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Krzysztof Mielczarek [1]
Stanisław Borkowski

THE IMPORTANCE OF QUALITY IN THE MISSION OF ENTERPRISES

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Abstract: *This paper presents the results of a survey conducted among enterprises from various industries. It examines the significance of quality as a key factor in the Toyota House model, specifically in its roof. In addition to quality, the roof also encompasses safety, lead time, implementation costs, and team morale. These five factors constitute the E1 area of the BOST method, a fundamental research tool in Toyotarity. The study identifies the characteristics of the respondents, establishes importance rankings, evaluates the degree of similarity in preferences, assesses the significance of differences in average ratings, and analyzes the impact of respondents' characteristics on the perceived importance of each factor. Based on the results and their analysis, the missions of the enterprises were formulated.*

Keywords: *quality management, Toyotarity, quality, BOST*

1. Introduction

The concept of quality has been widely studied and interpreted in various ways by scholars and practitioners, reflecting its complex, multifaceted nature and evolving significance in both manufacturing and service contexts. W.A. Shewhart defined quality as the "goodness" of a product, a characteristic that can be applied universally across all types of products and services (Ciekanowski, 2013). Similarly, R. Shmalensee and J.H. Swan emphasized durability and longevity, suggesting that enhancing a product's technical parameters is synonymous with improving its quality. A. Feigenbaum regarded quality as the capacity to perform tasks and fulfil intended functions (Borkowski et al., 2023), while D.A. Garvin highlighted proper execution and the inclusion of additional features as indicators of quality (Makarski, 2005). From the perspective of G. Taguchi and D. Clausing, quality is closely tied to appropriate product design. L. Dobyns and C. Crawford-Mason proposed that quality lies in meeting customer requirements, whereas J. Juran conceptualized it as fitness for use. A. Feigenbaum later expanded this view, defining quality as a composite of characteristics related to marketing, production, and design that collectively satisfy customer needs during product use. According to K. Ishikawa and D. Lu, quality entails excellence or usability achieved at an acceptable cost (Harris & Williams, 2020). Kowalczyk identified several critical dimensions of product quality, including performance, features, conformance, reliability, serviceability, aesthetics, and perceived quality. In the context of services, quality is reflected in the tangible aspects of service delivery, reliability, responsiveness to issues, employee competence, and empathy - as outlined by A. Parasuraman, L.L. Berry, and A. Zeithaml (Kowalczyk, 2008). M. Porter argued that quality serves as a key differentiator in competitive markets, particularly in areas that are of critical importance to customers (Hamrol, 2007). R.D. Buzzell and F.D. Wiersma noted that superior quality enables a product to gain

Corresponding author: Krzysztof Mielczarek
Email: krzysztof.mielczarek@pcz.pl

greater market share, while W.E. Deming emphasized that higher product quality can significantly enhance a company's reputation among consumers (Hamrol, 2007). R. Kolman viewed quality as a collection of properties interpreted as requirements necessary to fulfill the intended functions of an object, thus indicating the degree to which those requirements are satisfied. According to the Polish Language Dictionary, quality is described as "a property, type, kind, value; a set of characteristics that determine that a given object is what it is, and not something else". Furthermore, Directive 85/374/EEC of July 25, 1985, concerning producer liability for damage caused by defective products, defines quality as "the likelihood of meeting customer expectations" and concurrently states that a defect is something the customer has the right not to expect (Silva & Matos, 2022).

The aim of the article is to present the significance of quality as a key component of a company's mission and to demonstrate how a focus on quality influences strategic operations, organizational development, and the building of competitive advantage. The article also seeks to analyze the integration of quality concepts into the mission and vision of enterprises, discuss the impact of a quality-oriented culture on operational efficiency and stakeholder relations, highlight practical examples and tools that support the implementation of a mission focused on quality.

2. Mission in the context of Toyotarity

In modern management theory and practice, the mission of an enterprise plays a fundamental role in shaping strategic direction, defining organizational identity, and guiding internal culture. A clearly articulated mission serves not only as a declaration of intent but also as a communicative and motivational tool. It embodies the organization's fundamental reason for its existence (Sudoł, 2006). The mission typically includes a concise and precise manifesto of the organization's most important goals, its operational philosophy, and its values. It highlights the unique characteristics that distinguish the enterprise from competitors and communicates its contribution to the environment in which it operates. In this sense, the mission functions as a kind of organizational "business card," defining the role of the enterprise within its broader socio-economic context. From a strategic perspective, the mission provides direction for growth and decision-making for both managers and employees (Wand & Strong, 2015). It helps align individual efforts with collective goals and serves as a motivational anchor within the organizational culture. Furthermore, the mission is more concrete than the vision, offering greater specificity that can be later translated into detailed strategic plans and operational objectives.

