# ACHIEVING SYNERGY: AN INTEGRATED APPROACH TO PROJECT AND QUALITY MANAGEMENT IN PROJECT-ORIENTED ORGANISATIONS

Angela Fajsi <sup>1</sup> <sup>[ORCID 0000-0002-5706-4932]</sup>, Slobodan Morača <sup>1</sup> <sup>[ORCID 0000-0001-6174-1038]</sup>, Marko Milosavljević <sup>1</sup> <sup>[ORCID 0000-0001-7254-6078]</sup>, Slaviša Moljević <sup>2</sup> <sup>[ORCID 0000-0002-8141-4429]</sup>, Ranka Gojković <sup>2</sup> <sup>[ORCID 0000-0001-5437-2019]</sup>

# <sup>1</sup> University of Novi Sad, Faculty of Technical Sciences, Department of Industrial Systems and Management, Serbia

# <sup>2</sup> University of East Sarajevo, Faculty of Mechanical Engineering, Bosnia and Herzegovina

**Abstract:** Projects play a pivotal role in realizing organizational objectives. In today's dynamic work environment, organizations increasingly rely on projects as an integral part of their operations to successfully accomplish their goals. The stringent regulations and prerequisites pertaining to the knowledge economy and the contemporary industrial model have resulted in a shift from the traditional 'quality management' approach to one focused on 'managing quality.' This paper aims to showcase the beneficial outcomes resulting from adopting an integrated approach to project and quality management in project-oriented organizations. The research conducted for this paper involved an international sample of 124 organizations renowned for their high levels of quality and excellence. By embracing this integrated approach, organizations can establish a strong foundation that empowers them to reach the desired levels of success they strive to achieve.

Key words: project management, quality, excellence, project-oriented organizations (POOs)

# 1. INTRODUCTION

Achieving effective project management at the organizational level extends beyond mere software applications or the utilization of a particular tool. To successfully adopt this, it is crucial to foster acceptance and a positive attitude toward the project approach across all organizational levels. Subsequently, establishing robust, enduring processes and capabilities becomes essential, enabling the implementation of this approach and ensuring excellence and favorable results.

By examining both project and quality management through the lens of customer focus and continuous improvement, it becomes evident that project-oriented organizations uphold quality principles by implementing a structured project management methodology (Orwig and Brenan, 2000). Kerzner (2017) emphasizes that organizations today are increasingly recognizing the need to implement project management approaches. However, the question arises about how this approach is being applied and to what extent, as well as how it is connected to organizational performance.

This study demonstrates the positive impact of adopting an integrated approach to project and quality management on the overall business performance of such organizations. In the second chapter, both the project and quality management perspectives, as well as an integrated approach, are described. The third chapter provides evidence of high-performing and excellent project-based organizations, focusing on the relevance of project management. The fourth chapter presents a discussion of the results, while the conclusion remarks and future implications are described in the fifth chapter. Finally, a reference list is provided at the end.

# 2. PROJECT AND QUALITY MANAGEMENT: AN INTEGRATED PERSPECTIVE

#### 2.1 Project management perspective

Project management plays a crucial role in the contemporary business landscape as it encompasses an approach that fosters ongoing enhancement through diverse project endeavors, ultimately resulting in enhanced organizational performance (Radjuković & Sjekavica, 2017).

One of the leading authors in this field, Rodney Turner (2009), defined a project as a temporary organization assigned resources to perform work that delivers beneficial changes. Each project has its project life cycle, which represents the process that transforms vision into reality – from initiating the

initial idea with potential for performance improvement to delivering results that enable the realization of benefits (Turner, 2009).

Project management is a significant process for all organizations, regardless of their size, type, and/or industry. Efficient project management allows organizations to complete their tasks on time, within planned costs, and with satisfactory high-quality results (Ebbesen et al., 2013).

