

QUALITY MANAGEMENT PRINCIPLES IN HOTEL COMPANIES – A MANAGER’S PERSPECTIVE

Abstract

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Purpose – The article focuses on the implementation of Quality Management Principles in hotel companies. The purpose of this article is to identify the dimensions of a Quality Management System (QMS) that determine the implementation of Quality Management Principles from the managers’ perspective in medium-sized and large hotel companies in the Republic of Croatia.

Design – The primary research was conducted from May 21st to July 12th 2023. A total of 154 valid questionnaires were collected. The respondents were managers (CEOs, general managers and/or their deputies or assistants) of large and medium-sized hotel companies in Croatia.

Methodology – A survey method using a structured questionnaire was performed. Exploratory factor analysis (EFA) was performed to identify the dimensions that, according to the respondents, determine the implementation of QMS principles. The Kaiser – Meyer – Olkin (KMO) test was performed as a statistical measure to identify data suitability for factor analysis, and the result of the KMO test was greater than 0.6.

Findings – Exploratory factor analysis (EFA) was performed to determine the dimensions that, according to the respondents, best define the implementation of QMS principles. The exploratory factor analysis (EFA) identified three dimensions (factors) that according to the respondents’ perception, best describe and determine the implementation of QMS principles in hotel companies. The generated 3 factors explain 56.04% of the total variance. The reliability of each generated dimension was determined by calculating Cronbach’s alpha coefficient which was greater than 0.700.

Originality of the research – The results identify which factors are relevant for hotel managers in determining the implementation of the quality management principles in hotel companies. The results of the research can help hotel managers in creating guidelines for the efficient integration of QMSs into everyday business practice.

Keywords quality, quality management principles, hotel companies

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INTRODUCTION

Nowadays, to survive in a dynamic and competitive tourism market, it is necessary to provide high-quality service that meets or exceeds tourist expectations. To achieve that it is essential for hotel companies to implement a quality management system (QMS). The main purpose of QMS implementation is to identify and define the processes that allow a company to produce quality products and services rather than detecting defective products and services at the end of the production process. “From a corporate perspective the requirements for service quality are determined by the ability and / or willingness of a service provider to ensure a certain level of service quality” (Bruhn, 2023: 33).

For hotel companies, QMS implementation means achieving a competitive advantage and increasing the overall value of the hotel (Bruža and Rudančić, 2020, 73). QMS implementation in the hotel industry emphasizes the importance of continuous service quality improvement, which helps in achieving greater guest satisfaction, enables cost reduction, encourages teamwork, and affects the hotel company image. For hotel companies to be able to adapt to tourist demand and meet tourist expectations, the concept of quality needs to be implemented at all levels of hotel business. Therefore, this article aims to investigate whether, according to the respondents, QMS principles are implemented in large and medium-sized hotel companies in the Republic of Croatia. The purpose of the research is to identify the dimensions that the respondents perceive as being relevant for defining the implementation of QMS principles in hotel companies. The article consists of five thematically connected chapters. The chapter entitled “Quality Management Principles” provides definitions of quality and quality management systems and explains QMS principles according to ISO 9000:2015 standard. The sample and the methods used are presented within the framework of the research methodology. The results of descriptive and exploratory factor analysis are discussed in the chapter related to the research results. The final chapter puts forward concluding considerations and research limitations, as well as suggestions for future research.

1. QUALITY MANAGEMENT PRINCIPLES

The term “quality” can be defined as:

- Fitness for use (Juran, 201, 5)
- Conformance to requirements (Crosby, 2005, 61)
- Meeting customer expectations (Suarez 1992, 3, according to Deming, 1986).

There are two different perspectives in defining quality. From the producers' perspective, quality is defined using specific attributes of the product, while from the users' (consumers') perspective, quality represents the consumers' needs and wants (Shewfelt, 1999, 197).

