

## TWELVE GOLDEN PRINCIPLES AS DIRECTOR'S FEATURES' DETERMINANT

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### Abstract

Notion of the leadership is treated as one of power aspects, because it means an ability to influence or to exercise authority in social bonds. The leadership is also being defined as activity set, which influence conducts of the group (*Morris, Seeman, 1959*). The leadership is often identified with leadership, which value representing and motivating of others causing, that group is realizing determined purposes (*Burns, McGregor, 1994*). According to this definition, cells originate not only from the leader, but groups, but it is resultant of his purposes. Achieving the goals is possible thanks to management with leaders' participation. Management is about securing (conscious creation) of conditions, so that a given organization runs according to its assumptions, i.e. executes its mission, reaches its relevant targets and maintains the necessary coherence which enables its survival, connected with the distinction in its environment and also the development, related to executing its mission and goals in the future.

Therefore, the first step is to set the right course to an organization so that in the second stage it could follow the assigned direction as a well-guided ship. Management is an art of getting effects by way of subordinate people and other resources. Vision, strategy, activation, motivation, gaining power, formalization, ideological structure design, and representation are all the common elements including the activity related to management and leadership features. That paper presents innovative method of researches, case study and analysis of results attendant from BOST method which is the base of Department of Production Engineering of Czestochowa University of Technology's researches. Methodology of examinations was discussed at work, the respondents' characteristics were made, examinations results were elaborated statistically. The results of researches and their case study have been presented in characteristic and interesting figures. Director's leadership features were based on generally known twelve golden principles.

**Key words:** quality, BOST researches, twelve golden principles.

**Classification JEL:** M12 – Personnel Management

### 1 Directing and leadership in management and Toyota's leadership map

No organization can exist without a supervisor. Intuitively the idea of a supervisor seems obvious – it is someone who supervises that is exerts influence on others' behaviors, or makes them act according to his/her will (*Foltyn, 2009*).

In the theory of management, the basic characteristic of a supervisor is the managerial position in an organization hierarchy which is connected with such features as rank, remuneration, power, responsibility. In specific conditions, the supervisor is called: foreman, supervisor, chief, coordinator, boss, or head. There are also other terms substituting the name of 'a supervisor': leader, organizer, trainer, coach, ringleader, initiator, creator, animator, and master (*Pocztowski, 1998*).

H. Foltyn (2009) shows the differences between supervising and managing. Supervision is always related to a given organizational unit and the subordinate employees (or supervisors of lower rank). The supervisor is supposed to influence his/her team so that it accomplishes the tasks of the organization. To a minor extent, it is effecting the entire organization or its particular resources. That kind of role is definitely related to management (the authors' remark).

B. R. Kuc (2004) emphasizes that the status of the notion "leadership" is explicit neither in theory nor practice of the organization. In theory, the idea of leadership is most often understood as a form of power and it is closely related to the idea of supervision. In practice, however, the management of an organization seems to reveal two kinds of views on that issue. On one hand,

the acts of leadership are treated at best as voluntary ones, and at worst – as insubordination. On the other hand, when an organization becomes successful, the management usually rewards the formal leaders, and in case of a failure, it is also them to be blamed. The assumption, that even the smallest part of an organization can function effectively only when it is led and guided by the formally assigned leader, is almost omnipresent.

In the presented publication, the following definitions of leadership have been presented:

- Leadership means exerting influence (*J. C. Maxwell*).
- Leadership is the ability to influence the group, so that it achieves specific goals (*S. P. Robins*).
- Leadership – realization of the mutual influence, between at least two people, who are interdependent due to pursuing certain common goals in group situations (*E. P. Hollender, J. W. Julian*).
- Directing functions of leadership do not create production plans in consequence – they create visions and strategies. Those define a company, technology or culture of a company by specifying that issues of what they should become in long-term perspective and the actual ways of achieving those goals (*J. Kotler*).
- Leadership is both a process and a property. The leadership process refers to free and voluntary directing and coordinating activities of the members of an organized group to achieve group targets. Whereas leadership as a property is a collection of personality features attributed to people who are perceived as those successfully exerting such an impact (*R. M. Stogdill*).

In the definition of leadership by R. M. Stogdill, a very interesting characteristic of “personal features” appears which can very well be used in the research for answering the question of whether a leader really is the leader? And whether he/she is competitive (from the point of view of the features) in reference to other leaders? The issue of leaders’ characteristics is also mentioned in the leadership definition by H. Truman (*Kuc, 2004*), with the following conclusions arising:

- Leadership is connected with other people, subordinates or followers.
- Leadership refers to unequal division of power between the leader and members of the group.
- An aspect of leadership is the ability to use various forms of power to exert influence on the behavior of the supporters in diverse ways.

