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DESCRIPTION OF THE COMPANY'S MISSION IN THE PLASTICS PROCESSING INDUSTRY

Stanisław BORKOWSKI[1*], Wacław GIERULSKI[2]

[1] Politechnika Świętokrzyska; borkstanislaw@gmail.com, ORCID: 0000-0002-3403-1214
[2] Politechnika Świętokrzyska; waclaw.gierulski@tu.kielce.pl, ORCID: 0000-0001-6339-261X
* Correspondence author

Purpose: The article is a response to the needs of a specific company for help in writing a mission based on the Japanese management philosophy, especially Toyota, which is based on elements of the Toyota House roof. The content of the mission is supposed to emphasize the importance of these elements in the interpretation of employees (respondents).
Design/methodology: To achieve the stated goal of the article, the BOST questionnaire, the main research tool in toyo-tority, was used. The respondents assessed the importance of such elements of mission (factors) as: quality, work safety, costs, execution time, and attitude of the crew. A statistical analysis of the obtained sets of scores was carried out. An importance series was built, the preferences of the analyzed factors were assessed, the average scores were compared, the influence of the re-spondents' characteristics on the scores of the examined factors was determined.
Findings: The analysis of the research results allowed to obtain interesting information: quality, according to the respondents, is the most important, two factors - costs and work safety show similarity (for the 10% criterion) in terms of preferences, the average of these factors did not show any significant differentiation of the average scores. On the evaluation of the quality factor three respondents' characteristics are influenced, the cost - two, work safety - none.
Originality: This article presents: Make the Toyota House roof from the set of five elements a research tool and signing it into the BOST survey structure. These elements were referred to industries other than the automotive industry. Confirmation of the equivalence of the comparative scale and the range scale in the assessment of the similarity of the preference factors. The article is addressed mainly to the management staff and students of management and production engineering.

Keywords: mission, toyotarity BOST method, preference.

Category of the paper: research paper.

1. Introduction. The concept of mission

Mission is a precise word, expressed in a language understandable to employees and the organizational environment outlining its far-reaching goals and aspirations. Mission is the statement of vision employed by organization for strategic purposes (Griffin, 2005). Vision, on the other hand, is the image of the future that organizations want to create. The word "vision" comes from the Latin word *videre*, meaning "vision". According to the most natural definition vision is the concept of the company's future, the most fundamental aspiration that in order to be effective should be shared by both the management and other employees.

It is difficult to develop a good mission statement, as two contradictions have to be accommodated. First of all the mission should be lapidary but at the same time broad. Secondly, the mission should contain the element of a dream and indicate the operational way of its implementation.

1.1. Mission in the structure of toyotarity

TOYOTARITY is a concept invented by the author of the chapter and is a proprietary name (Borkowski, 2012a).

Toyotarity is defined as a scientific study of human-machine and human-human interactions with regard to process-based approach and Japanese culture, especially that of Toyota, aimed at continuous improvement with the use of knowledge.

The basic model of TOYOTARITY is shown in Figure 1.

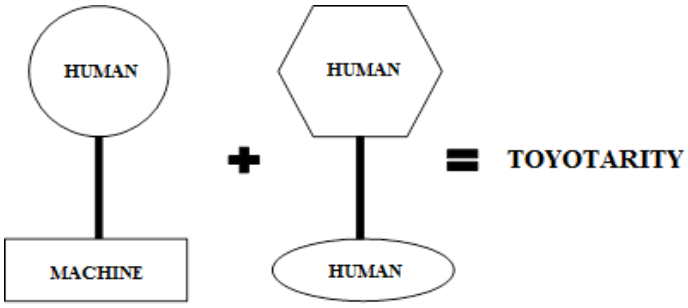

Figure 1. The basic model of TOYOTARITY.
Source: Borkowski, 2012b.

1.2. Mission in Toyota's house structure

The production system is a purpose-designed and structured subsystem that includes electrical power, materials and information used by a human to produce certain goods or services to satisfy the diverse needs of consumers (Lewandowski, Skołud, Plinta, 2014). The production system is the configuration of the com-ponents, the relationships between them and the conversion processes (converting the system's input vector into an output vector) (Durlik, 2007).

The Toyota Production System is based on the assumption that all individual elements work for the cause of a whole (Ohno, 2008). Its goal is also to support and encourage employees to continually strive for improvement in every sphere of company's activity (Liker, 2005).

In literature, several models of Toyota production system are described. One of them is shown in Figure 2. In general, the TPS (Toyota production System) is based on the philosophy of the Toyota Way (Liker, Meier, 2011).

The Toyota Way means much more than tools and techniques (Liker, Hoseus, 2016):

- It is a set of tools and techniques engaging all employees in continual improvement of their work (Kaczmarska, Gierulski, 2022).
- It depends on people who have the ability to detect invisible problems and try to solve them.