“A Quality Management System (QMS) is the organised structure of responsibilities, activities, resources and events that together provide procedures and methods of implementation to ensure the capability of an organisation meets the quality requirements of the client” (Tricker, 2019, 11). Furthermore, a “Quality management system (QMS) is a formal system that documents the structure, processes, roles, responsibilities and procedures required to achieve effective quality management” (ASQ - American Society for Quality, 2022). One of the main reasons for implementing a QMS is the recognition and definition of processes that allow the production of quality products and services, and not the detection of defective products and services at the end of the production process. According to the above, it is possible to conclude that a QMS is a way of managing a hotel company in terms of quality, whereby guest satisfaction is enhanced by producing products and services of the expected quality. There is no unique quality management system. Instead, each company creates its own quality management system that is fully adapted to the business activity and industry. This means that each company independently chooses which tools, methods, systems and standards will be implemented. By implementing a QMS a company may achieve many benefits. “Findings indicate that attaining quality superiority produces the following organizational benefits: greater customer loyalty, market share improvements, higher stock prices, reduced service calls, higher prices, greater productivity” (Omachonu and Ross, 2004, 15). Benavides-Chicón and Ortega (2014) confirmed that the implementation of the TQM principles has a positive impact on hotel labour productivity. Claver Cortes et al. (2008) find out that the implementation of quality management practices in hotels have a positive impact on business performance. Al-Ababneh (2012) ascertained that the implementation of TQM principles in hotels have a positive impact on hotel performance. Mansour et al (2018) found out that the implementation of QM principles (ISO 9000) in F&B department in hotels in Alexandria have a positive impact on employee's performance. Motwani et al (1996) confirmed that the implementation of quality management has a positive impact on service quality in hotels.

Different approaches can be used in the QMS implementation process, the most commonly implemented are TQM (Total Quality Management), ISO 9001, Lean Management and Six Sigma.

The ISO 9000 series includes ISO 9000:2015 - Quality management systems: Fundamentals and vocabulary. The actual version of this standard defines the principles of a quality management system that have been studied in this research. In total, there are seven principles: customer focus, leadership, engagement of people, process approach, improvement, evidence-based decision making, and relationship management“(ISO 9001:2015).

Table 1: ISO 9000 principles

Customer focus	The primary focus of quality management is to meet customer requirements and to strive to exceed customer expectations.
Leadership	Leaders at all levels establish unity of purpose and direction and create conditions in which people are engaged in achieving the organization's quality objectives
Engagement of people	Competent, empowered and engaged people at all levels throughout the organization are essential to enhance its capability to create and deliver value
Process approach	Consistent and predictable results are achieved more effectively and efficiently when activities are understood and managed as interrelated processes that function as a coherent system
Improvement	Successful organizations have an ongoing focus on improvement
Evidence-based decision making	Decisions based on the analysis and evaluation of data and information are more likely to produce desired results.
Relationship management	Measure performance and provide performance feedback to interested parties, as appropriate, to enhance improvement initiatives For sustained success, an organization manages its relationships with interested parties, such as suppliers.

Source: ISO 9000 - Quality management principles (iso.org)

2. METHODOLOGY

The survey was conducted from May 21st to June 12th, 2023, through an online questionnaire. (Periša, 2024) The questionnaire was based on previously developed and tested measurement instruments and scales. The questions were taken from several sources and the questionnaire was tested in a pilot study. The final questionnaire that was used to conduct the empirical research consisted of a total of 60 questions and was distributed through Google Forms. It was structured in a way that all questions were mandatory. A total of 154 completed questionnaires were collected (or 41.17% of the total population). The research included hotel companies in the Republic of Croatia that met the following two requirements:

1. They are classified as large and medium-sized hotel companies, according to the Accounting Act (Official Gazette 114/22), based on total assets, total income and average number of employees.
2. They belong to Group 55.10 – Hotels and similar accommodation, according to the National Classification of Activities.

