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Evaluating the Performance of ISO 9001 Quality Management Systems: A Framework to Support Organizational Decision-Making

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Abstract: This paper aims to contribute to a better conceptualization of quality management system (QMS) performance evaluation within the context of ISO 9001 certification. Despite the widespread adoption of ISO 9001 standard across organizations worldwide, approaches to QMS performance assessment remain insufficiently studied and lack methodological clarity. To address this gap, the paper proposes a generic framework designed to support a more coherent evaluation of QMS performance in line with ISO 9001 requirements. The proposed framework represents the original main contribution of the study, integrating insights from the literature into a structured approach that can facilitate both academic research and organizational decision-making regarding ISO 9001-based QMS performance.

Keywords: performance of quality system; evaluation of quality system performance; models for the evaluation of quality system performance; key performance indicators

JEL Classification: L21, L53, M10

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1. Introduction

The implementation of quality management systems (QMSs) has become a global practice worldwide, providing a systematic and consistent approach to quality in organizations. There are several models for quality systems, the widely recognized being ISO 9001 (2015), applied in all fields of activity. ISO 9001 is grounded in key principles such as customer focus, leadership, engagement of people, improvement, process approach, evidence-based decision making, and relationship management, which form the foundation of modern management.

Implementing a QMS requires organizations to implement processes, structures, and methods that support quality planning, execution, control, and continuous improvement. This systematic approach helps improve organizational performance, resulting in cost reduction, increased customer satisfaction, and a stronger competitive position.

As many publications show, the implementation of an ISO 9001-based QMS in organizations does not always produce the expected results. A bibliometric analysis by Fonseca et al. (2017), covering 259 journal articles published between 1998 and 2017, found that although ISO 9001 QMS certification generally brings benefits, the results vary significantly. These variations depend on the organization's reasons for seeking certification (internal and external) and how the standard is understood and applied. Together, these factors directly influence QMS performance.

The positive relationship between QMS performance and organizational outcomes is illustrated by many recent studies, which provide empirical evidence mainly based on questionnaire-based surveys (Črv & Markič, 2021; Khan et al., 2022; Bakhtiar et al., 2022; Rathilall, Ramchander & Singh 2024). In these studies, organizational performance is generally measured through economic results, while QMS performance is often assessed using respondents' subjective perceptions of quality system elements such as principles and specific techniques rather than objective indicators.

The present paper aims to contribute to a better conceptualization of QMS performance evaluation in the context of ISO 9001 certification. Its primary objective is to develop a methodological framework aligned with the requirements of the ISO 9001 standard. Addressing this topic is justified by the fact that QMS performance evaluation is explicitly addressed as a distinct clause in the latest edition of the ISO 9001 standard (2015).

Given its overall purpose, the paper presents: 1) a conceptual clarification on the QMS performance in the context of ISO 9001-based QMS; 2) a review of models for the QMS performance evaluation currently applied or proposed in academic papers; 3) a methodological framework for the QMS performance evaluation; and 4) conclusion.

The proposed methodological framework constitutes the novelty of this study, synthesizing insights from the literature into a structured approach that supports both academic research and decision-making in ISO 9001-based QMS performance evaluation.

2. QMS Performance - Conceptual Clarification

This section aims to clarify the meaning given to the concept of QMS performance by ISO 9001, and the connection with other concepts related to the QMS features, namely conformity, effectiveness, and efficiency.

As a previous study highlights, most organizational managers, including quality professionals, do not fully understand these notions (Nenadal, 2011). Moreover, they are confusingly used in some publications, particularly the concepts of QMS performance and effectiveness (Zajarskas & Ruževičius, 2010; Trachenko et al., 2020).

The ISO 9000 (2015) definitions of these terms are summarized in Table 1, which also presents ways for analyzing QMS conformity, effectiveness, performance, and efficiency.