Bredilet et al. (2013) state that as much as 20% of global economic activity is conducted through projects, with this percentage reaching up to 30% in certain growing economies. Today, it is common for businesses to be managed through projects, which applies to project-oriented organizations (POOs) as well as those that are not.

POOs can be defined as organizations that conduct the majority of their activities according to project principles and prioritize project dimensions over functional ones in terms of their structure and processes (Sydow et.al, 2004) in order to fulfil quality requirements in all aspects.

#### 2.2 Quality management perspective

The notion of quality is interconnected with all domains of human activity and can be examined from various perspectives: organizational, process-related, technical-technological, sociological, and other aspects that relate to people, the environment, processes, products, or services.

Juran (1994) defines quality as fitness for use in terms of design, conformance, availability, safety, and field use. While a high level of quality is desired, specific requirements vary among individuals and organizations, and these may evolve over time.

For that reason, it is important for organizations to fulfil quality requirements throughout the entire business and implement the Total quality management (TQM) approach. TQM focuses on improving organizational effectiveness, efficiency, and responsiveness to customers and other stakeholders. It does so by actively utilizing the skills and competencies of employees, with the ultimate goal of achieving sustained organizational performance improvement and excellence through quality (Sader et al., 2019).

Anticipating the quality of a process, product, or service is one of the major challenges of the contemporary era – determining whether what is being created today will deliver value to users in the future. The main objective of project management is to fulfil the requirements of customers and other stakeholders while meeting the quality standards that satisfy their needs (Digehsara, 2018).

#### 2.3 An integrated approach

Project management is no longer seen solely as an internal system within organizations, but rather, it represents a competitive tool that enables the achievement of higher levels of quality and enhances opportunities for delivering additional value to customers and other stakeholders (Silva et al., 2021).

Undoubtedly, quality stands as a pivotal outcome for every project. The consensus among professionals is that project performance is inherently linked to three key factors: time, cost, and, most importantly, quality. Hides (2000) has proven that project management plays a significant role in the successful implementation of the total quality management approach.

Project management is an approach that promotes continuous improvement through projects, leading to enhanced organizational performance and outcomes (Radujković & Sjekavica, 2017). Josef Juran, one of the founders of the quality management concept, emphasized that improvements within an organization are carried out project by project (Juran, 1994).

Managing quality in project-oriented organizations includes three main steps (PMI, 2013):

- Quality planning involves the identification of quality requirements and standards for a project and its deliverables. It entails documenting how the project will exhibit adherence to quality and meet the specified criteria.
- Performance quality management includes conducting audits on the quality requirements and evaluating the outcomes derived from quality control measurements. This process ensures the utilization of appropriate quality standards and operational definitions.
- Control quality encompasses the monitoring and recording of results obtained from implementing quality activities. It involves assessing the performance against established benchmarks and recommending any essential modifications.

Bryde and Robinson (2007) concluded that adhering to quality management steps and principles helps organizations maintain effective project management, especially in areas of customer service delivery,

preventing business failures, fostering employee professional development, and promoting strong leadership.

According to Basu (2014), every project-oriented organization must critically assess its project management's effectiveness in delivering the required longer-term outcomes and benefits to sponsors and end users.

# 3. ACHIEVING SUCCESS THROUGH INTEGRATED PROJECT AND QUALITY MANAGEMENT: EVIDENCE ON HIGH-PERFORMING PROJECT-BASED ORGANIZATIONS

All organizations that participated in the research were recognized or awarded as excellent by the European Foundation for Quality Management (EFQM). Business excellence principles are based on total quality management principles, and the research has shown that the companies that obtained certification with the ISO 9001 standard achieved higher scores in the EFQM model compared to those that were not certified (Fonseca, 2015). Accordingly, it is considered that organizations with a certain level of recognition and awards for business excellence demonstrate the highest levels of quality achieved in their processes and results.

Using these organizations as examples, it was examined to what extent project management is prevalent and integrated into the overall system, which has already been confirmed to deliver quality processes and results.

