Quantification of the Managerial Stress

Violeta Gligorovski [1], Gjorgji Mancheski [1], Marjan Angeleski [1]

[1]*Faculty of Economics –Prilep, Marksova133, Prilep, Macedonia*

***Abstract* - In order to be competitive on the market, company's managers permanently monitor and implement changes in companies, whether they are caused by internal or external factors. The purpose of this paper is to explain managerial stress caused by implementation of changes and to quantify that stress. Usually the implementation of each change causes stress among the employees, and the stress from the individual level slowly spreads to a collective level, that is to say, organizational level, and all the way to the managers. How much the manager will successfully lead the project for implementation of a change and how much they will manage to amortize the stress among the employees, mostly depends on their expertise, knowledge and skills to accurately and comprehensively inform and integrate the employees in the overall process. Methodology. For this purpose, a descriptive analysis of the data was conducted regarding the qualitative responses. In addition to the descriptive statistics, for the examination of this issue, factor analysis of the results in SPSS was conducted. The factor analysis is one of the methods of multidimensional analysis whose main task is to reduce the variables and explain their interconnectedness.**

***Keywords* - implementation, changes, managerial stress, amortization**

1. Introduction

The change is a progressive term that relates to the transition of a particular company, on the one hand (restructuring, reorganization, merging, consolidation, standstill, implementing new technology), and on the other hand, for employees, the change has negative implication [1]. One of the most important tasks of the managers in transition conditions is to help the employees overcome the company's transition challenges as much as possible. In fact, the most difficult task of the managers in their work is facing the enormous changes in companies and finding ways to help the employees in expressing their reactions and resistance to implementation, in order to accelerate their adaptation in emerging conditions. Recently, a Norwegian research study reported results from measuring interaction links between managers and stressors (the study was conducted by BI Norwegian Business School). Namely, according to the study, the stress was measured by the managers and it was found that those who had a positive attitude towards the employees and maintain good interpersonal relationships with them actually had less stressful situations. But, unlike them, the managers who had broken relationships with the employees, treated them roughly and did not respect their demands had accumulated stress.

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Corresponding author: Violeta Gligorovski,
Faculty of Economics –Prilep, Marksova133, Prilep, Macedonia
Email: violeta.gligorovski@gmail.com

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2. Managerial stress

Stress is not a disease. There is no medical term called stress, and therefore stress can be defined as a state of discomfort during a hard working day. Stress, in fact, is defined by many theorists as anxiety and demotivation.[2] Cox and Griffiths, when it comes to stress, think that there is no consensus on its definition, but there are three different types of concepts: the ***"engineering" approach*** - where the stress is observed as a stimulus that occurs in an environment which requires it, the ***"physiological" approach*** - where the definition of stress is based on the physiological or biological changes that occur in the individual in the event of stress, the ***"psychological approach"*** by Cox and Griffiths" where stress not only occurs as a stimulant or reaction, but also as a dynamic process that manifests itself when an individual interacts with the work environment".[3] The manager in the process of implementation of the changes in the company should be resistant to negative reactions, persistent and responsible for the entire process, and should undertake the following activities:

- To be careful with the employees with whom they collaborate. They have to constantly seek out new challenges that will increase their abilities and their skills;

• To pay special attention to their mental and physical well-being. In particular, they need to know how to manage their own stress, because (as managers) they are the leading model for other employees and the target of how behavior in the work environment should look;

• It is also necessary always to be positive and rational. They must enrich positive emotions and strengthen flexibility. Negative statements / attitudes and negative emotions limit and decline its resistance;

• The managers should focus only on those changes that are in their power, that is, those changes that they can control;

• They have to be the first to accept the changes and adapt to them. In order to achieve this, they must increase their own resistance by creating a realistic picture of themselves and the environment in which they work;

• This, in turn, imposes the need for them to create a rich network of personal relationships with the employees, the partners and the other participants from the business community. This network is very important to adequately face the challenges and achieve results in order to reach the goals of the company.