According to ISO 9000 (2015), the term performance means “measurable result”, and the QMS performance measures how well the QMS is, its maturity. Initially the evaluation of QMS performance was associated to achieving excellence, which corresponds to a high performance management system, ensuring the satisfaction of client requirements and advantages for people, organization, and society (Popescu, 2013, p.104). There are several well-established models for evaluating the performance of an organization's management system, known as models of excellence (presented in section 3).

Table 1. Concepts of Conformity, Effectiveness, Performance, and Efficiency: ISO 9000 Definitions and Ways of their Evaluation/Assessment.

ISO 9000 Definitions	QMS Analysis benchmarks	Ways of QMS assessment
Conformity: “fulfillment of a requirement”;	ISO 9001 requirement and other external and internal regulations (laws, standards, procedures, etc.).	Quality internal audits
Effectiveness: “extent to which planned activities and results are achieved”;	Quality objectives associated to products, processes, as well as the internal and external requirements.	Management review
Performance: “measurable result”;	Levels of quality performance of products, processes, and systems.	Self-assessment based on models
Efficiency: “relationship between the results achieved and the resources used”.	Measures of the system performance related to time, resources, and finances used.	Analysis of quality costs

The ISO 9001 standard includes a dedicated chapter (9) on performance evaluation, in which it is specified: “the organization must evaluate the performance and effectiveness of the QMS”. This clause requires organizations to define and implement how they measure, analyze, and evaluate the performance to ensure their QMS is effective. The standard identified several key processes that support performance evaluation, namely client satisfaction, analysis & evaluation, internal audit, and management review.

As can be seen, the ISO 9001 requirement for the evaluation of QMS performance is connected with the assessment of QMS effectiveness, which defines the system’s ability to achieve planned actions and fulfill established quality objectives. The assessment of QMS effectiveness constitutes a key element of the ISO 9001-based management systems, and is primarily conducted through periodic management reviews by top management. Clause 9.3.2 of ISO 9001 specifies a minimum set of inputs that top management must review, as follows: customer satisfaction, achievement of quality objectives, product conformity and process performance, nonconformities and corrective actions, monitoring and measurement results, audit findings, and the performance of external providers. The outcomes of the management review are documented in a report, which serves as the basis for the organization’s quality improvement planning.

Clarifying the concepts of QMS performance and effectiveness also requires establishing their relationship with the other two concepts, namely conformity and efficiency. QMS conformity refers to the fulfillment of ISO 9001 requirements and applicable external and internal regulations, and is systematically assessed through internal audits. Conformity is a component of QMS performance evaluation and, respectively, effectiveness analysis, which are more complex processes. These processes may also consider QMS efficiency, which reflects the relationship between achieved results and the resources used, and is typically assessed through the analysis of quality-related costs.

Concluding, as defined by ISO 9001, conformity, effectiveness, performance, and efficiency represent distinct yet interrelated concepts (Figure 1). The assessment of QMS conformity and effectiveness constitutes fundamental requirements: in their absence, the other QMS features become irrelevant. The evaluation of QMS performance and efficiency represents more advanced requirements, generally linked to achieving organizational excellence. However, although ISO 9001 is a basic QMS model, it explicitly requires organizations to evaluate QMS performance, in addition to effectiveness. In our view, the distinction between QMS effectiveness and QMS performance, and their relationship, are not clearly articulated in the ISO 9001 standard.

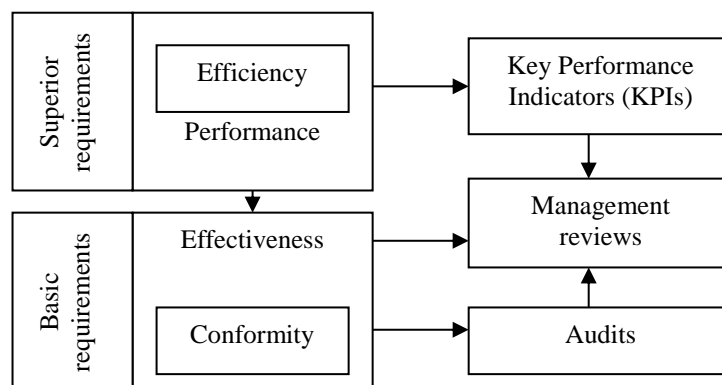


Figure 1. Relationships between QMS Characteristics (Original Scheme).

