

Factor analysis of labor satisfaction of the managerial staff working in an organization

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Abstract. In the course of the study, there was confirmed a hypothesis for greater labor satisfaction of employees being lawfully married compared to unmarried ones. Administrative and managerial staff having a family and being married, having achieved the desired, occupies more powerful positions, and their desire for stability leads to higher labor satisfaction. There was revealed a significant positive correlation between age of the managerial personnel in the organization and labor satisfaction. Simultaneously there was rejected the hypothesis of the influence of the labor process content and working conditions on the interest of managerial staff in exercising their powers in the organization.

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Introduction.

The studies of the performed work satisfaction reveal the essential and substantive content of this category, as well as reveal its fundamental characteristics in relation to various aspects of human commercial livelihood. It may be noted some ambiguity of interpretation the concept of "labor satisfaction" and the factors affecting it. For example, in the studies of Russian scientists there stand out, at least, four paradigms of analysis of labor satisfaction and factors affecting it, "worker – workplace" [1], "worker – team" [2], "employee – organization" [3, 4], "employee – society (social division of labor system)" [5].

In foreign studies the content of labor satisfaction is often revealed through its structural components, each of which includes some group factors of satisfaction. In the well-known concept of F. Herzberg all variety of factors affecting labor satisfaction is divided into two groups. Motivators lead to increased labor satisfaction, but their absence does not require dissatisfaction. Hygienic factors are presented by the factors, which inferiority provides for experiencing dissatisfaction with labor, but their optimal state is not able to increase satisfaction [6]. However, in practice, the factors being in different groups can not only be swapped, but also simultaneously included both in one and in the other group. This is possible due to the fact that the criterion for division into two groups of factors in the model of F. Herzberg is served by a human behavior, and not his or her opinion, for example. So, it is human nature to ascribe their failures to external circumstances, and success - to their own efforts.

Popularization of the F. Herzberg theory led to its wide testing on the divergent cultures, samples of occupational signs, etc. Results of the studies, made by a group of scientists, show that the hygiene factors are at the highest level and have the most significant impact on staff motivation [7].

However, until now the unanimity of opinion regarding the degree of predictability and compliance of the F. Herzberg theory with the actual reality has not yet been reached. The scientists Malik M.E., Naeem B. offer to determine the causes of satisfaction and dissatisfaction in a particular organization, which contributes to an increase in motivation of staff productivity [8].

American researchers (Cornell labor descriptive index-JDI) divide satisfaction factors into five major groups: wages, career, psychological climate, relationships with the management and work directly [9].

In the studies made by Scott W.S., Rowland R., Sobel R.St., labor satisfaction is considered in its multifaceted manifestations defined by the inner satisfaction (actually by the performed work) and external satisfaction (satisfaction with wages and career growth) [10-12]. At the same time there are taken into account the social aspect of the problem, expressed within the satisfaction of the company authority and working staff. Labor satisfaction acts as a generalized evaluative understanding of an employee not only of the results of his/her work, but also of the process of labor activity, engagement degree and working conditions.

Studies of the recent years are devoted to analyzing the impact of the work nature and

professionally qualified parameters on labor satisfaction. This is true within the issues of professional self-development, improving internal work motivation and the quality of the workforce. A group of researchers from Malaysia revealed the existence of the positive relationship between the significant compensation, motivation and labor satisfaction and promotion of teaching staff from private colleges in Penang [13].

A similar empirical study was performed by a group of scientists including Dehaghi M.R., Rouhani A., Salahshour C., evaluating the impact of the motivational factor effects on labor satisfaction of the Islamic University teaching staff in Iran: economic, social, political, religious and spiritual values [14]. The results showed that the priority factors are religious and spiritual values as compared to others (socio-economic and political values).

Comparative descriptions of labor satisfaction in organizations of different forms of ownership and business dealing are conducted by Almintisir A.B., Akeel A.B., Subramaniam I.D. [15]. They considered the impact of the three elements of labor satisfaction: incentives and reward systems, feedback systems and selection of managers in the companies of public and private sector. It turned out that employees of private companies were significantly more satisfied on all three elements under consideration and, as a consequence, labor satisfaction is considerably higher. For positive organizational behavior of the state companies personnel it is required to have a complex impact on both the development of an effective system of rewards and incentives, and the availability of feedback opportunities with management body.

A considerable amount of researches with ambiguous findings are devoted to the gender differences in labor satisfaction. Thus, in his works Hodson R. proved that the the difference in labor satisfaction of men and women is not significant [16]. While Bender K. noted the need for mandatory review of professional and qualification characteristics of labor, as women have a lower degree of labor satisfaction, if they are involved in a profession considered more natural for men [17].

