

Features Of Staff Motivation In The Field Of Information Technology

Lyudmyla Krupelnytska, Vsevolod Zelenin, Nataliia Ortikova, Viktoriia Sytnyk, Olga Emishyants

Abstract: A total of 120 respondents participated, of which 41 people were mid-level programmers, 27 respondents were high-level professionals (architects and project managers), and 52 persons were system administrators working in public organizations. In the study, OCAI methods, the methods of diagnosing the socio-psychological attitudes of the individual in the motivational and need-based field by O.F. Potemkina, the projective test "A man picking apples from a tree" were used. Differences in the value-motivational sphere of the individual, attitudes towards themselves, the company and its corporate culture among specialists in the field of information technology were found. Thus, middle-level programmers perceive corporate culture as bureaucratic and market-oriented, are motivated by the labor process, outcome, freedom, and the work itself. The world is perceived as a resource, one of the leading values is career growth. High-level programmers perceive the corporate culture of their IT companies as market and adhocratic, and are motivated to achieve results. The world is perceived as a resource, in need of technical transformation and a place for creative expression. System administrators are motivated by process, altruism and freedom, do not pay special attention to the features of corporate culture and perceive the world as a source of stability.

Index Terms: Motivation, information technology, personnel, corporate culture, system administrators.

1 INTRODUCTION

In the modern world, the training of specialists in the field of information technologies and the planning of their careers is an important and expensive business. Taking into account the peculiarities of employee motivation and their perception of corporate culture allows to create optimal working conditions for specialists. In our study, we relied on the work of A. Trofimov and K. Miliutina on work satisfaction [1] and the use of projective methods in the diagnosis of labor motivation of staff [2]. To determine the characteristics of value-motivational sphere of personality, attitude towards themselves, the company and its corporate culture at experts in the field of information technology (programmers and system administrators).

2 Literature Review

The concept of information technology has entered the sphere of scientific psychological research with the advent of the concepts of globalization, the information society and the network society. IT is considered as a social phenomenon that becomes a factor affecting social structure and social relations. Researchers assign information technologies the role of an important condition and the material basis of the information and network society. IT creates an infrastructure of social processes in the modern world. The works of R. F. Abdeev [3] on the information civilization, the works of Bell and V.L. Inozemtsev [4] about the post-industrial society could be highlighted.

A. Arestov, L. Babanin, A. Voyskunsky [5] analyze the problems of the post-Soviet society entering the information space and the consequences of the growth of information technologies in the aspect of communication in the global network. V. Pechenkin [6] explores IT in the social structure of society on the example of computer networks and communication technologies, considering the general processes of informatization, but without taking into account the role of workers in the field of information technology. The interaction of man with computer technology becomes the subject of research in science and technology. A.I. Luchinkina [7] develops such a new direction of psychological research as Internet psychology, but in her works, she explores to a greater extent the behavioral and personal characteristics of Internet users. In the work of Gibson, J.L., Ivantsevich, D.M., Donnelly, D.H.- Jr. [8], O. V. Andrushenko, T.P. Fokina [9] it is argued that IT specialists are more often than others forced to adapt to various changes, working in a project-type organization. The purpose of the empirical research was to identify the characteristics of the motivation of specialists in the field of information technology, depending on their specialization and the type of corporate culture of the enterprise.

3 METHODS

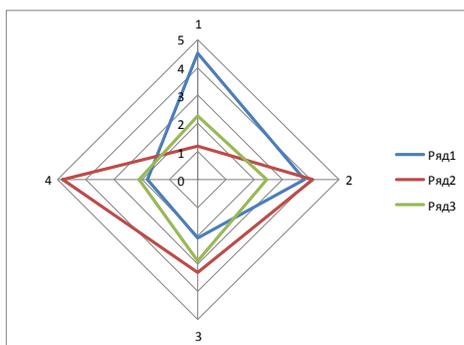
A total of 120 respondents participated, of which 41 people were mid-level programmers, 27 respondents were high-level professionals (architects and project managers), and 52 persons were system administrators working in public organizations. Of these, 36% are women, 64% are men, reflecting the uneven distribution of sex characteristic of this industry. The age of the participants was quite diverse, the average age of the programmers at the middle level was 26.5 years, on the high level was 32.8 years, and system administrators' average age was 46.3 years. In the study, OCAI methods, the methods of diagnosing the socio-psychological attitudes of the individual in the motivational and need-based field by O.F. Potemkina [11], the projective test "A man picking apples from a tree" [10] were used. Here is what the authors write about the OCAI methodology: "It has the form of a questionnaire that requires individual answers on six points ... The tool pursues the goal of efficient and thorough diagnosis of precisely those important aspects of an

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organization that determine the foundation of its culture ... The purpose of the proposed assessment tool is to help identify the existing culture of the organization.”

