**Aleksandar Dejanović**

**Jelena Lukić Nikolić[1]**

**Gabriela Miljuš**

# ANALYSIS OF THE DEGREE OF QUALITY CULTURE DEVELOPMENT

*Abstract: Over the last few decades, quality has become one of the most important factors of companies' competitiveness, a condition for their survival and development. The subject of this paper is the analysis of the degree of quality culture development in an organization. The analysis was based on empirical research in which 80 employees from the company Šinvoz, Zrenjanin participated during November 2022. The results showed that the organizational culture in this company did not sufficiently implement the characteristics of the quality culture. Employees do not notice enough management involvement and commitment in quality improvement efforts, the organizational culture is centralized and formalized, which is why the employees themselves are not engaged and committed to quality improvement. There is a big disproportion (gap) between what is visible and publicly announced (quality statement) and what is not immediately visible (opinions and attitudes of employees). In the following period, the company should constantly confirm in practice that quality is its key value, in order to reduce this disproportion.*
*Keywords: Quality; Organizational Culture; Organizational Behaviour; Human Resources, Competitiveness*

## 1. Introduction

Over the last few decades, quality has become one of the most important factors of companies' competitiveness, a condition for their survival and development (Cronemyr et al., 2017; Friedli et al., 2018; Harvey & Stensaker, 2008; Nygren-Landgärds et al., 2022; Stephens & Roszak, 2021). Bearing in mind that quality has become "an indispensable condition" (*conditio sine qua non*) of market business, it is not surprising that many companies were forced to change their organizational culture and build quality culture. This process was stimulated by a paradigm shift, i.e. the understanding that the main quality issue is not technology, but management. The new concept of quality places the responsibility for quality on the company's management. The highest level of that new quality concept is Total Quality Management known as TQM (Texeira-Quiros et al., 2022). According to its approach, TQM is at the same time a top-level quality improvement concept and a top management concept (Coelho et al., 2022). A dramatic change in the concept of quality was created by shifting the focus from product quality to management quality, with the aim of improving product performance, but also capabilities, i.e. competitiveness of the company (Heleta, 2008; Parast & Safari, 2022).

The subject of this paper is the analysis of the degree of quality culture development, which significantly affects the quality system in the company. This topic is extremely important because the quality requirements are

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[1] Corresponding author: Jelena Lukić Nikolić
Email: jelena.lukic@mbs.edu.rs

continuously increasing (Dimitrantzou et al., 2022; Milovanović et al., 2021). Consumers are looking for higher quality products and services, competitors are setting new challenges, regulators are passing more and more rigorous quality control regulations. In addition, the media celebrate high quality and condemn low quality. Therefore, the pressure to constantly improve quality is increasing (Dyason, 2022). Companies that falter in a competitive market will lose their market positions. In such conditions, improving quality culture is vitally important for the development of the company (Dvorsky et al., 2020).

In this paper is conducted in depth study of the key characteristics of the organizational culture in the company "Šinvoz", Zrenjanin, which specializes in the maintenance, modernization, and overhaul of all types of railway vehicles, with the aim to analyze the degree of quality culture development in this company. The paper is structured as follows. First, quality culture is defined, and its role, importance, and key characteristics are specified. Then, the research methodology and key research questions are presented. Next, the research results are presented with accompanying discussion and interpretations. In this part of the paper are noticed practical and theoretical implications of the conducted research. Finally, conclusions and limitations of the conducted research, as well as suggestions for future research on this topic, are given.

## 2. Literature Review: Quality Culture

Quality culture is essentially a form of organizational culture in which key assumptions, values, principles, and fundamental concepts of quality management are embedded (Cameron & Sine, 1999). It represents a set of adopted common principles, values, and norms that are adhered to by all individuals in the observed environment of the quality management system (Krivokapić, 2015). Srinavasan and