Leadership is related to values. Moral leadership is connected with values and requires providing information to the supporters about various possibilities of actions so that they could make the wise choices, when the time of reacting to a leader’s proposals comes. The above mentioned passage proves that a leader can be assessed based on his/her actions and behaviors during realization of the goals.

Toyota, a car manufacturer, has developed a characteristic leadership map (Figure 1). X axis shows two factors: managers’ experience and understanding of work, whereas Y axis denotes factors of directives and human development.

<b>Bottom-up leadership</b> (growing people)	<b>Group facilitator</b>  “You are entitlement!”	<b>Builder of learning organization</b>  “Here is our purpose and direction: I will lead you and coach.”
	<b>Bureaucratic manager</b>  “Follow the rules!”	<b>Task master</b>  “Here is what to do and how. Do it!”
<b>Top-down leadership</b> (directives)		
	<b>General managerial experience</b>	<b>In-depth understanding of work</b>

Figure 1. Toyota leadership map

Source: LIKER, J. K.: Droga Toyoty – 14 zasad zarządzania wiodącej firmy produkcyjnej świata. Warszawa. Wydawnictwo MT Biznes. 2005

Main premise of the ninth principle of Toyota is to grow leaders instead of buying them (Liker, 2005). Growing, in each situation, is implemented according to particular principles and models. In the case of Toyota, leaders are grown with consideration of the elements presented in the Figure 2.

As results from description of Y axis, Toyota leaders can use some top-down directives issued by the superiors or a bottom-up style. This style is characterized by the commitment of people, which allows for their own development, contributing to independent decision-making by themselves. This approach stimulates staff to be involved in the process of continuous improvement. One can conclude that Y axis should be used as a measure of willingness of the staff to learn and improve.

However, axis of ordinates (Y) in two-dimension coordinate system is connected with human (staff). Second axis (X) in this system concerns understanding of work (i.e. production, services). When plotting the scale of importance of production problems (understanding of work), it is remarkable that the range of 1÷4 concerns „a general managerial experience” whereas the range of 5÷8 relates to „in-depth understanding of work”. In the case of similar approach to Y axis, one can observe: for the range of 1÷4 „top-down leadership (directives)”, 5÷8 – „bottom-up leadership (growing people)”.

Leadership map is divided into ‘quarters’ (marked A, B, C, D). Quarter A, „builder of learning organization”, is based on the thesis „Here is our purpose and direction: I will lead you and coach”. In quarter B, „task master” works on the basis of the principle: „Here is what to do and how. Do it!”. Quarter C relates to „bureaucratic manager” whose activities are based on the thesis: „Follow the rules!” „Group facilitator” corresponds to the range of the quarter D with their motto „You are entitlement”.