As stated above, QMS effectiveness in ISO 9001-certified organizations is regularly assessed through the Management Review process, using defined criteria and indicators. This assessment is primary descriptive and, on its own, does not fully reflect QMS performance. A robust performance evaluation requires quantitative indicators to measure both the current level and the evolution of QMS performance/maturity, while also considering best practices and benchmarks against other organizations.

Performance evaluation is therefore essential for tracking QMS progress and providing useful information for improvement decisions. This requires appropriate tools and relevant performance measures, commonly known as key performance indicators (KPIs), which often include efficiency-related indicators. The results of performance evaluation can then be used as input to Management Review, strengthening continuous improvement and enhancing QMS effectiveness. Without clearly defined KPIs, quality improvement efforts often lack focus, making their impact difficult to assess.

The next section of the paper addresses the current state of QMS performance evaluation in ISO 9001-certified organizations and reviews existing and proposed models in this area.

3. Current State Regarding the Evaluation of Quality System Performance, Existing and Proposed Models

The objective of this section is to analyze, based on literature, how QMS performance is evaluated in ISO 9001-certified organizations (1) and, respectively, the existing and proposed models in this field (2).

1) There are few works directly related to the process and tools used for the evaluation of QMS performance in ISO 9001-certified organizations.

The paper of Trachenko et al. (2020) shows that enterprises providing engineering services in Ukraine lack adequate methodological tools for the systematic evaluation of QMS performance. Lordsleem, Duarte, & Barkokébas (2010) investigate QMS performance evaluation in Brazilian construction companies. The study conducted on a sample of 20 ISO 9001-certified companies identified a set of 173 indicators across 10 different processes, and also difficulties in selecting indicators, setting targets, and using them effectively. The QMS performance evaluation process has

also been addressed in studies examining the relationship between ISO 9001–based QMSs and organizational performance. For example, a systematic literature review by Sfreddo et al. (2021), covering studies published between 2000 and 2017, identifies the lack of a consolidated model for evaluating management system maturity and the limited consideration given to process management-related aspects.

2) The literature presents a variety of models and recommendations for evaluating QMS performance. In the following review, the publications are grouped based on their assessment models, into three categories: recognized excellence models (a), and proposed models based on a single criterion (b) and, respectively, multiple criteria-based models (c).

a) Models of excellence

The category of excellence models include several models, the next being the most known and applicable in all fields of activities: the self-assessment model from the ISO 9004 (2018); EFQM (European Foundation of Quality Management) excellence model (2025); and Baldrige Performance Excellence Framework (2023).

Each of these models has its own methodology, including specific criteria and a scoring system to measure performance (Table 2). ISO 9004 focuses on QMS processes, while EFQM and Baldrige models refer both to processes and results. But all excellence models measure the organization’s performance from a broad managerial perspective, extending beyond the ISO 9001 requirements.

Table 2. Models of Excellence, Key Criteria

Model/ First edition	Key Criteria	Instrument/Index
ISO 9004 (2018) Quality management - Quality of an organization - Guidance to achieve sustained success/ 2000	Leadership (mission, vision, culture); Context (internal/external issues); Process management; Resource management (people, knowledge, infrastructure, etc.); Systematic improvement.	Self-assessment maturity model/ Level 1÷5
EFQM (European Foundation of Quality Management/ Model (2025)/ 1992	Direction (Purpose, Vision & Strategy; Organizational culture & Leadership); Execution (Engaging Stakeholders; Creating Sustainable Value; Driving Performance & Transformation); Results (Stakeholder Perceptions; Strategic & Operational Performances).	Self-assessment model/ 0÷1000 scoring

Baldrige Performance Excellence Framework (2023)/ 1987	Processes (Leadership; Strategy; Customers; Measurement, Analysis, and Knowledge Management; Workforce; Operations); and Results.	Self-assessment model
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b) Publications on the QMS performance evaluation based on a single-criterion model.