There are 16 large hotel companies and 63 medium-sized hotel companies in Croatia, making a total of 79 hotel companies (Croatian Chamber of Economy). Large and medium-sized hotel companies were chosen because in 2022 together they achieved the largest share of total revenues among all companies included in Group 55.10 according to the National Classification of Activities (65.15%).

The minimum required sample size was calculated using GPower software (118 respondents). Respondents were managers (directors or CEOs of large and medium-sized hotel companies and their assistants or deputies, as well as general managers and their assistants or deputies who manage accommodation facilities operating as part of large and medium-sized hotel companies in Croatia). The size of a sample is one of the essential prerequisites for the successful implementation of factor analysis. As the results of the conducted empirical research results will be analysed using exploratory factor analysis: It is important that the sample size is appropriate for the chosen methodology.

Kline (1979: 40) recommends a minimum of 100 respondents in order to conduct a factor analysis. The same conclusion was reached by Arrindell and Van der Ende (1985: 166), who indicate that factor analysis as a method is not applicable to a sample of less than 100 respondents. Hutcheson and Sofroniou (1999) recommend at least 150 - 300 respondents, and Hatcher (1994) suggests that the number of respondents should be five times the number of variables being analysed.

When analysing the collected questionnaires, univariate and multivariate statistical analyses were adopted. Univariate statistical analysis was performed to identify the descriptive characteristics of the sample. Multivariate statistical analysis (exploratory factor analysis) was performed to identify the dimensions (factors) of the constructs that, according to the respondents' perception, determine the application of QMS principles in hotel companies.

“Exploratory factor analysis (EFA) attempts to identify the smallest number of hypothetical constructs (also known as factors or dimensions) that identify the common factors that explain the order and structure among measured variables” (Watkinson, 2018, 219-220). “The goals of factor analysis are to determine the number of fundamental influences underlying a domain of variables, to quantify the extent to which each variable is associated with the factors, and to obtain information about their nature from observing which factors contribute to performance on which variables” (Cudeck, 2000, 265). In order to determine the total number of generated factors or dimensions, it is necessary to fulfil the following prerequisites (Hair et al., 1998, 104):

- the eigenvalue should be greater than 1
- the total variance should be greater than 0.50
- the significance of the factor coefficient should be greater than 0.05.

Statistical data processing was performed using SPSS 24 statistical software. Based on the research conducted, the following section presents the results of the research.

For the purpose of this research QMS principles according to ISO 9000:2015 have been analysed, and those principles are: customer focus, leadership, engagement of people, process approach, improvement, evidence-based decision making, and relationship management (ISO 9000:2015). The research that has been conducted by Sila and Ebrahimpour (2003) ascertained the two TQM principles that are the most integrated once in hotels, and these principles are leadership and customer focus. Al-Ababneh (2012) found out that the implementation of quality management system (TQM) principles has a positive impact on hotel performance. The highest scores were for customer focus, quality planning, product and service design, leadership support, continuous improvement, and education and training. Amin et al. (2017) detected 7 critical factors in the implementation of TQM: leadership, continuous improvement, supplier quality, employee satisfaction, customer focus, training and education and process management.

RESULTS

Below are presented the results of the research using descriptive statistics (arithmetic mean (\bar{x}) and standard deviation (Sd)).

Table 2: Respondents' perception of the implementation of QMS principles - descriptive statistics

Variables	\bar{x}	Sd
Top management clearly defines quality goals	4.47	0.87
Top management is responsible for quality	3.97	0.89
Employees are included in education and training about quality management systems	3.31	1.15
Employees are encouraged to be involved in planning and decision-making	2.52	1.27
Continuous employee education and training are important	4.71	0.45
Employees are included in education and training that develop their competencies	4.49	0.56
The training and education plan is constantly improved in order to be in line with the needs of the company	4.17	0.84