#### 3.1 Research methodology

Data collection was initiated in January 2021 and persisted until March 2021. The distribution of the questionnaire took place in electronic format, utilizing the Google Forms platform, targeting organizations that have received recognition and awards for their business excellence. Out of the total participants involved in the research, which amounted to 130, six individuals had missing data, resulting in a final count of 124 participating organizations with a response rate of 10.05%.

#### 3.2 Results

The majority of respondents were employed in top management positions, constituting 37.90% of the participants, followed by middle management comprising 27.42%, and project management with 11.29% representation. The research included organizations from 27 different countries which operate in both service and manufacturing industries.

When it comes to business excellence, the majority of organizations are recognized as being dedicated to excellence, with four stars (24.19%), one star (19.35%), five stars (16.94%), or two stars (15.32%). The attained level of recognition and awards for business excellence is defined according to the categories established by the EFQM organization (EFQM, 2013). The criteria relate to three groups of business excellence levels, further divided into seven sub-levels.

	Category	Number	Percentage (%)
Business Excellence level	Committed to Excellence	24	19.35
	Committed to Excellence 2 stars	19	15.32
	Committed to Excellence 3 stars	12	9.68
	Committed to Excellence 4 stars	30	24.19
	Committed to Excellence 5 stars	21	16.94
	EFQM Finalist	10	8.06
	EFQM Award/Prize winner	8	6.45

Table 1. Organizations according to the level of recognition or Awards for Business Excellence

The participants completed a questionnaire consisting of 39 questions and one of the questions for organizations was whether project management is identified as a separate process. This question aims to determine whether excellent organizations that have demonstrated quality in their activities and results have established project management as a distinct process. It is important to note that in the assessment of business excellence, there is no mandatory part related to project management. Therefore, this research attempted to examine the correlation between these two aspects.

The responses of the organization representatives to this question are shown in Figure 1.





Project management is systematized and identified as a separate process in 78% of organizations, while it is not identified as a separate process in 22% of organizations.

In addition, there was a question that examined the extent to which project management is integrated into the business, i.e., whether it is connected with all functions, whether only specific aspects are used as needed, or if there is an approach to total project management.

Figure 2 illustrates the response structure of the organizational representatives.



Figure 2: Integration of project management within the organization

In the previous graph, it is shown that 54.3% of organizations have integrated project management within their key business functions, while 26.8% of organizations stated that they do not yet have formalized project management but use some specific methods for this purpose. 14.9% of organizations reported applying a total project management approach, which means that this approach is integrated into all business functions and aspects. Only 4 % of excellent organizations indicated that project management is not recognized in their organization or that they are not familiar with it.

The next chapter will present a discussion of the obtained results.

#### 4. DISCUSSION

The previous chapter presented the results of the conducted research, which establishes the significance of the relationship between quality management and project management. All participating organizations have demonstrated excellence in their operations and achieved remarkable results, indicating the highest levels of quality they attain (Fajsi, 2022).

Among the sample of 124 organizations, it was shown that over 3/4 of these organizations have established project management as a separate process (78%). This further implies that project management is recognized as a significant means to achieve quality and excellence in all business domains. The systematic approach to project management was previously solely associated with the application of accepted methodologies or the existence of a project management office or department. Over time, the specificities of organizations have been increasingly considered and placed in the context of project management, resulting in a series of adapted and modified approaches and methodologies to systematize project management within these organizations.

When examining the level of project management integration across all key business segments, more than 50% of organizations responded that they have an integrated approach that involves linking project management with procurement, finance, planning, and other departments. Project-oriented organizations applying this approach are typically structured as strong matrix organizations, where project management is to some extent formalized. A significant percentage of organizations indicated that they haven't established project management in this way but apply specific elements as needed, while 14% of organizations stated that they implement total project management, meaning their business is entirely based on the project principle. All of the above points to a strong correlation between the implementation of a project management approach and the achievement of quality in business operations and results.