Kurey (2014) defined quality culture as an environment in which employees not only follow quality guidelines but also consistently take quality-focused actions, listen about quality, talk about quality, and feel quality all around them. The company must sincerely believe in quality, think about quality, be consistently and at all levels committed to the achievement of quality goals, never give up on quality, and deliver quality in all circumstances (Harris, 2007). Quality culture should become the "way of life" of the company. Quality must be ensured in all layers of organizational structure, not only on the surface. Only then can be stated that a quality culture has been developed in the organization (Baird et al., 2011; Maull et al., 2001). Ehlers (2009) views quality culture as a new step in understanding quality management. This author believes that in the first phase the perspective on quality was very narrow and focused on production. Since this approach did not bring the expected results, quality began to be observed in a wider context (first within the entire company, and later factors outside the company that affect quality were considered). This holistic understanding of quality was much more advanced compared to the beginnings of quality management, but the practice has shown that it is necessary to change the way quality is perceived in order to achieve extraordinary quality. In fact, quality is also a cultural phenomenon (Ehlers, 2009). In order to ensure extraordinary quality, it is necessary that it emanates from the organizational culture (Lagrosen & Lagrosen, 2019). Some authors believe that quality culture should be recognizable by the principles of Total Quality Management (TQM) (Alketbi et al., 2022; Gimenez-Espin et al., 2013; Irani et al., 2004). These principles are incorporated into the ISO 9001: 2015 standards. In the literature, it is most often stated that TQM is based on the following principles.

**Leadership** is the ability of an individual (leader) to influence others (followers) and motivate them to contribute to the achievement of the company's goals with

their activities (Northouse, 2013). Leaders establish unity of purpose and direction of the organization. They should create and develop an internal environment in which employees can fully use their potential and participate in achieving the company's goals (Lukić Nikolić, 2021). The most important responsibilities of the leader are to present the vision of the company's development, mission, determine the key values, as well as the way of changing the culture suitable for the total quality management system (Lakshman, 2006). Additionally, they must be completely committed to the basic principles of TQM, inspire and encourage employees by example to fulfill strategic quality goals (Ljubojević and Dejanović, 2017). The prevailing narrative in the literature is that the leader's role is decisive in the preparation for the implementation of TQM, during the establishment and maintenance of the TQM system, as well as during the continuous improvement of this system (Gambi et al., 2015). In this way, the leader directly influences creation, that is, the development of the quality culture in the company (Buch & Rivers, 2001).

**Customer focus** is imperative for companies that strive to achieve extraordinary quality. Every company, or any of its subsystems, has clients (internal and external), because that is how it achieves its purpose (Wood, 1997). First, the company needs to identify and understand the needs and expectations of consumers, that is, clients. In the second step, these needs and expectations should be transformed into requirements by applying adequate methodologies and techniques, i.e. clear quantitative and qualitative performance (goals). Ultimately, meeting or exceeding these requirements confirms quality. In the first situation, when the requirements are met, customer satisfaction is obtained, while in the second situation, when the company exceeds expectations, customer delight is achieved. Under TQM, the customers define whether or not products/services are high quality (Mehra & Ranganathan, 2008). Companies must constantly collect information about what consumers need, what they expect and want in order to react in a timely manner and act accordingly (Ljubojević and Dejanović, 2017). To put it concisely, companies today must provide customers with a unique and unrepeatable experience.

**Continuous Improvement** is a way to improve quality. It is based on the understanding that a company should never be satisfied with its current state, no matter how good it is. There is always room for improvement because it can always perform better (better product, better process, better business model). Continuous improvement is a cycle that begins with analyzing the current situation (diagnosing) to identify areas for improvement and continues with planning (setting improvement goals). The next step is to implement improvements, followed by verification, analysis, and evaluation of the results in order to determine the extent to which the objectives have been met. The end of this procedure marks the beginning of a new cycle. Continuous improvements are never-ending. It is the path to perfection, and perfection is not the goal - it is an ideal (Ljubojević and Dejanović, 2017, p. 270).

**Employee Involvement** is an essential condition for TQM, but also an essential characteristic of democratic organizational cultures. Each employee in the company represents an important part of the quality system, has his/her role, but also a partial responsibility for the functioning of this system. Neither individuals nor groups can be an exception to this rule. To put it plainly, a quality culture should be created in the entire company (Chyi Lee et al., 2001). Likewise, it is very important that employees spontaneously and plainly show initiative for quality improvement, innovations and changes that lead to a higher level of quality (Lukić Nikolić et al., 2021). Managers must consider several key factors to enable employees to fully contribute to achieving quality goals: (1) Show respect to employees; (2) Ensure adequate working conditions; (3) Delegate authority and define a clear responsibility matrix; (4) Support the

employee development through training programs; (5) Motivation and (6) Development of harmonious interpersonal relationships. The significance of employee involvement in the successful functioning of the quality system is an important criterion for awarding prestigious quality awards. For example, the US national quality award (Malcolm Baldrige Award) recognizes companies that excel in human resource management. Similarly, the European Quality Award requires companies to focus on human resource development. These criteria are also used when evaluating the results of companies competing for the Oscar of Quality - a national award for business excellence in Serbia (Pešelj, 2007).

