

The Phenomenon of Resistance to Organizational Change in Companies of the Republic of Moldova Under the Conditions of Industrialization 4.0

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Abstract

Modern conditions of the external environment imply significant changes in the activities of companies. The changes are so significant that they are called the Fourth Industrial Revolution. Thus, the cardinality of changes is caused by the introduction of new technologies, which, on the one hand, significantly increase the efficiency of the enterprise, but on the other hand, carry many risks. Thus, the forthcoming changes in the enterprises of the Republic of Moldova are accompanied by resistance on the part of the personnel. The aim of the work is to identify the main causes of resistance to organizational change under the conditions of Industrialization 4.0, to diagnose the causes of resistance in Moldovan enterprises, and to develop recommendations for reducing resistance.

Key words: organizational change, resistance to change, Industrialization 4.0, change management, resisting resistance.

J.E.L. classification: O32, O33, M19

1. Introduction

The phenomenon of resistance to organizational change is studied by almost all researchers interested in organizational development. It is a natural state of a person, a group, an organization. Changes which are connected with the Fourth Industrial Revolution are accompanied by high speed, uncertainty and complexity, owing to necessity of use of new technologies which absolutely uncertainly can influence both the organization, and on a society as a whole. Accordingly, such rapid and dramatic changes are often perceived negatively, or at least cautiously. What are the main fears of employees, what are the factors of resistance, as well as whether it is possible to counteract this condition and what should be done to implement organizational change - **the purpose of this study.**

Thus, this goal is concretized by the following **tasks:**

- ✓ to clarify the peculiarities of the concept of Industrialization 4.0 and to consider the main factors promoting and negatively influencing organizational change in the conditions of the Fourth Industrial Revolution;
- ✓ to consider the theoretical basis of the concept of resistance and to identify the main features of resistance to organizational change in the modern environment;
- ✓ to consider the peculiarities of organizational changes in small and medium-sized enterprises of the Republic of Moldova, among which the present study was conducted, which included 175 enterprises, which were conducted between January and May 2023;
- ✓ to clarify the causes of resistance to change in the studied enterprises and to identify their characteristics;
- ✓ to develop the main development ways that would contribute to organizational changes in small and medium enterprises of the Republic of Moldova.

2. Literature review

The phenomenon of the Fourth Industrial Revolution is closely associated with the name of Klaus Schwab, who back in 2011 at the World Economic Forum in Davos proclaimed this concept in the context of the need to industrialize the German economy and move it to a new degree of development, using the latest technologies associated with artificial intelligence, robotics, the Internet of Things and other technologies that should make a breakthrough and move the economy in a new direction. (Schwab, 2016)

More than a decade has passed since then, and during that time, there has been quite a lot of research related to the use of Industry 4.0 technologies. In addition, many authors focus on the problems of organizations' transition to a new path of development in connection with the general penetration of technology in business and life of ordinary people. So, Thomas Siebel talks about the "era of digital transformation", which almost identifies Industrialization 4.0 with the concept of digital transformation. Other researchers, Andrew McAfee and Eric Brynjolfsson, refer to the era of modernity as "the era of machines" (McAfee *et al*, 2017)

Several features can be noted in Schwab's statements regarding this process:

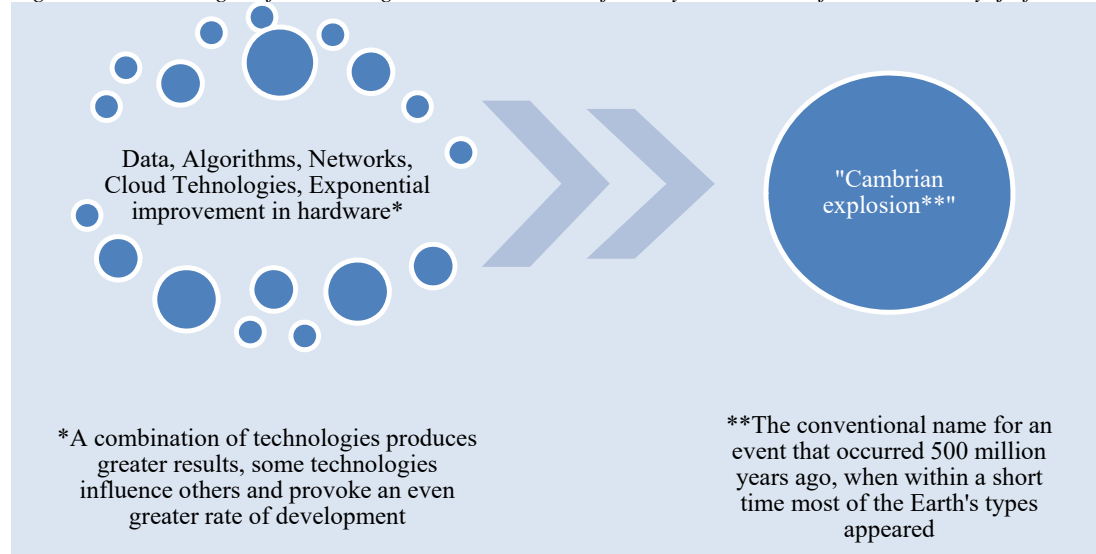
- First, any change is associated with the latest technology.
- Secondly, in addition to the need to master new technologies, it is necessary to navigate the provocative changes of the future, based on the interaction of different types of technology, which will make a breakthrough not only in business, but also in everyday life.
- The third feature is the speed of change, which is significantly different from the speed of previous changes. The authors call it exponential. Thus, the faster technology advances, the more significant will be its impact on productivity, industry, investment and organizational change.
- Fourth, the most important point is the blurring of boundaries between machines and humans: the further we go, the more we will feel machines are part of us, and the harder it will be to do without the Internet of Things, gadgets, computers, etc. (Schwab, 2018)

Technology, by interacting and combining, will create a synergy effect, that is, a multiplication of the effect of their association. At the same time, almost all authors note that the new technologies and the way people act will have both many benefits and a huge number of problems.

Scientists Tjeu Blommaert and Stephan Van Den Broek speak of the Fourth Industrial Revolution as a "new normal" that will change the entire world system. They also, like the other authors, focus on breakthrough technologies that cannot be ignored. Under their influence the whole world is changing: customers are oriented towards individual goods, given that they have almost 100% knowledge of all the offerings, properties and service processes associated with it. All enterprise processes will soon be digitized. To give up digitalization implies to give up the opportunity to survive. Therefore, all companies must take advantage of digitalization or they will cease to exist. Then there will be the integration of all processes, which will ensure even greater speed of delivery, payment, feedback and process resumption. In such a world, there is an even greater need for management, or rather a completely new approach to management. An indispensable requirement for the renewed approach is the possession of a high level of emotional intelligence. The new organizational structure involves abandoning the hierarchy and bureaucracy that were so important in the previous era. Hierarchy is replaced by multifunctional and self-organizing teams. All stakeholders become part of an ecosystem in which each member is part of a "value system" (Blommaert *et al*, 2019).

Andrew McAfee and Eric Brynjolfsson identify five signs of the coming "Robot Invasion". By this term, they refer to massive developments in five interdependent areas: data, algorithms, networks, cloud technology and hardware improvements that are occurring at an exponential rate.

Figure no. 1. Five signs of the coming robot invasion as defined by Andrew McAfee and Eric Brynjolfsson



Source: Developed by the author based on research results: (McAfee et al., 2017)

Data that has been recorded for decades is becoming increasingly vast, the speed of encoding has increased dramatically recently, and new types of information have emerged, such as touch signals in phones, digital photos and videos, and information from social media content. So big data is emerging that can only be processed with special software.

Algorithms. Huge amounts of data can be processed only with certain algorithms using artificial intelligence and machine learning. Such algorithms begin to update themselves; this process is called machine learning or deep learning. Thus, more and more new algorithms appear, which may later become impossible for human understanding.

Networks. Significant improvements and acceleration are taking place in communications technology. The increase in speed also implies faster data accumulation, which will enable seamless communication between different robots, which will ensure even greater development of the Internet of Things.