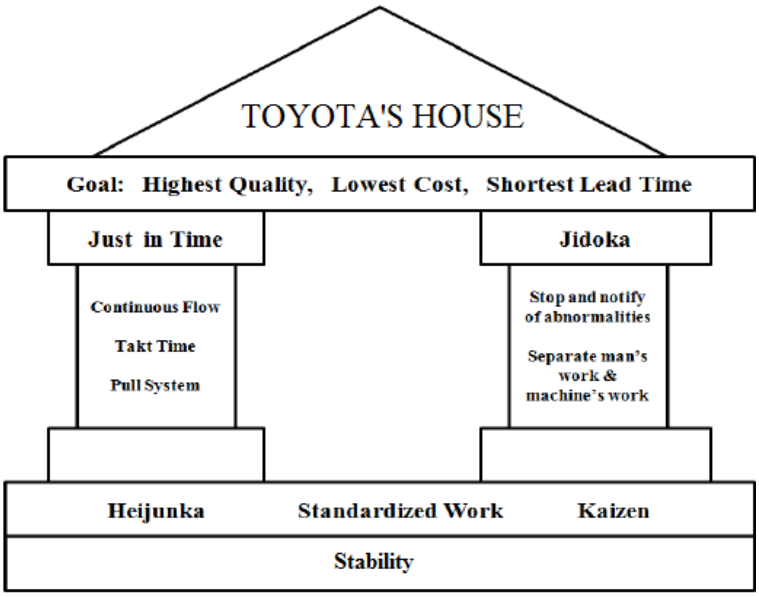

Figure 2. Toyota Production System. Toyota House.

Source: Liker, 2005.

1.3. Mission in the BOST questionnaire

The BOST questionnaire, that is Toyota's management principles in questions, was created by Stanisław Borkowski, Prof. of Technical and Economic Sciences. The name comes from the two initial letters of the author's first name and surname and is a proprietary name, (Borkowski, 2012a, 2012b, 2012c). Each of Toyota's principles is described by a set of factors called areas (Borkowski, 2021). The survey has two versions: for supervisors and for employees (Silwerman, 2009).

The BOST survey is universal and can be used both in manufacturing and service-providing enterprises (e.g., banks, hospitals, schools and shops) (Apanowicz, 2005; Babbie, 2007). The survey for manufacturing enterprises (one version for employees and the other for supervisors) consists of 12 sets of factors (areas). The version for the employees includes a set of factors describing the elements of the Toyota house roof and principles 1, 2, 3, 4, 6, 7 and

14, whereas the version for the supervisors includes a set of factors describing all the principles of management in Toyota and the elements of the Toyota house roof. The survey contains a rank scale and the respondents use it to evaluate the importance of each factor (Nowak, 11).

In the author's publications (Borkowski, 2022) the elements of mission (the roof of Toyota House are presented as follows:

Area E1. What is most important in your enterprise? Arrange the factors in the priority order inserting 1; 2; 3; 4; or 5 (5 is the most important factor) into the box:

JA		Quality
KO		Costs
CR		Lead time
BP		Occupational safety
MZ		Staff morale

The manufacturer of PVC pipes and fittings (Kaczmarska, Gierulski, Zajac, Bittner, 2021). The products include sewer pipes of different diameter, length and wall thickness, connectors, wells and inspection openings. The main customers are construction companies and supermarkets. The enterprise runs three shops including one located on its premises, the second within the distance of 20 and the third 50 km. Construction materials produced by other companies are also sold there.

2. Basic of the statistical analysis of evaluation sets – analysis of the structure of the respondents' characteristics

2.1. Characteristics of selected statistical measures

In the BOST method the following statistical measures are used to analyze the sets of responses:

- arithmetic mean,
- standard deviation,
- quartile deviation,
- coefficient of variation,
- coefficient of skewness,
- coefficient of excess,
- similarity according to the comparative scale and the range scale,
- differentiation of average ratings,
- correlation analysis.

The most intuitive measure of position is the arithmetic mean. For data in a detailed series, it is calculated by adding all the values assigned to the feature, and dividing the sum is by the number of features (Ostasiewicz, Rusnak, Siedlecka, 2006).

Standard deviation is an absolute measure of the differentiation in the distribution of features; it indicates the average deviation from the arithmetic mean (Pułaska-Turyna, 2008).

Quartile deviation is one half of the difference obtained by subtracting the first quartile from the third quartile. The quartile deviation is, therefore, an absolute measure and indicates the average deviation from the median for a half of middle values in the data set (Pułaska-Turyna, 2008).

The coefficient of variation is the ratio of the standard deviation to the arithmetic mean expressed as a percentage.

The coefficient of skewness (asymmetry) is used to determine the strength and direction of asymmetry; it does not normally exceed the interval from -2 to +2. The sign indicates the direction of the asymmetry; the positive sign (histograms over the zero axis) indicates the right-sided and the negative the left-sided skewness (Rabiej, 2012).

The coefficient of excess (We) is a measure of the extent to which the units concentrate around the mean. A small concentration of units around the mean is expressed by a relatively flat distribution and vice versa. The excess coefficient indicates the degree of flattening of the set with respect to the flattening of the normal set (Piłatowska, 2009).