**Mutually Beneficial Supplier Relationship** increases the ability of an organization and its suppliers to create value together. Over time, this principle was extended not only to suppliers but to a wider circle of business partners and stakeholders. Some authors have even modified the name of this principle and called it "The ability of the organization to establish and develop relationships". This indicates the connection of the new generation of quality management with the concept of customer relationship management (CRM). However, the name "Communication" can also be found in the relevant literature, which represents a significant change compared to the original principle. In fact, this can be interpreted as a change of principle, that is, the introduction of a new TQM principle. Communication within the company (internal communication) and communication with the environment (external communication) have an extremely important role in the functioning of the quality system and the development of the quality culture, so it is justified to consider expanding the list of TQM principles in this way.

**Process Approach** serves to facilitate quality system management. In order for companies to function effectively and efficiently, it is necessary to determine the "map" of the process, that is, to identify numerous interconnected processes and align them with the goals (Arsovski, 2007). The systematic identification of the company processes and process management, especially the management of their mutual interaction, can be qualified as a process approach. Stakeholders determine the input elements (requirements) that drive processes in the company. Outputs from each process must be continuously measured because distortions in the processes can be observed in a timely manner, which is a signal for taking preventive and corrective measures, i.e. improvements. Finally, at the exit, as a result of all the activities undertaken, the organization should deliver the appropriate product/service and thus ensure the satisfaction of the consumer, i.e. the user. The process approach offers companies significant advantages because following defined processes in the company leads to predictable results. Also, this approach ensures the control of deviations (variations) in processes and error prevention. Likewise, the process approach relies on horizontal management, i.e. overcoming barriers between different organizational units, directing their focus to the main company goals (Ljubojević and Dejanović, 2017). The quality culture should contribute to eliminating all redundant activities unrelated to quality from the process, that is, activities that do not represent additional value for consumers (users). In this way, redundancy in processes is reduced, which leads to more efficient use of resources, shorter cycles, and lower costs.

**System Approach** is a way of thinking based on systems theory. According to this theory, a system can be defined as a set of elements that are connected by mutual relations in order to achieve certain goals (Taiwo, 2001). The system approach is inseparable from the process approach. Its main role is to balance, coordinate, and integrate the activities of individual elements, i.e. subsystems, and to subordinate them to the achievement of set quality goals, i.e. the goals of the organization as a whole (Bennett & Kerr, 1996). In

addition, based on this approach, it is possible to perceive the interaction of the system with the environment. Thanks to the system and process approach, the idea of quality can be expanded and consolidated throughout the company, in all its parts and functions. This is extremely important for the development of a quality culture (Agmon et al., 2022; Lagrosen, 2003). Declining quality is a reliable indicator of real problems in the company, but also an expression of the quality culture degradation. In such conditions, quality is obviously no longer the most important value in the company. Obviously "something else" has become more important and the quality culture is diluted and transformed into "some other" culture with different values and characteristics. In order to prevent this, it is necessary to determine what happened in the company and why the quality culture is "deteriorating".

Quality culture should be understood as a collective state of mind and spirit in the company, that is, as an ideological construct.

## 3. Research Methodology

The main objective of the research is to study the key characteristics of the organizational culture in the company "Šinvoz", Zrenjanin, as well as to analyze the degree of quality culture development in this company. In accordance with the objectives of the research, a special two-part questionnaire was prepared. In the first part, the questionnaire contains several profile questions (gender, age structure, and educational structure of the respondents). In the second part of the questionnaire, statements in the form of a five-point Likert scale related to different aspects of quality culture were segmented into two groups. The first group consists of questions related to management, commitment to quality culture and clients, while the second group consists of questions that address the role and importance of employees in implementing and building a quality culture. Most of the questions were formulated as positive statements and

attitudes that describe quality culture. Since the answers were defined in the form of a five-point Likert scale, they could be easily transformed into a rating scale from 1 to 5. Answers that show a high level of agreement with the statements imply a higher rating (5 - strongly agree and 4 - agree to a certain extent with the statement. A neutral attitude is indicated by a score of 3 (neither agree nor disagree). Scores of 2 (disagree) and 1 (strongly disagree) show a low level of agreement. In this way, it is possible to calculate average scores and estimate attitudes toward quality culture. If the average score is high, it can be concluded that the quality culture is more developed. On the contrary, if the average score is low, the conclusion is that the quality culture is insufficiently developed. This analysis (evaluation) of data derived from Likert scales can identify the "weak points" in the organization's quality culture.