Importantly, the definition of a mission has evolved. While traditionally it sought to answer the questions "What is our business?", "What should it be?", and "What is our purpose?", contemporary approaches expand its scope to include considerations such as whom the enterprise serves, on what its success depends, and what societal contribution it makes (Kowalik & Klimecka-Tatar, 2018). In doing so, the mission becomes a reflection of stakeholder expectations, extending beyond shareholders to include employees, customers, and the broader community. According to (Wołczek, 2011), a well-formulated mission can incorporate four balanced categories of values, which reflect the holistic nature of enterprise responsibility:

- business values – relating to profitability and core operational efficiency (e.g., perseverance, effectiveness, professionalism, and results orientation);
- rational values – centered on the quality of interpersonal relationships (e.g., communication, customer care, and partnership-based cooperation);
- Developmental values – emphasizing innovation, creativity, learning, and continuous improvement;

- Social contribution values – related to the organization's responsibility and value creation for others.

These categories reflect the multidimensional role of modern enterprises, which are no longer seen solely as profit-generating entities but as complex social factors contributing to economic, social, and cultural development (Siwiec & Pacana, 2021). An effective mission statement should provide clear, concise answers to the following foundational questions:

- What does the company do?
- How does it do it?
- Why does it do it?

Additionally, to fully capture the organizational identity, it is useful to reflect on:

- Who are we?
- What do we do?
- For whom do we do it?
- What values drive us?

Ultimately, the mission serves as the foundation for building organizational strategy, shaping the enterprise's market behaviour, internal processes, and long-term development. As such, it constitutes an indispensable element in the structure of Toyotarity, where value-based management and continuous improvement are central.

Toyotarity is a term coined by the author of this chapter and legally protected by date confirmation (Borkowski, 2012). The concept represents an original theoretical framework within the field of management and organizational studies. The following definition of Toyotarity is proposed:

Toyotarity is a scientific approach focused on the relationships between humans and machines, as well as between individuals within an organization. It adopts a process-oriented perspective and draws heavily on Japanese organizational culture - particularly that of Toyota - emphasizing continuous improvement through the utilization of knowledge (Borkowski, 2012).

In the structural model of Toyotarity, four flat geometric figures are symbolically represented, one of which is the circle. The circle serves as a symbol of the human element in the human-machine dipole, highlighting the critical role individuals play in organizing and sustaining enterprises, including service firms and manufacturing organizations (Selejdak, 2013). The symbolic function of the circle also stresses the necessity for organizational actors to treat all components of the system equally and to remain acutely aware of their external environment - understanding, for instance, market behaviour and competitive dynamics.

The term "human" is used as a conceptual abbreviation for the initiators of economic and organizational activities—investors, top executives, tactical-level managers, and business owners. This symbolic role includes a mission-oriented focus that is central to the functioning and direction of every organization. Toyotarity recognizes that effective organizational design must integrate both technical systems and human factors in a cohesive, knowledge-driven process of improvement. In this way, it provides a broader and more inclusive interpretation of organizational mission - beyond conventional statements - to encompass real-time strategic awareness and cultural coherence.

At the heart of Toyotarity is the Toyota Production System (TPS), a methodology grounded in the principle that all subsystems operate synergistically for the benefit of the whole. The TPS not only focuses on process optimization but also fosters a culture of employee empowerment, encouraging continuous improvement (kaizen) at every level of the organization (Liker, 2005). Several graphical representations of TPS exist, often referred to as the Toyota House models. These models, while varying in design, share core elements. A common feature across these models is the roof, which consistently includes five critical success factors: quality, cost, time, safety, and employee morale. These represent the strategic goals of any Toyota-inspired system. The foundation of

the Toyota House comprises stable production processes and the use of 100% high-quality components - both technical and human.

Within this framework, the mission of Toyota functions as a guiding principle for achieving organizational excellence. It outlines aspirational standards that extend beyond Japanese cultural contexts and are increasingly adopted worldwide. The mission includes:

- Delivering the highest possible quality,
- Maintaining the lowest possible costs,
- Ensuring the shortest production cycle time,
- Achieving the highest standards of workplace safety,
- Fostering maximum employee morale and engagement.

This ideal serves as a benchmark for organizations striving to remain competitive in dynamic and complex environments. As Toyotarity suggests, organizations must go beyond mere structural adjustments and adopt a cultural transformation that integrates knowledge, process orientation, and continuous development into the core of their strategic mission (Niewczas-Dobrowolska, 2022).

3. Methodology

Scientific research always consists of two fundamental components: the subject and the object of inquiry. The subject of research refers to the entity or entities being studied—who or what the research is about—while the object defines the phenomena, processes, or relationships being investigated. According to (Yang & Yang, 2013), the research object answers the question "what is being studied?", such as a disease, job characteristics, or a process, whereas the subject answers "who is being studied and what is the focus of analysis?".

Given the complexity of socio-technical systems, it is practically impossible for a researcher to investigate all aspects of reality simultaneously. Therefore, a clear demarcation of the research object becomes necessary. The object of research refers to that portion of reality within which the subject is embedded and which generates a problem situation. This may include individuals, social groups, entire societies, institutions, enterprises (or their parts), processes, projects, or phenomena of interest. The subject of research must operate in such a manner that eliminates potential conflicts of interest, ensuring scientific neutrality and methodological rigor.