2.2. Assessment of respondents' characteristics

The BOST survey comprises the following characteristic of independent variable (respondents' features):

- gender (MK) - 1 - man, 2 - woman,
- education (WE) - 1 - < secondary, 2 - secondary, 3 - higher I, 4 - higher II,
- age (WI) - 1 - 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 66 years,
- work experience (SC) - 1 - to 5 years, 2 - 6-15 years, 3 - 16-25 years, 4 - 26-30 years, 5 - 31-35years , 6 - 36-40 years, 7 - 41-45 years, 8-– over 45years,
- current employment is your place of work (MR):
  1 – first ☐, 2 – second ☐, 3 – third ☐,
  4 – fourth ☐, 5 – fifth ☐, 6 – further ☐.
- in the present company I was employed in the mode: (two answers may be marked) (TR):
  1 – regular ☐, 2 – transfer ☐,
  3 – on account of better financial conditions ☐.

In the company manufacturing PVC pipes and fittings, the BOST questionnaire was filled in by 32 respondents, including 21 men and 11 women (Figure 3a).

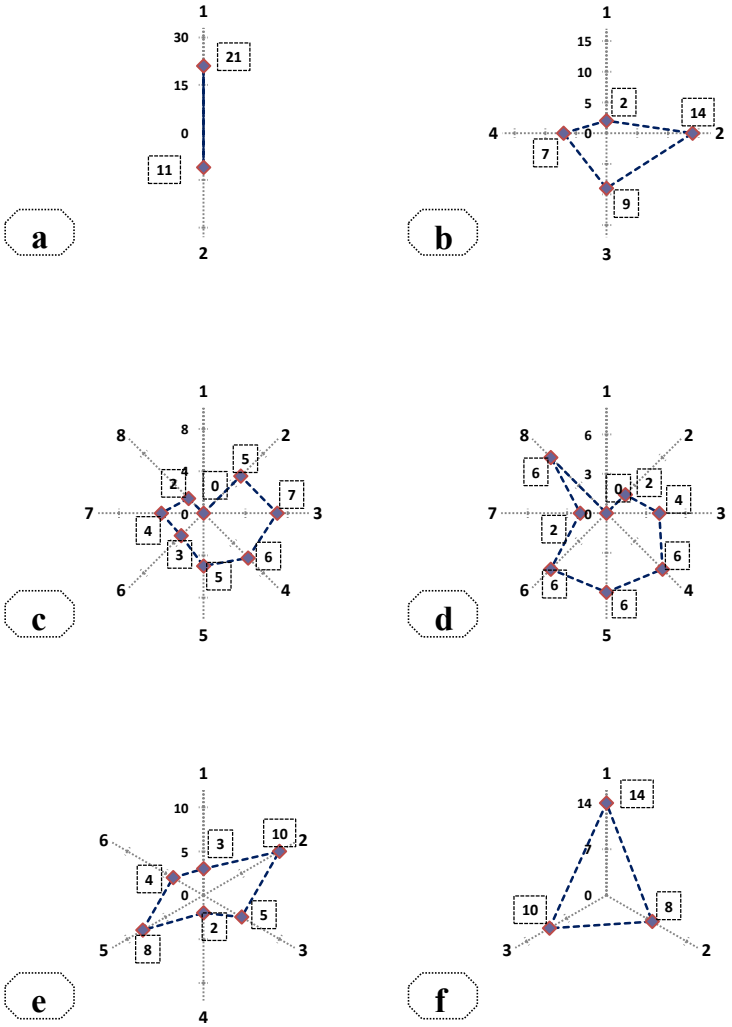

Figure 3. Radar graphs. Respondents characteristic with consideration of: a) gender, b) education, c) age, d) job seniority, e) mobility, f) way of recruitment.

Source: own study.

Figure 3b shows that 14 people (44%, Table 1, WE column) have a secondary education and a total of 16 respondents out of 31 have higher education. The biggest group of respondents (7 persons) is aged between 36 and 45, (Figure 3c; taking into account the next two variants of age we obtain 18 people (57% of respondents) aged between 36 and 55. This group of respondents, being the most efficient, constitutes human capital of the company. Figure 3d shows that four variants of work experience have the same number of respondents, 6 each. For 62% of respondents a long-term employment is also a company capital. Respondents are very mobile (Figure 3e), as only 3 of them (9%) have not worked before in any other company. Figure 3f shows that the high rotation of the staff was associated with low salaries. The owner stabilized the staff by basing the mode of recruitment on two procedures: transfer to another post and good salary.

Table 1.
Features of respondents. Percentage characteristic

Symbol	Features' marking and their rate characteristic					
	MK	WE	WI	SC	MR	TR
1	66	6	0	0	9	44
2	34	44	16	6	31	25
3		28	22	13	16	31
4		22	19	19	6	
5			16	19	25	
6			9	19	13	
7			13	6		
8	32		6	19		

Source: own study.

