

Comparative analysis of management system in Russian and Finnish High Tech companies

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Abstract : The author conducted the analysis of the Generation theory (baby boomers, X,Y,Z) and Management theory of motivation by D. McGregor (X,Y) enriched with Z theory by W. G. Ouchi, introduced the recommendation for managers how to motivate representatives from different generation. Also the idea of IY was represented, as a modified Y theory, suitable for Z generation. This article presents the first stage of the research – the analysis of theories of management and generation. The proposed hypothesis will be checked in second step of the research, which is based on the analysis of the high tech companies in Finland and Russia.

Keywords: management models, high tech, comparative analysis, generation theory

I. INTRODUCTION

Innovative development is a key priority of the modern economy. In the innovative countries the rate of technologically developed companies is high as well as the percentage of GDP, created by those companies. New economic activity needs new combinations of factors of production. The head role plays human capital, managerial abilities to motivate people.

Innovative system is not only the basis for economic competitiveness, but also creates conditions for the growth of human capital, personal development through creative self-realization. The ideas of behavioral patterns are discovered in the middle of 19th century. Since then many researchers were investigating the influence of behavioral patterns on human resource management. Until recently it has been given insufficient attention in the field of human resource management within the behavioral theories. The aim of this paper is to establish a correlation between the two directions of human behavior research – human motivation and management theory X, Y, Z and theory of generation cohorts (baby boomers, X, Y,Z), that will help in order to explore the trends in human resources management in high tech companies in Russia and Finland.

High technology industry is fast developing, it accumulates high skilled workforce. According to the Global Competitiveness Report 2014-2015 Finland tops in the category of innovation. [1] The pivotal role in innovation development plays human capital. The links between management motivation theory of X, Y, Z of D. McGregor, W. G. Ouchi and behavior differences according to the generation theory of N. Howe and W. Strauss have never been observed in neither in scientific world, nor in business. The analyses can disclose the most effective way how to manage the people from different generations. In this article the authors examine the correlations of generations' theory with behavioral theories of management on the basis of high-tech companies in Russia and Finland. Based on the results the analysis of high-tech companies in Russia and Finland will be provided in the second part of the research.

II. THEORETICAL ISSUE

Implementation of behavioral theory in human resources theory was done by C. Barnard in his work "The Functions of the Executive" in 1938. Chester I. Barnard considered people as "strategic factor of cooperation", and pointed that the organization is able to develop only because of personnel efforts, which he considered as a result of positive incentives. In his view, the management task is to develop an effective way to maintain the company's competitiveness through encouraging staff, decision-making, the establishment of communications systems and so on. As a result, institutional morality should be created, and it can align individual motives and interests of employees with collective interests [2]. Later followers of the school of behaviorism are R. Likert, F. Herzberg, A. Maslow [3], [4], D. McGregor et al.

R. Likert and his colleagues studied the groups of workers with high and low labor productivity, explaining the difference in the performance of different leadership styles. Based on his research, he concluded that leadership style should be focused either on the job or on the person. As a result, he assigned four types of

organizational structures, differing by communication processes, and ways of decision-making, goals-setting, inspection methods and so on. [5] His research was published in the work "The New patterns of management", in 1961. The next step in behavioral theory was made Frederick Irving Herzberg and his colleagues in the book "The motivation to work", where he presented the two-factors theory of motivation. In this work he separated job content and working conditions as two independent factors. The content of the work, in his opinion, is the internal factor and has a direct impact on the individual's behavior. Conditions of work are an external factor or hygiene, which can reduce dissatisfaction from labor, but is not able to influence the growth of labor productivity. [6]