Variables	\bar{x}	Sd
Employees are familiar with the quality policy	3.88	0.78
Training for employees is useful and aligned with the business strategy	4.01	0.85
At least once a year, employees receive feedback from their superiors about the quality of their work	4.50	0.74
Employees are encouraged to suggest more efficient ways of doing work	4.30	0.71
Awareness of quality is raising continuously among employees	4.15	0.69
Present and future wishes of guests are known	4.35	0.59
When creating new products / services, we are guided by the wishes and needs of our guests	4.64	0.57
The most important thing for us is to satisfy our guests and fulfil their expectations	4.77	0.43
The offering of the accommodation facility is in accordance with the needs and wishes of the guests	4.31	0.71
Official working procedures and SOPs are available	4.68	0.56
Error prevention is part of the organizational culture	4.01	0.82
Data on business results are collected regularly	4.75	0.50
Key performance indicators are always available for analysis	4.54	0.65
Strategic planning is carried out	4.36	0.79
In the decision-making process, I give priority to those decisions that result in an increase in quality	3.91	0.89
Efforts are made to build long-term business cooperation with suppliers	4.71	0.58
There is a unified procurement system with suppliers	3.50	1.35

Source: authors' research

According to the results presented in the table above, on average the respondents' perceptions of the implementation of QMS principles range from 2.52 (Employees are encouraged to be involved in planning and decision-making) to 4.77 (The most important thing for us is to satisfy our guests and fulfil their expectations). On average, the respondents agree with 23 of the 24 statements made, and disagree with only 1 statement made, namely that employees are encouraged to be involved in planning and decision-making (2.52). On average, the respondents expressed the greatest agreement with the following statements:

- The most important thing for us is to satisfy our guests and fulfil their expectations (4.77)
- Data on business results are collected regularly (4.75)
- It is important to continuously educate and improve employees (4, 71).

The standard deviation in most variables is less than 1, which means that the data are distributed in a narrower range of values compared with the arithmetic mean.

Exploratory factor analysis generated those factors (dimensions) that, according to the respondents' perceptions, identify and determine the implementation of QMS principles in hotel companies. The Kaiser-Meyer-Olkin test (KMO) and Bartlett's test were performed to determine whether the data are suitable for factor analysis. The value of the KMO test is 0.800, and the result of Bartlett's test is significant (sig. = 0.000), which indicates a strong correlation between the items, proving that the obtained data are adequate for the application of factor analysis.

Table 3: **Kaiser-Meyer-Olkin test (KMO) and Bartlett's test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.800
Approx. Chi-Square	618.342
Bartlett's Test of Sphericity	df
	78
	Sig.
	.000

Source: authors research

Table 4: Total variance analysis of the generated factors (quality management system)

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadingsa
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	4.413	33.947	33.947	4.413	33.947	33.947	3.610
2	1.598	12.291	46.238	1.598	12.291	46.238	2.939
3	1.275	9.808	56.046	1.275	9.808	56.046	2.960
4	.952	7.323	63.370				
5	.862	6.627	69.997				
6	.759	5.837	75.834				
7	.684	5.261	81.095				
8	.532	4.091	85.186				
9	.476	3.664	88.851				
10	.455	3.498	92.349				
11	.418	3.216	95.565				
12	.307	2.362	97.927				
13	.269	2.073	100.000				

Extraction Method: Principal Component Analysis.

Source: authors' research

Exploratory factor analysis was performed to identify the dimensions (factors) of according to the respondents' perceptions of the implementation of QMS principles in hotel companies. The analysis generated a total of 3 dimensions (factors). The final number of factors is based on the eigenvalue, which should be greater than 1 (Factor 1 = 4.413, Factor 2 = 1.598, Factor 3 = 1.275). The generated dimensions (factors) explain 56.04% of the total variance.