Muhammad et al (2019) analyze the QMS level in small and medium enterprises from the perspective of customer satisfaction, and conclude that customers easily rely on an enterprise if it has implemented QMS successfully and practicing effectively. Walawalkar, Swamy, & Kuttimarks (2024) plaid for a quantitative approach of internal audit to measure the QMS performance, using numerical data and statistical approach. Similarly, Smith, Bester, and Moll (2014) propose the evaluation based on internal audit considering the identified nonconformities, which are graded according to their potential consequences for the business and severity.

c) More complex models for evaluation of QMS performance.

Zajarskas and Ruževičius (2010) state that no single theory can fully assess the effectiveness of an enterprise's QMS. They propose an integrated evaluation model comprising subsystems for quality-related costs, process efficacy, quality culture, and audit results. This model is aligned with ISO 9004 requirements that are not explicitly addressed in ISO 9001, and includes a composite index to measure overall QMS effectiveness and performance.

Trachenko et al (2020) identify four main integrated approaches to QMS assessment: evaluating QMS efficiency based on technical, economic, and social effects; analyzing the causes and correlations between QMS implementation and other organizational index; measuring QMS performance through consumer satisfaction indices; and applying Balanced Scorecard model (Kaplan & Norton, 1996). The authors conclude that the Balanced Scorecard is the most effective approach, integrating financial indicators, consumer satisfaction; internal organization; and training and staff development.

Several papers underscore the importance of assessing the effectiveness and performance of ISO-9001-based QMS processes. For instance, Valdokhina (2019) proposes a model for the poultry breeding enterprise that supposes the evaluation of QMS processes by means of expert scoring of efficiency. The model evaluates the performance in percentages for process category (management, basic, and support)

and for the QMS as a whole. It also analyzes the competitiveness of products on the market. Similarly, Anggraeni, Wella, and Suryasari (2022) develop a QMS performance evaluation model for start-ups, with criteria aligned with ISO 9001 clauses 4-10, assessed on a five-level scale through internal survey and interviews with CEO-level participants. More recently, Balon, Dziadkowiec, and Niewczas-Dobrowolska (2024) emphasize in their paper the need to define appropriate KPIs for QMS performance evaluation and propose a model based on 41 KPIs for a medium-sized manufacturing company operating in Poland.

Concluding, the literature-based analysis highlights that the evaluation of QMS performance grounded in the ISO 9001 standard remains an insufficiently studied area. Only a limited number of works focuses explicitly on the processes and tools used to assess QMS performance in ISO 9001-certified organizations: these reveal significant shortcomings, such as the absence of structured methodological instruments, difficulties in defining relevant indicators, and limited managerial use of performance evaluation results.

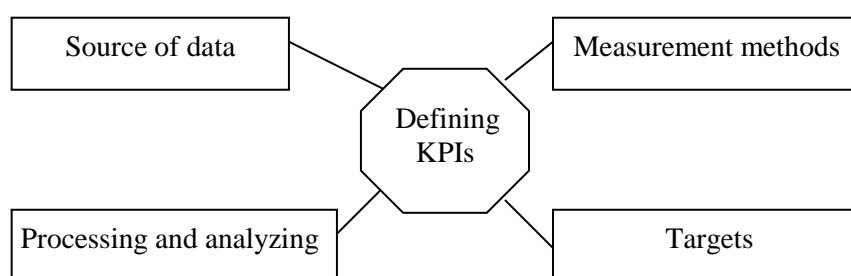
There are some well-established models, namely excellence models, which provide structured frameworks for evaluating QMS performance, supported by scoring systems and maturity levels. However, they are overly complex and extend beyond the ISO 9001 requirements, which limit their applicability within organizations. There are also several proposed models in academic papers, distinguishing two categories: single-criterion approaches, which capture only partial dimensions of QMS performance and fail to reflect their multidimensional nature; and more complex models that better align with the principles of ISO 9001 and ISO 9004, but they are not validated and applied.

