

Work satisfaction survey in the digital economy

Gurieva L.K.

North Ossetian State University
Financial University under the Government of the Russian
Federation (Vladikavkaz branch)
Vladikavkaz, Russia
443879@mail.ru

Togusova I.Z.

Financial University under the Government of the Russian
Federation (Vladikavkaz branch)
Vladikavkaz, Russia
in_toguzova@mail.ru

Tokaeva S.K.

North Ossetian State University
Vladikavkaz, Russia
sks_ts@mail.ru

Abstract — The modern economy, based on the widespread adoption of digital technology, is becoming increasingly dependent on human capital, which role is steadily increasing in comparison with other types of capital. According to expert estimates, the personnel of companies that are carriers of specific knowledge, professional skills and unique competencies in the knowledge-based economy will play a key role in the overall system of competitive factors, but at the same time human capital will become hypermobile, which will require more flexible personnel motivation systems.

For many years in the theory and practice of management it was generally accepted almost universally that the effective work of company personnel is more dependent on material incentives and monetary forms of motivation. However, in recent years, it has become clear that only staff who are satisfied with their work can work efficiently and creatively. At the same time, job satisfaction that a priori has individual characteristics, is one of the most difficult areas that modern managers face, especially when it comes to managing employee performance. In this regard, in recent years, on the example of large and successful companies in different countries, solid studies have been carried out aimed at identifying individual non-economic factors of effective labor. These studies showed an unusually large impact of job satisfaction on employee motivation, while the level of motivation affects both productivity and labor efficiency, and, ultimately, the competitiveness of companies.

In our country, unfortunately, studies of job satisfaction still have not received due attention either in scientific works or in the practice of various business organizations. The article presents the results of a study of the impact of staff satisfaction factors in the context of the active use of information and communication technologies (IT). It is shown that, despite the individualization of labor and the focus of work on a virtual environment when using IT, the main determinant of job satisfaction is team-oriented management. The results obtained by the authors generally coincided with the conclusions of the recent global study “The Global Study of Engagement”, carried out by the ADP Research Institute.

Keywords— *digital economy, team management, labor engagement, job satisfaction.*

I. INTRODUCTION

In recent years, thanks to the rapidly expanding use of the Internet, there has been a fast spread of the digital economy (Internet-, web-, e-economy) [1]. The digital economy at the company level is a system of economic, social and cultural relations based on the use of digital information and communication technologies, which increasingly mediate the direct interaction of personnel both with each other and with management. The introduction of information and communication technologies into economic activity before our eyes is changing economic structures in such a way that we can talk about the formation of a new type of economy, the individual components of which are subject to thorough research.

Internet technologies:

- are quickly implemented in the business and management of companies around the world,
- transform the nature of interpersonal relationships (virtual online communities are formed, information partnerships are established, users are grouped according to certain information interests),
- change the rules of the "game",
- change the principles of doing business and company management [2].

It is important to note that the new principles of doing business in the digital economy often have not an evolutionary, but a revolutionary character of influence on company management. And if changes in technological systems have a programmed and generally determined character, then social systems change not in a programmed and generally unpredictable way. At the same time, it should be assumed that productivity and quality of labor, and, consequently, the competitiveness of the company as a whole, depend on the degree of adaptation of people to new technologies, job satisfaction of key personnel. In the existing works, due to the

high rate of changes in socio-economic systems, insufficient attention has been paid to these problems [3-8].

II. RESEARCH METHODS

There are two prominent basic theories that assess the main factors of job satisfaction in order to motivate staff: the theory of needs of Abraham Maslow [9] and the two-factor theory of motivation by Frederick Herzberg [10]. These theories were the first to identify parameters or factors that affect employee job satisfaction at the workplace.

The essence of the theory of A. Maslow is reduced to the study of human needs. This is an earlier theory. Its supporters believed that the basis of labor behavior is the needs of a person, which A. Maslow divided into five groups: physiological needs, needs for security and confidence in the future, social needs, needs for respect and self-expression. In this theory, the supervisor's duty is to carefully monitor his subordinates, find out in a timely manner what active needs drive each of them, and make decisions on their implementation in order to increase employee satisfaction and work efficiency.

