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# IMPACT OF TRANSFORMATION INTO A GREEN ORGANIZATION ON PRODUCTION QUALITY

**Abstract:** The main goal of this paper is to demonstrate the impact of transformational leadership, participative management and empowerment in a green organization on the quality index. A quality index is one of the basic indicators monitored continuously in all production companies today. The first part reviews the literature on the impact of transformational leadership, participative management and empowerment, which are the basis of green organization on the quality of production. In the research part an analysis was performed in three enterprises located in Poland. It includes results showing how transformational leadership, participative management and empowerment influence work involvement and quality index in green organizations.

**Keywords:** empowerment, participative organization, production quality, transformational organization.

#### Introduction

Maintaining the quality of production leading to customer satisfaction is the basic parameter affecting the cooperation between the client and the supplier. If the quality index is below the client's expectations, there is no question of continuing cooperation. Repair of defects, waiting for properly made products and downtime caused by quality defects constitute a cost that affects the profitability of production. Currently prevailing trends based on TQM require making all members of the organization responsible for the quality. To make employees feel responsible, it is necessary to create the right culture in the organization. This should be a culture that strengthens the wish of taking the responsibility for performed tasks. Employees should prevent making defects, in contrast to the organizations where defects are discovered by the organization's quality control team or by the customer. Employees should have quality awareness, they should have appropriate knowledge and experience. The managers' goal is therefore to organize the process in such a way that employees perform their tasks and achieve quality objectives. The method is to make employees responsible for their goals and arouse in them the willingness to support the entire organization. Transformational leadership, participatory management and empowerment which have found their application in green and teal organizations are the tools which are useful in this case. The quality index is a measure of the effectiveness of an organization's activities. The concept of quality can be analyzed in many ways. This term may refer to the quality of a product, services, life, work, environment, etc. The quality of a product can be analyzed as perfection (no defects), high class of a product or compliance with standards. This study focuses on product quality in the sense of zero defects.

The purpose of this paper is to demonstrate the impact of transformational leadership, participative management and empowerment of employees in a green organization on the production quality index and to present empirical measurements of the impact of the above factors on the production quality index. This paper presents employee opinions on the impact of employee participation on work engagement and the actual impact of participation and empowerment on the development of a quality index. The research was carried out in three enterprises located in Poland. The diagnostic survey and monographic method were used as the research method. The research was divided into two stages. The first presents employee opinions on the impact of employee participation on their involvement in their work. Hypothesis 1 was developed:

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"Employees of the organization believe that employee participation is a tool that causes greater involvement of employees in doing their work". In the second stage of research, the actual impact of participation and empowerment on the development of the quality index was presented. At this stage, hypothesis 2 was developed: "Employee participation is a tool increasing the quality of production". Data was collected in three production enterprises transformed into green organizations with participatory management and empowerment of employees. The study carried out covers the period prior to the implementation of participation, the transformation period and the participation time. This makes it possible to trace the entire process of change and its impact on the quality index.

### Context of the study

Studies available in the literature present an individual assessment of the impact of transformational leadership, participative management and empowerment on the organization's results. Subjective assessment, especially in the area of enterprise performance, can lead to misinterpretation. Due to the confidentiality of company data, there is a lack of actual data presenting a change in the organization's results¹. There are many studies available, which analyze the impact of transformational leadership, participative management and empowerment on financial performance of the organizations, but we still know very little about how this style of management affects quality. There is a lack of empirical researches in the literature presenting specific values to what extent it influences the improvement of the organisation's quality performance. This study presents the actual results of three production companies located in Poland, which in the years 2016–2020 were successfully transformed from autocratic leadership to green organization. To ensure a reliable reporting, the amount of external claims was analyzed. This type of measurement ensures impartiality and objectivity in interpreting the organisation's quality results.