Overall, the literature review confirms the need for integrated, process-oriented, and indicators-based evaluation models that are aligned with ISO 9001 requirements, while also supporting sustained organizational success. Therefore, in the next section there is proposed a generic framework for the QMS performance evaluation, which balance methodological rigor with applicability.

4. A Methodological Framework for Performance Evaluation of ISO 9001-Based Quality Management Systems

The methodological framework developed in this paper focuses on the key sequences of QMS performance evaluation as a process, namely establishing KPIs

(1), and the selection of appropriate methods for data collection, processing, and analysis (2). These actions are aligned with ISO 9001 clause 9.1.1, which requires organizations to define what needs to be measured, the methods to be used, and the timing of monitoring and measurement, as well as when the results are to be analyzed and evaluated (Figure 2).



**Figure 2. Key Elements of QMS Performance Evaluation as a Process
(Original Scheme)**

1) Defining KPIs for QMS Performance Evaluation

Within the framework of the QMS evaluation, KPIs are measurable indicators used to evaluate how effectively an organization is achieving its intended outcomes.

Notably, not all quality metrics are KPIs. As generally agreed, KPIs should be directly linked to overall quality objectives and relevant ISO 9001 clauses, ensuring that measurement supports both compliance and organization's performance, while quality metrics provide detailed data to manage individual processes.

The selection of appropriate KPIs is fundamental to effective QMS performance evaluation within the ISO 9001 framework. Many online expert commentaries provide insights into suitable KPIs, along with explanations regarding the conditions that should be considered when defining them.

The most popular approach is articulated through the SMART (Specific, Measurable, Attainable, Relevant, and Time-Bound) acronym. This framework stipulates that KPIs should be **s**pecific to the organization's goals, **e**asy to **m**easure, **r**ealistically **a**chievable, **r**elevant to the organization's context, and **t**imely - regularly monitored and reviewed.

Regarding the recommended KPIs, the quality experts propose several models comprising between 5 and 11 KPI categories, with the most accepted categories presented in Table 3.

Table 3. Examples of Performance Indicators Associated with KPI Categories

KPI category	Indicators
Customer Satisfaction	Customer satisfaction index; Complaint number/ rate; Customer Return Rate / Warranty Claims; Customer Retention Rate;
Product/service quality	Defect Rate/ Defects Per Million (DPMO); Operating parameters (maintenance, reliability, etc.); Environmental parameters (emissions, resource consumption, etc.);
Operational Process performance	Internal nonconformance rate/ Process capability; Process duration; Environmental parameters; Costs of nonconformities;
Supplier/ Vender	Nonconformance Rate; Process duration; Inventory turnover rate; Costs of nonconformities
Support / HR	Training Effectiveness Score; Employee satisfaction; Employee engagement;
Conformity	Internal audit nonconformities;
Improvement and innovation	Number of improvement initiatives; Impact/ Effectiveness of corrective actions; Number of innovation projects; Impact/ Effectiveness of innovation projects.

For each category, specific performance indicators must be established, illustrative examples being given in Table 3. A subset of these indicators is directly related to QMS performance. The selection of KPIs should be guided by the SMART criteria to ensure their relevance, measurability, and practical applicability.

Establishing and evaluating QMS KPIs constitute a complex process that is closely linked to the organization's strategy and performance, as illustrated in Figure 3.

Innovation initiatives -such as new products, technologies, or manufacturing, sales, and management methods- directly affect quality performance and overall organizational performance. For instance, implementing online commerce within an organization improves quality by enhancing customer communication and reducing sales cycle time, while also impacting organizational performance indicators, such as costs, market share, and revenue. Without a clear strategy and appropriate strategic changes, organizations may achieve only limited performance gains, despite the apparent effectiveness of their QMS.

Figure 3 also presents the analysis of the correlation between QMS performance and organizational performance indicators. Within excellence models, organizational performance indicators are categorized as results indicators, alongside quality-related indicators. In the proposed methodology, organizational performance is conceptually distinguished from the QMS KPIs. Nevertheless, the systematic analysis of the relationships between these two indicator categories should constitute an integral part of the QMS performance evaluation process.