Within the framework of Toyotarity - a concept introduced by (Borkowski, 2012a) the subject of research is defined as the production processes embedded within a given organizational system, while the object comprises the relationships and relative importance of factors that represent Toyota's management philosophy. These include principles such as continuous improvement (kaizen), respect for people, long-term thinking, and standardized processes (Knop, 2020).

To study these relationships empirically, the BOST questionnaire serves as a primary research tool. This instrument captures respondents' evaluations of Toyota's core management factors through structured ranking. Each question represents a management principle, referred to as a factor, grouped into thematic areas. Respondents are asked to rank these factors according to their perceived significance. The resulting numerical values allow for the calculation of average importance scores, which in turn support the identification of priority areas for improvement. As such, the respondent is not merely a data source, but an active participant in evaluating managerial effectiveness (Pivka, 2004).

When designing survey instruments such as BOST, several methodological principles must be upheld. The survey should progress logically from simpler to more complex questions and be divided into coherent thematic blocks. Leading or emotionally charged questions must be avoided to maintain objectivity. Clarity, linguistic precision, and neutrality are

essential to ensure reliable data collection. By adhering to these standards, the BOST questionnaire becomes a robust tool for operationalizing Toyotarity in empirical research settings.

The BOST survey is a fundamental research technique in Toyotarity, a management philosophy derived from the Toyota Production System. The BOST survey presents a structured description of Toyota's management principles in the form of questions, referred to as factors, which represent characteristic organizational areas. Respondents are asked to rank these factors based on their personal judgment and experience. Each respondent quantifies the importance of the factors within a specific domain, assigning a numerical value to each one. This approach enables the calculation of the average significance score for each factor, providing valuable insights into the perceived importance of different managerial principles.

Importantly, the role of the respondent extends beyond passive data provision; they actively participate in identifying areas that require improvement. This interactive nature of the BOST method enhances its applicability in continuous improvement processes and supports decision-making in management diagnostics. As highlighted by (Wolniak, 2019), such participatory tools are crucial for aligning organizational practices with lean management philosophies and fostering a culture of employee involvement and continuous development.

In this method, the characteristics of the respondents serve as independent variables. By incorporating respondent attributes into the analysis, the BOST survey allows for a more nuanced understanding of how individual perspectives influence the prioritization of management principles. This enables researchers to identify patterns and correlations between personal or organizational traits and the perceived importance of specific factors.

In the survey, participants were asked to provide personal characteristics, namely:

Please mark "+" in the appropriate box.

Gender: Male, Female.

Education: 1 - Below average, 2 - Average, 3 - Higher I degree, 4 - Higher II degree.

Age: 1 - Up to 25 years, 2 - 26÷35 years, 3 - 36÷45 years, 4 - 46÷50 years, 5 - 51÷55 years, 6 - 56÷60 years, 7 - 61÷65 years, 8 - Over 65 years.

Total work experience: 1 - Up to 5 years, 2 - 6÷15 years, 3 - 16÷20 years, 4 - 21÷25 years, 5 - 26÷30 years, 6 - 31÷35 years, 7 - 36÷40 years, 8 - Over 45 years.

Current employment is your place of work: 1 - First, 2 - Second, 3 - Third, 4 - Fourth, 5 - Fifth, 6 - Further.

I was admitted to the current company in the mode: (You can select two answers) 1- Normal, 2 - On the basis of transfer, 3 - Due to better financial conditions. As dependent variables, the importance ratings assigned to the examined factors are used.

As dependent variables, the importance ratings assigned to the examined factors are used. This article presents an analysis of responses to a question included in the BOST questionnaire (Borkowski, 2016). To formulate a well-rounded opinion, it is essential to consider the perspectives of employees at various levels within the organization. This approach enables a deeper understanding of the enterprise from the viewpoint of its workforce. The BOST survey consists of carefully constructed questions, allowing for the evaluation of both the organization and its intangible assets (Mielczarek, 2021).

The first question relates to the roof of Toyota's house (E1 area). Employees were asked the following: "Which factor is the most important in your enterprise?" They were instructed to rank the factors by assigning values from 1 to 5, with 5 indicating the most important factor:

JA		Quality
KO		Costs
CR		Lead time
BP		Workplace safety
MZ		Employee morale

According to good scientific research practice, primary results obtained directly from surveys, physical measurements, etc., should be presented transparently. It should be emphasized, however, that these data have undergone prior verification, which involved removing cases of ratings outside the scale or situations where identical ratings were given by the same respondent. In research on central tendency, the most commonly used measure of the average level of a characteristic is the arithmetic mean. In the case of the BOST survey, the characteristic being measured was the importance of various factors as perceived by the respondents.