More recent studies (2011-2012) of the employed population attitude to their work, within the frames of a worldwide study State of the Global Workplace made by the Research Centre Gallup (Gallup International), showed the following results [18]. Almost two thirds (63%) of worldwide workers are dissatisfied with their work, lack of engagement and motivation to improve the efficiency of their work. A quarter (24%) of worldwide surveyed workers experience extreme dissatisfaction with their work in general. The result is the unproductiveness

and hostile attitude towards the employer. And only 13% of the worldwide workers enjoy their work and as a result, tend to career growth in the company and make their best efforts to thrive.

A noted increase of dissatisfaction from labor activity acts as a serious signal regarding the disadvantage of a modern employee and updates search for the factors and characteristics that have significant effect on the studied category.

The purpose of this study is to assess labor satisfaction and influencing factors. We proceed from the fact that labor satisfaction is characterized as the reached embodiment of human expectations from material, social, psychological and socially significant results of his/her work. Object is an administrative and managerial staff of a major Russian enterprise from the Republic of Tatarstan "Tatautodor", JSC. The sample population is 60 people. The following hypotheses are put forward.

Hypothesis #1: Employee satisfaction is largely driven by the content of the labor process and working conditions. Working conditions have always been considered as one of the main factors motivating staff to work. Accordingly, the worse the conditions are, the lower their motivation is, and as a result, satisfaction with their work.

Hypothesis #2: The older the worker is, the higher the satisfaction with his/her work is. Older people are more focused on high stability and reliability, they are not inclined to change jobs, and, ultimately, they are more satisfied with the process of labor.

Hypothesis #3: Married employees are more satisfied with their work than others. As a rule, employees who have family and are married occupy more serious positions – they have reached the desired and seek stability.

The analysis was conducted based on a synthesis of the two methods proposed by the group of psychologists from the Indiana State University (USA) under the direction of W. Scott called Technique «JDI» and Methodology «JDI-1».

On the basis of the date there were calculated absolute and relative indices of labor satisfaction, respectively, formulas 1 and 2.

$$I_y = (+2) \cdot N_1 + (+1) \cdot N_2 + (0) \cdot N_3 + (-1) \cdot N_4 + (-2) \cdot N_5, \quad (1)$$

where: (+2), (+1), (0), (-1), (-2) – are the satisfaction scale scores;

N – total number of respondents, N_1 – the number of respondents whose answer to this question was: "Completely satisfied", N_2 – the number of respondents whose answer was: "Rather satisfied than not", N_3 – the number of respondents whose answer

was: "I do not know", N_4 – the number of respondents whose answer was: "Rather dissatisfied than satisfied", N_5 – the number of respondents whose answer was: "Very dissatisfied".

$$I = \frac{(+2) \cdot n_1 + (+1) \cdot n_2 + (-1) \cdot n_3 + (-2) \cdot n_4}{n_1 + n_2 + n_3 + n_4}, \quad (2)$$

where n_1, n_2, n_3, n_4 – are, accordingly, the number of respondents for each of the answer variants in accordance with the scale of satisfaction.

As a result of the calculations, the value of the labor satisfaction level within the organization staff was 16. Given that the value of the index should be in the range [-54; 54], this result can be regarded as satisfactory.

To assess the relationship between the levels of employee satisfaction with their work on various factors (age of employee, working experience in the organization, working experience in the specialty), there was built a logit model of binary choice. Analysis of the model showed that the professional experience has little impact on the resulting value (P – value 0.3288). To improve the quality of the model, this variable was excluded.

Table 1. Estimated variables of the improved logit model

Dependent variables	Coefficient	Standard mistake	Z	Slope factor
const	-9.57136	2.57635	-3.715	
X1	0.245773	0.10831579	2.956	0.0576270
X2	0.803637	0.364088	2.207	0.188430

Table 2. Analysis of the improved logit model parameters

Indices	Value	Indices	Value
Average of the dependent variable	0.456140	Statistical variance of the dependent variable	0.502500
R-squared of McFadden	0.578283	Corrected R-squared	0.501927
Logical plausibility	-16.56919	Akaike criterion	39.13838
Schwarz criterion	45.26754	Henna-Quinn criterion	41.52038

Let us write the equation of the logit model in a formalized manner. We pay attention to the change of the coefficient signs to the opposite ones during the pattern recording:

$$P_i = \frac{1}{1 + e^{9.57 - 0.25X_1 - 0.8X_2}}, \quad (3)$$

The importance of aggregate regression is indicated by the Chi-square (45.4412) and its p-value (0.0000 < 0.10). The coefficient of determination was

0.5886 and 0.4868 – the Makfalden's and the amended one, accordingly. It shows that 59% of resultant variable variance is explained by the influence of independent variables – the share of the factor variables variation is accounted for a large part by comparison with the unaccounted in the model factors influencing the changes of the resultant variable.