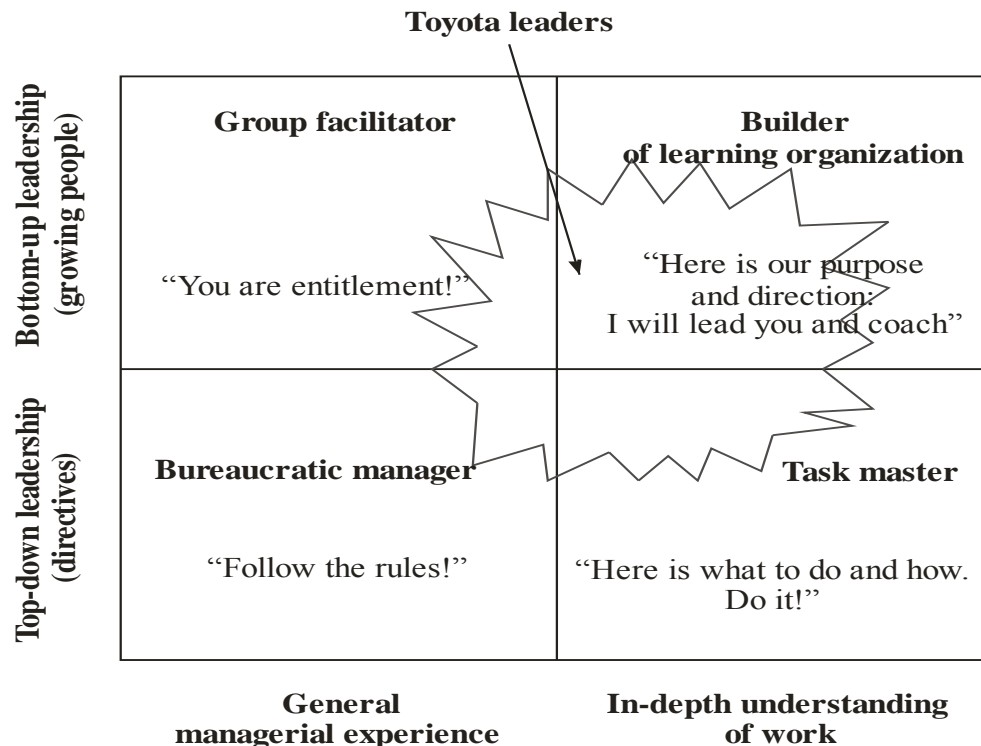


Figure 2. Toyota leadership map with Toyota's optimum

Source: LIKER, J. K.: Droga Toyoty – 14 zasad zarządzania wiodącej firmy produkcyjnej świata. Warszawa. Wydawnictwo MT Biznes. 2005

As results from the Figure 3, an area corresponding to management styles of Toyota leaders was plotted on the leadership map. Combination of in-depth understanding of work and ability to grow people and manage them causes that employees respect them for their technical knowledge and follow them, which is the result of their leadership skills. The presented in (Liker, 2005) Toyota leadership map does not contain scale in the axes. By using some experience (Borkowski, Ulewicz, Bartnik, 2009), the scale for both axis within the range of 1 to 8 was plotted during the study thus dividing the Toyota leadership map on 64 fields. Whole field of map was divides on four fields A, B, C, D (Figure 3b). It facilitates reference to Toyota leadership map.

## 2 The range of test object activity

The company is taking of production chandeliers and standing, hanging lamps up, and frost-resistant garden. In order to equal requirements and customers' changing tastes the test object employ designer who is trying to provide for demand every individual consumer. Products are being executed both in the base form produced in the series of pieces and individually for special orders. The company is introducing into the market every year from a dozen or so to a few dozen models. The company possesses the very broad choice of the assortment.

### 2.1 Production assortment

A first group involved the lamps, chandeliers about the modern line. They are characterized chromium galvanic coat where LED diodes are most often applied to it about various for dyeing. The second group is the line of lamps and chandeliers constructed from the connection with metal of wood. Decorative lamps, executed from metal painted powdery for various colors, belong to the third group. Cloches imitating flowers, bulbs are most often the

extra advantage applied of the concrete model. The fourth group is directed to persons preferring the time-worn decor, retro. Lamps are executed from the brass or ZnAl painted powdery or galvanized with the brass. Cloches are materials which depend on model. A fifth group there are products intended for the decor of nurseries. There are lamps with fabulous motives cloches or in the shape of toys.

### 3 Presentation the methodology of examinations carried out

Twelve golden principles (*Borkowski, Stasiak-Betlejewska, 2010; Borkowski, Rosak-Szyrocka, 2011*) are the perfect tool of leadership directors' features estimation. They are also useful in estimation functional persons in companies.

Examinations consisted (*Griffin, 1996, Liker, 2005*) on giving an answer by co-workers and they were tied with the selection YES or NO at occurring assertions (*Borkowski, Ulewicz, Bartnik, 2009*):

- KA – sets good example,
- KB – communicates about goals of actions,
- KC – informs about news in the company,
- KD – ask staffs about advice,
- KE – gives support during performance of tasks,
- KF – directs and requires,
- KG – allows to improve work independently,
- KH – prizes for good work,
- KI – thanks openly,
- KK - criticizes in discreet manner,
- KL – forgives and encourages to achievement of good results,
- KN – is open to ideas by the staff (*Borkowski, 2009; Gobillot, 2008*).

### 4 Identification the director's leadership features basis on twelve golden principles – statistical elaboration of examinations' results

Statistical results' characteristics of the BOST questionnaire (*Borkowski, Pieszczocho, Bartnik, 2009; Borkowski, Rosak-Szyrocka, 2011*) were carried out basis on the average, the standard deviation, the variance, the coefficient variance, obliqueness, kurtosis (Figure 3) (*Suchecka, 2003*).

The results average of examinations is the basis of many studies and analyses. It requires the comment in our case. The questionnaire is constructed that positive features are obtaining numerically 1, negative 2. It means that for them lower average the concrete feature is being judged more favorably with it. The result is the frontier value  $(1+2)/2=1.5$ .

The result interpretation is following: average within  $1.0 \div 1.5$  the director is obtaining the positive estimation, and in the  $1.5 \div 2.0$  interval negative. It has been enumerated earlier, that director's leadership feature, expressing with the principle: he is expressing acknowledgement in public (KI) was interpreted as the negative element whereas it is resulting from Figure 3a data that the highest average is occurring here.