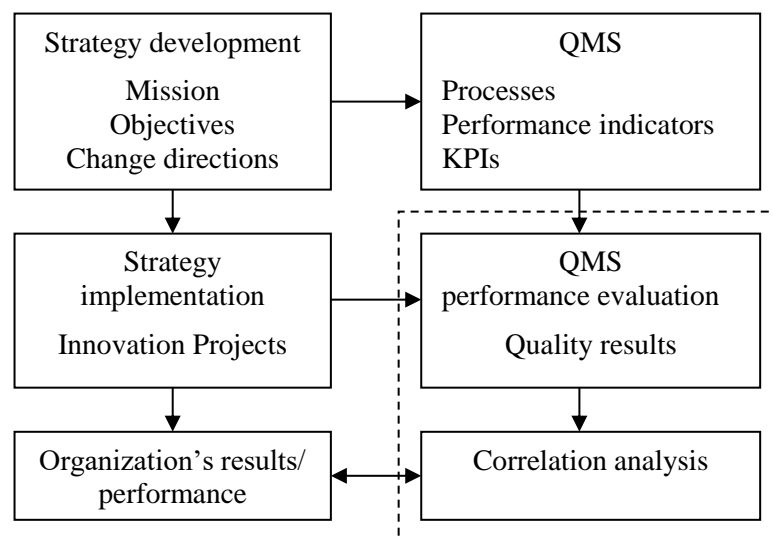


Figure 3. Connection between QMS Performance Evaluation, and the Organization's Strategy & Performance (Original Scheme)

2) Methods for data collection, processing, analysis & evaluation, and the use of results.

The effectiveness of the QMS performance evaluation process depends on the methods and tools used for data collection, processing, and analysis, as well as on the effective use of the resulting information. For each quality indicator and KPI, appropriate methods should be defined, specifying also data sources, monitoring frequency, and assigned responsibilities.

This information is generally detailed in various documented procedures and work instructions; however, a consolidated summary document is also necessary. Table 4

presents an illustrative example of such a summary. This documentation enhances oversight and helps ensure compliance with ISO 9001 requirements for evaluating QMS performance.

Table 4. Methods for KPI data collection, processing, and analysis (Synthesis)

Crt. No	QMS Element	KPI examples	Data collection method	Processing method	Analysis method	Frequency	Responsible
1	Customer satisfaction	Satisfaction rate (%)	Questionnaire-based survey, feedback	Statistical processing / scoring	Trend analysis/ Target comparison	Quarterly	Quality Dept.
2	Operational process	Non-compliance (NC) rate (%)	NC reports, process sheets	Indicator calculation	Cause-effect analysis	Monthly	Process owner
3	Supplier performance	Compliant suppliers (%)	Supplier ratings	Scoring	Comparative analysis	Annual	Process owner
4	Internal Audit	Audits performed (%)	Audit plan and reports	Indicator calculation	Target comparison	Annual	Auditor intern
5	Corrective actions (CA)	Closure rate (%)	CA Register	Indicator calculation	Efficacy calculation	Monthly	QMS Responsible
6	Employee engagement	People engaged (%)	Recording documents	Centralization	Trend analysis/ Target comparison	Annual	HR/QMS Responsible

The analysis of QMS performance is supported by the use of visual tools, such as graphs (evolution over time, comparisons, Pareto, etc.) and dashboards, which allow a quick and clear interpretation of data related to performance indicators. These tools facilitate the monitoring of trends, the comparison of results with established objectives, and the early identification of deviations or risks. The information resulting from these analyses is used in management reviews to assess the effectiveness of QMS and its processes, establish improvement actions, and track the achievement of quality objectives.

Finally, it is to note that the implementation of tools and methods as previously described can be achieved at a high level of performance through modern

information systems. Modern computer-based systems support automated data acquisition, reduce manual processing, and ensure traceability of information related to quality indicators and KPIs. By integrating data from operational, managerial, and support processes, such systems facilitate comprehensive performance monitoring, providing a solid basis for an objective analysis of QMS performance. Furthermore, information systems allow the use of advanced analytical tools, including dashboards, trend analysis, and performance visualization, which support data-driven decision-making.