The research was carried out at the company Šinvoz Ltd. Zrenjanin during November 2022. The total population (basic statistical set) for this research includes all employees of the company "Šinvoz", Zrenjanin. According to the latest data taken from the Serbian Business Registers Agency, the total number of employees in the company was 233 (as at December 31, 2021). A total of 80 respondents participated in the survey, which means that the response rate was 34.33%. The answers obtained were then processed and analyzed using Statistical Package for the Social Sciences - SPSS version 21.0. (Armonk, NY: IBM Corporation).

## 4. Research Results and Discussion of Research Findings

### 4.1. Basic information about the company "Šinvoz"

The company Šinvoz was founded in 1887 in Zrenjanin. Its business activities include three basic segments: 1) Overhaul of railway vehicles and components; 2) Maintenance,

repair, and modernization of railway vehicles; and 3) Manufacturing of components for railway vehicles. The company has defined three key values which it strives to affirm (www.sinvoz.rs):

- Quality ("Šinvoz has set high goals, and these include being the best in all aspects of the business and non-negotiable quality. We cultivate an internal work ethic with a focus on excellence. We persistently work on quality performance, trainings, and certifications.");
- Commitment ("The company nurtures a long-term commitment to its customers and believes in creating strong business alliances. Our focus is to provide clear communication with regard to strategy when dealing with clients. The clients' interest always comes first. Experience has shown that when clients are provided with the best service, the company succeeds as well");
- Ability ("The technical abilities, the continuous training, and development of our employees are the most important factors for our long-term success. We are extremely proud of the quality of our work and we are determined to be superior in everything we do".)

The company Šinvoz has implemented an integrated management system that includes the following elements: (1) Quality management system according to ISO 9001:2015 standard (QMS - Quality Management System); (2) Environmental Management Systems according to ISO 14001:2015 standard (EMS - Environmental Management Systems); (3) Occupational Health & Safety Management System according to ISO 45001 standard, i.e. OHSAS 18001.

In terms of organizational structure type, the company Šinvoz is a functional (classical) organization, which is divided based on the functional grouping of organizational units. The management sector is at the top of this organizational pyramid, and the Quality and Standardization Sector has a special place. This sector is in charge of maintaining and improving the quality system, i.e. the Integrated Management System (IMS). This includes the preparation of IMS documents, the preparation and realization of the IMS check, the analysis of compliance with the set norms, and the preparation of preventive and corrective measures, as well as the control of the application of these measures.

The company Šinvoz has clearly defined quality improvement plans, requirements, and goals related to the service process for each of the mentioned quality factors. In this context, two categories should be distinguished: (1) required quality and (2) projected quality. The required quality is an emerging form of quality that starts from the user's needs and can be described as "the voice of the user/consumer" in relation to the product characteristics. The required quality can be considered a "wish list" related to the product and is expressed mostly descriptively, in a way that is understandable to the user. On the other hand, projected quality is a form of quality that is understandable to production employees. This form of quality is most often expressed in construction-technological documentation, that is, in technical regulations, procedures, and instructions that regulate certain processes.

In its development, the company Šinvoz has been transformed many times in accordance with the requirements of the time - from a small workshop to a modern company whose main activity is the production of welded assemblies for the railway, process, chemical, and automotive industries. In addition to being a leading company in production, Šinvoz is the regional leader for the modernization and overhaul of all types of railway vehicles, from complex electric and diesel locomotives to passenger and freight wagons and all essential subassemblies.

### 4.2. Basic information about the respondents that participated in the research

Table 1 shows basic demographic information about the respondents that participated in this research.

**Table 1.** Basic information about the respondents

| Answers | Number | % |
|---|---|---|
| Gender | | |
| Male | 57 | 71.25 |
| Female | 23 | 28.75 |
| Education | | |
| Primary school | 15 | 18.75 |
| Secondary school | 36 | 45.00 |
| Faculty | 29 | 36.25 |
| Age of respondents | | |
| Less than 30 | 18 | 22.50 |
| Between 30 and 50 | 38 | 47.50 |
| More than 50 | 24 | 30.00 |