In conclusion, most of the respondents, the employees of company producing PVC pipes and fittings, are men. The majority of respondents are at the age of highest productivity. Most have work experience of 26-45 years, more than 90% have previously worked in at least one company. A significant number of the respondents considered the amount of salary as the most important factor when accepting the job (Pocztowski, 2003).

As noted above, in the BOST method, the correlation between the respondents' features is analyzed. The results are presented as bubble charts, taking the form of a matrix. When analyzing the matrix data the following should be kept in mind: the maximum number of possible correlations is 5, the general number of correlations is 15, the correlation applies to three levels of α: 0.05; 0.1; 0.2 (Figure 4). The correlations of features obtained for the respondents employed by the manufacturer of PCV pipes and fittings are shown in Figure 4. A preliminary analysis shows that in 4 cases no correlation exists. The mode of recruitment (TR) does not show a statistically significant correlation with the mobility. The correlations with respondents' gender ($\alpha = 0.05$) and education ($\alpha = 0.2$) are negative. In the next two cases correlations are positive: with age at $\alpha = 0.2$ and with work experience at $\alpha = 0.1$. Women are more likely than men to be recruited on a standard basis while less educated respondents are more interested in the amount of salary; older employees and those with longer work experience show more interest in the amount of salary. The respondents' gender (MK) is correlated with the mode of recruitment, work experience and age (Figure 4). The correlations are negative at the α level of 0.05. That means that women are more likely than men to be recruited on a standard basis, they are younger and have shorter work experience. The education of respondents (WE) showed a statistically significant correlation with the same features as gender, the direction of the relationship is also negative, but the level of α is 0.2. During recruitment procedure less educated respondents show interest in the amount of salary, are older and have long work experience.

The age of respondents (WI) showed statistically significant correlation with other features. These correlations are as follows: with the mode of recruitment - positive correlation, $\alpha = 0.2$, with mobility - positive correlation, $\alpha = 0.2$, with work experience - positive correlation,

$\alpha = 0.05$, with education - negative correlation, $\alpha = 0.2$, with gender - negative correlation, $\alpha = 0.05$. This indicates that older respondents show more interest in the amount of their future salaries, are mobile, have long work experience, are less educated and are mainly men.

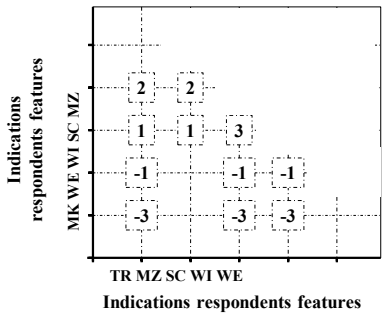

Figure 4. Results' map of correlation analysis between respondents' features. 1 for $\alpha = 0.2$; 2 for $\alpha = 0.1$; 3 for $\alpha = 0.05$. (-) negative.

Source: own study.

The respondents' work experience (SC) also shows statistically significant correlation with other features. The correlations indicate that persons with a long work experience are interested in the amount of future salaries, have worked in other companies, are older, do not have higher education and are men.

The respondents' mobility (MZ) showed statistically significant correlation with work experience (positive correlation, $\alpha = 0.1$) and age (positive correlation, $\alpha = 0.2$). The respondents who frequently change jobs are older and have long work experience.

3. Presentation of the results of teh BOST survery and their analysis

3.1. Analysis of the structure of assessmments of the importance of factors describing the mission of enterprises according to Toyota

The analysis of the respondents' features (explanatory variables) and the evaluation of factors describing Toyota mission are followed by the statistical analysis. Figure 5 shows the selected statistical measures of the sets of results obtained in T enterprise. The ratings of factors describing Toyota mission obtained from the respondents employed by the company producing PVC pipes and fittings (T4) are presented in Figure 5. The rating for *quality* (JA) is "4" (9 occurrences) and for *staff morale* (MZ) "1" (17 occurrences). The set of ratings for *costs* (KO) has the maximum number of occurrences for "3" (13 occurrences), lead *time* (CR) for "2" (10 occurrences) and *occupational safety* (BP) for "4" (10 occurrences).

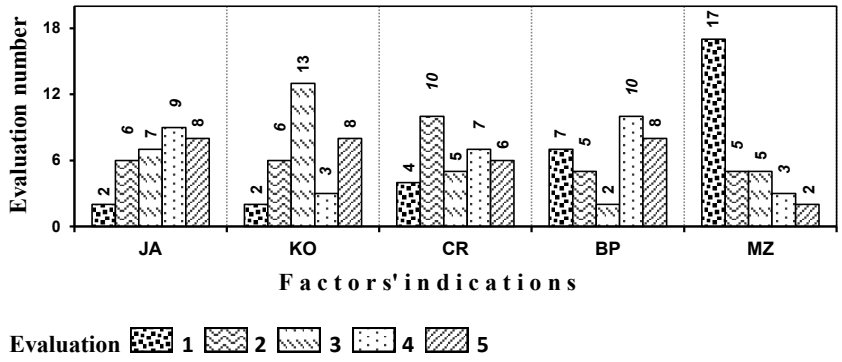

Figure 5. Roof of the Toyota house. Distribution analysis of evaluations E1 area factors.