The essence of the theory of F. Herzberg comes down to the fact that there are two main categories of factors for assessing the degree of satisfaction from work performed: factors that keep people at work (hygiene factors), and factors that motivate us to work (motivators). Hygienic factors (administrative policy of the company, working conditions, wages, interpersonal relationships with bosses, colleagues, subordinates) are related to the environment in which work is performed, their absence or lack leads to a person's dissatisfaction with his work. But, if they are presented in sufficient volume, they themselves do not cause satisfaction and are not able to motivate a person to the necessary actions. The absence of motivators (achievement, recognition of merit, responsibility, career opportunities, all connected with the nature and essence of the work itself) does not lead to dissatisfaction of people with work, but their presence adequately causes satisfaction and motivates employees to take necessary actions and increase efficiency. Herzberg made a paradoxical conclusion for the last century that wages are not a motivating factor. Modern business practice shows that salary, indeed, is a motivator only until a certain point

Herzberg's theory is developed in other works of scientists who analyze the theory as the basis for studying intercultural motivation [3-5], as well as in applied research that helps measure the degree of satisfaction with staff [12,13] in modern companies.

Therefore, in the study we applied the methodology of F. Herzberg and formulated five research hypotheses.

III. THE RESULTS OF THE STUDY

Digital changes of companies affect the requirements for employees and management personnel and, thus, the formation of determinants of job satisfaction. The above determinants of the traditional economy are mostly suitable for the Internet

economy. However, in a meaningful sense, they vary significantly.

On the side of motivators according to the theory of F. Herzberg, the transfer of competences in decision-making to individual organizational units leads to an increase in the responsibility of individual employees, and therefore to an increase in the value of the result of labor. The requirement of completeness of tasks determines the specific abilities of employees. Requirements for abilities and the result of labor in traditional empirical research are two aspects of the "ability to produce something". In view of this, the two determinants cited by F. Herzberg — responsibility and work — in the Internet economy are combined in a new determinant, which can be described as the "labor challenge". The direction of its influence, which has changed compared to the traditional economy, is unknown, therefore the first hypothesis is formulated as follows:

Hypothesis 1. In the Internet economy, the challenge of labor affects satisfaction with it and this relationship is positive.

On the side of the hygienic factors of F. Herzberg, significant changes are taking place in the Internet economy. The transfer of competence in decision-making into separate modules, or to individual employees, leads to the release of managers and supervisors and thereby to a change in the profile of their tasks. Instead of controlling and making decisions, the manager assumes the role of personal leader and assistant of responsible employees, so here, using the analogy with sports, we can talk about the manager as a coach.

In general, we can state a change in management techniques in the Internet economy, which is directly due to the strong team orientation of the work. The fact is that each employee, in addition to his specific professional knowledge, must have a general idea of the problem and the knowledge and capabilities of team members rationally complement each other. This means a high team readiness and ability of individual employees, which are manifested in an altered form of interpersonal relations, especially with colleagues. Here, of particular importance are the motivation and qualification of colleagues on the basis of a strong orientation in the team towards results. In addition, each employee must also bring a known social competency to the team. Due to the close interdependence of management techniques and team orientation, it makes sense to combine both aspects into the "team-oriented management" factor. In the Internet economy, as in the traditional economy, this determinant has a positive effect on job satisfaction. The second hypothesis therefore states:

Hypothesis 2. In the Internet economy, team-oriented management affects job satisfaction, and this relationship is positive.

The increased responsibility and specific knowledge of the employees that they contribute to the team are not expressed directly, which is why individual employees in the Internet economy have difficulty reimbursing them. In addition, the demand for flexibility due to market dynamics makes it

necessary for the company to respond quickly to changes. For an individual employee, this means that he must be in constant readiness and, under certain circumstances, put up with overtime work. In general, the Internet economy is characterized by a strong dependence of private life on work and poor planning of free time. On the other hand, in the course of changes in social values, the value of free time for people sharply increases. Therefore, it can be expected that workers in the Internet economy attach particular importance to vacation as the longest period of truly free time. Thus, the third hypothesis is:

Hypothesis 3. In the Internet economy, the claim for vacation affects job satisfaction, and this relationship is positive.

Finally, one more important influence on the compensation of workload can be stated. The transfer of responsibility and competence in decision-making to individual employees means that within the enterprise they take on the tasks of management personnel. In this regard, employees can be talked about as intrapreneurs. Therefore, it seems appropriate to bring the remuneration of employees closer to the classical system of remuneration of managerial personnel, the purpose of which is to reimburse their relative contribution to the success of the enterprise and the fulfillment of tasks. An essential element here is the variable part of labor remuneration and additional after-sales service. The differentiation of modules based on clearly defined products and services, as well as the associated strong result orientation of labor, are important prerequisites for remuneration depending on workload and performance. From this we can conclude about the special importance of the varying part of wages and additional services in the Internet economy, which in the traditional economy has a positive effect on job satisfaction. Therefore, the following hypotheses are subject to verification:

Hypothesis 4. In the Internet economy, a variable part of wages affects job satisfaction and this relationship is positive.