To assess the predictive capabilities of the constructed model as a measure of the model compliance with the empirical data, there can be used the correlation coefficient between the variable Y_i and theoretical values of the model P_i :

$$corr(Y, YR) = 0.79436948, \quad (4)$$

Null hypothesis: no correlation:

$$t(55) = 9.69849, \quad \text{double-sided } p\text{-value } 0.0000, \quad (5)$$

The correlation coefficient indicates a moderate association. P – value = 0.0000 < 0.1, which indicates good predictive model properties.

When building a probit model, we are faced with the fact that the experience of work in the organization has no effect on labor satisfaction (P – value 0.3001). To improve the quality of the model, we excluded this variable.

Table 3. Estimated variables of improved probit model

Dependent variables	Coefficient	Standard mistake	Z	Slope factor
const	-5.49040	1.32249	-4.152	
X_1	0.141488	0.0450157	3.143	0.0541248
X_2	0.455942	0.201651	2.261	0.174416

Table 4. Analysis of the improved probit model parameters

Indices	Value	Indices	Value
Average of the dependent variable	0.456140	Statistical variance of the dependent variable	0.502500
R-squared of McFadden	0.581468	Corrected R-squared	0.505112
Logical plausibility	-16.44405	Akaike criterion	38.88809
Schwarz criterion	45.01724	Henna-Quinn criterion	41.27009

Standard mistakes are calculated based on the Hessian. Number of correctly represented cases was 51 (89.5%). f (beta'x) for the average value of the independent variables = 0.383. Likelihood ratio test: Chi-square (2) = 45.6915 [0.0000]. Test for a normal distribution of errors showed that the errors are normally distributed. The importance of aggregate regression is indicated by the Chi-square (45.6915) and its P – value (0.0000 < 0.10). Let us pay attention to the value of the determination coefficient, which was 0.5814 and 0.5051 – respectively R – squared of McFadden and corrected R – squared. It shows that 58% of the resultant

variable variance is explained by the influence of independent variables.

Based on the results of the conducted correlation and regression analysis of binary choice model, we can accept the hypothesis # 2 – the older the employee is, the higher the satisfaction with his/her work is. This is evidenced by the value of the Student's t-criteria - in all cases for the factor, the regression coefficient is significant with a probability of 99%. Consequently, mature and experienced employees are more satisfied with labor, and thus ensure the stability, reliability and labor activity within the organization.

Thus, during the conducted study we found that members of the organization are the least satisfied with the process management, career opportunities, as well as intangible benefits of security. Simultaneously, within the team of the company there are created favorable conditions for labor – employees are satisfied with "work", "colleague", "intangible benefits" factors (Table 5).

Table 5. Study results

Components of satisfaction	Assertions	Max. score	Min. score
Work	9, 16, 17, 26, 27, 29, 30, 31	16	-16
Company authorities	10, 11, 18	6	-6
Colleagues	12, 20, 24	6	-6
Career	13, 19, 22, 23	8	-8
Wage	14, 15, 21, 25, 28	10	-10
Intangible incentives	32, 33, 34, 35	8	-8

Based on these data we rejected hypothesis # 1, according to which the employee satisfaction is largely driven by the content of the labor process and working conditions. The results are shown in Table 6.

Table 6. Employee satisfaction on various factors

Factors of labor satisfaction	Degree of satisfaction	Min. value	Max. value	The relative level of satisfaction
1	2	3	4	5=2/4
Work	7	-16	16	0.44
Company authorities	1	-6	6	0.17
Colleagues	4	-6	6	0.67
Career	1	-8	8	0.13
Wage	3	-10	10	0.30
Intangible incentives	0	-8	8	0.00

Based on the calculation of the relative level of satisfaction for each factor, there can be concluded that to a greater extent the result was influenced by high employee satisfaction in a team atmosphere, relations with colleagues. Whereas the "work" factor had a minimal impact. At the same time the most satisfied with their work are the workers of technical specialty, which can be explained by the creative nature of the work performed.

Analysis of employee satisfaction by gender factor showed that men, unlike women, are satisfied

with their work to a greater extent – 20.08 versus 13.75 on a scale of [-54; 54]. It seems that male representatives show more relaxed attitude to everything going on, are more restrained and mentally balanced. The results showed the accuracy of the hypothesis # 3: Respondents who are married, were more satisfied with their work.

Conclusions

During the study there were identified the determinants of labor satisfaction: the relationship with colleagues, the atmosphere in the team, which showed the closest relationship. Meanwhile, men experience greater labor satisfaction than women. Labor satisfaction of workers having higher technical education is also somewhat higher if compared to employees with economic and legal education.

Hypothesis testing showed greater labor satisfaction of employees who are lawfully married if compared to the unmarried ones; significant positive correlation between age of the managerial personnel in the organization and labor satisfaction. Simultaneously, there was rejected the hypothesis of predominant influence of the labor process content and working conditions on the interest of administrative staff in exercising their powers in the organization.

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