## Literature review

Quality is one of the basic parameters of economic efficiency. Quality improvement can only be achieved by involving all employees in the process. In Indonesia, in a state-owned company, it was found based on surveys among 30 mid-level managers, that transformational leadership strongly influences the increase of the involvement of the managers<sup>2</sup>. Transformational leadership used in green organizations uses the participation and cooperation of members of the organization to increase employee's engagement in pursuit of the organization's goals<sup>3</sup>. It is also effective in the case of the increasingly popular remote work. Thanks to the collaborative approach, decisions are made participatively, trust and knowledge sharing are strengthened, and this affects the involvement of the virtual group in performing the tasks and achieving common goals<sup>4</sup>. Product and service quality are elements that impact the organization's result<sup>5</sup>. Transformational leadership is considered the most effective in improving enterprise performance. This is due to the fact that transformational leaders present their team members a clear vision and through empowerment they gain favor and commitment of the teams in achieving goals<sup>6</sup>. Transformational leadership strengthens the self-awareness of the members of the organization, especially in terms of the contribution of each participant to the company's financial result<sup>7</sup>. It contributes to the unification of the vision between the leader and subordinates,

<sup>&</sup>lt;sup>1</sup> Özer, F., Tınaztepe, C. Effect of Strategic Leadership Styles on Firm Performance: A study in a Turkish SME. *Procedia – Social and Behavioral Sciences*, no. 150, 2014, p. 783.

<sup>&</sup>lt;sup>2</sup> Eliyana, A., Ma'arif S., Muzakki. Job satisfaction and organizational commitment effect in the transformational leadership towards employee performance. *European Research on Management and Business Economics*, no. 25, 2019, p. 147.

<sup>&</sup>lt;sup>3</sup> **İşcan, Ö. F., Ersarı, G., Naktiyok, A.** Effect of Leadership Style on Perceived Organizational Performance and Innovation: The Role of Transformational Leadership beyond the Impact of Transactional Leadership – An Application among Turkish SME's. *Procedia – Social and Behavioral Sciences*, no. 150, 2014, p. 883.

<sup>&</sup>lt;sup>4</sup> Martin, J., Cormican, K., Sampaio, S. C. B., Wu, Q. Shared leadership and team performance: An analysis of moderating factors. *Procedia Computer Science*, no. 138, 2018, p. 678.

<sup>&</sup>lt;sup>5</sup> Özer, F., Tınaztepe, C. Op. cit., 2014, p. 780.

<sup>&</sup>lt;sup>6</sup> Ibidem, p. 783

<sup>&</sup>lt;sup>7</sup> **Paracha, M. U., Qamar, A., Mirza, A., Inam-ul-Hassan, Waqas, H.** Impact of Leadership Style (Transformational & Transactional Leadership) On Employee Performance & Mediating Role of Job Satisfaction. Study of Private School (Educator) In Pakistan. *Global Journal of Management and Business Research*, vol. 12, no. 4, 2012, p. 55.