The availability of centralized and up-to-date performance information strengthens management's ability to evaluate the effectiveness of the QMS, identify improvement opportunities, and monitor the implementation of corrective and preventive actions. Therefore, appropriate information systems are a key enabler of systematic and effective QMS performance evaluation, in line with ISO 9001 requirements for performance evaluation and continual improvement.

5. Conclusion

This study addresses the evaluation of QMS performance within the framework of the ISO 9001 standard. The findings show that QMS performance evaluation is not clearly defined, both in the ISO 9000 family of standards and in the existing literature.

The conceptual analysis conducted by the authors, highlights that a rigorous QMS performance evaluation needs quantitative measures, particularly KPIs, to track the current level and progress of QMS performance and maturity. Furthermore, effective evaluation should incorporate best practices and benchmarks from similar organizations.

The literature review reveals the existence of several QMS performance evaluation approaches, notably excellence models. However, these models are generally complex and extend beyond the specific requirements of ISO 9001, which may limit their applicability in organizations seeking compliance with this standard. In addition, a number of evaluation models proposed in academic studies—ranging from single-criterion approaches to multi-criteria frameworks—remain largely unvalidated and insufficiently applied in practice. Overall, the literature review confirms the need for integrated, process-oriented, and indicator-based evaluation

models that are explicitly aligned with ISO 9001 requirements and that support sustained organizational success.

To address this gap, the paper proposes a generic framework to support the systematic evaluation of QMS performance in line with ISO 9001 requirements. The framework represents the study's original main contribution and has several distinctive characteristics, outlined below.

A central element of the framework is the structured definition of KPIs. Three key principles are emphasized: (i) KPIs should be derived from QMS processes and their associated performance indicators, with selection guided by SMART criteria; (ii) organizational strategy should constitute a fundamental input in defining KPIs and their target values; and (iii) organizational performance indicators should be distinguished from QMS KPIs, while the interrelationships between these two categories should be systematically analyzed as an integral component of QMS performance evaluation.

The proposed framework also includes methods and tools for data collection, processing, and utilization within the QMS performance evaluation process. The use of visual management tools, such as dashboards and graphical representations, is highlighted as essential for facilitating timely and accurate interpretation of KPI data. Additionally, the importance of a synthesis document is emphasized, even in organizations where detailed QMS documentation for individual processes exists.

Finally, the study underscores the critical role of appropriate infrastructure in supporting QMS performance evaluation, particularly through the implementation of computer-based information systems. These systems enable the integration of data from operational, managerial, and support processes, thereby facilitating comprehensive performance monitoring and providing a robust basis for objective analysis of quality performance.

Relevance of the study

The work findings are important for multiple stakeholder groups, including quality managers, process owners, and top management, involved in the design, implementation, evaluation, and improvement of QMS. Second, the work is of interest to researchers and academics in the fields of quality management, providing a foundation for further theoretical development and empirical validation of QMS performance evaluation models. Finally, the proposed framework is relevant for

policy makers and standardization bodies, as it highlights limitations in the current treatment of performance evaluation within ISO 9001.

Future Directions of Study

Future research should focus on the empirical validation of the proposed framework through case studies and large-scale surveys across different industries, organizational sizes, and maturity levels. Another important direction concerns the integration of QMS performance evaluation with the organization's performance, focusing on causal relationships between QMS KPIs and overall organizational performance indicators. In addition, future studies may explore the role of digital technologies and data analytics, including business intelligence systems and real-time dashboards, in enhancing the accuracy, timeliness, and predictive capability of QMS performance evaluation.