4 RESULTS AND DISCUSSION

It can be divided into 4 main types of organizational culture: hierarchical culture (bureaucracy), market, clan and adhocratic. Let us characterize each of the types of culture separately. Bureaucratic culture is characterized by formalization and structured work. Procedures play a special role which is the basis of the company's main activity. The criteria for the success of such firms include maintaining stability, smoothness of schedule, predictability, reliability of agents, low costs, etc. The bureaucratic culture corresponds to the “bureaucracy” quadrant and combines the factors of stability and control, and internal focus and integration. Market culture is characterized by external focus and differentiation, and stability and control. Organizations with this type of culture are focused on achieving goals, focused on results at any cost. Inside the organization, propensity to risk, courage, initiative and innovation are supported. The main criterion for success is market penetration and market share conquest. Particular emphasis is placed on the competitiveness of the organization. Clan culture is characterized by internal focus and flexibility. Companies with a clan-type organizational culture are based on a warm, friendly, family atmosphere within the team. Particular emphasis is placed on personal relationships and cohesion. Teamwork, participation of people in business, mutual aid are encouraged. Adhocratic culture is characterized by external focus and flexibility. Core values in the organization are creativity, innovation, and entrepreneurship. Employees' innovation and risk preparedness are encouraged. The success of a company with this type of organizational culture is determined by the number of unique products launched on the market. Our respondents evaluated the cultures of their enterprises quite diverse, the results of the OCAI methodology are reflected in Figure 1.



Row 1. Corporate culture according to mid-level specialists.
Row 2. Corporate culture according to high level specialists.
Row 3. Corporate culture according to system administrators.

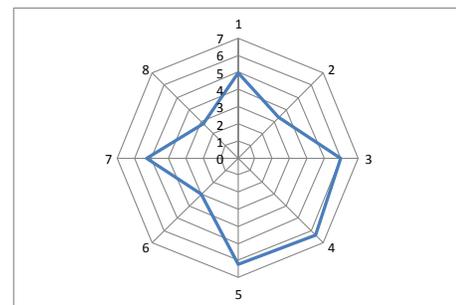
1. Bureaucratic culture. 2. Market culture. 3. Clan culture.
4. Adhocratic culture.

Figure 1. Features of the perception of corporate culture

Mid-level specialists performed executive functions and perceived the corporate style of their companies mainly as bureaucratic, partly market cultures. In the course of the

interview, the specialists expressed some dissatisfaction with the fact that creativity and insufficient competition between the employees was not enough at their work. High-level specialists, working as project managers and architects, made an active contribution to the creation of a corporate culture by themselves. They perceived the corporate culture of their enterprise as adhocratic and market, with what they were satisfied. The system administrators who participated in our study were employees of district employment centers. The features of the work organization in this institution is that the system administrator works alone, reporting directly to the director of the employment center, and has little contact with the rest of the staff. System administrators could not assess the features of the corporate culture, did not pay special attention to them, and believed that this did not affect their activities at all.

O.F. Potemkina's method contains 8 scales: process orientation, result orientation, selfishness, altruism, work, money, power and freedom. The results of the study of value systems among mid-level specialists are shown in Figure 2.

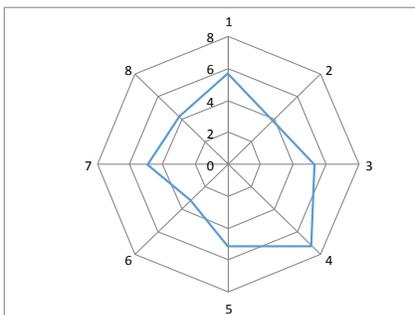


1. Altruism; 2. Egoism; 3. Process; 4. Result; 5. Freedom; 6. Power; 7. Work; 8. Money.

Figure 2. Value-motivational profile of high-level specialists (average values)

The leading orientations of specialists were focus on the process, result and freedom. When focusing on the process in work or other activities, it is important for them that the activity itself must be interesting. The specialist thinks relatively little about the achievement of the goal, so, for example, he may be late with the delivery of work. And if the process has become uninteresting to him, he can completely abandon this activity without thinking about the consequences. With a focus on results, a person strives to achieve goals in his activity despite everything - hectic, hindrances, setbacks ... He can be among the most reliable employees. The subjects had the setting on freedom. For a specialist in the field of information technology, it is for him - the main value. He does not tolerate any restrictions and is ready to make sacrifices for the sake of upholding his independence (sometimes from imaginary danger). It is probably this motivational profile ensured a good professional success of mid-level specialists in combination with a dislike for the bureaucratic corporate culture of the enterprise. Employees of this level expressed the same motivation of work itself. Large values on this scale indicates excessive fixation on the labor process. A person uses all the time to do something, not sparing his days off, holidays, and so on. Labor in itself brings him more joy and satisfaction than other activities. In contrast to the setting on the process, here

