



Services Infrastructure Forming in the Process of Transport Logistics Stock Movement

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ABSTRACT

Logistics as a scientific and practical direction, covering a wide range of business activities, has gained a strong position in the world economic system. As a priority has proved the concept of integrated logistics, based on the consolidation of the participants of freight and goods movement system to ensure continuity and regularity of material products and associated information, service and financial flows in the intra, regional, inter-regional, sectoral and international levels. The experience of the developed capitalist countries shows that the use of logistics systems is to reduce transport costs by 7-20%. The costs of handling and storage of material resources and finished products are reduced by 15-30%; total logistics costs to 12-35%. Accelerated turnover of material resources by 20-40%. Reserves and resources of finished goods reduced by 50-100%. In short, the game is worth the candle. The formation of market relations in Russia urgently requires the formation of transport and logistics infrastructure. Its fundamental, system-elements should be hubs, main and local railways, container and working with products terminals, multimodal transport and logistics centers. In large network-wide units of federal and international level, such as Moscow, Leningrad (St. Petersburg), Krasnodar and others. Target-consistent creation of a network of regional terminals and logistic centers, Union-United in regional integrated transport and logistics system.

Keywords: Mobile Service System, Transport Logistics, Transport Hubs

JEL Classifications: L14, L17, L23, M11

1. INTRODUCTION

To date, the problem of the rational organization of the service is one of the direction of the concept of the Federal Program "Transport Strategy of Russia until 2030" - the harmonization of the development of all spheres of transport in view of its integration into the global communications network. In this regard, urgent task of developing a service infrastructure in the form of transport logistics subsystem, corresponding to it in structure and complexity in order to ensure passengers and operational staff of financial, information and resource service on the whole route.

2. MATERIALS AND METHODS

The theoretical and methodological basis of the study served as a scientific work in the field of management, logistics, legislative and regulatory acts of the Russian Federation, the concept of logistics, techniques and methods of scientific knowledge (comparative and systematic analysis, sample surveys, synthesis).

The issues of formation of service infrastructure in the process of movement of goods transport logistics involved authors: A.K. Antoniuk, Hadjinsky, Göttingen (Göttingen, 2000), Golikov (Golikov, 2004), Holstein (Holstein and Yudin, 2013), Dybskaya

(2012), Kurochkin (Kurochkin, 2012), Landsman (Landsman, 2012), Lukinskogo (Lukinskogo, 2007), Lutsk (Landsman and Lutsk, 2010), Melnikov (Melnikov et al., 2014), Mirotin (Mirotin and Bokov, 2005), Mirotin (Mirotin et al., 2003), Nikitin (Nikitin et al., 2007), Nikolaichuk (Nikolaichuk, 2012), I.A. Rachkovskaya, I.S. Savchenko, A.G. Shirladze, S.V. Tashbaev, A.S. Chubukov, D.B. Yudin.

3. DISCUSSION

Currently, Russian companies is acutely the question of optimization of activity, since modern conditions of economic development in Russia are rooted principles of market economy, competition is growing. In this case it is necessary to pay special attention to the system, which makes it possible to improve the management of financial flows, which will lead to the optimization of the entire business. When a country enters a foreign capital that increases competition. In many areas of the reserves increase competitiveness in Russia are almost exhausted. Just search for new competitive solutions engaged in logistics. There is a need to devote more time to optimize economic activity, which is linked to the issues of creating effective operation of logistics systems. In principle, this problem can be described as the creation of competitive advantages by reducing logistics costs and improve service quality through the creation of integrated logistics systems.

Any successful company aims to enter the international market, especially in a globalized world economy, which is characterized by a single economic space of the pro-creation of a common market and monetary means of production and distribution.

4. GLOBALIZATION AND LOGISTICS

The globalization of logistics is an integral part of similar processes that occur in all areas of the world economy. This process did not leave without attention and Russian companies, but to go on the international scene with outdated methods, concepts and methods of implementation of logistics operations, thus dooming themselves to failure. As a consequence, it is necessary to use modern technologies and innovations, resorted to by developed countries that are actively using the achievements of scientific and technological revolution, which is based on computer technology. The correct structure and the use of logistic systems, which is based on the introduction of international standards of operation of integrated logistics - It is a success in the international markets and the integration of Russia into the modern structure of the external economic relations.