Source: own study.

3.2. Statistical analysis of sets of ratings

The analysis of the respondents' features (explanatory variables) and the evaluation of factors describing Toyota mission are followed by the statistical analysis. The results of a statistical analysis of factors describing Toyota mission obtained in the enterprise manufacturing PVC pipes and fittings are shown in Figure 6.

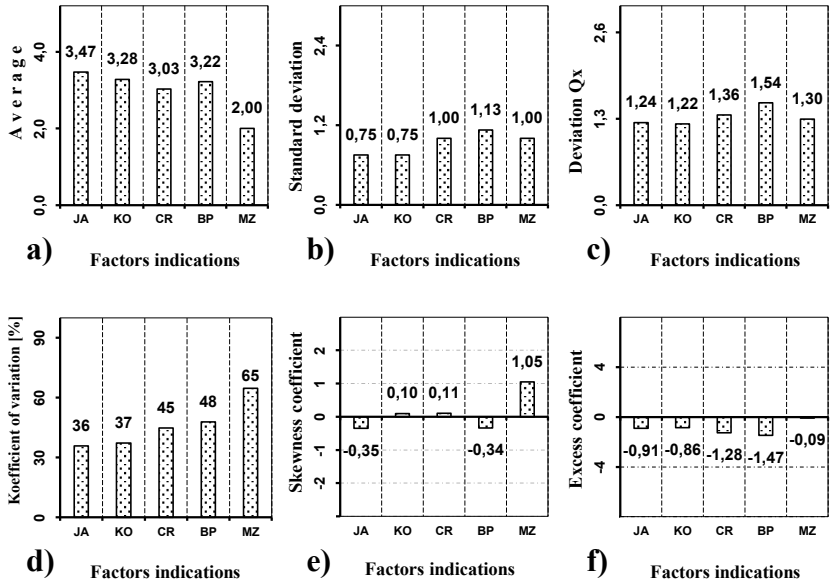

Figure 6. Roof of the Toyota house. Comparison: a) average, b) standard deviation, c) Qx deviation, d) coefficient of variation, e) skewness, f) kurtosis for E1 area factors.

Source: own study.

The respondents think that the most significant factor of the mission in their enterprise is *quality* (JA) (Figure 6a). They were unanimous as the set of ratings obtained (Figure 6b) has the smallest standard deviation. As regards the distribution of 50% of central values (Figure 6c) the largest deviation from the median exists in the set of ratings for *occupational safety* factor. (BP). The factor is scattered in the interval between 36 – 65%, and includes three scale ranges. In the range from 20 to 40% covering moderate differentiation of feature the sets of ratings for

quality (JA) and *costs* (KO) exist; in the range from 40 to 60% covering a strong differentiation of features the sets of ratings for *lead time* (CR) and *occupational safety* are present. The set of ratings for *staff morale* factor has a very strong differentiation of feature as the coefficient of variation is greater than 60%. The distributions of ratings for *quality* (JA) and *occupational safety* (BP) have negative coefficients of skewness which means that they are skewed to the left. The coefficient of skewness for the ratings of factors denoted as KO, CR, BP is positive; the ratings are grouped around lower values.

On the basis of the degree of asymmetry expressed by asymmetry coefficient the distributions of ratings fall within two scale ranges. A very weak asymmetry of distribution (range from 0.0 to 0.4) applies to the distribution of ratings for the factors denoted as: JA, KO, CR, BP. The distribution of *staff morale* (MZ) factor has the skewness coefficient of 1,05 which means that its asymmetry is moderate. The excess coefficient of ratings obtained for all factors is negative which implies that they are less flattened than normal ones.

3.3. Development of the series of factors arranged by the degree of importance (The Roof of Toyota House)

One of the aims of the BOST survey is to examine the relationships between ratings obtained for the factors. For that purpose the series of factors (describing the Toyota mission) arranged by the degree of importance, the preferences for each factor, and the differentiation of average ratings are presented. To develop the series of factors by the degree of importance, the rating scale is used. It is calculated on the basis of the average rating. For a five-point scale it is five. The extent to which the scale is used is expressed as the average rating divided by the maximum rating (resulting from the scale) multiplied by a hundred (expressed as a percentage). Figure 7 shows the application of the ranking scale in five enterprises.

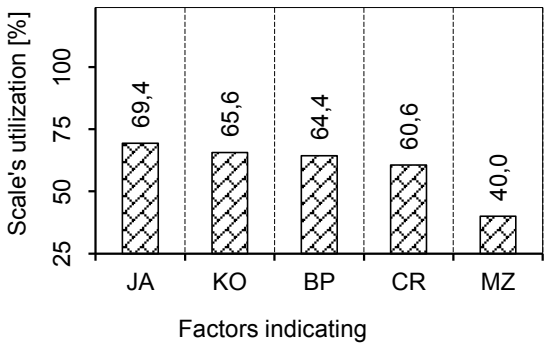

Figure 7. The usage of measurement scale for evaluating the importance of factors which describe the mission.