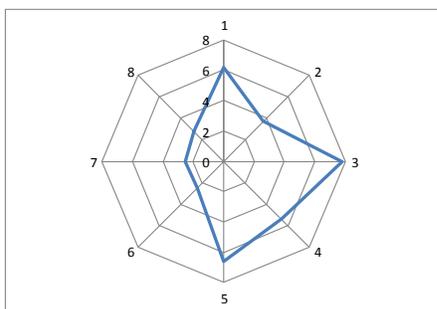
it is important for a person to feel that she/he is not just busy, but works. At the same time, the extent to which this work is actually productive is of little importance, but it is important how the employee's work is approved by the management or the society. It is likely that such a value - motivational structure is one of the reasons for increasing anxiety among workers at this level. The motivation of high-level specialists was somewhat different, which is reflected in Figure 3.



1. Altruism; 2. Egoism; 3. Process; 4. Result; 5. Freedom; 6. Power; 7. Work; 8. Money

Figure 3. Value-motivational profile of high-level specialists (average values)

For this type of specialists, the focus on results becomes the leading motivation, while other settings lose their value. This value-motivational structure contributes to high success in the IT sphere and creativity in adhocratic corporate culture. These features significantly impede work in the bureaucratic type of culture. System administrators have a very peculiar motivational profile, as shown in Figure 4.



1. Altruism; 2. Egoism; 3. Process; 4. Result; 5. Freedom; 6. Power; 7. Work; 8. Money.

Figure 4. The value-motivational profile of system administrators (average values)

Unlike other specialists, system administrators have low indicators of result orientation, there is absolutely no desire for work and money, but there is a high focus on altruism. With

large values on this scale, a person has a setting on altruism, to act primarily for the benefit of others, often to the detriment of oneself (and the business). These are people who should be taken care of. Altruism is the most valuable social motivation, the presence of which distinguishes a mature person. Traditionally, this setting is considered valuable, and the person with it is deserving of all respect. Collaboration and altruism orientation allows system administrators to maintain good relationships with a variety of employment service personnel, and help them work with new software options [12]. Differences in the basic worldview were also revealed between the studied groups. For the study of this aspect of the value - motivational sphere of the personality, the method "Man collecting apples from the tree" was used in the modification proposed by A. Trofimov and K. Miliutina. In the group of system administrators, the type of pattern that is characterized as "stably working" prevailed (82% of respondents). The human figure stands firmly on his feet, the tree is not tall, there are many apples. The pictured man collects apples in a basket or box. The figures are shown schematically, the level of creativity of the images is low. Medium-level specialists were dominated by two types of drawings: such as those of system administrators (36%) and "career-oriented" (48%). In this type of images, the figure of a man is drawn standing on a ladder, a tree is tall, there are many apples on it. This testifies to the readiness of the subjects to overcome difficulties in order to achieve goals, and to perceive the world as full of resources and capabilities. The high-level specialists' drawings with characteristic of "stably working" were even less common and were observed only in 28% of cases, "career-oriented" accounted in 37%, another 23% of the images contained "technical means" for harvesting. There were special sticks, stretch marks in order to shake off apples, even an apple harvester. In one of the drawings, a conveyor belt was drawn, on which a person collects apples from parts, at the subsequent assembly stage they turn into notebooks from the "Apple" company. The high level of creativity and non-standard approach to the use of environmental resources allows these employees to find solutions to complex problems, but at the same time makes this staff not stable enough. To study the relationship of the features of the motivational sphere of the personality of IT companies' employees with their loyalty and job satisfaction.

5 CONCLUSIONS

Differences in the value-motivational sphere of the individual, attitudes towards themselves, the company and its corporate culture among specialists in the field of information technology were discovered. Thus, middle-level programmers perceive corporate culture as bureaucratic and market-oriented, motivated by the labor process, outcome, freedom, and work itself. The world is perceived as a resource, one of the leading values is career growth. High-level programmers perceive the corporate culture of their IT companies as market and adhocratic, motivated to achieve results. The world is perceived as a resource, in need of technical transformation and a place for creative expression. System administrators are motivated by process, altruism and freedom, do not pay special attention to the features of corporate culture and perceive the world as a source of stability.

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