Structural components of space as a component of logistic

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Abstract. In this article the author's interpretation of the concept of transport space is offered, its brief characteristic is given. The basic features of the transport space and evidence of the existence of its variable hierarchy that allows observe the transport space at different levels of specificity, are specified. It is shown that freight forwarding can be considered as one of the subspaces of the transport space. It is proved that one of the main requirements for the development of this component should be the requirement to implement the maximum possible information conductivity of all its elements and links, and, therefore, the maximum interest of all its participants. An important role in the study of the transport process has been formulated. The described technique displays all the iterative components of the transport aspect.

1 Introduction

According to the transport strategy of the Russian Federation until 2030, the priority objectives of the development of the transport system of Russia for the specified period is the formation of a single transport space of Russia on the basis of balanced development of effective transport infrastructure, as well as its integration into the global transport space and the implementation of the transit potential of the country.

Previously [1-7] we proved that the category "space" is wider than the category "system", and any system is only a part of space. Accordingly, it is impossible to talk about the transport space as a transport system.

Analysis of a large amount of researches on the topic under study has allowed us to give our own understanding of "transport space" category, which means a set of objects of the transport complex, including the system of railways, highways, sea and waterways, as well as all the processes involved in it, the subjects and links among them, which in General is a set of conditions that ensure its (space) existence [7].

Transport space produces nothing, because it is not a mechanism, so we can consider transport space only as a set of conditions for the functioning of all transport systems involved in it. By creating these conditions, the entities involved in this space must take

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into account a number of factors (external and internal) that influence and determine these conditions.

Transport space consisting of a number of its subspaces, which at the same time, has all the features of the entire transport space. Transport space is considered by us as an open nonlinear system, instability and nonlinearity of which provides a wide choice of trajectories of its further development. This fact is particularly important one when choosing a strategy for the development of any subspace. It is the consideration of trends and appropriate actions for its development that allow maximize the effectiveness of the selected subspace.

In addition, in our opinion, it is possible to distinguish several levels of transport space (these include: unions/groups of countries, countries/regions/ organizations), having a certain degree of independence and subordination, and differing in the composition of the transport complex, the structure of transport and logistics systems, the number of goods and passengers, etc. Any of the indicated levels should be considered at some level of concreteness taking into account all characteristics of space, namely the set of conditions for space existence, environment, extent, its temporal structure and relationships that exist among objects of transport space.

Transport space includes a number of its subspaces, which means that there is its (space's) variable hierarchy, which consists in the fact that each subspace is considered at different levels of concreteness. Here we mean transport services; the power and intensity of information necessary for the functioning of the transport space; the infrastructure of the industry, which sets volumes and other topological properties of the entire transport space. We can state that the formation of space is influenced not only by real phenomena and processes that have already occurred, but also those which are potentially possible. This fact gives grounds to claim that the problem of transport space is very multilateral and involves the same multilateral broad participation of a large number of scientists and practitioners working both in the field of transport and in other fields of knowledge, and exploring these issues. The recommended scope of this paper does not allow us to consider all the components of the transport space, so we will consider only one of its components – freight forwarding.

2 Methods as a component of logistic space

In the context of globalization processes, freight forwarding has become a special branch of transport with its own technologies, pricing and legal norms. The management of forwarding in a modern seaport is implemented through targeted program of the transport sector development and is particularly relevant for transition economy countries because of its large area and transport communications. It is well known that forwarding, as an economic activity, is a mandatory stage in the process of social (world) reproduction, establishing a link among production, exchange and consumption. Special relevance it has while speaking about the role of an intermediary in international business, which plays an important role in the development of freight forwarding services and world transport in general.

Currently, the latest achievements of science and technology are actively used for the successful functioning of freight forwarding companies, the experience of the world economy and trends in the development of seaports are also taken into account. Knowledge of the economic situation in the national and world market of transport services and the main directions of Federal and regional management in the field of transport is of great importance. Only under these conditions, the freight forwarding company can remain competitive and provide a high level of freight forwarding services that correspond to modern requirements.

In connection with the foregoing, we have attempted to optimize the system of methodical support of transport forwarding management (SMSTFM). This system, as well as other subspaces forming transport space, is defined by set of external and internal factors, i.e. the circumstances considered as driving force of any process or phenomenon.

The external factors include: political (compliance with agreements on tariffs and trade among countries; the implementation of the Federal and local normative acts aimed at the development of legal regulation of the economy, etc.); economic (market opportunities, segmentation, consumer preferences and tendencies of their further changes; social (values, attitudes and relationships); natural and geographical factors that determine the operation of modern port complexes, etc.

The transport space, which covers one of the largest basic sectors of the economy, unites not only all regions of the country, but also connects it with the international community, ensuring Russia's foreign economic ties and its integration into the global economic system. This situation can be considered at different levels, taking into account its (space) hierarchy.