Table 5: Factor structure matrix

	Factors		
	1	2	3
V26 - Data on business results are collected regularly	.818		
V27 - Key performance indicators are always available for analysis	.777		
V17 - In the decision-making process, I give priority to those decisions that result in an increase in quality	.670		
V25 - Error prevention is part of the organizational culture	.652		
V24 - Top management is responsible for quality	.633		
V37 - The training and education plan is constantly improved in order to be in line with the needs of the company		.869	
V38 - Employees are included in training that develop their competencies		.845	
V39 - Training for employees is useful and in line with the business strategy		.526	
V18 - Employees receive feedback on the quality of their work at least once a year		.486	
V21 - Official operating procedures and SOPs are available		.429	
V30 - Employees are included in education about the quality management system			.833
V29 - Employees are familiar with the quality policy			.814
V28 - Awareness of quality among employees is continuously raised			.786

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

Source: authors' research

According to the factor structure matrix, it is evident that a total of 3 dimensions or factors were extracted. Each generated factor consists of several questions, and all questions within each factor are grouped based on the calculation of the correlation coefficient between them. In this case, a total of 13 questions are grouped into a total of 3 extracted dimensions (factors). The obtained dimensions are as follows:

1. Factor 1 - Leadership focused on evidence-based decision-making (consists of a total of 5 questions: V26, V27, V17, V25 and V24)
2. Factor 2 - Engagement of people (consists of a total of 5 questions: V37, V38, V39, V18 and V21)
3. Factor 3 - Quality improvement (consists of a total of 3 questions: V30, V29 and V28).

Factor 1, Leadership focused on evidence-based decision-making, combines questions from three principles: leadership, process approach to management, and fact-based decision-making. Factor 2, Engagement of people, combines questions from three principles: people’s involvement, process approach to management, and continuous improvement. Factor 3, Quality improvement, combines questions from two principles: people’s involvement and continuous improvement. The reliability of each generated dimension was determined by calculating Cronbach’s alpha coefficient.

Table 6: Cronbach’s alpha coefficient – reliability of dimensions

Factor	Cronbach’s Alpha	N of Items
1	,743	5
2	,710	5
3	,752	3

Source: authors’ research

The results of the conducted research can be compared with the study of Al-Ababneh (2012) that used the method of the exploratory factor analysis and determined which of the principles and practices of the quality management system (TQM) (Top Management Commitment, Leadership Support, Quality Department, Supplier Relationship, Quality Data & Reporting, Product and Service Design, Employee Management, Process Management, Education and Training, Continuous Improvement, Customer Focus Quality Planning) are most applied in hotels and how such implementation impacts hotel performance. Al-Ababneh (2012) ascertained that customer focus, quality planning, product and service design, leadership support, continuous improvement and education and training have the highest score while the lowest score was detected for quality data and reporting. The results of the author’s research is partially in line with the results of this study confirming that leadership, customer focus and continuous improvement are crucial for a successful implementation of QMS principles in hotels. The author’s research confirmed that process approach to management and people’s involvement are also important for a successful implementation of QMS in hotels. Furthermore, the results of the conducted research can be compared with the research of Sila and Ebrahimpour (2003) since both researches pointed out the leadership as one of the most important quality management principles for a successful implementation on quality management system in hotel companies.

CONCLUSION

Based on the results of the conducted research, it is evident that hotel managers are familiar with QMS principles (leadership, process approach, evidence-based decision making, engagement of people, continuous improvements). The dimensions or factors that, according to the respondents’ perceptions, determine the implementation of QMS principles in large and medium-sized hotel companies in Croatia were identified by performing exploratory factor analysis. The generated dimensions or factors are as follows: “Leadership focused on evidence-based decision-making” (combines three QMS principles: leadership, process approach, evidence-based decision making), “Engagement of people” (combines three QMS principles: engagement of people, process approach, and continuous improvement) and “Quality improvement” (combines two QMS principles: engagement of people and continuous improvement). When interpreting the results of the conducted research, certain limitations should be taken into account. The research does not cover small and micro sized hotel companies, and not all management levels (middle and lower) are covered. These limitations provide suggestions for future research – namely, future studies should seek to include all management levels, and research should be extended to include hotel companies of all sizes in Croatia.

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