# 5. CONCLUSIONS

The findings from this study provide empirical evidence that demonstrates a positive correlation between project management and enhanced quality, subsequently leading to the attainment of business excellence. Organizations in which the approach to project management is systematized achieve higher levels of quality, excellence and performance compared to organizations where project management is not systematized.

Project management is no longer a methodology exclusively confined to the industry; instead, it has become integrated into other sectors such as education, public administration, politics, and culture. This implies that an increasing number of sectors will adopt project management methodologies and approaches to address complex tasks arising in the ever-changing market and technological environment. For future research, it is suggested to empirically investigate the impact of project management on specific aspects of quality management, such as customer and employee satisfaction, leadership, and continuous improvement, with the aim of achieving better organizational performance and competitiveness.

#### 6. REFERENCES

Basu, R. (2014). Managing quality in projects: An empirical study. International journal of project management, 32(1), 178-187.

Bredillet, C. N., Conboy, K., Davidson, P., & Walker, D. (2013). The getting of wisdom: The future of PM university education in Australia. International Journal of Project Management, 31(8), 1072-1088.

Bryde, D. J., & Robinson, L. (2007). The relationship between total quality management and the focus of project management practices. The TQM Magazine, 19(1), 50-61.

Digehsara, A., Rezazadeh, H., & Soleimani, M. (2018). Performance evaluation of project management system based on the combination of EFQM and QFD. Journal of Project Management, 3(4), 171-182.

Ebbesen, J. B., & Hope, A. (2013). Re-imagining the iron triangle: embedding sustainability into project constraints. PM World Journal, 2(3), 1-13

EFQM. (2019). EFQM Excellence Model 2020. EFQM Publications

Fajsi, A. (2022). The influence of project management maturity on organizational business excellence, Thesis, University of Novi Sad (Serbia).

Fajsi, A., Morača, S., Milosavljević, M., & Medić, N. (2022). Project Management Maturity and Business Excellence in the Context of Industry 4.0. Processes, 10(6), 1155.

Fonseca, L. (2015). Relationship between ISO 9001 certification maturity and EFQM business excellence model results. Quality Innovation Prosperity, 19, 85-102.

Heras, I.S., Casadesus, M. and Marimón, F., (2011). The impact of ISO 9001 standard and the EFQM model: The view of the assessors. Total Quality Management & Business Excellence, 22(2), pp.197-218

Hides, M. T., Irani, Z., Polychronakis, I., & Sharp, J. M. (2000). Facilitating total quality through effective project management. International Journal of Quality & Reliability Management, 17, 407-422.

Juran, J. M. (1994). The upcoming century of quality. Quality progress, 27(8), 29.

Kerzner, H. (2017). Project management: a systems approach to planning, scheduling, and controlling. John Wiley & Sons.

Orwig, R. A., & Brennan, L. L. (2000). An integrated view of project and quality management for project-based organizations. International Journal of Quality & Reliability Management, 17(4/5), 351-363.

Pellegrinelli, S., & Bowman, C. (1994). Implementing strategy through projects. Long range planning, 27(4), 125-132.

Project Management Institute PMI (2013). A guide to the Project Management Body of Knowledge (PMBOK guide) (4th ed.). Project Management Institute

Radujković, M.; Sjekavica, M. Project Management Success Factors. Procedia Eng. 2017, 196, 607–615.

Sader, S., Husti, I., & Daróczi, M. (2019). Industry 4.0 as a key enabler toward successful implementation of total quality management practices. Periodica Polytechnica Social and Management Sciences. 27(2), 131-140.

Sydow, J., Lindkvist, L., & DeFillippi, R. (2004). Project-based organizations, embeddedness and repositories of knowledge. Organization studies, 25(9), 1475-1489.

Turner, R. (2009). The handbook of project-based management: leading strategic change in organizations. Mc Graw Hill.