The more far-away Figure 3a analysis isn't necessary probably. Clear deviations aren't being found in regard to the variance and the standard deviation. The variation coefficient describe results' distribution is pointing that for extreme leadership features (KI) determined principles: he is expressing the acknowledgement in public and he is tolerating for independent improving of work (KG) is obtaining maximum values.

It is necessary to number these sets, they contain in the interval range: feature moderate diversifying by (Pulaska-Turyna, 2011). Numeric sets for six leadership features possess the coefficient variance bigger than 35% that is also classifying them for the range and diversifying the feature moderate, but in the proximity of the top value.

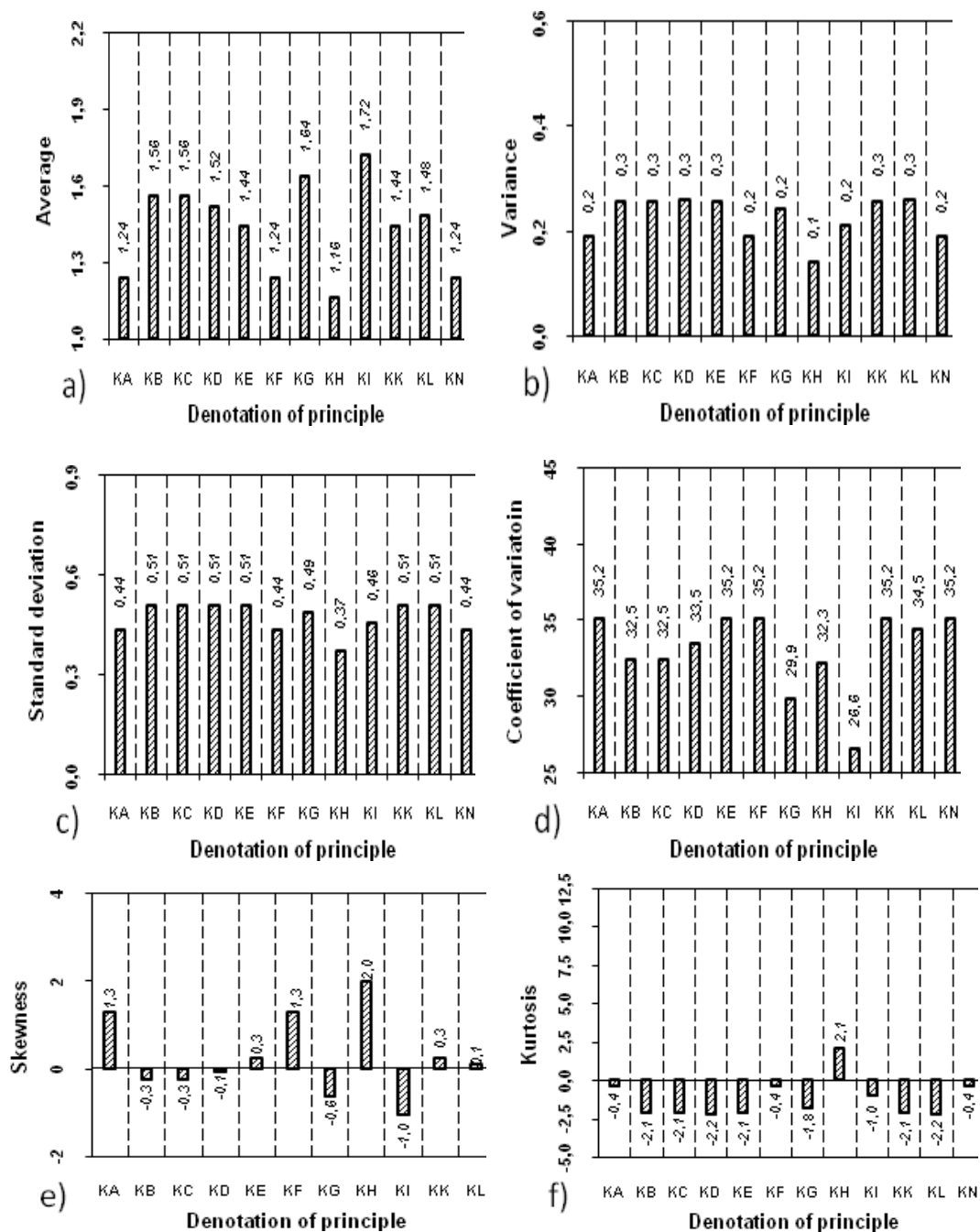


Figure 3. Director's leadership features. 12 ZS principles. Comparison:

a) average; b) standard deviation; c) variance; d) variation coefficient; e) skewness; f) kurtosis.

Source: own study

Specification referring skewness and kurtosis included in the quoted publication served to state that:

- It is obtaining sets being marked in five cases left-sided skewness of distribution (sign the classic asymmetry coefficient negative).