Logistics plays an important role in economic activity in a market economy, as a factor in forming the core competencies. At the moment, the government of the Russian Federation pays special attention to the development of logistics infrastructure and its relationship with the international logistics environment, the expansion of domestic and foreign trade and the integration of our country into the global international market, namely, the question of Russia's accession to the WTO. Also on the agenda is the question of forming the government of a powerful

macroeconomic demand for the development of international logistics infrastructure, as one of the main underlying factors affecting the dynamic and steady growth of the economy and strengthening its position in the international market.

The use of logistics methods of planning, management, control and regulation of passenger traffic in space and time from its original source to the final consumer in its essence and purpose involves service support. This requirement is consistent with modern technology automation of financial and information services to passengers and people on the basis of the mobile terminal service system (CNS), which includes a network of terminals, storage intelligence and software SAP BI software.

Transport logistics is the most appropriate medium of interaction of transport processes and service. The starting point for the communication parameters and passenger service subsystem is the fact that all its input parameters are generated in each transport unit by separate routes, types of communications and correspondence (size, types and dynamics of admission requirements for services). Accordingly, all the services you need to function in a mode of transport nodes, performing services according to international standards.

The transport logistics methodology provides a service module, and its relationship with the rest of production and the transport module through a general criterion - the amount and quality of passenger and freight traffic. The concept is based on a modular principle of formation of integrated transport and logistics systems involves interlinked development of each module, including the service.

But any interaction subsystems, especially in transport, imposes wide increased demands on the reliability of joint functions. Experience placing terminals with control via SAP analytical repository of information in real time has shown that the lack of an integrated approach to their operation leads to a sudden failure, prolonged downtime, increase the number of emergency repairs.

These factors negate any potential benefits of mobile service, reliability of information and financial services, the image of the terminal network owner and the profit in the service business.

That is why the introduction of mobile service networks linked to the requirements of their sustainability (Hadjinsky, 2013).

Spontaneously installed terminals do not provide coverage for high-quality and sustainable service the growing demand for variable services, especially in the new transport hubs. They cannot be reliably operate and constantly upgrade. Experimental calculations and implementation of the methodology of formation and functioning of a network of terminals were performed in relation to the transport nodes located on the route Moscow - Sergiev Posad Yaroslavl highway in JSC "Platform" - a leading developer of the investment project implementation of new service technologies on roads and in a number of SAP-based regions BI. Data analysis was developed regulations on economic performance (the average check, the revenue, cost, volume of transactions), and

technical readiness of control terminals Park (availability factor, the reserve fund), which allowed to increase the sustainability of the service.

And structurally terminal service network, as the integration of the work of the transport hubs, it becomes necessary transport logistics subsystem. Service on international routes judged by the standards of the countries in the passage of these routes all over (in time and space). The passengers, operating personnel must be able to meet the needs of information and financial services for business and personal use on the whole route. Otherwise, the transport unit does not meet international standards of quality, as a necessary condition of their continued existence.

Selection of the optimal structure of TLC, which includes terminal networks, service repair and maintenance, collection and software related to the complex problem of accommodation, which is considered in the class of mathematical programming problems (Göttingen, 2000).

Development and maintenance of market change on transport, has led to a significant increase in the requirements for management information and financial technology. It is not enough to use the automated system only with developed accounting functions without consolidated analytic functions. New service technologies had become gradually became an effective means of making a profit. But for this purpose, it took their full integration in all areas of vehicle production in the form of terminal service system. It is this integration corresponds to the requirements of the world transport system, international transport corridors that are characterized by harmonization of all kinds of services to passengers, an integrated approach to linking all areas of the transport business, including the service subsystem.

Its function is to:

- Financial and resource service business and personal needs pass fats and operational staff - participants of the transportation process;
- Information service participants of the transportation process to get needed information on individual needs.

The structure of the service sector in the road and rail transport includes several levels – service networks, centers and individual companies providing a complex of services and payment for services, different nomenclature and functionality at all stages of the logistics. In this structure, a special place is occupied by the mobile service. In the domestic transport market it is not enough to pursue the best options “price-time.” Expanding the scope and scale of services connected with the creation of adequate opportunities for customers of financial transactions throughout the entire journey, including the fees for the international management standards.

Expanding demand in the service sector and international inter-regional integrated transport and logistics centers (TLC).