For comparing the average ratings of factor importance, the non-parametric Mann-Whitney U test was employed (which is the non-parametric equivalent of the Student's t-test), due to its high power compared to other tests used to analyse two independent groups. This test was also selected because the data are ordinal (i.e., they can be ordered), and the data come from a set of independent measurements. The null hypothesis in the test assumes that the distributions of the studied variable in the analysed populations do not differ significantly (medians of ratings in the compared industries). Given the large research sample (n > 20), the test statistic Z was calculated. This statistic is a function of the sum of ranks and sample size. The applied test statistic Z has the following form:

$$Z = \frac{U - \frac{n_1 n_2}{2}}{\sqrt{\frac{n_1 n_2 (n_1 + n_2 + 1)}{12} - \frac{n_1 n_2 \sum(t^3 - t)}{12(n_1+n_2)(n_1+n_2-1)}}}$$

where: U - test statistic for small sample size, calculated according to the formula:

$$U = n_1 n_2 + \frac{n_1(n_1+1)}{2} - R_1$$

where: n_1, n_2 - sample sizes, R_1 - sum of ranks for the first sample, t - number of cases included in tied ranks (this is the arithmetic mean calculated from the proposed consecutive natural numbers for these values; tied ranks are assigned to repeated values of the variable).

The results regarding the significance of the differentiation of mean scores will be presented in a table, the structure of which is as follows (Table 1).

Table 1. Results of the significance of the differentiation of mean scores for the factors in area E1

Indications	**KO**	**CR**	**BP**	**MZ**
JA	0	1	3	3
KO		3	3	3
CR			3	3
BP				0
1; 2; 3 - significant diversification, 0 - insignificant diversification				

The significance of the differentiation of mean scores is tested for three levels of α: 0.2, 0.1, 0.05. If the differentiation is significant only at the α = 0.2 level, it receives a value of 1; for α = 0.2 and 0.1, it receives a value of 3; while for all three levels of α, it receives a value of 3. Descriptions of the factors in area E1 are arranged both horizontally and vertically. It should be noted that in both cases, there are 4 factors; in the horizontal arrangement, the factor JA is missing, while in the vertical arrangement, the factor MZ is missing. There are five factors, which means that each factor appears 4 times. The JA factor creates pairs: JA-KO, JA-CR, JA-BP, JA-MZ. The next factor, KO, creates pairs: KO-CR, KO-BP, KO-MZ. One pair is missing, and the KO factor also appears in the horizontal description, where it forms a KO-JA pair, which is the fifth missing pair of factors. Similarly, the same approach is applied to the remaining factors.

The BOST method widely utilizes correlation analysis. Correlation (the interdependence of characteristics) defines the mutual relationships between selected variables. The numerical expression of correlation is the correlation coefficient (r or R), which indicates the strength and type of correlation (positive or negative), serving as a means to determine the value of the relationship between the two analysed variables (Quigley et. al., 2018). The Pearson correlation coefficient, which is a measure of linear dependence between variables, takes values within the range (-1, 1) and is calculated using formula:

$$r_{xy} = \frac{\sum_{i=1}^{n}(x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_{i=1}^{n}(x_i - \bar{x})^2 \sum_{i=1}^{n}(x_i - \bar{x})^2}}$$

where: $\bar{x}$, $\bar{y}$ – means, σ_x, σ_γ – respective standard deviations of characteristics.

The study involved six companies: manufacturers of building ceramics – C, 23; producers of forged fences – K, 18; meat processing industry – M, 18; bakery – P, 19; producers of classroom furniture – W, 22; and manufacturers of wooden toys – Z, 19. The number of correctly completed surveys is indicated alongside the company designation. On average, this number is 7 lower than the number of surveys received before the pandemic. The main reason for this is the employment of foreign workers by the companies and the widespread reluctance of employees to complete surveys. The survey was filled out by operational-level employees directly involved in the production of goods. Respondents filled out only part of the BOST survey, namely areas E1-E4 and E12.

4. Results

4.1. Analysis of Workforce Characteristics Across Selected Enterprises

The aim of analyzing the characteristics of the workforce is to assess whether the current employees are capable of achieving the strategic objectives of their respective enterprises. The assessment is based on a set of criteria deemed critical for optimal workforce structure: gender distribution aligned with the production profile, a majority of employees possessing at least secondary education (preferably higher), an optimal age range between 25 and 55 years, long tenure within the workforce, experience across multiple enterprises, and employment reflecting appropriate salary negotiations. Table 2 presents the characteristics of employees in a company producing construction ceramics. The workforce is predominantly male, which corresponds with the physical demands of the production process. Nearly half (48%) of the employees hold a secondary education, while 69% are within the peak productivity age range (25–55 years). The most common work experience bracket is 36–40 years, and 17% of the staff have 16–25 years of experience. A noteworthy finding is that 30% of the workforce have previously worked in two other enterprises, and 35% were hired with salary considerations taken into account. Overall, the employee structure appears well-aligned with the enterprise's operational and strategic goals.

The production of wrought iron fences requires handling materials at high temperatures and demands considerable physical strength. According to data in Table 3, 83% of the workforce are men, which reflects the physical nature of the job. Basic education is deemed sufficient for operational roles. Half of the employees are in the 46–55 age group. The company exhibits a relatively short average work tenure, with 28% of employees having 6–15 years of experience. However, 34% have worked between 36–45 years. Additionally, 28% have no prior employment history, while another 28% have worked in one other enterprise. Notably, 22% of the staff have experience across three previous employers, which supports effective task execution. While a significant portion (61%) are employed in standard contracts and 44% have only basic education, this indicates opportunities for further training. To ensure

performance objectives are met, 28% of the workforce were hired based on salary expectations.