which includes the same understanding of proper quality<sup>8</sup>. Equal understanding of the organization's quality requirements is a way to motivate members to achieve these goals<sup>9</sup>. Additionally, if leaders and their groups understand the goals equally, they do not compete with each other to achieve their own goals that differ from each other, and employees try to achieve them with greater determination. Particularly in the case of quality requirements, we are dealing with professional knowledge that employees have acquired as part of their education and experience. Using transformational leadership, the leader shares his vision and leads to employee development in a way that ensures joint pursuit to realization of this vision. If both employees and leaders look at the quality goals in the same way, the chance of achieving them increases<sup>10</sup>. Many researchers consider intellectual stimulation and individual approach as the most important mechanisms of transformational leadership. Intellectual stimulation is understood as suport of subordinates in logical, rational and involved solving of organization's problems. This is mainly done by encouraging the analysis of existing solutions and searching for new, more efficient methods of performing the task. In the individual approach the leader becomes a coach and mentor who examines the needs of subordinates and cares for their development in a way that combines the expectations of the employee and of the organization. Intellectual stimulation and supporting the development of employees in order to perform better their duties and take responsibility for their actions has a direct impact on improving the quality of tasks performed and thus reducing the number of complaints and improving customer relationships. Empowerment is an effective tool that is recommended to be included in the range of management techniques used in transformational leadership. Empowerment mediates in obtaining better quality of work, which is the effect of introducing intellectual stimulation and individual approach. It is proved that thanks to intellectual stimulation and individual approach that develops the potential of employees, they are able to assume the role arising from empowerment<sup>11</sup>. Employees are more confident and take responsibility for the activities they perform<sup>12</sup>. Transformational leadership develops employees' sense of importance and their development is the goal of the organization. This sense improves the employees' approach to the organization, and consequently improves the quality of work<sup>13</sup>. Transformational leadership motivates employees to participate in the development of the organization. The result is a positive approach to work and increasing quality. Employees feel psychological ownership of their tasks. Psychological ownership arises when an employee has the right information and capabilities to make right decisions to accomplish his task in his way<sup>14</sup>. By implementing empowerment, employees perform their tasks with greater accuracy and attention<sup>15</sup>. Based on research in Canada, India and Iran, it has been established that transformational leadership increases empowerment, and empowerment makes employees feel independent and engaged in self-control<sup>16</sup>. The implementation of empowerment increases the level of knowledge of members of organization, increases their awareness, skills and enriches experience. Empowerment also reduces the amount of errors made by an employee<sup>17</sup>. Empowerment is based on transferring the right to make decisions to persons in the place where the problem arises. In the TQM philosophy, this means shifting the decision center from a distant, centralized level to a place closer to the client. Transformational leadership enriches skills of employees<sup>18</sup>. The activities of transformational leaders result in the improvement of employees'

<sup>&</sup>lt;sup>8</sup> **Andersen, L. B., Bjørnholt, B., Bro, L. L., Holm-Petersen, C.** Achieving High Quality Through Transformational Leadership: A Qualitative Multilevel Analysis of Transformational Leadership and Perceived Professional Quality. *Public Personnel Management*, no. 47, 2018, p. 52.

<sup>&</sup>lt;sup>9</sup> Ibidem, p. 53.

<sup>&</sup>lt;sup>10</sup> Ibidem, p. 54.

<sup>&</sup>lt;sup>11</sup> **Ismail, A., Halim, F. A., Abdullah, D. N. M. A., Shminan, A. S., Muda, A. L. A., Samsudin, S.** The Mediating Effect of Empowerment in the Relationship between Transformational Leadership and Service Quality. *International Journal of Business and Management*, vol. 4, no. 4, 2009, p. 4.

<sup>&</sup>lt;sup>12</sup> **Abbasi, M. M., Khan, M. M., Rashid, K.** Employee Empowerment, Service Quality and Customer Satisfaction in Pakistani Banks. *Journal of Bank Management*, vol. 10, no. 4, 2011, p. 47.

<sup>&</sup>lt;sup>13</sup> **Ghafoor, A., Qureshi, T. M., M. Aslam Khan, M. A., Hijazi, S. T.** Transformational leadership, employee engagement and performance: Mediating effect of psychological ownership. *African Journal of Business Management*, no. 5, 2011, p. 7391.

<sup>&</sup>lt;sup>14</sup> Ibidem, p. 7391.

<sup>&</sup>lt;sup>15</sup> Ibidem, p. 7399.

<sup>&</sup>lt;sup>16</sup> **Roozitalab, A., Majidi, M.** Factors Affecting On Improvement Employee Empowerment (Case Study: Saipa Corporation). *International Review*, no. 1, 2017, p. 12.

<sup>&</sup>lt;sup>17</sup> Ibidem, p. 10.

<sup>&</sup>lt;sup>18</sup> Paracha, M. U., Qamar, A., Mirza, A., Inam-ul-Hassan, Waqas, H. Op. cit., 2012, p. 59.