Development of perspective volumes of transportation of passengers and goods especially in international traffic, and the

need for compliance with international quality level of service impose strict requirements to improve the Russian transport system (Hadjinsky, 2005).

Integration service networks in TLC structure also creates potential for SAP in terms of the creation of a data warehouse and business units - Intelligence (Hadjinsky, 2013). Optimal placement of the terminals on roads (highways) in the centers of towns and regions and to other potential services market objects associated with the problem of maintenance of the population and the organization of passenger traffic, manage “demand” and the service rates. Terminals installed in areas of maximum population and movement of passengers (such as transport hubs, supermarkets, etc.). The potential for a permanent demand for services (Kobersy et al., 2016; Kobersy et al., 2014).

Advanced placement points can be determined by the results of the initial stage of the analysis of demand for services. However, the choice of the optimal placement of a multivariate economic objective, since They are fundamentally different at each node: The demand for services, competition, maintenance costs, sensitivity to changes in demand for payment (depending on the population).

Transport systems in different countries around the world are actively engaged in projects related to the mouth, posing the electronic self-service terminals to the same standard. Implementation of these solutions should attract more passengers, as well as the flexibility to respond to changing needs in the area of service.

However, it is noteworthy features:

- First, the increased demands on the reliability of information and financial services, trouble-free operation of terminals in a high mobility of passengers;
- Secondly, the need for a systematic campaign to passenger service and operational staff in real in different nodes of the metropolis and on the way;
- Third, significant capital intensity of this investment project in sections starting investment of computer technology and software, not only in the terminal, but also in the operational infrastructure (technical operation of the service and collection).

In this context, methodological support service infrastructure includes:

- The economic justification of investment in the reliability of terminal networks, the corresponding covering demand for sustainable financial and information services to passengers and operating personnel;
- Monitoring organization (based on SAP BI) and effectively adapt operational service composition and service modes, depending on changes in demand and, consequently, the structure of the terminal service system.

It should be noted that the current direction of development of transport logistics is the development and efficient functioning of the service subsystem for the financial, resource and information service for passengers and operating personnel. The modernization

of the transport infrastructure of megacities, equip highways, subways, railways, new technology services related to the transition trend towards cashless treatment. Implementation of this direction is associated with the choice of the optimal structure of the service subsystem, providing reliable operation of terminals in the TLC.

5. FEATURES OF DEVELOPMENT OF LOGISTIC TRANSPORT SYSTEM OF RUSSIA

In recent years, we often hear and use the word logistics, but few completely understand the meaning of this term. Logistics in modern society is the means to achieve the strategic objectives of enterprises by coordinating the flow of processes and cross-functional integration (Karpova, 2013; Shkurkin et al., 2016).

Today made a mistake to assume that logistics is inseparably linked only to transport, but it is not so. So, allocate the purchase, production, sales, warehouse, logistics, inventory, logistics services, logistics, retail, etc.

But it is necessary to give due, transport really is not the last place in the formation of logistics infrastructure, its activities are manifested in various spheres of logistics, on-since without transportation, a powerful logistics strategy cannot be realized in full.

Indeed, the value of freight currently cannot be overestimated. Transportation of goods, as a service in demand, like a big business, and a private person. The difference is only in the scope and volume of the goods transported and the distance at which the goods are carried.

On a geographical basis cargo can be divided into international and domestic. International transportation is carried out on the basis of international treaties and agreements concluded between the countries. Transportation of goods in the country is carried out according to the rules of the state, which basically contain customary provisions of international agreements.

By type of transport used in the transportation of cargo are four main types of wasps' transportation: Road, sea, rail and air.

The use of different modes of transport has its own characteristics, advantages. Therefore, depending on the objectives for the delivery of goods, the decision on the choice of transport and route.

It should be noted that the international transport of a consignment, which often between states no land communication, the most commonly used vehicles of various kinds.

Transportation of shipments using a variety of vehicles called modal transportation.

Big business is actively using transportation services, as international arena and the domestic market. Unlike businesses, individuals use freight solutions for local problems. Typically,

this apartment or holiday moving, delivery of building materials, household items, etc. Transportation of private goods, for the most part, takes place over short distances within the boundaries of a city or region. For such shipments do not require heavy trucks, and transport companies are using low-tonnage vehicles. On long-distance routes are often used transport team when one vehicle carrying the goods of different senders. Long-distance trucking teams often are made using the railway or heavy vehicles.