Hypothesis 5. In the Internet economy, service affects job satisfaction and this relationship is positive.

IV. DISCUSSION OF THE RESULTS

Let us briefly present the results of testing our hypotheses. In the course of the study, we interviewed by e-mail 550 employees of various industry companies that actively use information and communication technologies. Our respondents were grouped according to various criteria – age, level of education, professional experience, working experience in this company and size of organizations (by the number of employees). The results of statistical processing of the obtained data confirm the postulated special importance of these factors and their substantial aspects for job satisfaction in the Internet economy.

Comparison of the regression coefficients of individual factors indicates that job satisfaction is most strongly affected and therefore team-oriented management becomes the main

determinant. Thus, the hygiene factor contributes more to job satisfaction than motivators related to the determinant of the “labor challenge”. This is noteworthy, since in traditional studies, motivators show a stronger effect compared to hygiene factors [11]. Perhaps the division of F. Herzberg determinants into two groups with different intensity of influence in the Internet economy will not make sense.

It should be noted that the change in the content of employee management is reflected in new approaches to personnel research. Flexible management with a focus on the team and employees in the method of integrated success assessment is the main parameter in the formation of voluntary loyalty. During the development of society, the life path of each individual acquires considerable flexibility, which makes the flexibility of labor relations necessary. This is ensured not so much by fixed labor contracts as by flexible psychological partnership agreements that facilitate the individual's voluntary stay in a particular company.

It should also be noted that the study empirically confirms the combined influence of aspects of the traditionally separated determinants of “responsibility” and “work”. This suggests that the content center of gravity in the Internet economy is shifting significantly. This is also evidenced by the empirically proven importance of the claim for vacation for job satisfaction as the main aspect of the traditional determinant of “private life”. On the compensation side, it can be stated that after-sales service contributes significantly more to job satisfaction than the variable part of wages. This underlines the particular importance of intangible value-added services in the Internet economy.

According to a recent global study by the ADP Research Institute “The Global Study of Engagement” [15], in case if employees consider themselves as part of a team (or, even better, part of several teams), the likelihood that they feel involvement in the work increases twice. Moreover, countries where more workers see themselves as a team (for example, India or Saudi Arabia) report a higher level of engagement. Leaders seeking to improve performance are pointed out by the authors of the study: “It is important to understand the relationship between engagement and the team, because engagement is known to be the engine of productivity. Nevertheless, the research that we conducted for Oracle and Engage for Success (a British group studying ways to increase engagement in the professional environment) shows that many teams are involved in work less than it seems. For three years, we talked with leaders of work teams, conducted focus group experiments, observed meetings and collected engagement metrics in 41 teams from nine industries, including transportation, government, healthcare, utilities, the chemical industry, technology and nonprofit organizations. Our research – in this and other cases – shows that one third of the teams fall into the category of pseudo-involved, as we designated it. These teams seem involved according to the results of surveys and in the eyes of management: employees are often satisfied with their work, devoted to the company and are ready to recommend their employer to others. But taking a closer look,

we found that they also show deep signs of detachment: antipathy towards colleagues and dishonesty towards managers” [15].

As can be seen from the above citations, our conclusions about the predominance of non-economic factors in assessing the degree of satisfaction with staff work in general coincide with the conclusions of the fundamental global study of a reputable institute – ADP Research Institute, published in seven languages.

V. CONCLUSION

The decisive role in the digital transformation of the business belongs to the new information and communication technologies that underlie the Internet economy. In new digital business models, the ratio of tangible and intangible capital is changing, and the competitiveness of a company is becoming increasingly dependent on human capital, whose role is steadily increasing compared to other types of capital. Therefore, the formation of the foundations of a digital economy inherently leads to the need for the transformation of models and technologies of personnel management of companies as carriers of human capital. The most important factor in such management is ensuring job satisfaction, without which high productivity, creativity and self-development of staff are unattainable.

The results of a study of the influence of staff satisfaction factors in companies with active use of IT in the business showed that, despite the individualization of work and the focus of work on the virtual environment when using IT, the main determinant of job satisfaction is team-oriented management. The results obtained by the authors generally coincided with the conclusions of the recent global study “The Global Study of Engagement”, carried out by the ADP Research Institute.

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