There are more male than female participants in the sample (71%), which corresponds to the gender structure of employees in the company Šinvoz. The greater percentage of men in the company is conditioned by the company's basic activity (overhaul of railway vehicles and components, maintenance and repair of railway vehicles, manufacturing of components for railway vehicles). When it comes to age categories, the largest number of respondents belongs to the middle age category (from 30 to 50 years old). The older group (over 50 years old) is also significantly represented, while the youngest age category (up to 30 years old) is the least represented. In the educational structure of the employees included in the sample, the middle level of education (secondary school) dominates, but other educational categories are also significantly present. The educational structure of the employees is also a consequence of the company's basic activity. In fact, in this activity, there is a need for

certain professional profiles, such as welders, fitters for mechanical, pneumatic, hydraulic, electrical, and electronic assemblies, specialists for machining, i.e. sheet metal processing, etc. Of course, the emergence of new technologies, the achievement of top quality, and the company's ambitions also require the engagement of highly educated experts such as designers and constructors who are trained to use the newest equipment that characterizes current industrial development (the so-called Industry 5.0).

### 4.3. Management - commitment to a quality culture and clients

Table 2 shows the research results related to the management, commitment to the quality culture and clients of the company Šinvoz, Zrenjanin.

The first statement referred to leadership as an essential condition for the establishment and development of a quality culture. Only 25% of the respondents agree with the statement that the company management is very committed to quality improvement and shows by example its care for the successful functioning of the quality system. Therefore, based on the obtained results, it can be concluded that more than half of the respondents (56%) do not support the statement that the company management is committed to quality improvement and shows it by example. A certain number of respondents, 19%, expressed a negative attitude toward this statement. The average score of all answers for this statement is only 2.66.

The second statement refers to the company's value system. A large number of respondents, (45%) agree that quality is one of the company's key values, while 40% of respondents disagree. A certain number of participants, 15%, remained neutral. Based on these data, it can be stated that the degree of agreement with this statement is significantly higher compared to the previous one. The average score of all responses for this

statement is 3.14. This shows that quality is accepted as a proclaimed value in the company, but that it is still not sufficiently "consolidated" in the company.

The third statement is related to the company's mission. Šinvoz's mission was stated in the questionnaire: "Our mission is to achieve a firm focus on quality and constant improvement in this domain. Our company manufactures safe, reliable, and sustainable products that are used by millions of people every day. For this reason, we regard the quality of our products as the backbone of our company." The stated mission was followed by the statement "I believe in the company's mission and I support it." More than one-third of respondents, 35%, agree with the above statement, while a slightly larger number of respondents disagree, 37.5%. A large number of participants, 27.5%, remained neutral. The average score of all responses for this statement is 3.03. This level of acceptance is rated as "medium". Therefore, the mission that highlighted quality "oscillates" on the "verge of acceptance", that is, it does not have sufficient support from employees. This is another indicator that quality culture is not sufficiently developed in the company Šinvoz.

The fourth statement is simply formulated "The company knows and respects the demands of customers". The employees were supposed to express their opinions regarding this statement and show the extent to which the company Šinvoz is focused on customers, their needs, wishes, and expectations. The largest number of respondents, 41%, agree with this statement and believe that the company understands and respects customer demands. However, 36% of respondents do not agree with this statement. Also, a large number of respondents remained neutral (22%). The average score of all responses for this statement is 3.10.

The analysis of employees' attitudes and opinions about customer satisfaction showed a similar result. Respondents had to express their opinion regarding the statement "The company makes every effort to ensure customer satisfaction." Out of the total number of respondents, 37.5% of them agree with this statement, while 40% of respondents disagree. A large number of respondents, 22.5%, remained neutral. The average score of all responses for this statement is 3.05. So, the majority of employees who participated in this research believe that there is a lot of room for improvement when it comes to increasing customer satisfaction. In addition, according to this criterion, there is a medium level of development of the quality culture.

The company's ability to establish and develop relationships with business partners and all stakeholders is one of TQM's principles and an important condition for the quality culture development. Bearing in mind the importance of this TQM principle, the questionnaire included the statement "The company has reliable business partners and builds long-term cooperative relations in order to raise the overall quality". The largest number of respondents agree with this statement, 42.5%. However, there is a significant number of respondents, 33.75%, who disagree, and 23.75% remained neutral. The average score of all answers for this statement is 3.2. This result indicates that there is still room for improvement, that is, the organization's ability to create and develop long-term cooperative relationships with stakeholders can be improved in order to raise the overall quality.