When the changes are implemented, uncertainty is always present among the employees. In the moments of insecurity, self-confidence and employee productivity are at the lowest level. There are two ways in which managers can increase self-confidence and productivity among the employees, such as:

• *Investment in personal development.* This is what motivates people to work. The manager should make the employees feel that they make a valuable contribution to the development of the company, but also that they "grow"; Progress on a personal level;

• *A sense of value.* This is achieved through an appropriate evaluation of the work of the individual by the management.[4]

The manager should have avision into the overall situation in the company and they play the key role in the team, especially when it comes to early identification of a stressful situation. In this context, the manager should pay attention to the following indicators, because they clearly show that there is stress in the working environment, and such are: Performances of the employees, Presence at the workplace, Indifference and Aggressive / emotional / negative behavior, Changes in the style of living / abuse of alcohol, drugs, etc., Abnormalities and errors in given deadlines for separate tasks. Identifying some of the previously exposed indicators for the employees in a particular company clearly shows that there is stress at the workplace, and this has negative implications on the overall company performance. The task of the manager (after detecting the problem) is finding a way to overcome this situation, i. e. preventing and regulating the stress of the employees from the implementation of the particular change.

The manager is responsible for how employees will feel in the company and it depends on whether they will be productive and will work on their own development, but at the same time for the growth and the development of the company, and whether they will feel as an integral part of a company. If the manager does not anticipate the consequences of stress among the employees, then the company can suffer losses, that is, will have negative consequences in its operation, through:

• *Reducing the performance and productivity of the employees,*

• *Making bad business decisions,*

• *Increase in errors, and this results in an increase in consumer complaints and a loss of their loyalty,*

• *Decrease in the commitment to work,*

• *The number of absences from work increases* [5]

3. Analyses

The results of the analysis of the data obtained through the research are presented, and they refer to the stress caused to the managers, above all, from: technological changes, then changes in the legal regulations, changes in the organizational structure, changes in human resources, transformation of business processes, launching new products / or services and new marketing strategy of the company, but also the impact of the intensity of stress in the manager's performance, decision-making, perception, cognition, the impact on productivity, etc.