The following phenomenon, such as globalization, can be viewed as both an economic and a political factor. Globalization involves a significant restructuring of the world economy, associated with a change in the balance among economic centers, the increasing role of port complexes, which entails changes in national and world cargo flows, and ultimately affects the requirements for the quality of transport services.

The development of transport infrastructure can also be attributed to external factors, as they significantly affect the functioning of the system of methodological support of management of transport enterprises, in particular, forwarding. It is important to note here that the role of the port sector, where the maximum export opportunities of transport services and transit potential of Russia are concentrated, has been significantly strengthened recently. In other words, the port is also considered as a component of transport space.

Search of ways for SMSTFM optimization also involves accounting of internal factors, reflecting the level of development of the port complex, the influence of customs of the port tariffs and port dues, efficient use of production resources and management, competitiveness of services, the quality of personnel training. It is the personnel or human capital that represents the key component of intellectual capital, since it is the basis for the development of both client and organizational capital. Human capital, as a source of renewal and progress, is the attractor, which largely determines the development of any space, including transport. It is believed that human capital grows in two ways: in the first, the company uses the maximum amount of knowledge of its employees; and in the second, the maximum number of employees owns the knowledge that can bring both the benefit of the company, and therefore the industry as a whole.

Human capital can also be seen as both the formed competencies of the employee and his / her ability to learn and acquire knowledge. To benefit from the human capital, it is necessary both to have this knowledge, and to control it. Team work and, consequently, the appropriate structure, able to oversee the process of optimization is required.

Based on the abovementioned, it can be stated that internal factors reflecting the state of the process, which are considered as a set of elements and significant circumstances of organization which usually are the result of management decisions and to a large extent are subject to control by an organization. That is why they are influenced and changed, and due to this fact there is opportunity to improve the efficiency of the company.

Being a component of the transport space, the considered system of the methodical support of transport forwarding management in a modern seaport, involves the interaction of several mechanisms: legal (establishment of the legal framework providing fully functioning multi-tiered system of methodical support of transport forwarding management); economic (the interaction of all internal subsystems aimed at improving

effectiveness); information (use of data Bank of management information system); personnel (determination of the need for personnel and its effective use) and organizational (development of the organizational structure and action plan for the implementation of the developed system). All these mechanisms ensure the functioning of the subspace under consideration at a certain level of concreteness.

3 Methods of the system support of transport management

Based on the task of this paper, we are considering the main component of the organizational mechanism – organizational culture, which should be the basis of human resources management, and associated with the development of all aspects of the organizational environment.

Organizational culture is also a component of this system, but at the same time it is also a component of another space – space of culture, a category of another level, with the different content.

Culture is a complex self-developing system in which any element of it is a cultural monad. The Leibnizian concept of monad seems to be the most acceptable for the study of cultural phenomena, since in every cultural phenomenon there is a spirituality accepted by Leibniz for monad. The «world line» of Leibniz, on which each point has uniqueness and repeatability, is different from others and identical to them, is closed in relation to external influences and at the same time due to all previous and subsequent units [8]. Highlighting the organizational culture as the main component of the organizational mechanism, we relied on the principle of pre-established harmony, adopted in the philosophy of Leibniz, which allows identify the modality of culture as an organizing beginning.

When considering this mechanism, we have identified the parameters that need to be addressed at each structural level of the organizational culture.

On general corporate level it includes: the system of values; tasks of the organization; style of relationship of the top management with subordinates; participation of personnel of the enterprise in the solution of key problems, etc.

At the level of structural divisions it includes: the nature of relationships between departments and employees; attitude of employees to working conditions; team awareness of the main tasks and problems of departments in a particular company; methods and ways of adaptation of new employees in the division; conditions of promotion, etc.

At the personal level, it is necessary to distinguish the psychological traits of the employee; his/her professional competence and style of behavior.

Recognition of these parameters is considered by us as the basis of the optimization process (the process of selecting according to any criterion of the best available solutions, schemes, plans), since in our opinion, this mechanism has a decisive impact on all other components of the system under study.

4 Results introduction of methods for the transport process

Building any system requires compliance with certain principles. The principles of the system of methodical support of freight forwarding management are the following: consistency (search and determination of relationships, integrity); continuity (timely adjustment of the developed provisions); multilevel (consolidation of responsibility for the formation and use of resources by levels of management); balance (compliance with optimal proportions for all aspects of the formation and use of resources and their); sequence (holding scheduled events on a particular technology); factual support (specific symptoms, causes, outcomes, resources, etc. to adjust the current process).

Based on the principles outlined above, we highlighted the following functions of SMSTFM: analysis, operational management, forecasting, motivation, control and regulation.

Analysis of the SMSTFM optimization process involves a comprehensive study, consideration of its individual elements, properties and characteristics, which ultimately allows make necessary generalizations and assessments of both the system and its optimization process.