qualifications and an increase in the level of knowledge and competence in the organization<sup>19</sup>. This was also confirmed in the Czech Republic. Based on surveys conducted among 88 hi-tech manufacturing companies in the mechanical and electrical industries, it was found that members of the organizations expect to be involved in the process of decision-making, for which they take responsibility in the next stage. In this way they gain new skills and develop themselves. The manager has no formal power, but rather acts as a coach who mobilizes to cooperation. Empowerment increases employee motivation to produce products of the right quality. Quality in hi-tech companies is more important than quantity<sup>20</sup>. Based on the research carried out in Nigeria, among 320 managers from 24 banks, it was found that the implementation of participatory management resulted in an increase in employee productivity<sup>21</sup>. In this study, productivity was defined as the efficient execution of the order in the required quality<sup>22</sup>. As the result of the implementation of transformational leadership in 18 hospitals in the United States, in addition to improved financial results, also an improvement in the quality of services and increased patient satisfaction were noted<sup>23</sup>. Based on observations carried out in the United States, it was found that participative management increases production quality. Employees change independently the organization of their work stations and make decisions within their scope of responsibility<sup>24</sup>.

In a series of studies, the correlation between organizational culture, knowledge sharing and the quality of services has been established<sup>25</sup>. Knowledge management is an important element of participative management. Members of the organization must have the appropriate knowledge to make right decisions. This obliges managers to create a culture that supports knowledge sharing among members of the organization<sup>26</sup>. In Turkey, a research was carried out with 343 medium and senior managers from 125 production companies belonging to the 1000 most prosperous Turkish companies<sup>27</sup>. As a result of the research, it was found that transformational leaders directly influence the company culture, develop visions, implement changes, innovations and support the learning process<sup>28</sup>. Transformational leadership supports learning proces in organizations by promoting intellectual development, motivation and strengthening self-confidence among members of the organizations<sup>29</sup>. Employees involved in the decision making process are responsible for these decisions<sup>30</sup>. Transformational leadership supports the intellectual growth of members of the organization, encourages learning and problem solving<sup>31</sup>. The willingness to share knowledge is caused by the internal motivation of the person possessing this knowledge. None of external motivation form is effective enough, as the transfer of knowledge is immeasurable. Any attempt to measure the process, e.g. by the amount of written pages, does not guarantee the correct content and quality of the knowledge recorded. Internal motivation increases as an employee participation in decision making increases. Participation strengthens internal motivation coming from satisfaction and prosocial behavior<sup>32</sup>. Transformational leadership should be used

<sup>&</sup>lt;sup>19</sup> İşcan, Ö. F., Ersarı, G., Naktiyok, A. Op. cit., 2014, p. 882.

<sup>&</sup>lt;sup>20</sup> **Tomášková, E., Kopfová, A** Management style at market orientation. *Economics and Management*, no. 16, p. 2011, 985.

<sup>&</sup>lt;sup>21</sup> **Amah, E., Ahiauzu, A.** Employee involvement and organizational effectiveness a study of the Nigerian banking industry. *Journal of Management Development*, no. 32, 2013, p. 14.

<sup>&</sup>lt;sup>22</sup> Ibidem, p. 9.

<sup>&</sup>lt;sup>23</sup> **Brown, T. M., Holland, J., Bokowy, K. L., Horblyuk, R.** Can transformational programs aimed at improving hospital management, leadership, and productivity systems affect financial performance? *Journal of Hospital Administration*, vol. 2, no. 4, 2013, p. 118.

<sup>&</sup>lt;sup>24</sup> **Cabana S.** (1995), Participative design works, partially participative doesn't. *Journal for Quality and Participation*, vol. 18, no. 1, p. 10.

<sup>&</sup>lt;sup>25</sup> Brown, T. M., Holland, J., Bokowy, K. L., Horblyuk, R. Op. cit., 2013, p. 112.

<sup>&</sup>lt;sup>26</sup> **Amah E., Ahiauzu A.** Op. cit., 2013, p. 4.

<sup>&</sup>lt;sup>27</sup> Özsahin, M., Zehir, C., Acar, A. Z. Linking leadership style to firm performance: the mediating effect of the learning orientation. *Procedia Social and Behavioral Sciences*, no. 24, p. 2011, 1546.

<sup>&</sup>lt;sup>28</sup> Ibidem, p. 1557.

<sup>&</sup>lt;sup>29</sup> Ibidem, p. 1551.