These and other studies in the field of behavioral traits have served as the basis for the "X" and "Y" theories developed by American scientist Douglas McGregor. Douglas McGregor, presented theory of X, Y in the book 1960 "The Human side of the Enterprise." Theory X and Theory Y are basic in the management and motivation, however, more recent studies have questioned the rigidity of these models. The theory describes the basic principles of management staff and promotes positive methods to implement a management style [7]. McGregor's theories X, Y occupy a central place in the organizational development and improvement of the organizational culture. McGregor's ideas suggest that there are two basic approaches to managing people. Many executives tend to the X theory, and often get bad results. More advanced managers use theory Y, which brings better performance and results of the work, and also allows people to grow and develop. McGregor's concept is related to the modern understanding of the psychology of the organization's personnel. It contains plenty of evidence of the ineffectiveness of management on the basis of X-theory, and a productive and constructive leadership within Y-theory. [8]

Many scientists expanded the theory of McGregor, one of them was William G. Ouchi, who created Z theory. This theory is based on the modern management experience and is closely linked with the Japanese management practices. The motivation and management theory Z is based on creating a corporate culture, increase employee loyalty, the formation of a stable team, based on a system of "lifetime employment" and ideas of a participatory [9].

W.Ouchi explained this theory in his book, published in 1981: "How American Business can meet the Japanese Challenge"[10]. Z theory is often called "Japanese" style of management, which, in fact, really is. It is not considered as strictly independent, because in its essence it is a collective theory, which has absorbed the best that include the theory of Y and modern. Japanese management, suggesting considerable freedom and confidence of employees, and their loyalty and interest in teamwork in the organization. The above literature is devoted to research in the field of behavioral management theories, the theory of generations in the form in which we know it today, emerged later. In 1991 economist N. Howe and historian W. Strauss independently studied the concept of generation gap [11]. As a result, they revealed the following pattern: the behavior of the people of different generations varies significantly.

The reason of misunderstanding between the people from different generation is not the age. According to N. Howe and W. Strauss, if these conflicts arose only because of the age difference, then over time, reaching a certain age, the children would become like their parents, but this does not happen. The causes of this phenomenon are the differences in values among people of different generations. Generations' theory is a tool for understanding the behavior of people in life. Generation is a group of people born in a particular period and experienced the same events (social, economic, political, technological, etc.) and especially education. This theory provides insight about the knowledge and experience of the people.

Scholars have identified the following generation:

- GI Generation - Generation Winners (1900-1923). Their values were formed up to 1933. In Russia value formation was influenced by the revolution, collectivization and electrification. The values of this generation are hard work, responsibility, categorical judgments and high confidence in the institutions of family and tradition.
- The Silent Generation (1923-1943). Their peculiarities are: patience, frugality, piety, respect for law and order, loyalty, understanding the concept of honor. Their views were formed until 1953. This generation in Russia felt the impact of the following events: Stalinist repression, the Second World War, the restoration of the destroyed country and the discovery of antibiotics.
- Baby-Boomers (1943-1963). Their features are: idealism, optimism, excellent performance, teamwork and personal growth, youth cult. The events that influenced their formation in Russia are: the conquest of space, the Khrushchev "Thaw", Cold War, the emergence of the Soviet Union as a "superpower", the opening of the contraceptive pill, the availability of health services, the implementation of the first plastic surgery. This generation formed their world until 1973. To date, the majority of Baby-Boomers in Russia are retired, however, they are distinguished by good health and stamina.
- Generation X (1963-1983). The representatives of this generation differ individualism, pragmatism, technical literacy, non-formal and constant change, the desire to learn throughout life, an equal

understanding of the gender-specific, the ability to rely only on themselves. Restructuring, AIDS, drugs, The War in Afghanistan - the events that until 1993, influenced the formation of the views of the "unknown" Generation X in Russia.