Cloud technologies. They offer a huge amount of computing power. Various jobs are performed in the Cloud, which can be divided into tasks by individual robots as well as centralized operations and processes. Cloud interconnections help to orient the individual participants in the process—they receive information based on the algorithms that the cloud generates.

Exponential improvement in hardware. The performance of digital equipment is increasing manifold. The emergence of new technologies provides even greater speed and distribution. This is noticeable in absolutely all fields of activity. Microchips are getting smaller and smaller, and their performance is increasing.

All of these factors have a major impact on increasing the rate of innovation, as well as creating gigantic flows of data. The combination of these factors is leading to revolutionary changes in business.

Given the above changes, it is obvious that they are facilitated by major changes in the organization, which, in one way or another, will be associated with resistance. Next, let us consider the concepts of some of the authors, revealing the causes of staff resistance.

Resistance to change has been studied by many gurus of change management (J. Kotter, P. Drucker, K. Levin, D. Garvin, M. Roberto, W. Chan Kim, Renee Mauborgne M. Beer and many others). These studies can be summarized in several conclusions:

- ✓ First, resistance is the natural reaction of the organism, and consequently of the group, to any transformation, as it forces them to leave their "comfort zone".
- ✓ Second, resistance is often related to the uncertainty that accompanies change. Fear of the unknown most often draws negative predictions about the amount of work, changes in the employee's position, or fear of losing the job. Here it is worth noting that the changes

associated with Industrialization 4.0 are largely related to the replacement of manual labor with machine labor, and, accordingly, the fear of employees losing their jobs.

- ✓ Thirdly, the success of any change depends directly on the leadership style, and accordingly, the model of behavior of the leader and the organization.
- ✓ Fourthly, changes largely depend on the motivational attitudes of employees. Without influencing them and not understanding these attitudes the failure of change is guaranteed.
- ✓ Fifth, of course, change needs resources: financial, informational, and human. For their correct and effective distribution, it is necessary to develop a model of change, an action plan and a vision for changing the future.

For example, according to Kotter's well-known model, several cardinal mistakes are made that affect the entire course of change. First of all, it is the lack of an atmosphere of urgency. This may be due, according to Kotter, to the fact that the company has "too many managers, but no leader." The leader must inspire the team to action, as well as convince them of the urgency of action and the criticality of the situation. The second problem with change, Kotter says, is the lack of an influential team of reformers. It is a mistake to delegate change management to the heads of departments, because the interest of the head of the organization and the impetus for change should come from him. Another mistake is the lack of a vision, which both the leaders themselves need to have and to communicate to all stakeholders. Even if the vision is established, another mistake that can be made in implementing organizational change is not effectively communicating the corporate vision. Kotter talks about different behaviors in communicating the vision to the organization.

Often ineffective corporate communications or lack thereof can affect the outcome of change. The next barrier in implementing organizational change is the lack of addressing the obstacles that arise in the implementation process. As an obstacle may be the shortcomings of the organizational structure, or insufficient motivation of employees, and the most serious problem in this context is the limitation of managers who themselves do not want to change. Also, serious problems in this process are the lack of systematic planning and the lack of focus on intermediate short-term results as part of strategic planning. Since quick results motivate employees to further accomplishments they must be established and felt. If this approach does not exist, it demotivates employees, because sometimes long-term victories have to wait a long time.