<sup>&</sup>lt;sup>30</sup> **Amah, E., Ahiauzu, A.** Op. cit., 2013, p. 2.

<sup>&</sup>lt;sup>31</sup> **Mahdinezhad, M., Suandi, T. B., Silong, A. D., Omar, Z. B.** Transformational, Transactional Leadership Styles and Job Performance of Academic Leaders. *International Education Studies*, vol. 6, no. 11, 2013, p. 30.

<sup>&</sup>lt;sup>32</sup> **Frost, J., Osterloh, M., Weibel, A.** Governing knowledge work: transactional and transformational solutions. *Organizational Dynamics*, no. 39, 2010, p. 9.

especially in companies based on the specialized knowledge of employees, in order to increase the willingness to share knowledge, so that employees do it of their own will<sup>33</sup> and these increase the quality of production.

Other conclusions were drawn by researchers from Nigeria. Based on the research among 200 employees in the brewing industry it was found that autocratic style brings the best quality results <sup>34</sup>. Similar results were obtained in studies in South Africa among 110 project managers from the construction industry. It was found that transactional leadership contributes to the successful completion of the project. The success of the project was defined as a task completed in the planned time, within a fixed budget, appropriate quality and contributing to customer satisfaction<sup>35</sup>. In autocratic societies based on the cult of power, transaction leadership that uses direct reward and punishment is declared more effective in achieving results<sup>36</sup>. As a system for consolidating procedures and strong relationships, it improves quality results. It is a culture that formalizes the organization's activities through formal procedures, rules and regulations. Participatory and democratic cultures, according to such societies, allow too much flexibility, freedom of action, freedom in interpreting requirements and weaken the quality culture. In healthcare, transformational leadership focused on change has been assessed by researchers in the United Kingdom as being in conflict with maintaining quality, which requires stability and orderliness<sup>37</sup>.

When comparing the number of defects in organizations managed in authoritarian and humanistic way, results often show the advantage of authoritarian management over NGL (New Genre Leadership). The researchers came to the conclusion that this result was obtained not because of the smaller number of defects in organizations managed in a dictatorial manner, but because of untrue data from this type of organizations. Employees do not report errors and provide incomplete data, because they are afraid of consequences. Comparing these two groups, it was found that participation teams actually generated fewer errors. The quality of leadership should be assessed on the basis of the number of defects found and the effectiveness of improving the organization, and not on the basis of the number of defects reported<sup>38</sup>. There is openness in NGL organizations and members of the organization report errors to improve the organization. As a result of a survey conducted in Iran among 281 bank employees, it was found that autocratic leadership significantly reduces employee involvement in the quality of the service provided. Participatory leadership, on the other hand, encourages members of the organization to accept and respect the organization's values. It directly increases the involvement in the high quality services<sup>39</sup>.

It has been proven that autocratic style affects the quality of work. This impact is only positive in the presence of managers and when performing simple work. In the long run, it causes employees to withdraw, lack of initiative and avoidance of responsibility due to fear of punishment<sup>40</sup>. In the case of transactional leadership based on prizes and penalties, it often happens that employees want to receive a prize or want to avoid punishment and perform tasks against their knowledge and against their experience<sup>41</sup>. The motivation to perform the task professionally in the case of transactional dependencies is weaker, and additionally vigilance and ingenuity as well as common sense of employees vanish. Research conducted among airline crews showed that the fewest mistakes were made under the leadership of people who were friendly, nice, sociable, confident and resistant to pressure. At the same time, in the same study it was proved that the crew made the most mistakes when the leader (captain) managed in an authoritarian manner<sup>42</sup>.

The variety of cultures, the diversity of work performed and various research methods do not allow to define one the most effective management style that leads to the highest involvement of the employee.

<sup>&</sup>lt;sup>33</sup> Ibidem, p. 14.

<sup>&</sup>lt;sup>34</sup> **Ogunola, A. A., Kalejaiye, P. O., Abrifor, C. A.** Management style as a correlate of job performance of employees of selected Nigerian brewing industries. *African journal of business management*, no. 7, 2013, p. 3720.