A company that successfully manages a quality system and has a developed quality culture should also have effective quality control. This implies defining an adequate measurement system in the company, which signals deviations from the set norms and quality goals in a timely manner. According to the opinion of the majority of employees, there is such a quality control system in the company Šinvoz. 49% of respondents agree with the statement that the company has a reliable quality control system. There is also a certain number of respondents who do not agree with this statement (26%), as well as those who remained neutral (25%). The

average score of all responses for this statement is 3.45. Based on the obtained results, it can be concluded that quality control is moderately established in the company and it functions solidly. However, one should be careful when interpreting this result, because there is a fairly large number of employees who stayed neutral in relation to this statement.

Rituals, ceremonies, and events are symbolic components of organizational culture (symbols of behavior). They represent a very important element that manifests the meanings of deeper (invisible) layers of organizational culture. A developed quality culture has more behavioral symbols that glorify quality, while in a less developed quality culture these symbols are few or even absent (Gallear & Ghobadian, 2004). In order

to examine the extent to which rituals, ceremonies, and events dedicated to quality are present in the company Šinvoz, the following statement was included in the questionnaire: "There are special events in the company dedicated to improving quality." The largest number of respondents, 58.75%, did not agree with this statement. Only 22.5% of respondents agreed with the statement, while 18.75% remained neutral. The average score of all answers for this statement is 2.5. It unequivocally shows that this segment of the quality culture in the company is quite "invisible". The reason for this is that quality is not ranked first in the company's value system. If quality were the most important of all values, that is, if the company cared about quality the most, there would be more events celebrating quality.

**Table 2.** Responses to statements related to management commitment to the quality culture

|   | Statements | Answers | N | % | M |
|---|---|---|---|---|---|
| 1 | The company management is very committed to quality improvement and shows by example its care for the successful functioning of the quality system. | Disagree | 45 | 56.25 | 2.66 |
|   |   | Neutral attitude | 15 | 18.75 |   |
|   |   | Agree | 20 | 25.00 |   |
| 2 | Quality is one of the company's key values. | Disagree | 32 | 40.00 | 3.14 |
|   |   | Neutral attitude | 12 | 15.00 |   |
|   |   | Agree | 36 | 45.00 |   |
| 3 | I believe in and support the company's mission. | Disagree | 30 | 37.5 | 3.03 |
|   |   | Neutral attitude | 22 | 27.5 |   |
|   |   | Agree | 28 | 35.00 |   |
| 4 | The company knows and respects the demands of customers. | Disagree | 29 | 36.25 | 3.10 |
|   |   | Neutral attitude | 18 | 22.50 |   |
|   |   | Agree | 33 | 41.25 |   |
| 5 | The company makes every effort to ensure customer satisfaction. | Disagree | 32 | 40.00 | 3.05 |
|   |   | Neutral attitude | 18 | 22.50 |   |
|   |   | Agree | 30 | 37.50 |   |
| 6 | The company has reliable business partners and builds long-term cooperative relations in order to raise the overall quality. | Disagree | 27 | 33.75 | 3.2 |
|   |   | Neutral attitude | 19 | 23.75 |   |
|   |   | Agree | 34 | 42.50 |   |
| 7 | The company has a reliable quality control system and undertakes corrective actions to improve quality as soon as it signals deviations from the set norms and goals. | Disagree | 21 | 26.25 | 3.45 |
|   |   | Neutral attitude | 20 | 25.00 |   |
|   |   | Agree | 39 | 48.75 |   |
| 8 | The company often organizes special events dedicated to quality improvement. | Disagree | 47 | 58.75 | 2.49 |
|   |   | Neutral attitude | 15 | 18.75 |   |
|   |   | Agree | 18 | 22.50 |   |

### 4.4. Employees and their role in building and nurturing quality culture

The research results related to employees and their role in building and nurturing quality culture of the company Šinvoz, Zrenjanin are shown in table 3.

Employee participation is one of the basic TQM principles. This principle implies that every employee in the company should strive to improve quality, i.e. contribute to raising the quality level. In the company Šinvoz, only 35% of respondents agreed that all employees were actively involved in quality improvement efforts. The largest number of respondents, 45%, did not agree with the statement, while 20% of respondents remained neutral. The average score of all answers for this statement is 2.96. The obtained results show that there is no mass "movement" for raising the quality level in the company Šinvoz. A large number of employees are passive and not involved in quality improvement efforts. These data also convincingly testify that the organizational culture in the company has not sufficiently adopted the characteristics of the quality culture (quality has not gained mass support from employees).

