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Presentation of results using the BOST method in food industry

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Abstract: This paper presents a brief description of the surveyed enterprises and the manufacturing process of its flagship product - butter. Subsequently an analysis of BOST survey results was conducted. The staff spoke out about the importance of factors describing one of Toyota's management principle. Their opinion was the basis for the systematization of research results and to formulate a performance evaluation of the selected company. Results were presented by using spatial charts.

Key words: BOST method, first rule of Toyota management, food industry

1. Characteristic of research subject

The subject of research is a company operating in the food industry (BORKOWSKI S., ADAMUS KAMILA, GÓRSKA M. 2012, STASIAK-BETLEJEWSKA R., BORKOWSKI S. 2009, BORKOWSKI S., ADAMUS K. 2014a). The object of activity in the company is the production of dairy. The examined object has a long history, and the origins of its activities date back to the turn of the nineteenth and twentieth century. In the beginning the company assumes the role of department which arranges the transport and transfer of raw material in the field, assumed for stores with dairy products, powerhouses of eggs, milk sales. It is also brokered in obtaining loans for small, rural branches and co-operatives. There has been an increase in the number of suppliers of milk, and consequently this has increased the pace of development. Over the next few years, this company has developed exponentially, resulting in its established position today.

2. Presentation of the production process of butter

The examined company produces a wide range of dairy products. This analysis covers one of the main products, namely butter. A diagram of the current manufacturing process is shown in Figure 1.

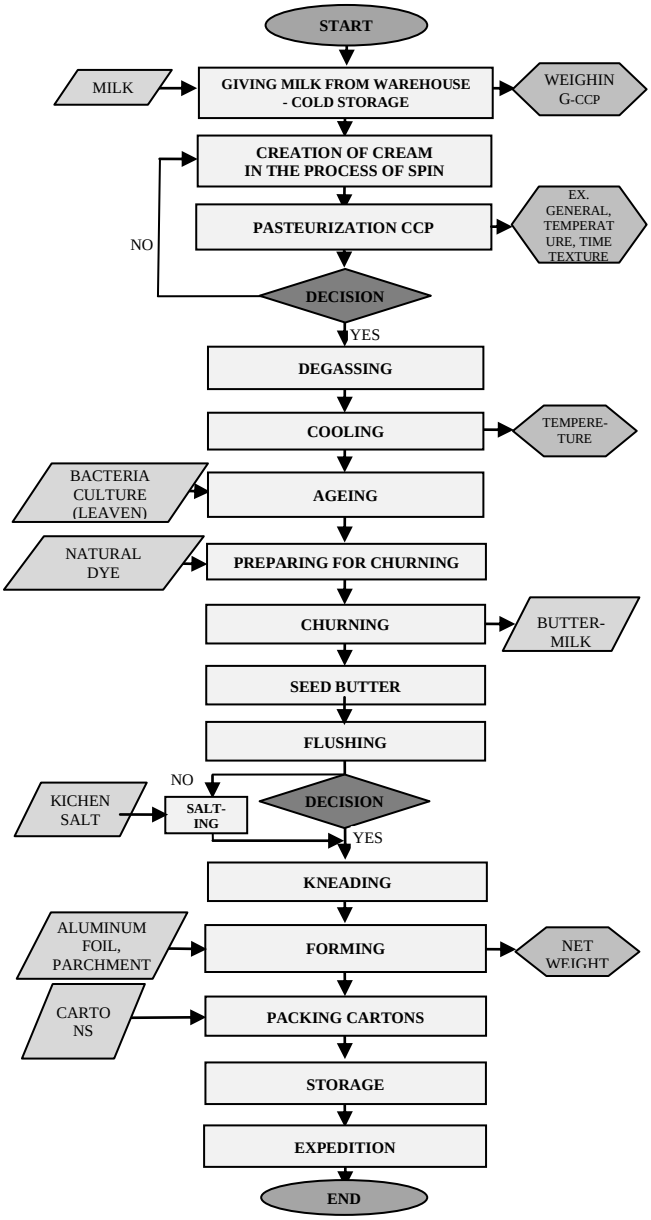

Fig. 1. Diagram of the manufacturing process of butter in objective approach

Source: own study

3. Methodology of research

The method used in the BOST study questionnaire was devised by Professor of Technical and Economic Sciences, S. Borkowski. This study is an innovative method of assessing the company and its resources, tangible and intangible, which originates from the 14 management principles of Toyota. These principles were developed by the researcher J. K. Liker (LIKER J.K. 2009) and are included in the publication "The Toyota Way - 14 principles of management leading manufacturing company in the world."