- From sets about right-hand skewness a set of leadership estimations' features, determined by principles he is expressing recognition for work executed well (KH), possesses the maximum value (2), its asymmetry of distribution is very strong.
- Skewness of sets, specific with ratio excess, is pointing that numerical data for KH characterize flattening bigger than normal, other however there are divisions about flattening smaller than normal.

We state, that in the field of six statistical characteristics, numeric sets possess big diversity in the field of the average, the classic ratio skewness and the ratio excess (kurtosis).

## 5 An importance number of director's leadership features of the repair department in the textile institution

As it has been marked earlier only men were respondents. It is tied with the fact that a subject of examinations is the repair and keeping the movement department in the enterprise producing the curtains. Proportional participations on YES and on NO were calculated (Figure 4). In seven on 12 cases histograms on YES (without filling in) they are exceeding histograms on NO (Figure 4a). Making use Figure 4b and Figure 4c it is necessary to return the remark for leadership features determined in principles:

- He is expressing appreciation for work executed well (KH), YES – NO = 68%.
- He is giving the good example (KA), YES – NO = 52%.
- He is training and he requires (KF), YES – NO = 52%.
- He is open for the crew's ideas (KN), YES – NO = - 52%.
- He is tolerating for independent improving of work (KG), YES – NO = - 28%.

First standing out features was judged favorably, two remaining negatively that will be found at the end of an importance number:

$$KH > (KA, KF, KN) > (KE, KK) > KL > KD > (KB, KC) > KF > KI \quad (1)$$

It turned out that until three the director's leadership features were found positively in the second place of an importance series, however two in the third place. The spread between outside row elements occurs  $84\% - 28\% = 56\%$ . It means big clarity of identified director's leadership features of the repair workshop. What is the answer structure given by each respondent? We have  $12 + 1 = 13$  variations at such an analysis. Figure 4d shows that a case in which the respondent gave all negative estimations in isn't made a note. One respondent gave only 3 answers on YES, 5 or 6 positive estimations – after five, only 2 is careful that evaluated deserves for 10 positive estimations.

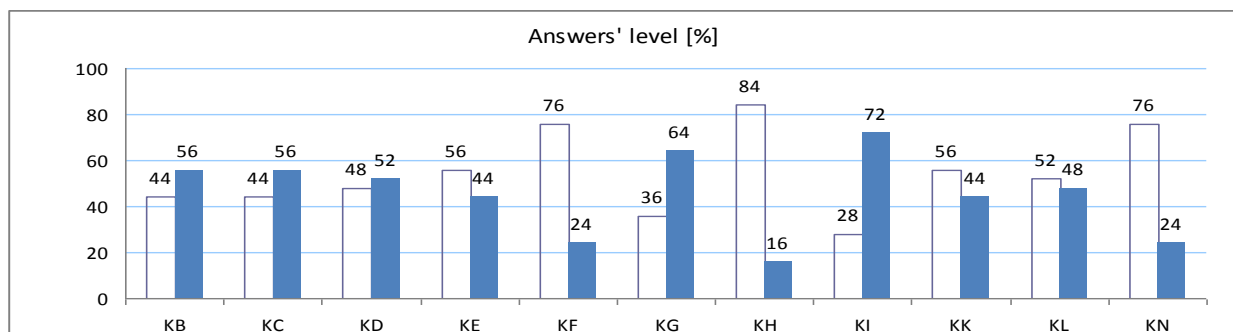


Figure 4a. Comparison of the answers level in director's leadership features. 12 ZS principles. The analysis of quantitative relations between managers