The next statement, like the previous one, refers to employees. One of the essential conditions for achieving top quality is sufficient employee authority and autonomy to make decisions at their workplace. If employees have greater authority, their interest will increase and they will show their creativity in daily work tasks (Lukić Nikolić, 2021). Of course, the greater authority also implies greater responsibility. However, if employees do not have, or have little authority, their work can become monotonous. In that case, they are obliged to adhere to strict procedures (instructions) and ask their superiors for any, even the smallest change. This hinders their creativity and the need to reach their potential, and propose new solutions, i.e. improve quality (Lukić et al., 2021). At Šinvoz, opinions are quite divided over this question. The data show that only 34% of respondents agree with the statement that employees have enough authority and autonomy to make decisions. A large number of respondents (39%) do not agree with the statement, while the rest of the respondents remained neutral (27%). The average score of all responses for this statement is 2.99. These research results indicate that the organizational culture in the company Šinvoz is quite centralized and formalized, which is not a feature of a developed quality culture.

The next statement refers to employee motivation, which is an important quality factor. Motivation determines whether the employees will give their full contribution to quality improvement. 36% of respondents agree with the statement that employees are sufficiently motivated to achieve top quality. The largest number of respondents, 41%, believe that employees are not sufficiently motivated to achieve top quality. A certain number of respondents (22.5%) remained neutral. The average score of all responses for this statement is 2.95. This means that employee motivation is "stuck in the middle". With this level of motivation, the quality is also expected to be "somewhere in the middle" (average motivation leads to average quality).

Training and development programs have a major role in the quality management process. Out of the total number of respondents, 29% agree with the statement that employees often attend special training programs related to quality. More than half of the respondents do not agree with this statement (52.50%). A certain number of respondents remained neutral (18.75%). The average score of all answers for this statement is 2.69. These data unequivocally show that the company management should insist more on employee professional development, which would significantly contribute to the development of the quality culture in the organization and improve the functioning of the quality system.

Quality culture can also be recognized by the way it is spread. In most organizations, it is spread by word of mouth from one generation of employees to another. Older and more experienced members of the organization strive to convey their experiences to younger colleagues and teach them "how they do it" and what is important in the organization. The results show that the majority of respondents (70%) believe that experience and knowledge about quality, as well as the importance of

quality in the company, are shared with new colleagues in the company. Out of the total number, 19% of respondents do not agree with this statement, while 11% of respondents remained neutral. The average score of all answers for this statement is 3.9 (it is the highest average score in this questionnaire). This shows that there is a mechanism for spreading and strengthening the quality culture in the company Šinvoz.

**Table 3.** Responses to statements regarding employees commitment to the quality culture

|  | **Statements** | **Answers** | **N** | **%** | **M** |
|---|---|---|---|---|---|
| 1 | All employees are actively involved in quality improvement efforts. | Disagree | 36 | 45.00 | 2.96 |
|  |  | Neutral attitude | 16 | 20.00 |  |
|  |  | Agree | 28 | 35.00 |  |
| 2 | Employees have enough authority and autonomy to make decisions in the workplace. | Disagree | 31 | 38.75 | 2.99 |
|  |  | Neutral attitude | 22 | 27.50 |  |
|  |  | Agree | 27 | 33.75 |  |
| 3 | Employees are sufficiently motivated to achieve top quality. | Disagree | 33 | 41.25 | 2.95 |
|  |  | Neutral attitude | 18 | 22.50 |  |
|  |  | Agree | 29 | 36.25 |  |
| 4 | Employees often attend special training programs related to quality. | Disagree | 42 | 52.50 | 2.69 |
|  |  | Neutral attitude | 15 | 18.75 |  |
|  |  | Agree | 23 | 28.75 |  |
| 5 | Experience and knowledge about quality, importance of quality in the company, and quality objectives are sharred with new colleagues in the company. | Disagree | 15 | 18.75 | 3.89 |
|  |  | Neutral attitude | 9 | 11.25 |  |
|  |  | Agree | 56 | 70.00 |  |

## 5. Key Implications

The results showed that the majority of employees do not see quality as one of the most important values, although the company Šinvoz declaratively emphasized quality as the most important in its value system. In the statement regarding quality, company Šinvoz has set high goals: to be the best in all aspects of business and not to negotiate on quality. "Šinvoz has set high goals, and these include being the best in all aspects of the business and non-negotiable quality. We cultivate an internal work ethic with a focus on excellence. We persistently work on quality performance, trainings, and certification."