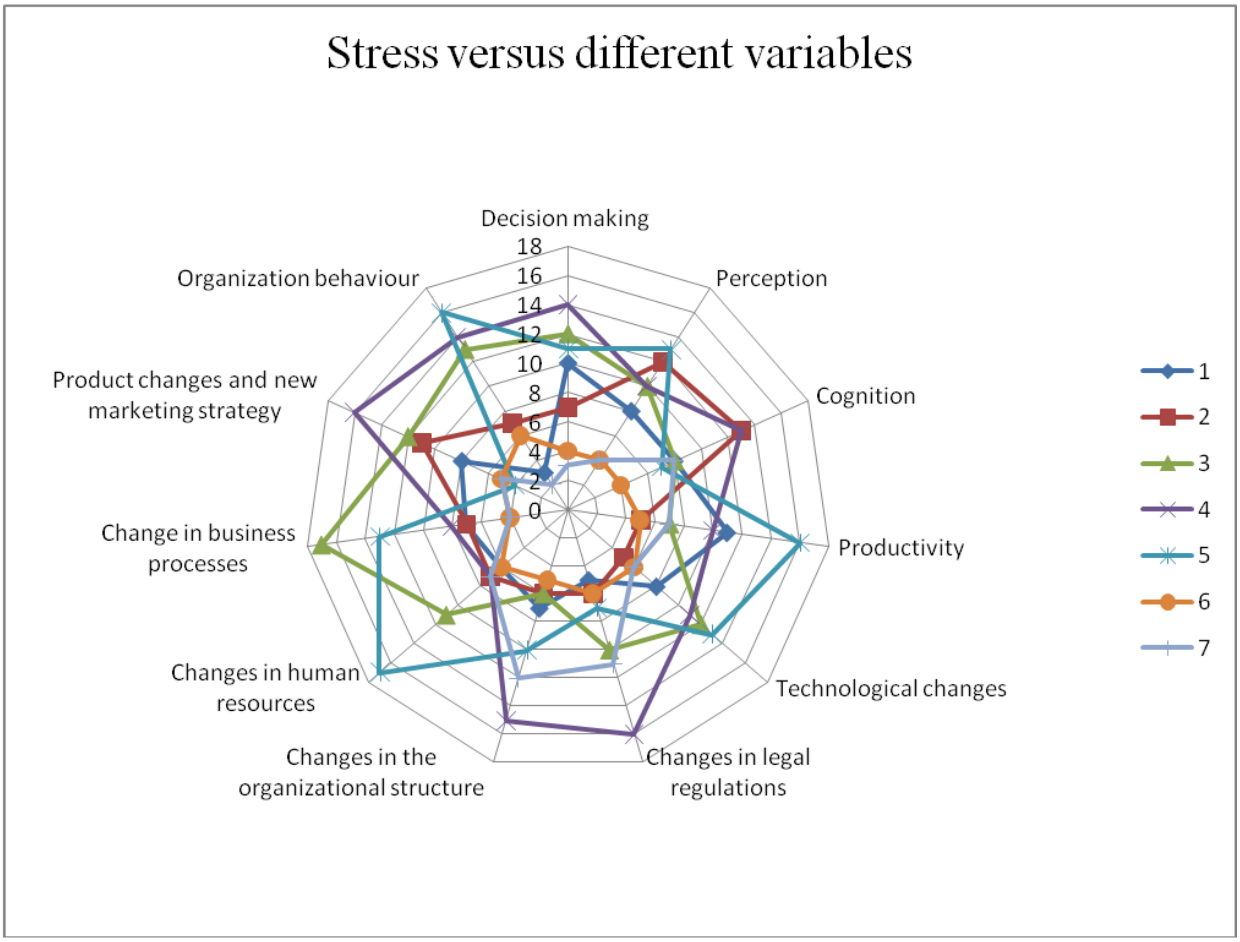

Figure 1.Stress versus different variables

4. Methodology

For this purpose, a descriptive analysis of the data was conducted regarding the qualitative responses. In addition to the descriptive statistics, for the examination of this issue, factor analysis of the results in SPSS was conducted. The factor analysis is one of the methods of multidimensional analysis whose main task is to reduce the variables and explain their interconnectedness. The data presented, in fact, were collected through a questionnaire that was submitted to 61 respondents/ managers. The data were measured using the Likert scale from 1 to 7. Namely, with the help of the Likert scale, the quantification of stress was made in relation to the various variables that were identified as the most important for the researched issues, and tabulated in Table 1. The Lickert scale has 7 gradations.

Table1. The Lickert scale

Lickert scale	1	2	3	4	5	6	7

Meaning: (1 - has no influence, 2 - has very little influence, 3 - has an insignificant influence, 4 has influence, 5 - has significant influence, 6 - has a big influence, 7 - radically affects the investigated variable)

Table 2. stress quantify with different variables

Lickert scale	1	2	3	4	5	6	7
Technological changes (Absolute values)	8	5	12	11	13	6	6
In%(Relative values)	13%	8%	20%	18%	21%	10%	10%
Changes in legal regulations(Absolute values)	5	6	10	16	7	6	11
In%(Relative values)	8%	10%	16%	26%	11%	10%	18%
Changes in the organizational structure (Absolute values)	7	6	6	15	10	5	12
In%(Relative values)	11%	10%	10%	25%	16%	8%	20%
Changes in human resources (Absolute values)	6	7	11	7	17	6	7
In%(Relative values)	10%	11%	18%	11%	28%	10%	11%
Changes in business processes(Absolute values)	7	7	17	8	13	4	4
In%(Relative values)	11%	11%	28%	13%	21%	7%	7%
Product changes and new marketing strategy (Absolute values)	8	11	12	16	4	5	5
In%(Relative values)	13%	18%	20%	26%	7%	8%	8%
Decision making(Absolute values)	10	7	12	14	11	4	3
In%(Relative values)	16%	11%	20%	23%	18%	7%	5%
Perception (Absolute values)	8	12	10	10	13	4	4
In%(Relative values)	13%	20%	16%	16%	21%	7%	7%
Cognition(Absolute values)	8	13	8	13	7	4	8
In%(Relative values)	13%	21%	13%	21%	11%	7%	13%
Organization behavior (Absolute values)	3	7	13	14	16	6	2
In%(Relative values)	5%	11%	21%	23%	26%	10%	3%
Productivity(Absolute values)	11	5	7	10	16	5	7
In%(Relative values)	18%	8%	11%	16%	26%	8%	11%