- Generation Y (1983-2003) is sociable, self-confident, diverse. For them the high role moral principles, civic duty, a variety of achievements are inherent. They are also distinguished by the naiveté, the desire for instant gratification and immediate growth, thirst for knowledge. Their values were formed until 2013 the events have on the impact of this process in Russia include: the collapse of the USSR, the default of 1998, numerous attacks and military conflicts, the development of digital technologies, the emergence of mobile phones and the Internet, SARS, the development of the Era of brands.
- Generation Z (2003-2023). Values of this generation are still in the process of formation, the eldest of them at the time of writing is 13 years old. Already we can assume that in the formation of their personalities in Russia will have an impact event such as the growing threat of terrorist attacks and military conflicts of different scale, the Global crisis of 2008-2009, Ukrainian conflict, the rise of patriotic and nationalistic sentiments, the rapid development of new technologies, epidemics and the different nature of the disaster and others.

The generations' theory helps to analyze the various spheres of human activity. In this article, we will focus on the features of the behavior of different generations, as the modern employees and managers. In connection with this, we are interested in generation X and generation Y, which are currently dominant in the labor market of high tech technology, especially IT sphere. Also, we attempt to predict the behavioral characteristics of the generation Z, who will enter the labor market on the nearest future.

The generations' theory allows building the corporate culture of organization, considering the needs and interests of the employees of all generations. The basis theories for this research are: the management theory X and Y by D. McGregor; the management theory Z by W. Ouchi and the generation theory by H. Neil and W. Strauss. The aim of this article is to investigate the correlations between types of managements with generations' peculiarities, to find the most comfort and efficient type of management for every generation, which is currently involved or will be involved in the next 10 years in the labor market activities.

III. GENERATIONS'THEORIESANALYSIS

After consideration of described theory and analyze of the content, the authors attempted to establish the correlation between these theories, to find the advantages and disadvantages of every management theory for certain generations. The authors considered primarily generation of X and Y. Baby boomer generation was excluded from the analysis due to their low adaptability to new technologies, and relatively low percentage of involved in work in IT and high tech companies. The authors includes into the analysis generation Z, despite the fact that this generation currently not represented in the labor market. In 5-10 years generation Z will enter the market and significant share of their work places will be in the IT sector and high tech companies. The navigation system of results of this work clearly shown in Table 1; the results' explanation is situated in the accompanying comments. Sample statements, which complement each other, are represented by the signs "+". Abstracts, conflicting with each other are presented with the signs "-".

Table I. The correlation between management and generation theories

Management Generations	X _m	Y _m	Z _m
X _g	X _g X _m	X _g Y _m	X _g Z _m
Y _g	Y _g X _m	Y _g Y _m	Y _g Z _m
Z _g	Z _g X _m	Z _g Y _m	Z _g Z _m

X_gX_m

"+" Theory: Demonstration of intrinsic motivation and discipline allows X-leaders do not keep employees under the constant control.

"+" Behavior: Accustomed to rely only on themselves and fight in spite of circumstances, employees find satisfaction in demonstrating their own autonomy and independence.

"+" Theory: Obligation is the key factor of successful interaction with the X-manager. Typically, X-leaders agree to turn over the control of the situation to the employee, if assure that he or she clearly understands the task.

"+" Behavior: Representatives of X-generation are individualists and need personal space, subordination and personal area of responsibility.

X_gY_m

"+" Theory: Personnel is the important active of the company; human development is advocated.

"+" Theory: Employees can reach their potential only when they are confident about their future.

“+” Behavior: At the core of their motivation is the availability of opportunities for personal growth lifelong learning, confidence in the future, the opportunity to deepen their skills as experts in a certain field of remuneration and employment stability, the presence of the possibility of gradual career advancement.

XgZm

“+” Theory: Trust and freedom in choosing the methods to achieve goals are the base of Z-manager behavior.

“+” Behavior: It is important for X generation to have a possibility to express its individuality.

YgXm

“-” Theory: As a rule X-managers are not interested in personal problems of employees, therefore, an attempt to appeal to their sense of humanity and morality is likely to be unsuccessful.

“+” Behavior: The best motivation for generation Y is cash award and access to modern technologies.

YgYm

“+” Theory: Based on idea of flexible theory of management, the Y-leader tends to influence the requirements of a higher level, such as the need for self-expression or belonging to a social group.

