size

Table 5. Adoption level by hotel profile

Hotel profile	Active adopters	Prospective	Non-adopters
By category (stars)			
2-star	2	0	0
3-star	8	16	9
4-star	10	5	3
5-star	1	2	0
By type			
Chain	4	1	3
Independent	17	22	9
By size (beds)			
Small (10–100)	13	20	7
Medium (101–250)	7	3	3
Large (>250)	1	0	2

Source: Authors' survey, 2025.

Cross-tabulations indicate differences in adoption patterns by hotel category, type and size. For example, adoption was most common among 4-star hotels, whereas 3-star hotels most frequently reported plans to implement methods, alongside the highest share of non-adopters. Chain hotels more often reported active use than independent hotels, while independent hotels more frequently planned future adoption. By size, small hotels most often planned adoption, medium-sized hotels most frequently reported active use, and large hotels most frequently reported non-adoption; however, the number of large hotels was very small.

3.6.2 Statistical Tests for Adoption Differences

Non-parametric tests did not confirm statistically significant differences in adoption level. For hotel category, the Kruskal-Wallis test yielded p = 0.060; for hotel type, the Mann-Whitney test yielded p = 1.000; and for hotel size, the Kruskal-Wallis test yielded p = 0.444. Thus, while descriptive differences exist, they should be interpreted cautiously given sample size constraints.

Table 6. Statistical tests: Adoption level vs. hotel characteristics

Variable	Test	Test statistic	p-value
Category (stars)	Kruskal-Wallis	H = 7.42	0.060
Type (chain vs. independent)	Mann-Whitney	U = 192.00	1.000
Size (beds)	Kruskal-Wallis	H = 1.63	0.444

Note: All p-values > 0.05, indicating no statistically significant differences. Source: Authors' calculations, 2025.

3.6.3 Methods Used by Hotel Profile

The portfolio of methods also varied descriptively by category, type and size. Four-star hotels reported the most diversified portfolios (notably Balanced Scorecard, Benchmarking and TQM), while three-star hotels most frequently reported Benchmarking. Method portfolios were broadly similar across chain and independent hotels, with Benchmarking dominating both groups.

Table 7. Methods used by hotel profile

Profile	BSC	Bench.	Kaizen	Lean	Six Sig.	TQM
By category (stars)						
2-star	2	1	2	1	2	1
3-star	0	6	2	2	0	2
4-star	6	6	2	3	2	4
5-star	1	1	0	0	0	1
By type						
Chain	3	4	1	1	1	2
Independent	6	10	5	5	3	6
By size (beds)						
Small (10–100)	5	9	5	2	4	4
Medium (101–250)	3	5	1	4	0	4
Large (>250)	1	0	0	0	0	0

Note: BSC = Balanced Scorecard; Bench. = Benchmarking; Six Sig. = Six Sigma. Source: Authors' survey, 2025.

3.6.4 Association Tests (Cramer's V)

Dependence tests using Cramer's V indicated weak-to-moderate associations between adoption level and hotel characteristics (V ≈ 0.245–0.291), but none were statistically significant (all p > 0.05). The most plausible explanation is limited statistical power due to small cell counts in subgroup analyses.

Table 8. Cramer's V: Adoption level vs. hotel characteristics

Characteristic	Cramer's V	p-value
Category (stars)	0.291	0.147
Type (chain vs. independent)	0.245	0.186
Size (beds)	0.257	0.116

Note: All associations not statistically significant at α = 0.05. Source: Authors' calculations, 2025.

3.7 Summary of Key Empirical Findings

Overall, the results suggest a heterogeneous adoption landscape among Slovak hotels: 38% actively use modern management methods, 41% plan adoption, and 21% remain non-adopters. Benchmarking, Balanced Scorecard and TQM are the most prominent methods among active adopters, while prospective adopters primarily intend to introduce TQM and Benchmarking. Across adoption groups, the main perceived value relates to efficiency and service quality, whereas the most persistent barriers are time, knowledge, and uncertainty about returns. Descriptive differences by category, type and size exist, but they are not consistently supported by statistical significance, indicating that conclusions about predictors of adoption should remain cautious.

4. Discussion

The findings of this study confirm that the adoption of modern management methods in Slovak hotels remains uneven and strongly differentiated by managerial readiness rather than by structural hotel characteristics alone. While more than one third of surveyed hotels actively apply modern management methods, a substantial share remains at the planning stage or refrains from adoption altogether. This pattern is broadly consistent with earlier empirical evidence from hospitality research, which suggests that management innovation in hotels tends to diffuse gradually and selectively rather than uniformly across the sector (Knižka, 2015; Buhalis, 2022).