Source: own study.

Basing upon the data the following series of factors (describing the Roof of Toyota House) arranged by the degree of importance were obtained:

$$JA > KO > BP > CR > MZ \quad (1)$$

The respondents think the enterprise manufacturing PVC pipes and fittings (T4) focuses on *quality* (JA) as the most important element of its mission. Quality is understood as compliance with technical requirements such as length, diameter, tightness and chamfering.

Since pipes are usually joined at an angle, the quality of fittings consists in maintaining the required angles, and diameters. Customers want the exposed pipes and fittings to be white. This preference is taken into account and the color of pipes and fittings is included in quality factors. *Costs* factor (KO) occupies the second place. Defective pipes are cut into shorter ones in order to eliminate the defect. Some are milled and so are defective fittings. The respondents think that occupational safety can take the third place (series 1). Since the moving parts of the machines are separated from the respondents by curtains, the number of accidents at work is negligible. The majority of accidents are caused during transport and assembly of pipes. The fourth place in the order of significance is taken by *lead-time* factor (CR). As the manufacturing of PVC pipes and fittings is based upon rigid technologies the introduction of any modification results in an increased number of defective products.

3.4. Interpretation of series of importance

The interpretation of series of importance describing Toyota mission will be conducted on the basis of preferences expressed by the respondents while ranking the significance of factors. Two scales will be used to compare preferences: Thurstone scale and the scale of range developed by the author (Sagan, 2003). The purpose of using two scales is to demonstrate their equivalence. The figures include: the comparative scale and the scale of range: (a) showing the factors studied, (b) illustrating the distance between adjacent factors, (c) showing the distance (%) between adjacent pairs of factors on a selected scale (Borkowski, Knop, 2014).

Figure 8 and Figure 9 are used to determine respondents' preferences regarding factors describing Toyota mission, (series 1) in the enterprise manufacturing PVC pipes and fittings. The relationship 1 and the distribution of factors on the comparative scale (Figure 8a) and on the scale of range (Figure 9a) indicate that the order of factors is the same on both scales.

Analyzing the distances between pairs of factors we obtain the following relationships:
for the comparative scale:

$$CRMZ(0.57) > JAKO(0.10) > BPCR(0.08) > KOBP(0.04) \quad (2)$$

for the scale of range:

$$CRMZ(1.03) > JAKO(0.19) = BPCR(0.19) > KOBP(0.06) \quad (3)$$

Thus we can conclude that:

- the distances between factors are bigger on the scale of range than on the comparative scale,
- two pairs with the same distance between factors are present on the percentage scale of range.

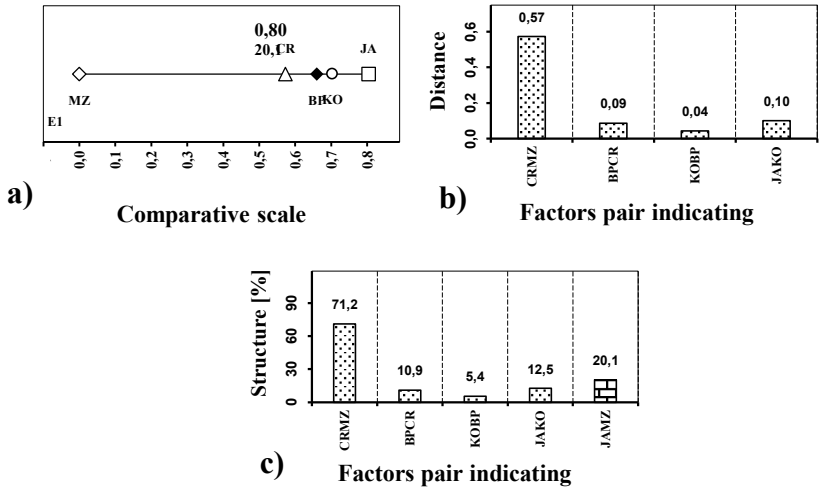

Figure 8. Characteristics of comparative evaluations' scale for importance factors in E1 area: a) distribution of factors on the scale, b) distance between pairs of factors, c) scale structure (%).

Source: own study.

While analyzing the preferences (Figure "a" and Figure "c") we notice some peculiarity in the distribution of factors on the scales; four factors are distributed in the range of 70-100%. We find that *quality* (JA) unlike other factors is most strongly preferred (Hamrol, 2013). The *costs* factor (KO) shows a similarity in preference to the o*ccupational safety* (BP) because the distance between them is less than 10%. Both factors are in the strong preference area (80-100%). The *lead time* factor (CR) does not show similarity in preference to other factors. It is located in the area of strong preference (60-80%). S*taff morale* (MZ) is the least preferred factor.