However, research results show that this statement does not have enough value, that is, the majority of employees do not have a unanimous opinion regarding this statement. Therefore, if the quality is not put on a pedestal of value with the strong support of management and employees, quality culture is not sufficiently developed. In the case of the company Šinvoz, there is a visible disproportion (gap) between what is visible and publicly announced (quality statement) and what is not visible at first glance (opinions and attitudes of employees). In the following period, the company should constantly confirm in practice that quality is its key value, in order to reduce this

disproportion.

It was possible to calculate the average acceptability scores for 16 statements. Seven average scores are below 3.00, which indicates a low level of quality culture development. The same number of average scores are in the interval from 3.01 to 3.50 (medium level of quality culture development), while only 2 average scores are above 3.50 (high level of quality culture development). It should be emphasized that there are no extremely low average scores (below 2.00) or extremely high average scores (above 4.00). The median score for all the answers, that is, the attitudes of employees who participated in the research is a modest 3.08.

Based on the previous remarks, several practical recommendations for improving the quality culture in the company can be given. *Firstly*, the management should strengthen its leadership role in this segment, that is, strengthen its commitment to quality improvement. This means that managers should get more involved and lead by example to show how much they care about quality. They should implement the Deming cycle (Plan - Do - Check - Act). *Secondly*, employees must have adequate working conditions that will enable them to achieve extraordinary quality. In addition to investing in space and equipment, it should be invested more in special training programs and constantly raise the competence level of employees and managers (which is one of the most important values in the company). *Thirdly*, employees should be given more autonomy to make decisions at the workplace, which implies a greater degree of their responsibility. In addition, their involvement in quality improvement efforts must be significantly greater. There must be a mass "movement" for raising the quality level in the company and all employees must participate. Quality is not the concern of individuals, but of the entire company. *Fourthly*, it is extremely important to talk more about quality in the company, organize more quality improvement events, as well as

strive to move quality from theory to practice. *Fifthly*, the company must innovate more, be more flexible, more inclined to change, and adapt faster to changes in a dynamic environment in order to strengthen the quality culture. Of course, the list of recommendations for strengthening the quality culture could be much longer, but the research in the company Šinvoz clearly showed that it is necessary to focus on these business segments.

## 6. Conclusion

The results of the conducted empirical research in which 80 employees from the company Šinvoz, Zrenjanin participated in 2022 showed that the organizational culture in the company Šinvoz did not sufficiently implement the features of quality culture. The management is not sufficiently committed to quality improvement efforts, the organizational culture is centralized and formalized, which is why the employees themselves are not engaged and committed to quality improvement. There is a big disproportion (gap) between what is visible and publicly announced (quality statement) and what is not visible at first glance (employees' opinions and attitudes). The results showed that employees perceive insufficient management involvement and commitment in quality improvement efforts. This fact represents a significant "impediment" to quality culture development. If there is no real management commitment and their care for quality improvement is not applied practically, there is little chance that the company will successfully build a quality culture.

The research results can be useful for decision-makers, leaders, and managers not only in this company but also in similar companies that are focused on high quality and constant improvement. The conducted research has certain limitations. First of all, the research was conducted in one company that performs a specific activity with its own unique characteristics, which is why the

obtained results cannot be generalized to other activities. In addition, it is not possible to even make a comparison within the same activity if companies operate in different countries, due to the specificity of national culture and the general level of economic development. Furthermore, the questionnaire consisted of closed questions, and it was not possible to find out more detailed and complete information and employee opinion about quality in their company. Therefore, recommendations for future research are as follows. First of all, it is recommended to organize interviews with employees in order to gain a more comprehensive and detailed insight into the concept of quality culture. Then, it would be useful to conduct similar research in other organizations in different activities and analyze their orientation and commitment to quality culture. One of the future research projects should be focused on the specifics of the quality culture in the era of the fifth industrial revolution, which imposes new business conditions and an increasing necessity for excellent quality.

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www.sinvoz.rs

**Aleksandar Dejanović**
Modern Business School,
Belgrade,
Serbia
aleksandar.dejanovic@mbs.edu.rs
ORCID 0000-0002-3987-3795

**Jelena Lukić Nikolić**
Modern Business School,
Belgrade,
Serbia
jelena.lukic@mbs.edu.rs
ORCID 0000-0003-0632-8974

**Gabriela Miljuš**
gabriela.miljus.gm@gmail.com