<sup>&</sup>lt;sup>35</sup> **Liphadzi, M., Aigbavboa, C., Thwala, W.** Relationship between leadership styles and project success in the South Africa construction industry. *Procedia Engineering*, no. 123, 2015, p. 285.

<sup>&</sup>lt;sup>36</sup> Paracha, M. U., Qamar, A., Mirza, A., Inam-ul-Hassan, Waqas, H. Op. cit., 2012, p. 61.

<sup>&</sup>lt;sup>37</sup> Firth-Cozens, J., Mowbray, D. Leadership and the quality of care. *Quality in Health Care*, no. 10, 2001, p. 3.

<sup>&</sup>lt;sup>38</sup> Ibidem, p. 5.

<sup>&</sup>lt;sup>39</sup> **Dolatabadi, H. R.** The Effect of Directive and Participative Leadership Style on Employees' Commitment to Service Quality. *Journal of Business and Management*, no. 4, 2011, p. 9.

<sup>&</sup>lt;sup>40</sup> **Puni, A., Ofei, S. B., Okoe, A.** The Effect of Board Composition on Corporate Financial Performance: Evidence from Listed Firms in Ghana. *International Journal of Marketing Studies*, vol. 6, no. 1, 2014, p. 179.

<sup>&</sup>lt;sup>41</sup> Andersen, L. B., Bjørnholt, B., Bro, L. L., Holm-Petersen, C. Op. cit., 2018, p. 54.

<sup>&</sup>lt;sup>42</sup> **Firth-Cozens, J., Mowbray D.** Op. cit., 2001, p. 4.

Surveys show that to minimize manufacturing defects, combining two styles of transformational and transactional leadership gives benefit. Transformational leadership gives way to change, improvement, entrepreneurship, internal motivation, responsibility, while transactional leadership focuses on errors, problems and puts it in the framework of procedures, awards and regulations. It has not been possible to state clearly and unequivocally that there is always less defects in the organizations with transformational leadership<sup>43</sup>. Research conducted in Romania on 1,272 employees in the trade industry showed that transformational leadership is the most appropriate in organizations where ambitious goals are required and in which a lot of changes are carried out<sup>44</sup>. Researchers from Ireland also say that participative management has the best effects in implementing complex tasks<sup>45</sup>. The green organization is based on humanistic management styles. These include transformational leadership and participation<sup>46</sup>. The humanistic management focus on a human who has causative capabilities and is responsible.

### Methodology

Before the tested companies changed their nature into green organizations, a study was conducted on employee perception of participation. In order to test the hypothesis 1, a study was conducted among 80 employees in three companies located in Poland. A diagnostic survey was chosen as the research method for the purpose of this study. A survey was used as the technique of collecting data. A questionnaire was chosen as the research tool in the study. The survey contained one question with suggested choices. A question was asked as follows: "Do you think that employees who participate in the profit of an enterprise are more involved in their work?" The respondents had five answers to choose from: definitely yes, rather yes, probably not, definitely not, hard to say. Only one answer was allowed. 80 participants took part in the study.

In order to test the hypothesis 2, statistical data was collected defining the quality index. The quality index is defined in these considerations as the quotient of the number of products without claims of final customer (in the numerator) and the quantity of products manufactured and delivered to the final customer (in the denominator). Data was collected on a monthly basis. Three production enterprises placed in Poland were observed. There were 150, 100 and 200 employees employed in them. Data were collected in the period of 2016-2020. The monographic method was chosen as the research method, documentation testing was chosen as the research technique, and observation notes as the tool. The leadership style before the change had the characteristics of autocratic leadership. There were present, among others, infallibility of people with power, use of special privileges by managers and centrallised control. High employee uncertainty was manifested in high stress, fear, aggression and threats<sup>47</sup>.