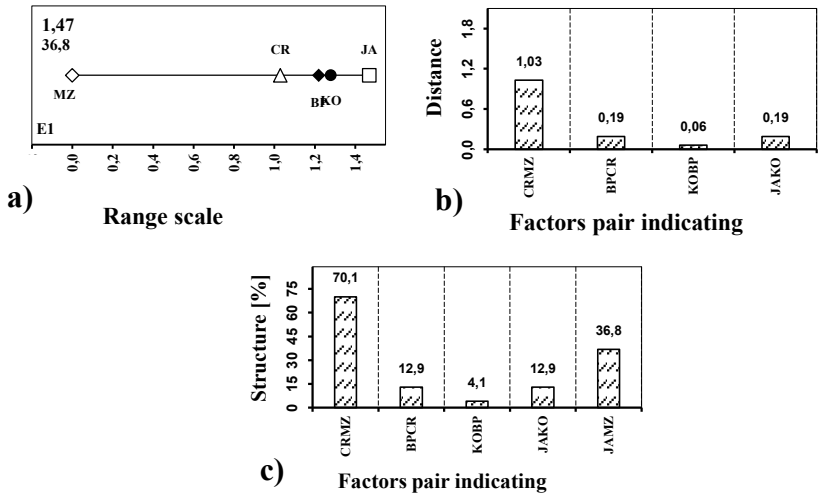

Figure 9. Characteristics of range' scale for average importance evaluations' for factors in E1 area: a) distribution of factors on the scale, b) distances between pairs of factors, c) structure (%) of scale.

Source: own study.

3.5. Differentiation of average ratings of factors describing the enterprise mission

Table 2 presents the results concerning the differentiation of the average ratings of factors located in E1 area for the enterprise manufacturing PVC pipes and fittings. The pairs with *quality* (JA) factor have the differentiation of average ratings written as: JA: KO – (0; 0; 0), JA: CR – (0; 0; 1), JA: BP – (0; 0; 0), JA: MZ – (1; 1; 1). It can be concluded that the average rating of *quality* factor differs from those of *lead time* factor (CR) only at $\alpha = 0.2$ and *staff morale* factor (MZ) at $\alpha = 0.05$; 0,1 and 0.2. From the Table 2 it follows that the average ratings of the pairs of factors KO: JA, KO:CR and KO:BP do not show significant differentiation. Therefore, they can be written as (0; 0; 0). The average ratings of KO: MZ pair show significant differentiation at all α levels. The differentiation of average ratings for two pairs containing *lead time* factor (CR), namely, CR:KO, CR:BP are also written as (0; 0; 0). This means that their average ratings do not differ significantly at $\alpha = 0.05$; 0.1 and 0.2. The average ratings of CR: MZ show significant differentiation at all assumed levels of α, which is written as (1; 1; 1). The differentiation of the average ratings of CR: JA exists only at $\alpha = 0.2$.

Table 2.
Roof of the Toyota house. The results of importance difference analysis average evaluations factors for E1 area

Indications		**KO**	**CR**	**BP**	**MZ**
JA	**test**	***0,61***	***1,35***	***0,71***	***4,63***
	α = 0,05	***no***	***no***	***no***	***yes***
	α = 0,1	***no***	***no***	***no***	***yes***
	α = 0,2	***no***	***yes***	***no***	***yes***
KO	**test**	***E1***	***0,77***	***0,18***	***4,07***
	α = 0,05	***1,9600***	***no***	***no***	***yes***
	α = 0,1	***1,6449***	***no***	***no***	***yes***
	α = 0,2	***1,2816***	***no***	***no***	***yes***
CR	**test**	***yes - significant diversification***		***0,52***	***3,11***
	α = 0,05			***no***	***yes***
	α = 0,1			***no***	***yes***
	α = 0,2			***no***	***yes***
BP	**test**	***no - insignificant diversification***			***3,43***
	α = 0,05				***yes***
	α = 0,1				***yes***
	α = 0,2				***yes***

Source own study.

From the column PB in Table 2 we conclude that the average ratings of: BP: JA, BP: KO, BP: CR do not show significant differentiation and can be written as (0; 0; 0). The average rating of *occupational safety* factor (BP) differs significantly from that of *staff morale* (MZ) at the assumed levels of α. The differentiation is written as BP: MZ – (1; 1; 1). The relationships in the pairs of factors containing *staff morale* factor (MZ) in all cases (MZ column in Table 2) are written as (1; 1; 1), owing to a significant differentiation at $\alpha = 0.05$; 0.1 and 0.2. It should be stressed that the significant differentiation of average ratings is observed only for JA: CR (CR: JA) and four pairs in which *staff morale* factor (MZ) is present.

On the basis of relationship (1) we obtain the pairs with the following differentiation of average ratings: JA: KO - (0; 0; 0), KO: BP - (0; 0; 0), BP:CR - (0; 0; 0), CR:MZ - (1; 1; 1). Hence we can conclude that in the relationship 1 the statistical differentiation of the average ratings exists only for the factors taking the fourth (*occupational safety* – BP) and fifth place (*staff-morale* – MZ).