6. References

- Anggraeni, L. F., Wella, W., & Suryasari, S. (2022). Evaluation of quality management system using ISO 9001:2015 at startup company. *Ultima Management. Jurnal Ilmu Manajemen, 14*(2).
- Bakhtiar, A., Nugraha, A., Suliantoro, H., & Pujotomo, D. (2023). The effect of quality management system (ISO 9001) on operational performance of various organizations in Indonesia. *Cogent Business & Management, 10*(2).
- Balon, U., Dziadkowiec, J. M., & Niewczas-Dobrowolska, M. (2024). Key performance indicators (KPIs) in the quality management system. *International Journal for Quality Research, 18*(2) 473–486.
- Črv, S., & Markič, M. (2021). Contribution of the QMS principles to company performance. *International Journal for Quality Research 17*(1), 227–242.
- European Foundation for Quality Management. (2025). *EFQM model 2025 brochure*. Institute for Quality Management, Switzerland.
- Fonseca, L. M. (2017). Management system certification benefits: Where do we stand? *Journal of Industrial Engineering and Management, 10*(3), 476–494.
- International Standardization Organisation. (2015). *ISO 9001 – Quality management systems – Requirements*. Geneva, Switzerland.
- International Standardization Organization. (2015). *ISO 9000:2015 – Quality management systems - Fundamentals and vocabulary*. Geneva, Switzerland.
- International Standardization Organization. (2018). *ISO 9004 – Quality management – Quality of an organization – Guidance to achieve sustained success*. Geneva, Switzerland.

- Kaplan, S. R., & Norton, P. D. (1996). *The Balanced scorecard: Translating strategy into action*. Harvard Business School Press.
- Khan, I. M., Khan, I., Mahmood, S., & Sheeraz, M. (2022). Quality management system and organizational performance: An evidence from manufacturing sectors. *International Journal of Management*, 11(8), 1441-1455.
- Lordsleem, A. Jr., Duarte, C., Barkokébas, B. Jr. (2010). *Performance indicators of the companies' quality management systems with ISO 9001 certification*. In "TG65 & W065-Special Track 18th CIB World Building Congress, May 2010, Salford".
- Muhammad, U. (2019). Investigating the role of QMS implementation on customers' satisfaction: A case study of SMEs. *IFAC-PapersOnLine*. 52(13), 2032-2037.
- National Institute of Standards and Technology. (2023). *2023–2024 Baldrige performance excellence framework: Criteria for performance excellence*. U.S. Department of Commerce.
- Nenadal, J. (2016). Adequacy, suitability, effectiveness and efficiency of quality management systems: How to perceive and assess them? *Quality Innovation Prosperity*, 20(2).
- Popescu, M. (2013). *Total quality management*. Transilvania University Publishing House.
- Popescu, M., & Mândru, L. (2016). Relationship between quality planning and innovation, *Bulletin of the Transilvania University of Brasov, Series V: Economic Sciences*, 9(2).
- Rathilall, R., Ramchander, M., & Singh, K. (2024). An integrated sustainable QMS framework for the south african packaging industry. *South African Journal of Business Management*, 55(1).
- Sfreddo, S. F. L., Vieira, G. B. B., Vidor, G., & Santos, C. H. S. (2021). ISO 9001 based quality management systems and organizational performance: A systematic literature review. *Quality Management Systems & Business Excellence*, 32(3-4).
- Smith, R. A., Bester, A., & Moll, M. (2014). Quantifying quality management system performance in order to improve business performance. *South African Journal of Industrial Engineering*.
- Trachenko, L. (2020). Assessment of quality management systems of service companies. *Intellectual Economics. Research Journal*, 14(1), 45-66.
- Valdokhina, S. I. (2019). Analysis of methodological approaches to assessing the effectiveness of the quality management system. *IOP Conference Series: Earth and Environmental Science*, 341, 012221.
- Walawalkar, A., Swamy, R. M., & Kuttimarks, M. S. (2024). Improving organizational performance with ISO 9001 QMS audits. *International Journal for Research in Applied Science & Engineering Technology (IJRASET)*, 12(11).
- Zajarskas, R., & Ruževičius, J. (2010). Evaluation of the effectiveness of the quality management system of the service enterprise. *Economics and Management*, 15, 857-864.