Data collection began before the organizations were transformed into green organizations. During the reorganization, a collaborative culture was created. A culture of cooperation is the most important goal of empowerment. The following direct participation tools have also been introduced in the organizations: regular employee meetings with their line managers, extended task scope at the workplace, an increase in the rotation of activities at the occupied workplace, teams that deal with problem solving, project groups, enriching the scope of work, research in the area of employees' opinions, autonomous groups, quality circles. A participation of all employees in the companies' profit was also introduced. The transformation was evolutionary. The whole observation process lasted about 24 months.

#### Result

The result of the examination of hypothesis 1 shows that 37.5% of respondents believe that the employee who participates in the profit of the company is definitely more involved in their work, according to 38.75%, this is rather the case, 11.25% of respondents believe that this is not the case, while 6.25% are convinced that this is definitely not the case and 6.25% do not have a clear opinion on this (see figure 1).

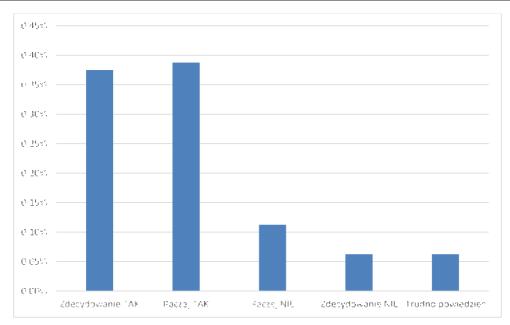
<sup>&</sup>lt;sup>43</sup> Firth-Cozens, J., Mowbray, D. Op. cit., 2001, p. 5.

<sup>&</sup>lt;sup>44</sup> **Mihalcea**, **A.** Leadership, personality, job satisfaction and job performance. *Procedia – Social and Behavioral Sciences*, no. 127, p. 2014, 447.

<sup>&</sup>lt;sup>45</sup> Martin, J., Cormican, K., Sampaio, S.C.B., Wu Q. Op. cit., 2018, p. 677.

<sup>&</sup>lt;sup>46</sup> Özsahin, M., Zehir, C., Acar A. Z. Op. cit., 2011, p. 1462.

<sup>&</sup>lt;sup>47</sup> Paracha, M. U., Qamar, A., Mirza A., Inam-ul-Hassan, Waqas, H. Op. cit., 2012, p. 57.



Source: Own study.

**Figure 1.** Opinions of the respondents about the extent to which the employee who participates in the company's profits is more involved in their work

On the basis of data collected to check the hypothesis 2, the quality index was calculated on a monthly basis. In the first organization, the quality index after 10 months from the start of the transformation into a green organization reached 100% with an initial value of 75%-82%. Over the next 14 months, up to a total of 24 months, apart from two drops to 97%, the ratio remained at the level of 100% (see Figure 2). It should be noted that organization 1 delivered various products to one recipient, and the monthly production volume reached several thousand pieces.

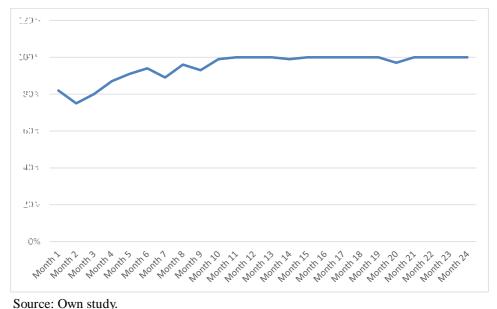
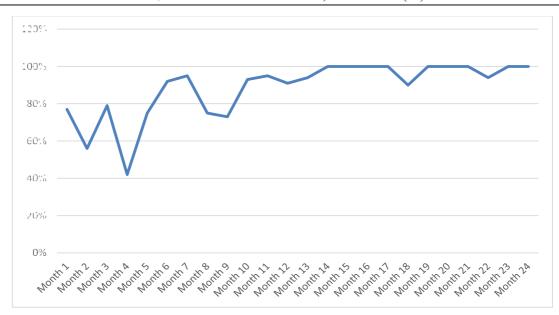