Operational management involves the coordination of all mechanisms included in the system, compliance with rules of engagement, timely adjustments as necessary and decision-making. In this regard, we used the situational and functional approach developed by Malinochka E. G. and developed in the works of Makashina I., Marichev I., Filatova E., etc. The Essence of this approach is to create an integral unity of components, which is a preparation of the process of interaction of the entities included in the process, that is, the integral internal feature of the process, through which the relevant activities of its participants can be carried out at a certain level of quality. In the process, this situation is constantly changing due to the enrichment of the current state of quality of the component, because quality is a variable category, and its development is perpetual and depends on a variety of external and internal factors, such as, for example, changes in technology, changes in demand, etc.

The following identified function is forecasting function, which is expressed in the consideration of options for the development of SMSTFM. It includes: development of infrastructure of a transport company; improving quality of transport services; implementation of transport projects that optimize activities, which generally involves the accelerated and balanced development of the studied system.

Motivational function of the described system, ensures the intensification of the work of employees in accordance with their functional duties. Motivation usually includes: external stimulation (material and moral) and psychological stimulation (interest in work).

A particular role belongs to monitoring function, presuming: tracking what is planned; supporting ongoing processes, identifying deviations, their causes and developing recommendations to guide the elimination of the causes that caused these deviations.

Thus, the reliance on the situational and functional approach when considering the process of SMSTFM optimization as a subsystem of transport-forwarding space, allows not only to regulate the results, but also to adjust the actions in order to select the most optimal solution that contributes to the optimization of the studied system.

The optimization process of the considered system aimed at achieving the state, which in a given forecast period provides the most complete achievement of goals at the lowest cost. Optimization of resources eliminates contradictions and duplication in internal interactions, removes problems caused by imperfection of the structure. Optimization of the system is considered as bringing its interactions with the market and internal interactions among these mechanisms into a state that contributes to the most effective achievement of the goals within the framework of the adopted strategy.

Any system is developed under the influence of certain factors, so their accounting, as well as identification of management problems allows find ways to improve the company, expressed in the definition and monitoring quality of services, as well as in the development of measures and recommendations to improve the quality of services provided.

Optimization of the system of methodical support of transport forwarding management in the modern seaport is based on the assumption of obtaining the «synergetic effect» known in Economics and management, which consists in increasing the efficiency of enterprise management by taking into account the trends of its development and initiation of one of them. As the trend, we chose the development of organizational culture, which is a component of the system of methodical support, affecting the interaction of all actors

involved in the production process and aimed at optimizing the results of activities and meeting the balanced requirements of all participants concerned. As a result of the optimization of the system, contradictions between the functional units are eliminated, and the overall efficiency of activities is increased.

The creation and implementation of these conditions will not only diagnose the current state of corporate culture, but also contribute to its development.

While developing the methodical support of organizational culture the specificity of members and organizational culture are taken into account. The mechanism of formation of organizational culture of representatives of the forwarding organization represents step-by-step process:

1– orientation (diagnosis and analysis of diagnostic sections of the subjects of the organization; orientation to the awareness of the importance of corporate culture in the production sector);

2 – design (selection and justification of methods, forms and means of organizational culture formation);

3 – reflexive activity (organization of the process of organizational culture formation, collective discussion, etc.).

The main idea of development of the system is achieving the company's main goals, improving the efficiency of the freight forwarding company.

This conditional division into groups, in our opinion, allows us to determine the indicators of the optimized system more adequately [10-14].

Taking into account the importance of the synergistic effect and the possibility of choosing the right development trajectory, we have developed and proposed a list of recommendations regulating the impact on selected parameters of the three levels of organizational culture: corporate code; job descriptions; regulation on the procedure of employment (probation, payment system, conditions of admission to the organization); the concept of selection, adaptation, motivation and personnel training; the regulations on the attestation of employees; the regulations on the General meeting; the agreement not to disclose confidential information; regulations on the structural unit; rules of interchangeability of employees, etc.

Transport forwarding system, as a component of the transport space and provided by transport and forwarding companies, is determined by trends of development of sea ports and is an integral unity of three interrelated components, namely: transport-forwarding services, organization of technological process of cargo delivery and organizational culture that reflect the interaction of consumers and service providers. Each component has its own content (set of operations) and reflects the process of providing forwarding services to shippers and consignees in accordance with contractual obligations and established norms and requirements.

Conclusion

In recent years, the concept of transport space has become the object of attention of many analysts, with everyone investing its own meaning in it. This leads to the fact that those valid laws of existence of many components that are necessary for building a holistic vision of this phenomenon remain aside. The system-organizational approach to transport space used by us is the structural ordering of the elements of a holistic phenomenon, the elements of which are a set of systems, specifically arranged reality, etc., such a specification of the transport space allows us to consider both its individual features and its essence as a whole. The optimally complete content of this category may be related to the set of actions performed in the transport space by all its participants.

The fundamental properties of the transport space: environmental, procedural, institutional and integrity allowed us to consider one of its components at a certain level of specificity – freight forwarding activities.

The offered method of optimization of a forwarding company activity, promotes its development and qualitative improvement.

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