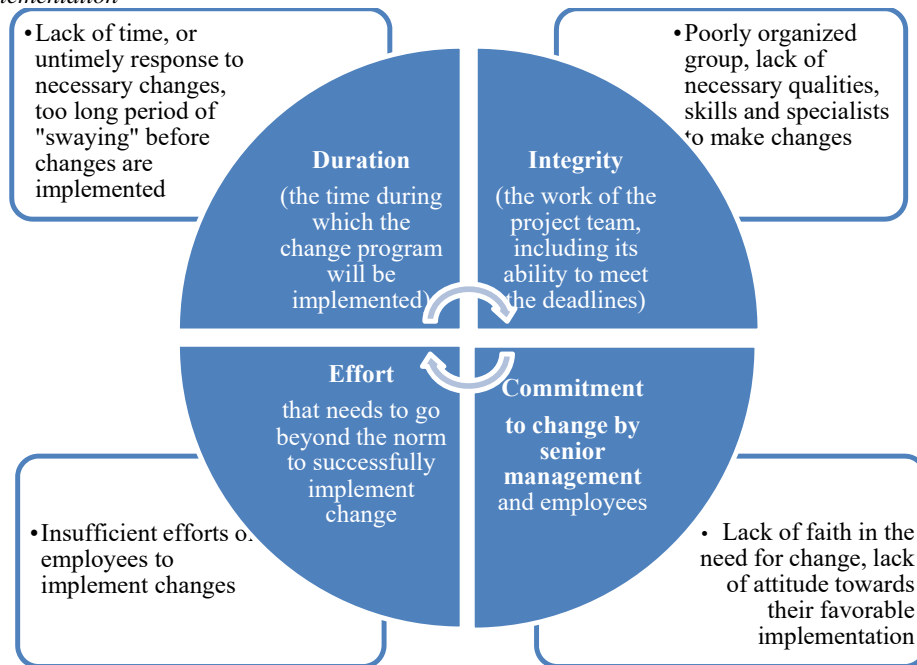
At the same time, another problem is the premature celebration of victory, which can be observed with excessive joy in implementing change. And another devastating mistake is the lack of anchoring change in organizational culture. New approaches must become part of the social norms on which the organization will operate; otherwise, the whole process of change can go backwards. (Kotter, 2012)

Other researchers Jang Kim and Renee Maubor identify four major problems of organizational change. The first is an obstacle in the minds of workers, the second is the problem of resources, the third is the lack or inefficiency of motivation, and the fourth is the so-called political barriers, which are associated with the opposition and its actions in the course of change. Thus, researchers believe that overcoming these barriers will help to successfully implement change. (Chan Kim *et.al*, 2003)

Another group and researchers (Harold Sirkin, Perry Keenan, Alan Jackson) identify four factors of change, the mismatch of which can cause a problem of organizational change. They identified these factors as the DICE (Duration, Integrity, Commitment, Effort) model.

Thus, the DICE model schematically will look as follows. (Figure 2).

Figure no. 2. Schematic representation of the DICE model and the problems associated with its non-implementation



Source: Developed by the author based on research results: (Harold L. *et al.* 2005)

So, the reasons for resistance to change are many. Therefore, let us further conduct the results of an empirical study, which presents the main reasons for resistance to change in small and medium-sized enterprises in the Republic of Moldova.

3. Research methodology

The study of organizational change problems was conducted in the period January-May 2023. The study involved 175 representatives of small and medium-sized enterprises in the Republic of Moldova. The study was conducted on the basis of a questionnaire, which included questions that were relevant to the topics and clarify the specifics of organizational change in the conditions of Industrialization 4.0. The study is part of a post-doctoral study financed from the national budget of the Republic of Moldova, number 22.00208.0807.10/PD on "Creating the organizational change management model for small and medium enterprises through the challenges of Industrialization 4.0".