Figure 2. Quality index of the organization 1

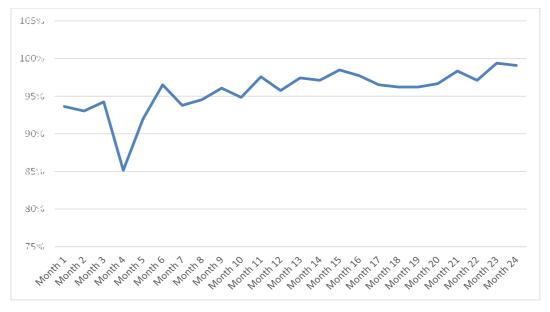
In the second organization, the quality indicator after 14 months from the start of the transformation into a green organization reached 100% with initial fluctuations of 42%-77%. For the next 10 months, up to 24 months, the indicator kept the level of 100%, however, having two drops reaching the level of 90% at the worst moment (see Figure 3). It should be noted that organization 2 delivered one type of product to one recipient, and the monthly production volume reached 30 pieces.



Source: Own study.

Figure 3. Quality index of the organization 2

The quality indicator in the third plant after 13 months reached 97% with an initial value of 93–94% with registered drops of up to 85%. Over the next 11 months, up to 24 months, the value of the indicator increased, however, it continued to fluctuate, oscillating between 96% and 99% (see Figure 4). It should be noted that the organization 3 supplied various products to many recipients, and the monthly production volume reached up to several thousand pieces.



Source: Own study.

**Figure 4.** Quality index of the organization 3

## Discussion, Implications, Limitations and Directions for Future Research

Based on surveys, it was found that 76 percent of respondents believe that employees who participate in a company's profit are more involved in their work. Employee involvement directly influences the quality of production. Observations of changes in the quality index in three organizations have shown that the transformation of the organization into a green organization based on transformational leadership, participatory management and employee empowerment has a positive effect on production quality. It is interesting that in all three cases the increase in the value of the quality index and its relative stabilization occurred after a

similar period from the beginning of the transformation. Organizations needed about a year to change their mindset and organizational culture. It should be noted that in the examined period, none of the observed organizations introduced technical changes and did not invest in new technologies. The only changes that took place concerned the style of management and involving employees in decision-making processes. On this basis, it can be concluded that organizational changes involving the introduction of a transformational style of leadership, participation and empowerment give the opportunity to increase the quality of production one year after the start of the process changing the organizational culture.

The limitation of the obtained results is a small sample confirming the hypothesis 2, because the observations were made only in three plants in one country. Further research should make further analyzes in other enterprises to confirm the obtained result. It should be remembered that the environment and culture existing in a given community are also important. Culture strongly determines the effectiveness of leadership style. Therefore, subsequent studies should compare the result in the case of transactional and delegating leadership in order to select the most effective management style in a given environment. It will also be useful to continue the observation to answer the question of how the quality index will develop in the following months and years in green organizations after achieving initial growth. The question arises whether the index will continue to remain at a high level, whether there will be discouragement among employees after the first period of enthusiasm. It should be noted that some participative tools such as quality circles focusing on improving the quality of production are difficult to maintain at the appropriate level of effectiveness for a long time. It was observed that after the first period of enthusiasm after the formation of circles discouragement increses and involvement of participants decreases<sup>48</sup>.

#### Conclusion

The increasing popularity of green organizations implementing transformational leadership and participatory management style based on employee empowerment encourages careful analysis of the effects of this activity. The purpose of this work was to examine the impact of green organization management on the quality index. To test this, employees' opinions were collected on the impact of participation on their involvement in work. It was also examined how participative management, transformation leadership and employee empowerment used in a green organization will change the quality of its production. On the basis of the presented research, it should be stated that the results were consistent with the hypothesis 1: "Employees of the organization believe that employee participation is a tool that causes greater involvement of employees in doing their work". Based on the conclusions, it can also be stated unequivocally that after the implementation of employee participation, transformational style and empowerment of employees, organizations increased the quality of production. Therefore, the hypothesis 2: "Employee participation is a tool increasing the quality of production" is also approved. Employees involved in the decision-making process take responsibility for the quality of their work and show initiative and creativity. This increases employee satisfaction and motivation to perform tasks. Such employees should contribute to the increase in quality in these organizations.

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