The dominance of Benchmarking, Balanced Scorecard and Total Quality Management among active adopters corresponds with findings reported by Elbanna *et al.* (2022), who emphasise the suitability of these methods for service-oriented environments where performance is multidimensional and customer experience is critical. Benchmarking, in particular, emerges as a 'gateway method' that is relatively easy to understand and apply, which supports conclusions by Gierczak-Korzeniowska and Gołembski (2017) that benchmarking is often the first formal management tool adopted by hotels seeking performance improvement.

In contrast, more analytically demanding approaches such as Six Sigma remain marginal, which aligns with prior research highlighting their higher requirements in terms of data availability, analytical expertise and organizational discipline (Mitreva *et al.* 2018; Ferizi and Broum, 2024). The low planned adoption of Six Sigma among prospective adopters further suggests that Slovak hotels prioritize managerial tools perceived as flexible and less resource-intensive, a pattern also observed in small and medium-sized hospitality enterprises in other European contexts (Rauch *et al.* 2016).

The study also reveals that perceived benefits and perceived barriers are remarkably similar across adoption groups. Operational efficiency, service quality and competitiveness are consistently identified as key expected outcomes, which is in line with the service management literature emphasizing process optimization and quality management as primary value drivers in hospitality (Dale *et al.* 2016; Rigby, 2017). At the same time, time constraints, lack of expertise and uncertainty about return on investment persist even among active adopters, indicating that implementation challenges do not end with initial adoption but accompany the entire lifecycle of management innovation. What is distinctive in the Slovak context, however, is that these barriers persist at comparable intensity across all three adoption groups, suggesting that even hotels that have already implemented management methods continue to face capability constraints - a pattern that has not been explicitly documented in prior hospitality research from Western European settings.

A finding that represents a novel contribution specific to the Slovak context is the absence of statistically significant differences in adoption levels by hotel category, size or ownership type. This contrasts with some international studies that report higher adoption rates among larger or chain-affiliated hotels (Elbanna *et al.* 2022). However, the absence of statistically significant relationships in this study may reflect the relatively small sample size and the dominance of small, independent hotels in the Slovak market structure. From an interpretative perspective, the results suggest that managerial attitudes, knowledge and perceived feasibility may be more decisive than structural characteristics alone, supporting a capability-based view of management innovation adoption. Future research with larger samples could further test this proposition.

Overall, the discussion highlights that modern management methods are not rejected by Slovak hotels; rather, their adoption is shaped by perceived complexity, knowledge gaps and risk considerations. This underscores the importance of context-sensitive implementation strategies that align method selection with hotel-specific goals, resources and maturity levels. The findings also point to the potential role of industry associations, educational institutions and policymakers in facilitating knowledge transfer and reducing perceived barriers to adoption. From a theoretical perspective, the study contributes to the hospitality management literature by providing the first systematic empirical evidence on the adoption of multiple modern management methods in a Central European post-transition hotel market. Unlike prior studies conducted predominantly in Gulf state hotels (Elbanna *et al.* 2022), Turkish hospitality settings (Alphun *et al.* 2023) or international hotel chains (Rauch *et al.* 2016), the present findings emerge from a market dominated by small independent hotels, where managerial capability and awareness appear to be more relevant predictors of adoption than structural characteristics such as size or chain affiliation.

Conclusions and Further Research

The aim of this paper was to analyze the use of modern management methods in Slovak hotels and to assess their economic and practical implications for hotel performance. Based on a questionnaire survey of 56 hotels, the study demonstrates that the adoption of modern management methods is present but uneven. Approximately 38% of hotels actively apply such methods, while 41% plan future implementation and 21% remain non-adopters.

Addressing the research questions, the study found that: (RQ1) Slovak hotels are predominantly small (71%), independent (86%), and 3-star (59%) establishments; (RQ2) 38% actively use modern management methods, with Benchmarking (30%), BSC (19%), and TQM (17%) being most common, while Six Sigma remains marginal (9%); (RQ3) no statistically significant differences were found across hotel categories, sizes, or ownership types ($p > 0.05$); and (RQ4) Benchmarking and TQM appear most suitable for Slovak hotels given their lower complexity and resource requirements.