Company M (Table 4) operates in the meat processing industry and had 18 survey respondents. The workforce is composed of 72% men, with a high share (39%) holding a first-cycle higher education degree. Most employees (78%) are in the optimal productivity age range. About 22% have 26–30 years of experience, 33% have worked in at least one other enterprise, and 56% were hired under standard employment conditions. Key success factors in this context include a well-educated workforce, extensive production experience, prior employment elsewhere, and salary negotiation as a component of recruitment.

Another food-sector enterprise in the study is a bakery (Enterprise P). According to Table 5, the majority of employees are women, which is consistent with the nature of the work. A significant proportion of employees have secondary (47%) or first-cycle higher education (26%). The age distribution shows that 79% of the staff are in the 26–55 range, suggesting high productivity. About 15% of employees have over 36 years of work experience, and 37% gained skills in two previous enterprises. Management has acknowledged wage expectations during recruitment for 42% of the workforce to secure talent capable of maintaining traditional baking quality.

Enterprise W specializes in the production of classroom furniture (e.g., desks, tables). As Table 6 shows, this work is primarily carried out by men. The workforce includes a high proportion (41%) of employees with first-cycle higher education and 27% with only primary education. Most employees are aged 36–45, and 32% have 26–30 years of experience. Notably, the processes are managed both by first-time employees and those who have worked in at least five other enterprises (each group constituting 23%). Most workers (45%) were employed under standard conditions.

Table 7 presents data from a wooden toy manufacturing enterprise. The workforce here includes both men and women. The majority (42%) have secondary education, while 32% hold a first-cycle higher education degree. A striking 84% of the staff are within the peak productivity age. The experience levels are diverse: 21% have 6–15 years of experience, and an equal percentage have 36–40 years. Additionally, 32% were previously employed in one other enterprise. Although 53% were hired under standard contracts, 32% negotiated their salaries, reflecting a workforce aware of its market value.

Table 2. Characteristics of respondents – percentage structure in Enterprise C

Symbol	**Labelling of characteristics and their percentage distribution**					
	MK	**WE**	**WI**	**SC**	**MR**	**TR**
1	**70**	**22**	**9**	**4**	**17**	**43**
2	**30**	**48**	**13**	**17**	**17**	**22**
3		**22**	**4**	**17**	**30**	**35**
4		**9**	**22**	**4**	**13**	
5			**30**	**13**	**9**	
6			**13**	**26**	**13**	
7			**9**	**9**		
8	**23**		**0**	**9**		

Table 3. Characteristics of respondents – percentage structure in Enterprise K

Symbol	Labelling of characteristics and their percentage distribution					
	MK	WE	WI	SC	MR	TR
1	83	44	11	0	28	61
2	17	28	0	28	28	11
3		28	17	11	17	28
4		0	22	17	22	
5			28	6	6	
6			17	17	0	
7			0	17		
8	18		6	6		

Table 4. Characteristics of respondents – percentage structure in Enterprise M

Symbol	Labelling of characteristics and their percentage distribution					
	MK	WE	WI	SC	MR	TR
1	72	22	11	0	17	56
2	28	17	17	17	33	11
3		39	22	17	28	33
4		22	22	22	17	
5			17	17	0	
6			0	17	6	
7			0	0		
8	18		11	11		

Table 5. Characteristics of respondents – percentage structure in Enterprise P

Symbol	Labelling of characteristics and their percentage distribution					
	MK	WE	WI	SC	MR	TR
1	47	21	5	11	0	32
2	53	47	5	37	26	26
3		26	37	11	37	42
4		5	26	16	11	
5			11	11	21	
6			5	5	5	
7			11	5		
8	19		0	5		

Table 6. Characteristics of respondents – percentage structure in Enterprise W

Symbol	Labelling of characteristics and their percentage distribution					
	MK	WE	WI	SC	MR	TR
1	82	27	14	0	23	45
2	18	27	5	23	18	27
3		41	27	27	18	27
4		5	18	32	5	
5			18	9	14	
6			14	5	23	
7			5	5		
8	22		0	0		

Table 7. Characteristics of respondents – percentage structure in Enterprise Z

Symbol	Labelling of characteristics and their percentage distribution					
	MK	**WE**	**WI**	**SC**	**MR**	**TR**
1	**47**	**21**	**11**	**5**	**26**	**53**
2	**53**	**42**	**11**	**21**	**32**	**16**
3		**32**	**32**	**16**	**21**	**32**
4		**5**	**21**	**16**	**5**	
5			**21**	**16**	**5**	
6			**0**	**21**	**11**	
7			**5**	**0**		
8	**19**		**0**	**5**		

The analysis of workforce characteristics across six private enterprises reveals substantial diversity, reflecting both the nature of each company's operations and conditions in the labor market. In many cases, family members and retirees are employed, which further influences structural outcomes. Despite deviations from literature-based criteria introduced at the beginning of this chapter, all surveyed companies have successfully achieved their strategic objectives, including profitability. None have declared bankruptcy. This suggests that generalizing workforce structure benchmarks across different enterprises is of limited validity and should always be contextualized.