Therefore, it can be concluded that there were 11 variables that were investigated in relation to the appearance of managerial stress in companies. Descriptive statistics helped to explain the mean, standard deviations, and analysis of the percentage representation of the variables that influence the stress of the employees, including the managers.

Table 3. Descriptive statistics

Descriptive Statistics

	Mean	Std. Deviation	Analysis N
A.Decision making	3.54	1.689	61
B.Perception	3.59	1.755	61
C.Cognition	3.69	1.920	61
D.Organization behaviour	3.80	1.730	61
I.Productivity	3.95	1.936	61
F.Technological changes	3.95	1.802	61
G.Changes in legal regulations	4.25	1.850	61
H. Changes in the organizational structure	4.28	1.942	61
I. Changes in human resources	4.11	1.808	61
J. Change in business processes	3.74	1.721	61
K. Product changes and new marketing strategy	3.52	1.747	61

From table 3, according to the influence of the different variables, it can be concluded that: the level of stress increases the most in the implementation of the changes in the ***organizational structure (4.28)***, the level of stress significantly increases in the implementation of ***new laws and regulations*** within the company's operations ***(4.25),*** but also in the changes in ***human resources (4.11)***. Managers feel the least stress when changing the marketing strategy and the introduction of ***new products / services (3.52)***. The ***greatest variability*** in managers' responses is in their attitude to changes in organizational structure, productivity in the company, and cognition. The ***lowest variability*** in managers' responses, that is, they mostly agree with the impact of stress in making decisions that are of strategic nature for companies, but also the level of stress in the implementation of certain new business processes.

Correlation matrix, which contains the coefficients of the simple linear correlation of each pair of variables, and it is the basis for the realization of the factor analysis. One of the conditions for the application of factor analysis is the connection between the variables. From the table of Correlation matrix (not shown here) it can be understood that there is a high positive correlation between the examined variables: perception and decision-making in relation to the level of stress; cognition and perception in terms of stress levels; as well as changes in human resources; changes in business processes and the level of stress. Many of the values are greater than 0.3, which is why they are taken into account in further processing. From the correlation matrix, it can be noted that in some variables there is a negative correlation.

Also, the value of Kaiser-Meyer-Olkin is a measure by which it can be determined whether the factor analysis is conducive to examining the data. Specifically, if the value of this measure is less than 0.5, then the correlation matrix is not suitable for factor analysis. Table 4 shows that the value is 0.865, which means that the value is greater than 0.5, so it can be concluded that the data are suitable for applying the factor analysis.

Table 4. KMO andBartlett's test

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.865
Bartlett's Test of Sphericity	Approx. Chi-Square	473.037
	df	55
	Sig.	.000

Table 5. Communalities

Communalities

	Initial	Extraction
A.Decision making	1.000	.811
B.Perception	1.000	.824
C.Cognition	1.000	.882
D.Organization behaviour	1.000	.949
I.Productivity	1.000	.666
F.Technological changes	1.000	.772
G.Changes in legal regulations	1.000	.474
H. Changes in the organizational structure	1.000	.778
I. Changes in human resources	1.000	.804
J. Change in business processes	1.000	.825
K. Product changes and new marketing strategy	1.000	.747

Extraction Method: Principal Component Analysis.

