SCIENTIFIC SUPPORT OF ORGANIZATIONAL AND STAFF POLICY OF LARGE COMPANIES

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ABSTRACT

The actual task of the current stage of adaptation of organizations to the requirements of a market economy is the scientifically based design of management structures. The structure adequate to the market becomes the most important condition for effective functioning and development of any autonomous subject of the transformations taking place in society. This is especially indicative for such a dynamic branch of the economy as transport. The article is devoted to the research of scientific approaches to organizational and staff policy in the organizations of transport and transport education. The system of trends influencing organizational changes is proposed, the range and structural features, levels of system complexity of the project solutions being prepared are determined.

Keywords: organizational and staff policy, design of organizational structure, transport company, optimization, system, management structure.

Background. *The main tool for designing and improving the management structure is organizational and staff policy. It can be defined as a set of principles, methods and technologies aimed at creating, providing with staff and changing the organizational structure of the company in accordance with the strategic objectives of the organization*

In the scientific literature, three aspects of organizational and staff policy are distinguished: structural, process, social and psychological [1]. Modern conditions predetermine the need for a flexible combination of these aspects in the company's organizational and staff policy, depending on the stage of its life cycle, the state of the external and internal environment, and the development strategy.

Objective. *The objective of the author is to consider the issues of scientific support of organizational and staff policy of large companies.*

Methods. *The author uses general scientific methods, comparative analysis, evaluation approach.*

Results. *Numerous studies have revealed a number of factors that affect the construction of an optimal organizational and staff structure [2–4]:*
- *strategic objectives of the organization;*
- *economic condition;*
- *external environment;*
- *features of business processes;*
- *level of development of information technologies;*
- *organizational culture;*
- *market status, etc.*

The traditional approach to managing the organizational structure of the company is reactive, often intuitive, methods of organizational and staff policy. However, practice shows that successful organizations use scientific methods to justify and improve the organizational structure. We can distinguish the following main aspects of organizational and staff policy, which require serious justification:
- *grouping of functions, structural divisions;*
- *design of the structure of interrelations between departments;*
- *calculation of the standards of controllability-subordination;*
- *choice of hierarchical representation of the management structure;*
- *determining the degree of centralization and decentralization of authority and responsibility.*

At the same time, the basic principles of building / improving the organizational and staff structure should be:
- *maintaining controllability and ensuring traffic safety requirements;*
- *flexibility and adaptability;*
- *scalability;*
- *absence of duplication of functionality;*
- *economic efficiency;*
- *ability to quantify the functionality and scope of work;*
- *application of modern approaches to the standardization of mental work;*
- *validity and transparency of decisions;*
- *linking with the existing system of motivation;*
- *standardization of processes;*
- *regulation of authority and responsibility.*

As an example of the application of the scientific approach in improving the organizational structure of the regional branch of the transport company, it is possible to consider the methodology [5], adapted to the current conditions for reforming the railway transport.

The essence of the methodology is the use of conjugate assessments of management options for comparative analysis with respect to ensuring integrity and sustainability, on the one hand, and granting freedom by the structural unit on the other, i. e. evaluation of the structure options from the point of centralization / decentralization of management.

When designing a management structure, information assessments of the degree of integrity α and the use of elements of the system β are usually used, which can be interpreted as assessments of the sustainability of the management structure in the grant of freedom by the structural unit or as an assessment of the degree of centralization / decentralization. For stable systems it is characteristic that the value of

Table 1

Using scientific methods in improving the organizational structure

Assessment of integrity degree of the system	$\alpha = -\dfrac{C_{e}}{C_{c}}$	C_e –	Mutual complexity
		C_o –	Own complexity
Assessment of the degree of system's elements use	$\beta = \dfrac{C_c}{C_o}$	C_c –	System complexity
		C_o –	Own complexity
System complexity	$C_c = N \cdot \log_2 K$	N –	Number of elements of 0th level
		K –	Number of elements of the lower level
Own complexity	$C_o = \sum_{i=1}^{m} \log_2 k_i$	m –	Number of elements of the system, linked with the elements of underlying levels
Mutual complexity	$C_e = C_c - C_o$	k_i –	Number of links of i-th elements with the elements of the underlying level

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Table 2

Calculation of conjugate estimates of three variants of the management structure

Indicator	Management option		
	A	B	C
Number of elements of the 0th level of the hierarchy	1	1	1
Number of elements of the lower level of the hierarchy	27	25	27
Number of elements of the structure that have a link with elements of the underlying level of the hierarchy	5	5	6
Number of links of the i-th element of the structure with the elements of the lower level of the hierarchy	$K_1 = 13$ $K_2 = 6$ $K_3 = 6$ $K_4 = 3$ $K_5 = 3$	$K_1 = 13$ $K_2 = 5$ $K_3 = 5$ $K_4 = 3$ $K_5 = 3$	$K_1 = 5$ $K_2 = 6$ $K_3 = 6$ $K_4 = 3$ $K_5 = 3$ $K_6 = 9$
System complexity	4,75	4,64	4,75
Own complexity	12,06	11,54	13,86
Mutual Complexity	− 7,31	− 6,90	− 9,11
Assessment of the degree of system integrity	0,61	0,60	0,66
Assessment of the degree of use of the elements of the system	0,39	0,40	0,34

their own complexity is greater than the value of system complexity. Therefore, the value of the indicator of mutual complexity formally has a negative sign (Table 1).

The results of the calculation of conjugate estimates of three variants of the management structure of the regional branch of the transport company (option A – the initial organizational structure of management (OSM), option B – the proposed version of OSM, taking into account the recommendations for optimizing the composition of the functional blocks, option C – the proposed version of OSM with account of general requirements for management structures within the framework of the system-target approach) are presented in Table 2.

Calculations show:

1. In all three variants, its own complexity exceeds the system complexity, which indicates the stability of the considered organizational system.

2. Quantitative differences in assessments of the integrity and degree of use of elements are small, since the options for the structure are three-level and differ little from each other. However, even small differences in estimates can significantly affect the effectiveness of the organization.

3. Since α is treated as a degree of centralization, when striving for decentralization of management, more efficient use of the potential of structural divisions it is necessary to choose structure B. Its distinctive feature from the original is the integration of the functions of legal activities within the legal department without distinguishing sectors. The allocation of sectors will inevitably lead to an increase in the degree of integrity of the system and, consequently, to the re-centralization.

4. The degree of integrity increases with the increase in the number of elements of the second level of the hierarchy. In particular, the creation of the position of «deputy director for the provision of activities» in structure C pursued the goal of reducing the burden on the director of the branch. Nevertheless, in this case there is a more centralized structure than the original structure A, which does not fit the concept of decentralization of management. However, such a step can be justified if a cluster analysis is conducted with respect to the units that form the commercial, production and technical blocks. If the possibility of creating a production and commercial unit comprising 8 divisions (without the claim work sector) is shown, the degree of centralization will be 0,54. In this case, the choice of the structure of C is more expedient.

5. Allocation of sectors within divisions is impractical, as the degree of centralization increases with an increase in the hierarchy level. At the same time, it is possible to allocate sectors as departments. While maintaining the norm of controllability-subordination, this decision will lead to greater independence of the sectors and, correspondingly, a higher degree of decentralization of the management structure.

Conclusion. Thus, at the moment of dynamic organizational transformations in the external environment, a scientifically substantiated assessment of the organizational and staff policy is desirable and even necessary. This will reduce the risks for large companies and objectively assess the social and economic consequences of organizational decisions.

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