4.2. Rankings of factor importance

The construction of rankings for factors describing the mission of enterprises, following the Toyota model, is based on the arithmetic mean of rating sets obtained from the BOST survey. These data enable the creation of comparative importance sequences for the enterprises studied. Figure 1 presents the rankings for each company:
Enterprise C – Building Ceramics Industry:

$$JA > BP > KO > CR > MZ$$

Enterprise K – Metal Industry:

$$JA > KO > BP > CR > MZ$$

Enterprise M – Meat Processing Industry:

$$JA > KO > CR > BP > MZ$$

Enterprise P – Bakery Industry:

$$JA > KO > CR > BP > MZ$$

Enterprise W – Furniture Manufacturing Industry:

$$JA > KO > BP > CR > MZ$$

Enterprise Z – Wooden Toy Manufacturing Industry:

$$JA > KO > CR > MZ > BP$$

Analysis of the factor rankings indicates that quality (JA) consistently holds the top position across all surveyed enterprises. This confirms its critical importance and justifies its central role in the mission statements of all analyzed organizations. The cost of production (KO) is ranked second in five out of six companies, suggesting its high strategic relevance and the need for its inclusion in enterprise missions. The lead time factor (CR), referring to the speed and reliability of order fulfillment, appears in third place in three enterprises, further emphasizing the importance of operational efficiency in competitive markets. Although Employee morale (MZ) ranks lower, it remains a present factor in several companies and requires careful interpretation. The role of this factor in shaping mission content will be discussed in greater detail in the correlation analysis presented in a later section.

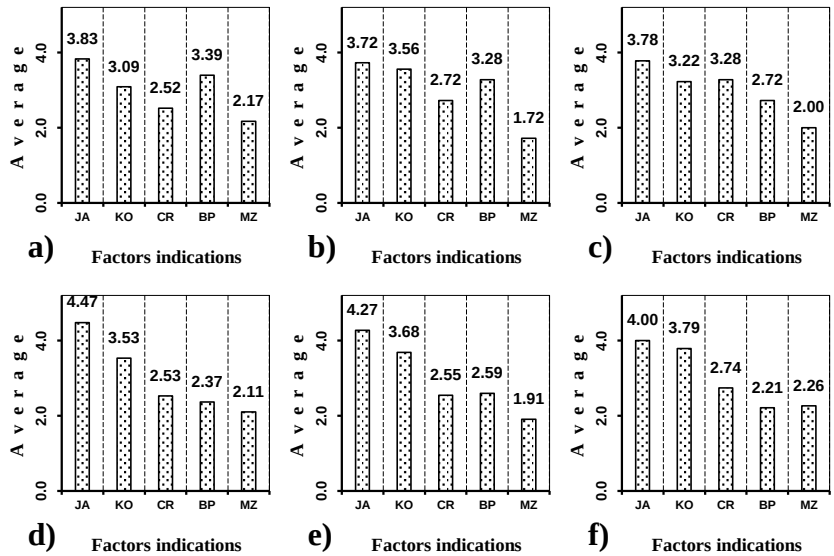

Figure 1. The Roof of the Toyota House: comparative analysis of average scores from enterprise surveys: a) C, b) K, c) M, d) P, e) W, f) Z

Another form of factor importance is the construction of the importance of a specific factor in the surveyed enterprises, with the results showing a dependence:

- for the factor Quality (JA)

  P > W > Z > C > M > K

- or the factor Costs (KO)

  Z > W > K > P > M > C

- for the factor Lead time (CR)

  M > Z > K > W > P > C

- for the factor Workplace safety (BP)

  C > K > M > W > P > Z

- for the factor Employee morale (MZ)

  Z > C > P > M > W > K

The summary of the importance of specific factors in individual companies shows that at each position, the same company appears for a maximum of two factors. In the case of the first position, a toy industry company – a manufacturer of wooden toys – appears for the factors: Costs (KO) and Employee morale (MZ). Regarding the second position, a furniture industry company, a manufacturer of classroom furniture, appears for the factors: Quality (JA), Costs (KO). This company also appears twice in the fourth position for the factors: Lead time (CR) and Workplace safety (BP). The fifth and sixth positions each contain two pairs of companies.

During the analysis of the results, the significance of the variation in the average rating of the factor Quality (JA) across the studied companies was also assessed (Table 8). The average rating of the quality factor (JA) in the building ceramics industry (C) is significantly different at the levels $\alpha = 0.2, 0.1, 0.05$ from the average of the factor in company P, and only at the level $\alpha = 0.2$ for company W. The same relationship is also found for the averages of companies K and M. In the case of the average for company P, in addition to the mentioned relationships, it is statistically different from the average of the toy industry company Z. In summary, it should be stated

that out of the possible 15 cases of variation, 7 were observed, with 3 cases concerning the averages of three companies: P and W.

The results of the survey research and their analysis revealed that there is no situation where the factors in all companies occupy the same position in the importance ranking (i.e., have the same average). Although a case of identical factors in the rankings was identified, the numerical data do not indicate the same average levels. Based on the conducted analysis, it can be concluded that the sets of ratings for the importance of factors, elements, and business missions are the property of the companies; they are their intellectual assets.