Source: own study

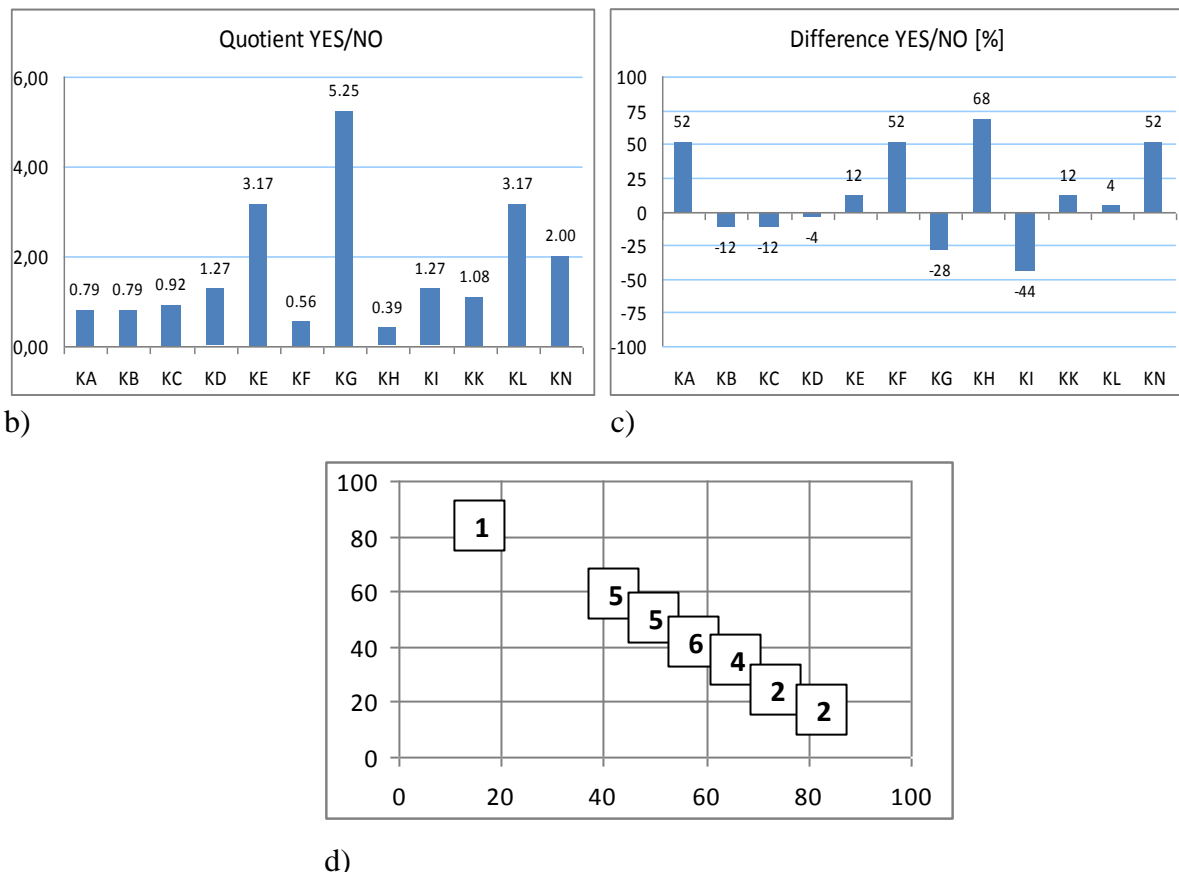


Figure 4b, c, d. Director's leadership features. 12 ZS principles. Analysis of quantitative relations between managers: b) quotient YES/NO; c) difference YES/NO; d) votes structure in arrangement YES – NO

Source: own study

### Impact of respondents' characteristics for noticing director's leadership features of the repair department

Applying the correlation analysis (*Pulaska-Turyna, 2011*) strength of interdependence was calculated between respondents' personal features but answers given by them. Obtained coefficients correlations were presented by graphs in Figure 5.

In figures, on the left and right side of the central line (0), there are located for three auxiliary lines, representing values of the critical correlation coefficient on various probability marks. Emergence in the results' interpretation probability of 80% ( $\alpha = 0.2$ ) is tied with the subject character and the examinations range. Social problems, management are being tested and as a theory and practice shows the turbulent phenomenon occurs and phenomena expectation accuracy on the level of 80% is satisfying. It is necessary to underline also, that correlation analysis isn't often applied to management sciences.

Behaving towards dependence in Figure 5 we are able to notice that men were respondents indeed (in Figure 5a exists lines only for critical correlation coefficient values). Education influence for the results' vote and what's more for the leadership feature extreme positive: he is open for the crew's ideas (KN) for alpha 0.1. It means that the higher education is appearing then more of estimations can occur for them (negative correlation).

Respondents' age influenced statistically essential on the estimations result for four director's leadership features, specific with principles:

- He is informing about events in the company (KC).



- He asked crew about the piece of advice (KD).
- He is open for the crew's ideas (KN).
- He is expressing appreciation for work executed well (KH).

A negative correlation is existing for three first principles that means in case of present examinations that with the increase in respondents' age in answers the more and more estimations exist for YES (for KC and KD), and for KN there exist estimations for NO. In regard to the fourth enumerated principle, the influence is positive; the increase in respondents' age is identical, to the increase in the answer on YES.

A fact, that for KC and KD features' estimation was negative and for others was positive, was taken into consideration in above-mentioned trends. The seniority exerted an influence on the director's features results' estimations in two cases: determined for features in principle – he is informing about events in the company (KC) – negative correlation and for – he forgives and he is encouraging to reach more far-away effects (KL) – positive impact.