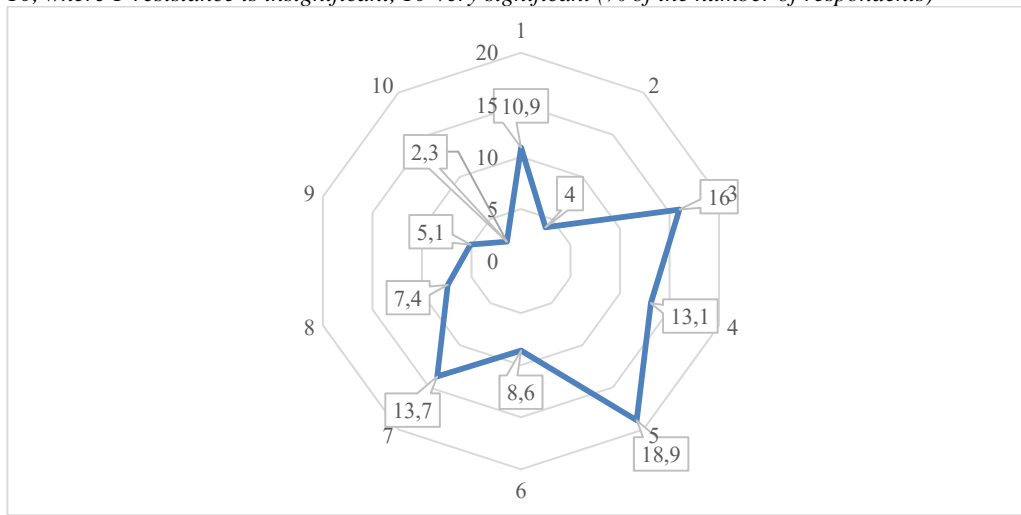
Owners, managers and employees of companies participated in the study. It was important for us to bring together the opinions of all the actors involved in the organizational change, which in one way or another will have to be carried out, taking into account all of the above factors and the revolutionary changes occurring in the external environment.

The work uses methods of analysis, synthesis, as well as a graphic representation of the results of the study. The survey questions are based on the methodology of the authors of the concepts associated with the phenomenon of the Fourth Industrial Revolution and change management.

4. Findings

One of the points of the study was the respondents' assumption about the strength of resistance to change, where they were offered a rating scale from 1 to 10, where 1 is insignificant resistance, 10 is very strong resistance, inhibiting the process of change. The results were distributed as follows (figure 3).

Figure no. 3. Level of resistance to organizational change by employees of enterprises on a scale of 1 to 10, where 1-resistance is insignificant, 10-very significant (% of the number of respondents)

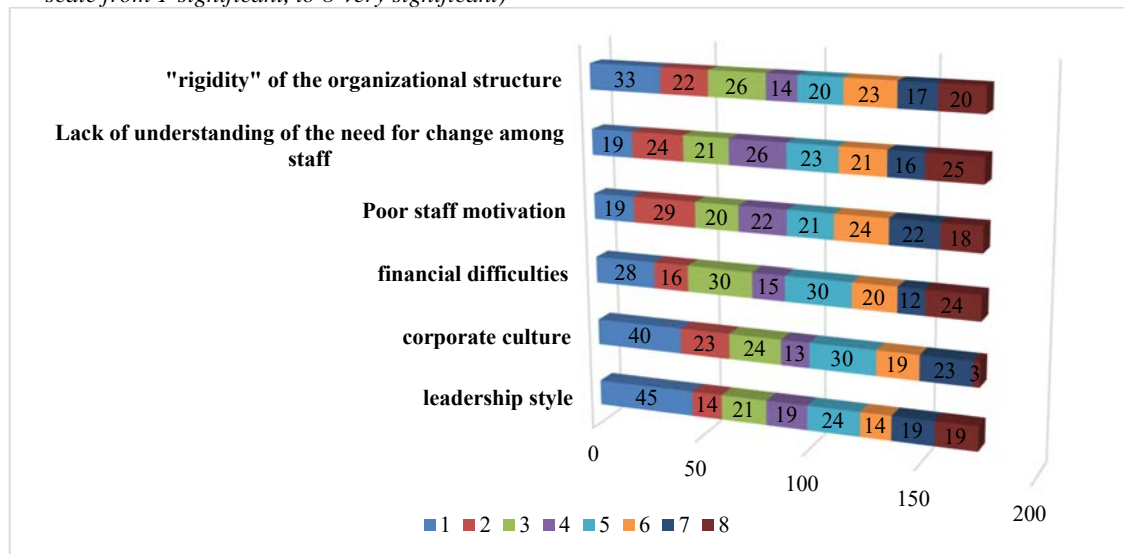


Source: Author's research results

As can be seen from the chart, the highest percentage of respondents noted an average level of resistance to change, that is, the value of "5" on a 10-point scale was noted by 18.9% of respondents. This indicates an average level of staff resistance to organizational change. Further, 16% of respondents indicate a level "3" on a 10-point scale of resistance to change, 13.7% indicate a level "7" and 13.1% indicate a level "4". Thus, summing up the results till the level 5 (presumably it is the average level of resistance - in 50/50 estimates), in total 44% of respondents marked the points between 1-4, after "5", that is from 6 to 10 - 37,1% of respondents, which is already, in our opinion, a positive moment.