To sum up, the biggest number of differentiated average ratings is observed for the manufacturer of concrete products while the smallest one for the manufacturer of PVC pipes and fittings. The average ratings show the least differentiation for pairs with *costs* factor (KO). In five enterprises all pairs with *staff morale* factor (MZ) show significant differentiation of the average ratings at the assumed α levels.

3.6. Correlation analysis

The results of correlation analysis for the enterprise manufacturing PVC pipes and fittings are shown in Figure 10. Two respondents' features: gender (Figure10a) and education (Figure 10b) do not influence the ratings. The respondents' age (Figure 10c) influences the rating of three factors: *quality* (JA), positive correlation at α = 0.2; 0.1; *lead time* (CR), positive correlation at α = 0.2; occupational *safety* (BP), negative correlation at α = 0.05; 0.1; 0.2. The respondents' work experience (Figure 10d) also influences three factors: *quality* (JA), positive correlation at α = 0.2; *lead time* (CR), positive correlation at α = 0.2;01; occupational *safety* (BP), negative correlation at α = 0.05; 0.1; 0.2. This indicates that respondents' age and work experience are equally active in affecting the ratings of the analyzed factors. The respondents' mobility (Figure 10e) influences the rating of *quality* factor (JA), positive correlation at α = 0,2. The ratings of *quality* (JA) with positive correlation at α = 0,2 and *staff morale* (MZ) with negative correlation at α = 0.2 are affected by the recruitment procedure (Figure 10f). The most sensitive factor is *quality* (JA), which is affected by four respondents' features.

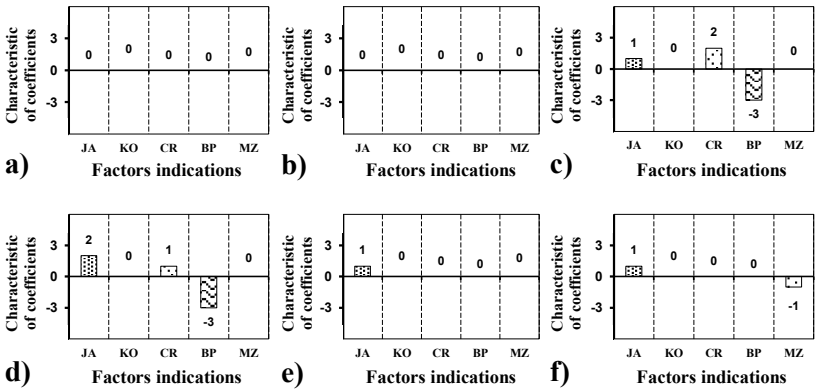

Figure 10. Roof of the Toyota house. Number of statistically significant coefficients for importance evaluations factors in E1 area depending on the respondents' features: a) gender, b) education, c) age, d) job seniority, e) mobility, f) way of recruitment. (+) positive correlation, (-) negative correlation.

Source: own study.

Summary and conclusions

It was shown that employees regard quality as the most important element in company. Next in line is cost and work safety (the average values are almost the same, as the only ones similar to each other in terms of preferences), less recognition was given to the implementation time and the lowest is staff morale. Standard deviation has the sets of assessments for the work safety factor, also this set has the highest quarter deviation. The coefficient of variation indicates that the most distributed assessment is in the set of factors staff morale. The sets of factors ratings: quality, work safety have left-hand skewness, sets of ratings of all factors are characterized by flattening less than normal. This means that the analysed sets of scores do not raise any objections in terms of statistics. During the analysis of the significance of the differentiation of average scores, the following information was obtained: out of 10 cases, there are five, of which four concern the staff morale factor.

The structure of the respondents' characteristics is following: in the plastics processing industry works mainly men, half of the respondents have higher education, 57% of respondents are at the age of the highest productivity, 62% of respondents have over 26 years of work, 91% of respondents have previously worked in at least one other enterprise. It has been shown that two features: age and seniority are statistically significantly correlated with the other five features.

No influence of gender and education on the evaluation of the importance of the analysed factors was identified. The evaluation of the quality factor is influenced by the remaining four characteristics of the respondents, age and seniority are similarly created by the evaluation of three factors. The evaluation of the cost and quality factor is not influenced by any of the respondents' characteristics. Considering the analysis of the obtained assessments of the importance factors describing the roof of the Toyota’s House and the structure of the respondents' characteristics and relations between them, the content of the company's mission in the plastics processing industry can be formulated.

The mission of our company is mainly the highest and constant quality of manufactured plastic products. The products are manufactured considering high work safety and costs and production time and staff. Managers of the enterprise achieve the mission by human resource management so that the employees are mainly men, with higher education, in the productive age, with the longest possible work experience and with experience in other enterprises. In order to maintain the appropriate structure of human resources, candidates with specific personal characteristics are recruited, with the possibility of wage negotiating.

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