Table 8. Results of the significance sssessment of differences in average ratings of the Quality (JA) in the studied Companies

Indications	**K**	**M**	**P**	**W**	**Z**
C	0	0	3	1	0
K		0	3	1	0
M			3	1	0
P				0	1
W					0
1; 2; 3 - significant diversification, 0 - insignificant diversification					

4.3. The Influence of Respondents' Characteristics on the Level of Factor Ratings in Area E1

In the BOST method, correlation analysis is extensively developed, with nine graphical forms used to present its outcomes. One such form - bubble charts is presented in Figure 2. On the X-axis, the designated symbols of the analyzed factors are marked, with three vertical lines assigned to each, representing significance levels $\alpha = 0.2$, 0.1, and 0.05. The Y-axis represents respondent characteristics. Each data point is labeled with one of two digits: 1 indicates a positive correlation, and 2 indicates a negative correlation.

Figure 2a illustrates that the importance of the factor production costs (PC) is positively associated with employees who have longer work experience, significant at $\alpha = 0.2$. Similarly, the factor delivery time (DT) is positively associated with respondents possessing higher education, also at $\alpha = 0.2$.

For company K (Figure 2b), the evaluation of factors is influenced by respondents as follows: the quality (Q) factor is positively associated with the mode of employment (i.e., how the employee was hired) at significance levels $\alpha = 0.2$ and 0.1, while production costs (PC) are supported by the same characteristic, but only at $\alpha = 0.2$. In the case of the workplace safety (WS) factor, a negative correlation is observed with education level—respondents with lower education tend to assign greater importance to this factor. Additionally, workplace safety is perceived as more important by male respondents. Employees hired with salary considerations believe that workplace safety is not sufficiently ensured.

Figure 2c presents the correlation results for company M, representing the meat industry. The evaluation of delivery time (DT) is positively influenced by four respondent characteristics: gender, age, work experience, and mobility, across all three significance levels. The employee morale (EM) factor is supported by work experience, but only at $\alpha = 0.2$.

In the case of company P, which operates in the bakery industry (Figure 2d), the evaluation of production costs (PC) is positively associated with two respondent characteristics: age (across all three α levels) and mode of employment (at $\alpha = 0.2$). The employee morale (EM) factor is supported by education level, suggesting that higher-educated employees place more emphasis on adherence to baking parameters and standards.

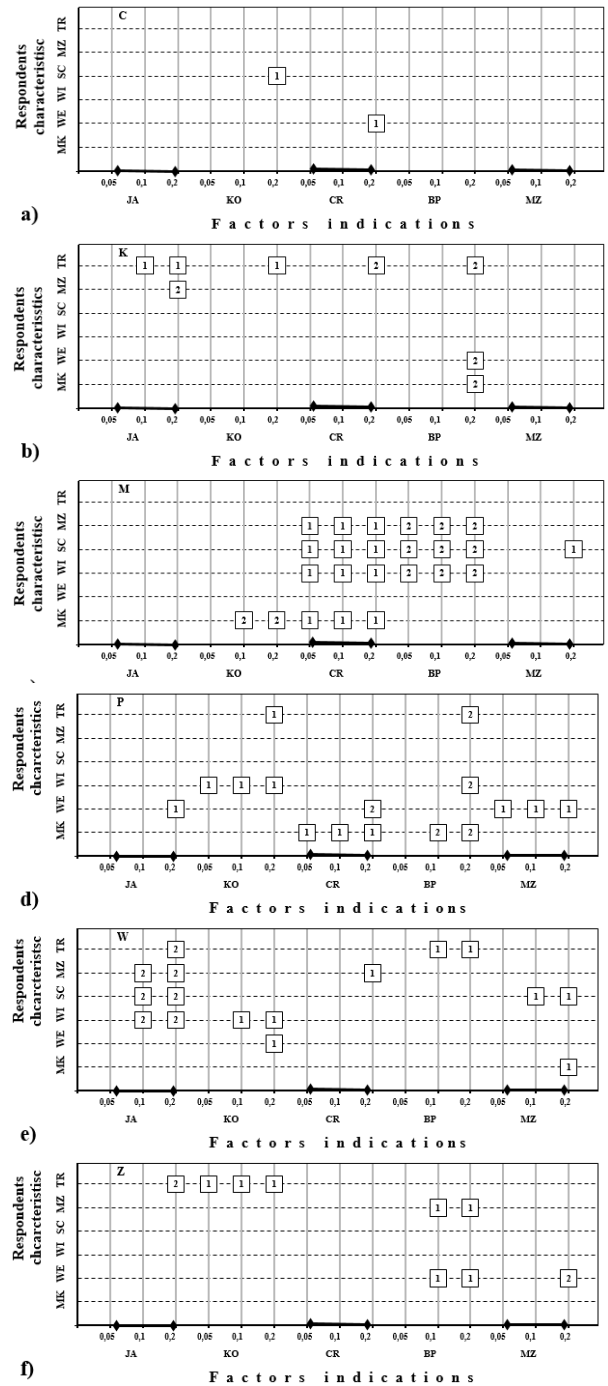

Figure 2. The Roof of the Toyota House: Results of the Analysis of the Influence of Respondent Characteristics on the Importance Ratings of Area Factors Based on Survey Data from Enterprises comparative analysis of average scores from enterprise surveys:
a) C, b) K, c) M, d) P, e) W, f) Z