Respondents' mobility (Figure 5e), similarly as respondents' age, exerted also an influence on the examinations' results in four cases. Two of them refer to the positive estimation and two negative. In regard to positive features, determined with principles – he is criticizing to the discreet method (KK) and he is favorable in the realization of tasks (KE) the increase in employers' number means the increase in estimations for NO. However for negative features determined with principles:

- He is informing about purposes of action (KB).
- He is permitting work to improve (KG).

The increase in employers' number is tantamount with showing up bigger number of response to them. Respondents who have had other directors earlier estimating the present director compared his feature to directors' features in the previous places of work. Respondents employed from financial consideration (Figure 5f) exerted correlation influence on determined features with principles: he is favorable in the realization of tasks (KE) – positive feature, and he is expressing the public acknowledgement (KI) – negative feature. Correlation dependence is positive that means that the higher indicator of the employment mode than there is more answers for YES to KE and answers on NO to KI. In setting impact of respondents' characteristics together for perceiving director's leadership features of the repair department with the consideration twelve golden principles occurring facts are able to show up:

- Occurs correlation between analyzed groups of results on the level  $\alpha = 0.2$ .
- 13 cases of the statistically significant correlation were found.
- Three director's leadership features determined principles: he is open for the crew's ideas (KN), he is informing about events in the company (KC), he is favorable in the tasks realization (KE) it was showed significant dependence for two times.
- From 13 dependence cases, 5 of them showed positive dependence correlation, others however negative.
- Two respondents' characteristics: age and mobility exerted significant impact on results' estimations for four features (each).
- The biggest dependence occurred between the mode of employment but the director's leadership feature, determined principle – he is favorable in the tasks realization (KE).
- Taking the specificity of results into consideration (positive, negative estimation) the negative correlation is pointed in lot of dependences: occurrence the answer on YES is reducing strength influence but is favorable for improving the director's positive estimation.