From a managerial perspective, the findings imply that hotels should not approach modern management methods as isolated tools but rather as part of a gradual capability-building process. Managers are encouraged to select methods that correspond to their strategic priorities and organizational readiness, starting with low-complexity tools and progressively integrating more advanced approaches as experience and data availability increase. Policymakers and industry associations may support this process through targeted training programs, dissemination of good practices and demonstration projects tailored to small and independent hotels.

Several limitations must be acknowledged when interpreting the results. First, the sample size of 56 hotels, while adequate for exploratory analysis, restricts the statistical power of inferential tests and limits the generalizability of subgroup comparisons. Second, the study relies on self-reported data provided by hotel managers or owners, which may be influenced by subjective perceptions, social desirability bias, or incomplete knowledge of actual practices. Third, the cross-sectional design captures adoption status at one point in time and does not allow for analysis of dynamic changes, implementation trajectories, or causal relationships between method adoption and performance outcomes. Fourth, the study focused on method adoption rather than implementation depth or effectiveness, leaving questions about actual performance impacts for future research.

Future research could address these limitations by employing larger samples or longitudinal designs that track adoption processes and performance outcomes over time. Qualitative case studies could provide deeper insight into implementation mechanisms, managerial learning and organizational change associated with modern management methods. Additionally, further studies may explore the causal relationship between specific management methods and financial or non-financial performance indicators, as well as the role of digitalization and sustainability-oriented management practices in shaping future adoption patterns in the hotel industry.

Declarations

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Ľubica Šebová: Conceptualization, Methodology, Supervision, Writing – review and editing, Project administration, Funding acquisition
Klára Chovanová: Investigation, Data curation, Formal analysis, Writing – original draft, Visualization
Radka Marčeková: Conceptualization, Methodology, Writing – review and editing, Validation
Adrián Švec: Investigation, Data curation, Software, Formal analysis, Visualization

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References

Alphun, C., Sainaghi, R., & Turker, N. (2023). Market competition, balanced scorecard, and their effects on hotel organizational performance and manager's satisfaction. *International Journal of Hospitality & Tourism Administration, 25*(4), 793–816. https://doi.org/10.1080/15256480.2023.2169853

Androniceanu, A., Enache, I. C., Valter, E. N., & Raduica, F. F. (2023). Increasing energy efficiency based on the Kaizen approach. *Energies, 16*(4), Article 1930. https://doi.org/10.3390/en16041930

Buhalis, D. (2022). *Encyclopedia of tourism management and marketing*. Edward Elgar Publishing.

Chalupa, Š., Petříček, M., & Ulrych, Z. (2021). The use of business process management in hotel direct sales improvement. *TEM Journal, 10*(1), 215–220. https://doi.org/10.18421/TEM101-27

Dale, B. G., Bamford, D., & Van der Wiele, T. (2016). *Managing quality: An essential guide and resource gateway*. Wiley.

Elbanna, S., Kamel, H., Fatima, T., & Eid, R. (2022). An investigation of the causality links in the balanced scorecard: The case of the Gulf Cooperation Council hospitality industry. *Tourism Management Perspectives, 41*, 100934. https://doi.org/10.1016/j.tmp.2021.100934

Fatima, T., & Elbanna, S. (2020). Balanced scorecard in the hospitality and tourism industry: Past, present and future. *International Journal of Hospitality Management, 91*, 102656. https://doi.org/10.1016/j.ijhm.2020.102656

Ferizi, F., & Broum, T. (2024). Six Sigma: A review of literature. In *Proceedings of the International Conference* (pp. 121–130). University of West Bohemia.

Gierczak-Korzeniowska, B., & Gołembski, G. (2017). Benchmarking in the process of creating a culture of innovation in hotel companies. *Economics and Business Review, 3*(2), 101–113. https://doi.org/10.18559/ebr.2017.2.6

Hurzhyi, N., Rozovyk, I., Kharchenko, T., Kobets, S., & Komandrovska, V. (2025). The role of adaptive management in ensuring enterprises' sustainable development. *Theoretical and Practical Research in Economic Fields, 16*(1), 245–257. https://doi.org/10.14505/tpref.v16.1(33).20

Jugović, T., Štavljanin, V., & Kostić Stanković, M. (2022). Winter destinations hotels performance measurement practice – Evidence from CEE. *Economic Research-Ekonomska Istraživanja, 35*(1), 6304–6318. https://doi.org/10.1080/1331677X.2022.2048195

Knižka, M. (2015). Využívanie moderných manažérskych metód v hoteloch na Slovensku. *Ekonomika a spoločnosť, 16*(1), 47–57.