For company W, which manufactures classroom furniture (Figure 2e), respondents indicated that quality (Q) is the most important factor in area E1, yet they also expressed the belief that the actual quality of products is not high. According to the data, this view is supported by older employees, those with longer work experience, greater mobility, and those hired under salary-based agreements. The importance of the production costs (PC) factor is associated with respondents' age and education. The delivery time (DT) factor is supported by mobility, the workplace safety (WS) factor by mode of employment, and the employee morale (EM) factor by gender and work experience.

In the case of company Z (Figure 2f), a wooden toy manufacturer, several respondent characteristics influence factor evaluations. The production costs (PC) factor is supported by mode of employment, while workplace safety (WS) is influenced by respondents' age and mobility. Regarding quality (Q), employees hired based on salary considerations perceive product quality as insufficient. Moreover, employees with higher education believe that procedural standards are not consistently followed—this is reflected in the evaluation of the employee morale (EM) factor.

Although the results of the correlation analysis may challenge previous assumptions, they offer valuable insights for the improvement of internal processes and the tailoring of management practices to specific employee profiles

5. Conclusion

Based on survey research conducted in six companies, this article presents the arithmetic means of factors describing the mission of enterprises according to the Toyota philosophy. These factors include: Quality (JA), Costs (KO), Workplace safety (BP), Lead time (DT), and Employee morale (MZ). They constitute the Roof of the Toyota House and form Area E1 in the BOST method.

An analysis of the structure of respondents' personal characteristics was conducted in the context of achieving the objectives of the enterprises. The statistical significance of differences in the mean rating of the Quality (JA) factor across the surveyed companies was assessed. The influence of respondent characteristics on the evaluation of subjective factors was also analyzed. The results obtained indicate potential directions for improvement actions.

Based primarily on the arithmetic means, the following mission statements can be proposed for the respective enterprises:

Company in the Building Ceramics Sector (C) – "We manufacture top-quality building ceramics to bring joy to our customers during both construction and use. Our products are made in safe working conditions, and we continuously strive to reduce production costs and shorten lead times. Our workforce is fully capable of fulfilling our mission".

Company in the Metal Industry (K) – "Our forged products and fencing components are of the highest quality - their shape and precision bring smiles to the faces of owners and passersby alike. We ensure short order fulfillment times at competitive prices. We pay close attention to workplace safety and continually improve it. Our workforce structure guarantees successful mission execution".

Company in the Meat Industry (M) – "Our cold cuts are of the highest quality - fresh, tasty, and traditionally made from Polish ingredients. We are mindful of production costs and workplace safety. Our employees are aware of their role, particularly in adhering to process timelines".

Company in the Bakery Industry (P) – "Regardless of the type of bread, it is of the highest quality every day: fresh, aromatic, and consistently flavored, bringing satisfaction with every bite. Our products are competitively priced. Our employees are well-qualified for process execution and place particular emphasis on meeting time

requirements".

Company in the Carpentry Industry (W) – "The high quality of the benches and tables we produce for classroom furnishings ensures that comfortable seating helps reduce fatigue and fosters a friendly learning atmosphere. Our management is committed to continuously improving the quality of our products, which are manufactured under safe conditions".

Company in the Toy Industry (Z) – "Our toys are of the highest quality in every respectthey are safe for children, hypoallergenic, durable, and affordable. They are manufactured under safe working conditions. The composition of our staff ensures the successful realization of our mission".

The analysis of the surveyed companies revealed that the mission of each enterprise is deeply intertwined with key operational factors such as quality, production costs, workplace safety, delivery time, and employee morale. These factors, modeled in alignment with the Toyota philosophy, form a crucial part of the organizational strategy and are essential for driving continuous improvement within the companies.

The survey results highlight the importance of tailoring mission statements to the unique characteristics of each enterprise and its workforce. It was evident that a strong, well-defined mission contributes not only to operational efficiency but also to the overall satisfaction of employees and customers. Moreover, the relationship between respondent characteristics and the evaluation of factors provides valuable insights for managers, helping to identify areas for targeted improvements.

By focusing on the continuous enhancement of these core factors and aligning them with the needs of their employees and customers, enterprises can foster a more productive and sustainable environment. The findings of this study contribute to a deeper understanding of how companies can refine their missions to achieve long-term success, ensuring that their strategic objectives are met in harmony with the philosophy of continuous improvement.

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Krzysztof Mielczarek
Czestochowa University of Technology,
Czestochowa,
Poland
krzysztof.mielczarek@@pcz.pl
ORCID 0000-0003-3701-0192

Stanisław Borkowski
Kielce University of Technology
Kielce,
Poland
borkstanislaw@gmail.com
ORCID 0000-0002-3403-1214