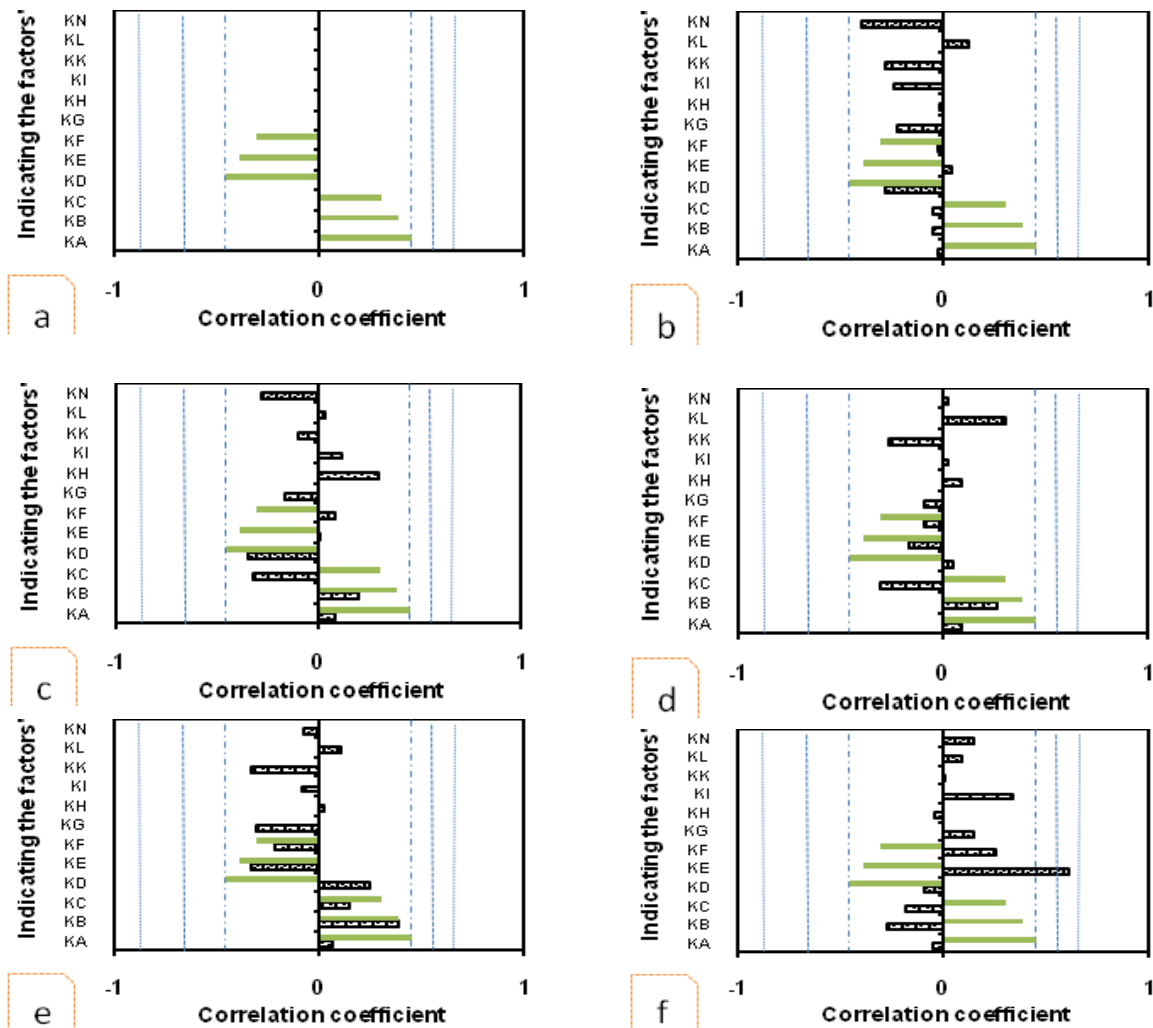


Figure 5. Director's leadership features. 12 ZS principles. Correlation graphs depending on the respondents' feature: a) gender; b) education; c) age; d) work experience; e) mobility; f) mode of the employment.  $\alpha = 0.2$  (internal lines),  $\alpha = 0.1$  (central lines),  $\alpha = 0.05$  (external lines)

Source: own study

## 6 Summary

Methodology of examinations was discussed after the company presentation at work, the respondents' characteristics were made, and examinations' results were elaborated quantitatively and statistically. Examinations' results and their studies were presented in characteristic tables and figures. All graphical result's forms are characteristic for works, published by workers of The Czestochowa University of Technology, Institute of Production Engineering.

They are authoring and an application licensed Excel program was utilized. Examinations referring to director's leadership features are the fragment of the authoring BOST method. Director's leadership features were based on generally known twelve golden principles (marked with 12ZS).

The reader is able to be tired because of the analysis but also disorientated already with trends of influence. A question is troubling him surely: What is the director of the repair department and what is the structure of leadership features? It lacks such information actually in the existing elaboration. Let us assume that the director is the "whole" – 100% of interesting.

Figure 6 is presenting effects that numeric values were marked on. Going from dependence that there are 12 equivalent elements than on everyone is corresponding to 8.5%. This value was marked on Figure 6 with the characteristic line. Features that histograms as representatives of proportional share are exceeding marked line are more perceived then it is resulting from numeric dependences. The result combination is interesting.

The reader would be able to tell that only four the director's leadership features are perceived favorably by respondents. Please note that these features are exceeding the frontier level, from here conclusion that the director's estimations structure is the perfect completion of the existing analysis. It is possible to say the repair department director is leader in the range:

- he is expressing appreciation for work executed well (KH),
- he is giving the good example (KA),
- he is training and requires (KF),
- he is open for the crew's ideas (KN).

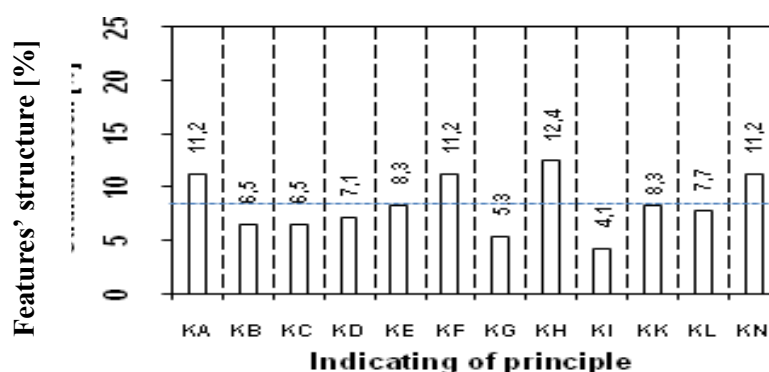


Figure 6. Director's leadership features. 12 ZS principle. Director's features structure

Source: own study

It is necessary to underline that two leadership features (KA, KF) don't depend on respondents' characteristics. However the feature he is expressing appreciation for work executed well (KH) is correlated positively with respondents' age, the more years they have, the estimation is high (more answer on YES). He is open for the crew's ideas (KN) – this director's leadership feature dependent on two respondents' characteristics: education and age – it is negative dependence, e.g. for obtaining the big answers' number on YES the respondent should have the lowest education and age (under the circumstances there is no contradiction).

Studies have shown that in no case given all the answers to YES or NO. Only one person (for 25 respondents) noted three leadership features at director, whereas 9 and 10 features – two people. The maximum votes' number to YES (6 respondents) refers to seven respondents.

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