From Table 5 it can be detected that the values of the variables are high and there is no need to exclude any variables. The following table presents the general / total / and the commutative / aggregate / variations./

Table 6. Total variance explained

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.965	54.228	54.228	5.965	54.228	54.228
2	1.537	13.971	68.199	1.537	13.971	68.199
3	1.032	9.379	77.578	1.032	9.379	77.578
4	.738	6.706	84.284			
5	.426	3.874	88.158			
6	.329	2.995	91.153			
7	.325	2.952	94.105			
8	.211	1.921	96.026			
9	.170	1.541	97.567			
10	.155	1.411	98.978			
11	.112	1.022	100.000			

Extraction Method: Principal Component Analysis.

With the extraction method, factors with the highest value higher than 1 are distinguished. As can be seen, in this case, ***three factors are extracted with values: 5.965 - factor 1, 1.537 - factor 2 and 1.032 - factor 3.*** From table 6 it can be concluded that the percentage of variance, explained by the three factors is 77.578%. These factors are extracted and can visually be seen in the picture where, through the Cattellijev diagram (scree plot), all 11 variables are shown, from which the violation of the three factors is seen in figure 2.

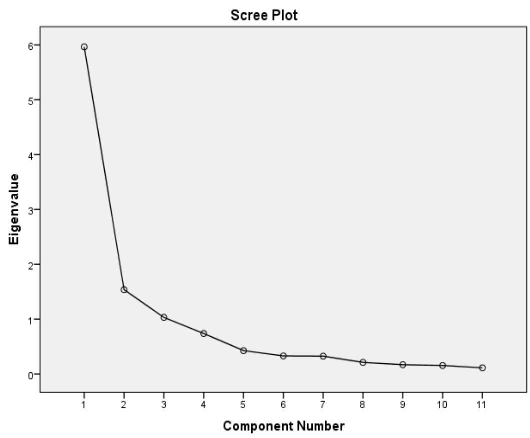

Figure 2. Violation of the three factors

Analyzing the data in the Component matrix, determines the importance of each variable in terms of extracted factors and factor load. From table 7 it can be concluded that the first factor is defined by the following variables:

Table 7. Component matrix

Component Matrix[a]

	Component		
	1	2	3
A.Decision making	.686	.578	-.078
B.Perception	.744	.516	-.068
C.Cognition	.781	.515	.079
D.Organization behaviour	-.177	.253	.924
I.Productivity	.804	.078	.119
F.Technological changes	.850	.022	-.223
G.Changes in legal regulations	.522	-.375	.247
H. Changes in the organizational structure	.869	-.127	-.078
I. Changes in human resources	.776	-.435	.109
J. Change in business processes	.822	-.374	.102
K. Product changes and new marketing strategy	.791	-.338	.089

Extraction Method: Principal Component Analysis.

a. 3 components extracted.

The 1-factor consists of the variables

• Changes in the organizational structure (0.869),

• Technological changes (0.850),

• Change in business processes (0.822),

• Productivity (0.804),

• New product and marketing strategy (0.791),

• Changes in human resources (0.776),

• Legal regulation (0.522);

The 2-factor is made up of the variables

• Decision making (0.578),

• Perception (0.516),

• Cognition (0.515);

The 3-factor is made up of the variables

•Organizational behavior (0.924).

Since the loading on the first factor is high, the factors are rotated with the Varimax method, which will change the relationship between the variables and the factors. In this way, as we can see, the variables that make up the factors change, except for the third factor, so, it is evident that the first factor has high factor loading, that is to say, a larger number of variables, unlike the other factors. Thus,

The 1-factor now consists of the following variables:

•Changes in human resources (0.872),
•Change of business processes (0.865),
•New product and marketing strategy (0.817),
•Changes in the organizational structure (0.700),
•Legal regulation (0.681);

The 2-factor is made up of the variables

•Cognition (0.897),
•Decision making (0.892)
• Perception (0.883),
•Technological changes (0.599),
•Productivity (0.584);

The 3-factor constitutes the variable
•Organizational behavior (0.972).