“+” Behavior: A technological breakthrough, which came in the period of the Y-generation formation convinced that nothing is impossible. High duty position and prestigious job are the goal of this generation. They are prepared to change activities, and give preference to less depth, but more diverse functions and new interesting experience.

“+” Theory: Companies applying Y management theory often are more open and friendly. Atmosphere in these companies allows subordinates to seek for help of the managers not only in operational issues, but in case of personal problems. Teambuilding also contributes to equal two-way communication between leaders and subordinates.

“+” Behavior: Friendly atmosphere, a highly developed corporate culture, free style in communication, teamwork, a high level of gamification of business.

ZgXm

“+” Theory: X-Bosses love instructions, do not like a teamwork.

“+” Behavior: The representatives of generation Z is often have difficulties with memorizing large amounts of information, because of its general availability in the era of advanced information technologies. In this regard, clear instructions, guidance and automation of business processes should form the basis of work with employees from generation Z.

“+” Behavior: The team work for the Z-generation is often problematic, because of the high degree of individualization.

“-” Behavior: Charisma and aggression are not attracted to Z-people. Such leaders will not be successful.

ZgYm

“-” Theory: Y-boss does not impose his/her point of view to subordinates, but tends to involve them in the decision-making process, gives them the freedom to choose how to achieve goals, prefers to delegate authority and responsibility.

“+” Theory: Managers show high respect to employees, apprise their creativity.

“-” Behavior: Z-generation needs to have strict instruction.

“+” Behavior: In general, this generation is much better than other reacted to the non-financial motivation that can be made in the form of praise, letters or demonstration of the recognition of their success. Social networks occupy in the life of Z-generation’s representative an important place; their life is concentrated around “likes” and “comments”.

ZgZm

“+” Theory: Through multilateral specialization because of the periodic change of the functions employees have opportunity to try themselves in different activities.

“+” Behavior: Generation Z is called unstable and changeable, because they cannot stay long in one place. The reason for this is to ensure that they have their place. And the best remedy for this - it is the experience of training in other areas.

The most successful combination of management styles and behavioral characteristics has been found for every generation, they are highlighted in bold in the table.

D. McGregor has shown that the most common was the management theory X, but in the modern economic system this theory became outdated. With the changes of hierarchical model of organization it did not take into account the modern characteristics of the behavioral approach of new generations.

Nowadays the Y and Z management theories have been successfully used by different companies, their effectiveness is admitted. However, it is believed that in the future Z management theory can reduce its effectiveness due to the massive access to the labor market representatives of the Z-generation, which according to the analysis requires different approach than currently promotes Z management theory.

\ Nowadays the X management theory is not very spread on the business world, it was replaced by Y theory.

However, despite of the successful functioning of Z management theory these days, the authors of the article do not expect the wide spreading, especially when the representatives from the new Z generation will enter the labor market. The main motivation factors of Z management theory mostly cannot be applied for new generation with its predisposition to individualism, unwillingness o work in team and constant desire for change and new experiences.

We suggest that the future of the management theory Y will not lose its relevance. However, the stagnation of the management forms is not possible. It is believed that the Y theory could serve as a base for new management theory "IY" or "Innovative Y", which will reflect the new form of management for innovation companies. The main characteristics of IY managing are:

- implying new forms of remote types of cooperation and control;
- increase in usage of technologies in communication between employees, including the virtual interaction;
- acceleration the communication processes reduces formalization;
- automation of business processes and development of clear guidance for employees;
- the clear allocation of the responsibilities;
- developed non-financial forms of motivation.

IV. CONCLUSION

The analysis of McGregor theory of management and generation theory X, Y, Z was made. The results show that some generations work more comfortable with Y management theory, other with Z. Authors also proposed a new theory of Innovative Y management that meets the challenge of next generation Z. The future research will concentrate on the analysis of Finland and Russian characteristics of innovation activity, types of management and generation peculiarities.

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