Conducting the study further along the same lines, we asked respondents to note which factors were the most resistant to change in companies. Here respondents were offered an 8-point scale, with 1 being insignificant and 8 being very significant.

Figure no. 4. Factors that have the greatest impact on resistance to organizational change (score on a scale from 1-significant, to 8-very significant)



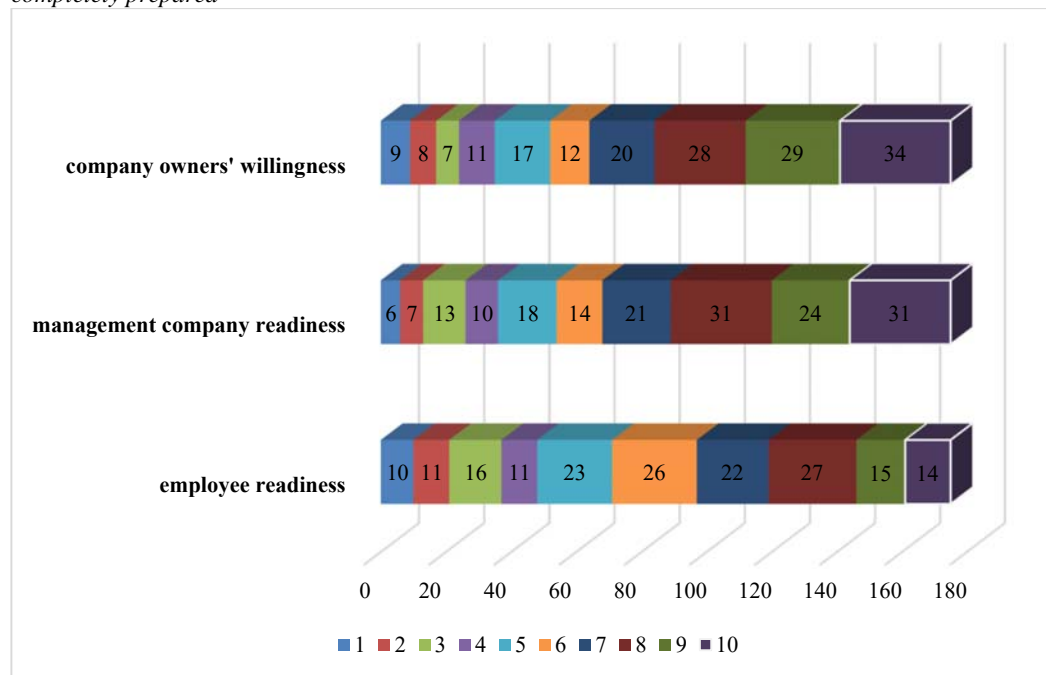
Source: Author's research results

The chart shows that the smallest cause that influences employee resistance, according to respondents, is leadership style and corporate culture. The biggest reason is the lack of understanding of the need for organizational changes by employees and managers, as well as financial difficulties, which affect, especially in the last period, small and medium enterprises in the Republic of Moldova.

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Another important question for respondents was to assess the readiness of staff, management and owners to transition to new principles of operation using the latest technologies associated with the process of Industrialization 4.0. Here, respondents were also asked to rate their readiness for the transition based on a scale of 1 to 10 points, where 1 was completely unprepared, 10 was completely prepared. Thus, the scores were distributed as follows (Figure 5).

Figure no. 5. Assessment of the ability of your company's staff to work with new technologies (artificial intelligence, digitized processes, etc.) on a 10-point scale, where 1 is completely unprepared, 10 is completely prepared



Source: Author's research results

Figure 5 clearly shows that the willingness to change the owners of the company clearly exceeds the willingness of other categories. Thus, the maximum ratings of 9 and 10 levels of readiness of business owners are noted in total by 63 respondents, which is 36% of all respondents. At the same time, the maximum level of staff readiness (the number of respondents who marked 9th and 10th readiness in this category) is 29 people, which is 16.5% of all respondents. Also, respondents note the maximum readiness of the company's management in 55 cases, namely, in 31.4%.