Table 8. Rotated Matrix components

Rotated Component Matrix[a]

	Component		
	1	2	3
A.Decision making	.118	.892	-.040
B.Perception	.203	.883	-.052
C.Cognition	.266	.897	.086
D.Organization behaviour	-.066	.000	.972
I.Productivity	.570	.584	.027
F.Technological changes	.556	.599	-.323
G.Changes in legal regulations	.681	.050	.089
H. Changes in the organizational structure	.700	.490	-.218
I. Changes in human resources	.872	.186	-.091
J. Change in business processes	.865	.262	-.091
K. Product changes and new marketing strategy	.817	.269	-.092

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 4 iterations.

5. Results

Managerial stress and technological change

The implementation of new technologies in companies, whether it is new technology in production or the implementation of a new software program, is a continuous process that is typical of competing companies. Implementation of these changes creates stress among managers, but also with the company employees, regardless of the size of the examined company. Technology connects the world, but it disconnects humanity. A number of theorists call this stress, techno stress, and the term itself covers a wider range of different definitions, according to which aspect it is treated. Clinical psychologist Craig Brod (1984) [6] designs the coinage ***techno stress*** as a term that explains the interaction of an individual with new technology. [7] Namely, people face individual symptoms of stress every day, mainly as a consequence of the new technology (smart phones, new devices in the household or workplace, computers, etc.). Implementation of the new technology also occurs in the companies in the Republic of Macedonia. Thus, the stress implied by the implementation of technological changes, according to the presentation, has highest values in the middle of the Likert scale, that is, the majority of the managers of the companies responded that the implementation of technological changes has an impact, which is neither negligible, nor extremely radical, however, it is enough to cause stress and stressful situation among managers and other employees Namely,20% percent of the managers of the companies responded that the implementation of technological changes has a stressful impact, with 10% responding that it has a major impact on employees, while the other 10% think that stress is implied in the implementation of the changes.

Managerial stress and changes in legal regulations

According to the indicators, (26%) of the managers answered that these regulations cause stress because the implementation of the changes related to the legal regulation imposes additional obligations and responsibilities with them. It is interesting that 18% of the managers of the companies responded that in the implementation of new laws and legal regulations, the existing situation is radically changed, i.e. causing great stress both among managers and employees in each of the companies surveyed. Namely, when it comes to implementing a new legal regulation or when the company starts to operate under a new law, then the stress (as can be seen from the results) is huge. In this context it can be noted that often the process is followed by a large number of turbulences, for example, in the case of amendments and supplements to legal solutions that daily monitor business operations, such as: changes in the Law on Labor Relations, the Law on Accounting, the Law on VAT, the Law on Social Responsibility, etc, and also in the implementation of the various standards imposed by the European Union, in order to harmonize the legislation and so on.

Managerial stress and changes in the organizational structure

The changes in the organizational structure of each company are associated with the most risky decisions a manager can make. Namely, any such decision is followed by a series of most turbulent changes in companies, and thus, one of the subsequent situations that managers can face. However, the successfully implemented reorganization in the legal sector and in general functioning can make the company more prosperous and more successful. Although this is a radical sweep, there are many companies in the world that owe their success to the organizational structure and its adaptation to change, and some of them are: Google, British Airways, Microsoft. [8]
According to the indicators, when it comes to implementing the changes in the organizational structure, as can be seen from table 2, 25% of the companies said that the changes have an impact on them and cause stress. There is also a high percentage of radically increasing stress in the implementation of this type of change (20%), thus confirming that these changes are especially stressful for the employees.

Managerial stress and changes in human resources

The changes dictated by the labor market also trigger changes in human resources in the companies. Hence, the human resources management in the company assumes the responsibility for their proper organization and inclusion in the business process. In the companies, there are constantly changes in human resources, whether it is related to the implementation of new technology in operation, anew product is launched, the company introduces a new type of service, etc. In fact, the objective of every company is to have the best staff employed which will be suitable for the existing work positions and will accomplish the general company mission. Like any other change, changes in human resources also cause stress among managers, arising from dilemmas: whether they have employed appropriate staff, whether employees are completing business tasks, whether efficiency and effectiveness of the work is improved, whether productivity increases, etc. In fact, the nature of success in today's businesses lies in the ability to respond immediately to unpredictable and rapid changes in the work environment.[9] As can be seen from the results of this research, it confirms the high percentage (of 28%) that arose from the managers' responses that changes in human resources cause significant stress to them, but also to other employees. Further, some of the managers answered that these changes cause insignificant stress (18%), while some of the managers answered that they do not have such kind of stress in general, while others reported that such situations cause great stress to them.