The purpose of this study was to use question E2, included in the BOST questionnaire, relating to the first principles of Toyota management. The BOST method Principle 1 is described as a set of the following factors: *welfare of the customer* (DK), *product innovation* (IP), *co-operation with allies* (WK), *self-reliance and responsibility of employees* (SP), *trust relations with employees* (ZP), *care enterprise culture* (PR), *technology* (RT), and the respondents had to answer the following question: "What makes the concept of the development of your company?" Respondents were asked about the scale of the ranking by assigning them to assess the validity of the range of 1 to 7, of which 7 were the highest evaluation. Respondents were production workers in the surveyed enterprise. The study sample consisted of 27 people and the results of the study provided multi-faceted analysis.

4. Analysis of research results

The important part of the analysis is the presentation of the obtained results in numerical form. 3D spatial drawings have been used (PUŁASKA-TURYNA B. 2011) and presented in Figure 2. The data presented in this figure presents a summary of the results in the form of a numerical and percentage. Analyzing them in the first place, you can notice a great variety in passing votes on individual factors.

The greatest concentration and unanimity characterized by *welfare of the customer factor* (DK), which received the highest number of ratings on level "7" - 4 votes, giving a 44.4% share. In turn, no assessment of the highest level received *care culture factor enterprises* (PR). For the assessment of the lowest "1" can in turn, be observed that no assessment has obtained at this level of the customer *welfare of factor* (DK). But there is no factor at which the size of the post for the assessment of "1" significantly dominate over others. It may be noted, that up for the three factors: *trust relations with employees (*ZP), *technology* (RT) and *maintenance of enterprise culture* (PR) the size of the post are similar, which means that the votes were split fairly evenly here.

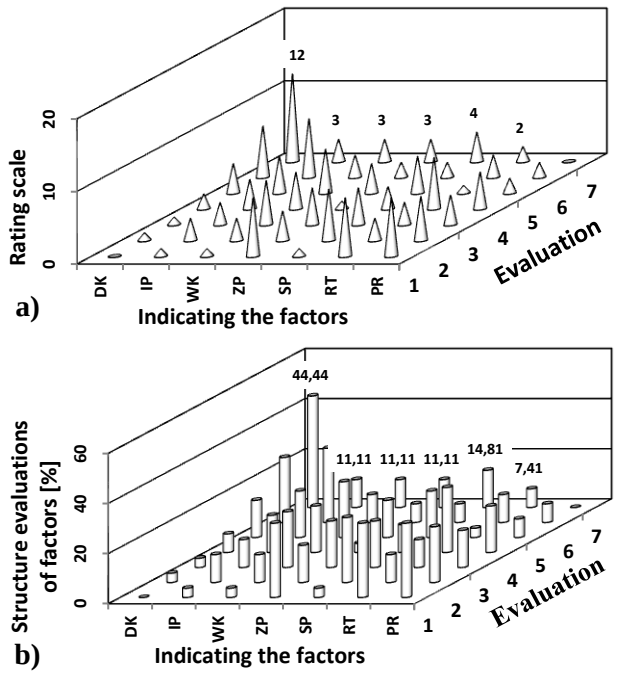

Fig. 2. Principle 1. The spatial presentation of research results: a) the number of assessments, b) the structure of the ratings. Applies to food business

Source: own study

Respondents are aware therefore, that in order to survive in the market the company should focus its mission and strategy primarily on the client's needs. This is today one of the main determinants of success in the market. At the same time it should be considered that respondents rated so low factors directly relating to the *care of their corporate culture* (PR), and trust in *relations with employees* (ZP). Each of these has a big impact on the effective functioning of the company, although not a direct indicator of the company's strategy. It is worth suggesting that the supervisors turned their attention to these areas and think about whether it would be helpful here to introduce some changes in the direction of gaining greater confidence, dedication and motivation of staff.

9. Summary and conclusions

In this article for the study an innovative method, BOST, and the concept of Toyotarity were used. Research subject ratings were based on the first principle of Toyota management, which concerns the factors determining the concept of development. Respondents assessed their validity classifying them according to the ranking scale. The BOST questionnaire was filled in by 28 respondents, including 18 men and 10 women. The results allowed us to gain valuable information for the company executives. The analysis showed that for the respondents the most important factor in the development of the company is *welfare of clients* (DK). The company should therefore, base its strategy on the significance of this factor, and thus provide customers with the product requirements of quality, ensuring satisfaction and contentment.

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