Madsen, D. Ø., Slåtten, K., & Johanson, D. (2017). The emergence and evolution of benchmarking: A management fashion perspective. *Benchmarking: An International Journal, 24*(3), 775–805. https://doi.org/10.1108/BIJ-05-2016-0077

Marquart-Pyatt, S., & Paxton, P. (2007). In principle and in practice: Learning political tolerance in Eastern and Western Europe. *Political Behavior, 29*(1), 89–113. https://doi.org/10.1007/s11109-006-9017-2

Mbulu, Y., & Kausar, D. (2025). Implementation of Sensory Marketing in Korean Concept Hotels. *Journal of Environmental Management and Tourism, 16*(1), 80 - 89. https://doi.org/10.14505/jemt.v16.1(77).06

Mitreva, E., Lazarovska, E., & Filiposki, O. (2018). Implementation of the Six Sigma methodology in A-ROSA Hotel. In *Economic and Social Development: 33rd International Scientific Conference on Economic and Social Development* (pp. 38–47).

Molina-Azorín, J. F., Tarí, J. J., Pereira-Moliner, J., López-Gamero, M. D., & Pertusa-Ortega, E. M. (2015). The effects of quality and environmental management on competitive advantage: A mixed methods study in the hotel industry. *Tourism Management, 50*, 41–54. https://doi.org/10.1016/j.tourman.2015.01.008

Peng, X., Zhu, J., Lee, S., Zhou, D., Song, W., & Ying, T. (2024). Digital transformation in the hospitality industry: A bibliometric review from 2000 to 2023. *International Journal of Hospitality Management, 120*, 103761. https://doi.org/10.1016/j.ijhm.2024.103761

Perdomo-Verdecia, V., Sacristán-Díaz, M., & Garrido-Vega, P. (2022). Lean management in hotels: Where we are and where we might go. *International Journal of Hospitality Management, 104*, 103250. https://doi.org/10.1016/j.ijhm.2022.103250

Rauch, E., Damian, A., Holzner, P., & Matt, D. T. (2016). Lean hospitality – Application of lean management methods in the hotel sector. *Procedia CIRP, 41*, 614–619. https://doi.org/10.1016/j.procir.2016.01.019

Rigby, D. K. (2017). *Management tools 2017*. Bain & Company.

Šebová, Ľ., Švec, A., & Chovanová, K. (2025). The role of business process management in hotel innovation and competitiveness. *Tourism and Hospitality, 6*(3), 122. https://doi.org/10.3390/tourhosp6030122

Slivková, E. (2025). *Moderné manažérske metódy v hoteloch na Slovensku*. Matej Bel University.

Statistical Office of the Slovak Republic. (2025a). Kapacity a výkony ubytovacích zariadení v Slovenskej republike – ročné údaje . https://datacube.statistics.sk/#!/view/sk/VBD_SLOVSTAT/cr2001rs/v_cr2001rs_00_00_00_sk

Statistical Office of the Slovak Republic. (2025b). Návštevnosť, tržby a kapacity UZ – okresy [cr3807qr]. https://datacube.statistics.sk/#!/view/sk/vbd_sk_win2/cr3807qr/v_cr3807qr_00_00_00_sk

Szabo, Ľ., & Nemeth, F. (2017). Frekvencia uplatňovania tradičných a moderných manažérskych metód, techník a nástrojov v podnikoch na Slovensku. *Ekonomika a manažment, 14*(2), 8–32.

Tarí, J. J., Pereira-Moliner, J., Molina-Azorín, J. F., & López-Gamero, M. D. (2022). The relationship between internalisation of a quality standard and customer results via employee and social results in the hotel industry. *Total Quality Management & Business Excellence, 33*(13–14), 1656–1673. https://doi.org/10.1080/14783363.2021.1996223

Vohra, N., Kumar, R., Rana, H., & Singh, A. P. (2024). Review on ISO 9000 series requirements in quality management systems. *International Journal of Pharmaceutical and Biological Science Archive, 12*(2), 30–36.

Wang, T.-C., & Huang, S.-L. (2021). Benchmarking tourist hotels performance for strategies development. *Current Issues in Tourism, 24*(3), 424–441. https://doi.org/10.1080/13683500.2020.1718065

Záležáková, E., & Vogl, M. (2015). Prehľad vybraných moderných manažérskych metód. *Manažment podnikania a vecí verejných, 10*(27), 55–62.

Závadská, Z., & Korenková, V. (2017). *Procesný manažment*. Wolters Kluwer.