Managerial stress and changes in business processes.

Each company seeks to improve the way it does business, that is, take advantage of the ability to adapt rapidly and to respond more dynamically to changes that are imposed by the market and the competition. Initiatives for change in business processes are most often caused by: changes in organizational structure, changes in responsibilities, changes in company strategy, government laws and regulations, new IT system in the company, appearance of new markets, etc. In fact, the manager's task is constantly to improve, to manage and to control business processes, in order to realize the company's strategic determinations. There are three levels when it comes to changes in business processes: Reengineering, which relates to the business processes in the company's strategy, with the main threats or opportunities triggering larger changes in the value chain; Redesign, which refers to the more extensive changes in business processes, for example, changing the job description or introducing separate automated processes; Improving processes that are related to the tactical level of business, where changes relate to the development of stable connections, and this is usually done with the six sigma approach. 10] Changes that are directly related to business processes, as can be seen from the indicators, do not cause stress to managers and other employees in companies. Namely, the presented values show that 28% of the managers believe that changes in business processes have little impact on them and do not cause stress among all employees.

Managerial stress, products changes and new marketing strategy

Companies are constantly improving existing products or introducing completely new products in order to make greater profit. Economic theory assumes that one of the basic ways for a company to make a profit is to gain an advantage over the competition. Offering new products, the company opens up new opportunities for appearance in new markets and thus achieves quasi - monopolistic profits, but as long as competition does not have access to those markets. [11] Company managers are constantly looking for innovative ways to promote products and bring them closer to the consumers, which is why they continually change the marketing strategy. Marketing is increasingly seen as a process in the value chain, which is responsible for creating value for consumers in the short and the long run. [12] According to the results from the research, it can be noted that 26% of the managers answered that there is stress on this issue, but it is at a very low level. However, 20% and 18% of the managers of the companies answered that such Changes in general do not cause stress.

Managerial stress and their performances - their correlation

Performance is the process through which managers realize their expectations and goals, receive feedback from their employees, identify developing opportunities and evaluate the results of the achieved benefits. It is through these processes that companies are able to create and maintain a working atmosphere where:

• the continuous improvement will be evaluated,
•will easily adapt to changes,
• there will be an ambition to achieve ambitious goals,
•creativity will be stimulated,
•knowledge and professional development will be promoted,

•employees will be hired and rewarded more consistently; similar stimulus measures will be introduced.

Performances management is a process of communication (planning, monitoring, review) between managers and the employees in support of achieving the set goals of the company.

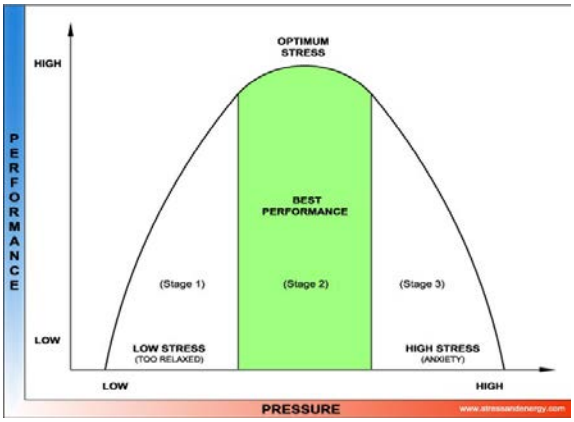

Figure 3 Yerkes-Dodson law

According to the law of Yerkes-Dodson, as can be seen from figure 2, performances increase as mental excitement increases, that is, stress, but to a certain point, and then, as stress increases more and more, performances decrease. [13] So, the best performances in the company are achieved with an optimal level of stress. The optimal level of stress and the best performances of the managers are influenced by several factors: the level of learned skills, personality, the level of anxiety and, of course, the complexity of the tasks. The changes that the managers of the companies implement in order to achieve better performances cause stress, so (in this case) 64% of the surveyed managers responded affirmatively and 36% think that the changes in them do not cause stress. Regarding the question of whether the stress affects managers' performances adversely, 77% of the respondents answered that it has negative impact on their performances, and only 33% said that stress has no effect on performances.