These findings support theoretical research in the field of resistance to change. The owners of the company, being the most interested in the competitiveness of companies and their further prosperity, are more concerned about the need for organizational changes. At the same time, management, often being employees, on the one hand understands the need for changes, due to the specifics of their work, and on the other hand, they are afraid or resist changes, taking into account often unforeseen consequences.

The personnel of organizations, on the other hand, is interested in the stability of companies, but on the other hand, they think more about the stability of their position, the long-term work in the company, they are afraid of losing their usual way of life, retraining and wasting time on this, therefore, this category is more inherent resistance, which explains the data of the study.

5. Conclusions

Conducted studies of the theoretical aspects of industrialization 4.0 and resistance to change confirm a large number of reasons why the personnel of organizations resist change. The primary reason is the natural state of a person to be in a comfort zone and the fear of breaking this state.

In addition, researchers name many reasons that negatively affect organizational change. This is the lack of desire of management and employees to implement changes, this is a leadership approach that is not adequate to the current situation and therefore provides even more resistance, this is the timing of the change project, which may not be appropriate or insufficient to obtain beneficial results. Also, among the reasons for resistance, an organizational culture is often cited that is unable to encourage employees to make changes, or is more focused on obtaining short-term results, and therefore employees have a fear that in the near future the results will not be what they would like. In addition, one of the factors of resistance is the fear of managers and owners to lose what they currently have as a result of organizational changes. This may relate to any assets, or customer base, or competitive position in the market. Many problems are associated with the lack of funds for the implementation of changes, as well as the lack of a clear developed strategy for change.

Given the global changes that are provocative today, the listed causes of resistance are even more relevant. The upcoming changes imply a reorientation of the entire company's activities, even if entrepreneurs first think about the digitalization of one or more processes, rethinking the entire system will be a necessary factor for survival in the future.

The conducted research showed the average level of resistance of organizations to organizational changes. Respondents to a greater extent attribute the lack of understanding or insufficient awareness by employees of the need for changes to be the reasons for resistance. This problem is also addressed by Kotter, who advises in his well-known model of change to "create a sense of urgency", as a result of which all personnel are aware of the need and inevitability of change.

The most important point that causes resistance to change is the weak motivation of the staff to carry them out. On the one hand, changes require additional effort and time, on the other hand, the expectations of employees are most often aimed at increased motivators during this difficult period of time for the company. Therefore, their absence can serve as a demotivational factor.

Problems related to the inefficiency of the organization's function were also highlighted by employees as one of the resistance factors. The organizational structure can be built inefficiently in terms of the distribution of work tasks, inefficient delegation of authority, fuzzy or indefinite work regulations. So, any change will be facilitated by an updated organizational structure. Conversely, its stiffness will influence against change.

Also, the study showed a greater willingness on the part of the owners to implement changes than on the part of management and employees. Managers also understand the inevitability of change, but at the same time show less willingness to implement it. This may also be related to the fear of the responsibility that will be assigned to management personnel during the period of implementation of the changes.

Summing up this work, it should be noted that resistance, as a natural phenomenon, will exist at the initial stage of the change process, at the same time, at each specific enterprise, it is necessary to study the reasons for such resistance. Although common factors have been identified, at the same time, depending on the individual history of the organization, the approach to leadership, to mentoring that is present in the enterprise, these processes may vary. We also note that the object of research - small and medium-sized enterprises have their own specifics, which is also manifested in the specifics of changes. On the one hand, it seems that it is much easier to make changes in small companies, given the smaller number of employees and the greater specialization of the enterprise, but at the same time, limited financial resources, specialists and sound approaches can slow down the process of change. At the same time, the irreversibility of many processes that are the result of changes can lead to the doom of the entire project to failure.

6. Acknowledgment

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