Managerial stress and decision-making, perception and cognition

Making decisions in the company is one of the crucial tasks of the managers, just like perception, and cognition. More precisely, the way in which the manager observes the situation in the company is important, both through the visual and the reflective observation. Decision-making is the basis for creating a competitive advantage and defining new values for the companies. How much the managerial decisions are genuine, timely, reliable, and backed up by relevant information, risks of doing business are diminishing. Manager's perception is also an important element, especially when it comes to all the information they absorb with their senses, and they relate to the employees and the environment, with a certain visualization of the situation being formed. When it comes to cognition, however, then it is thought of the cognitive response, that is, the thoughtful observation of the managers. It is a mental action or a process of acquiring knowledge, understanding through thought, senses and experiences.

Here, precisely, the questions arise: what level of stress actually works on these three parameters;

And are managers / under stress / limited in their functioning?

As noted in Table 2, when making decisions, the managers of the companies face a series of stressful situations, which significantly affect the objectivity of the decisions made, although there is no radical form. Namely, 18% of them answered that it had a significant impact, and 23% said they had a certain influence. Regarding the perception, however, the results of the survey show that stress has an impact, but the values are in the middle of the Lickert scale, or only 21% think that deciding has a significant impact on their perception. Regarding cognition or thoughtful observation, the situation is similar, so 21% of the managers said that stress has an impact, but 13% of the managers say that stress radically affects them and hampers their work.

Managerial stress and organizational behavior

Managers accomplish their goals through the engagement of the employees in the company. They make decisions, allocate resources, and carry out various activities, etc., in order to achieve the goals of the company. A company that is a good place to work makes a profit. So, in addition to the technical skills (the ability to apply the knowledge and experience) that the manager have, it is important to have high quality human potentials (the ability to work carefully, to understand essentially and motivate oneself, but also the other employees) [14]. Creating a positive working environment is very important for any company. The appearance of stress is an unpleasant psychological process that occurs mainly as a reaction to the pressure from the environment. Regardless of the size of the company, the most important is the group functioning (organizational behavior) in the course of work and in time to be aware of how much stress contributes to that balance among the employees to be disturbed. Stress has an impact on the organizational climate in the company, and even as many as 26% of the managers said that it has a significant impact on the operation of the employees, and 23% of the respondents answered that it has influence.

Managerial stress and their productivity

The concept of employee productivity is the relationship between the input (consumed resources) and the output (produced goods). Productivity, in fact, is the value of the output produced by the input, i.e. the input factors (people, capital, land, energy, etc.) in the production transformation process. On the one hand, productivity is reduced if resources in the company are not sufficiently utilized or there is a lack of them, and on the other hand, productivity is strictly related to value creation. Thus, high productivity is achieved when resources and activities in the production transformation process add value to the produced goods. [15]The research also showed that there is a link-level between the stress levels and the reduced productivity.

Does stress affect the productivity of the managers and to what extent? Of the examined managers, 26% think that stress affects their potency to a considerable extent. These points to the fact that the stress among the managers is a factor that should not be overlooked.

6. Conclusion

From the previous analyses and results we can conclude that stress as an implication emerging from the implementation of the changes in the companies is constantly present among the managers. But the stress intensity, however, depends on the type of the changes that are being implemented in the companies. Sometimes the changes cause great stress among the managers, sometimes radically affecting the investigated phenomenon, and sometimes the stress is minor and insignificant, as can be seen from the previous analyses. Stress affects the decision-making of the managers, their perception and cognition, as well as their performance in the working environment. Reduction of stress when implementing changes is in fact a very important task for the managers of the companies in order to successfully implement the changes and to have no consequences for the operation of the company.

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