Transportation market is constantly evolving, it appears the new players and new technology. The process of transportation is improved through the introduction of new logistics technologies (Sergeev, 2012).

For almost any load there is a suitable mode of transport to deliver the goods at destination at the lowest cost in the shortest possible time. Customer can only select the right shipping company that will perform the task professional cargo delivery.

Transport is an important element of the economy, whose main tasks are:

- Providing connections between regions of the country;
- Meeting the needs of the population in transportation;
- Raising the level of economic efficiency.

These problems cannot be solved with one type of transport. Therefore, in Russia all modes of transport interact, complement each other, forming a transport system, which is represented in auto rail, water-in pipeline, sea, air and river transport.

Transport infrastructure - a combination of all transport types, combined with each other points, in which there are several types of transport and goods carried exchanged between them. Main functions of the transport system:

- Realization of the benefits of territorial and inter zonal division of labor;
- Transportation of results of economic activities and population;
- Ensure the functioning of inter branch complexes and relationships, both within and between regions and countries (Dmitriev, 2012).

The transport infrastructure of the Russian Federation is a set of vehicles to be included in the concept of infrastructure, operating in the country. Transport network in Russia - one of the most extensive in the world, it includes:

- Railway traffic routes - 87 thousand km;
- Roads with hard surface - 984 thousand km;
- Overhead lines - 600 thousand km;
- River waterways - 115 thousand km;
- Oil and gas pipelines - 210 thousand. km.

Young Russian logistics industry needs to develop technology compatibility times-personal methods of transport: Sea, river, rail and road (Chueva et al., 2016). And while transport car remains the main and most effective way to deliver weights domestically.

Changes in the economic and political situation that took place in the Russian Federation for 2014, reflected on the state of the domestic market of transport and logistics services. According to RosStat, in the first 9 months of 2014 in comparison with the same period of 2013 cargo in road transport decreased by approximately 2.5% and on a railway - by 1.2% (according to JSC "Russian Railways"). According to Ministry of Transport in the first half of 2014 compared to the same period in 2013 aviation cargo turnover decreased by about 6%, which is presumably due to the instability of exchange rates and the negative investment dynamics. There are several trends formed in 2014 in the Russian transport logistics (Karpova, 2014):

1. In connection with the change in the foreign policy situation and the desire to explore new business areas, according to Ministry of Transport trucking large and medium companies in 2014 declined in five of the eight federal districts and grew up in the Central Federal District (3.9% in 2013), Siberian (+0.5%) and the Far East (15%). Also, if you compare with 2013 years in the study period, the volume of cargo shipment by "Russian Railways" network towards the ports of the Far East, they increased by 12%.
2. Another trend is to reduce the volume of imports of a number of food products from Europe, which is largely associated with the sanctions against the Russian Federation. According to experts, the problems on the Russian market of freight logistic services related not only to the political situation in the country and the crisis in the economy, which will definitely make the system deficiencies of the domestic transport logistics more visible and more exacerbate them. These problems are also associated with one of the highest levels of transport and logistics spending for subjects any economic activity, especially the production. According to various estimates, these costs reach 20% of GDP, which is about a quarter more than in China, and nearly three times more than in Europe.

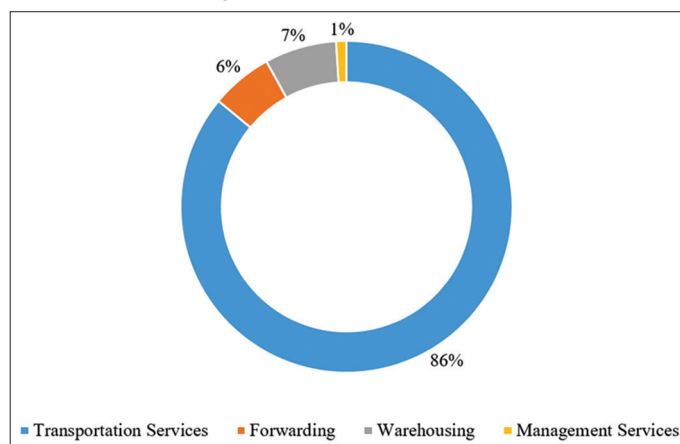
According to the first two months of 2015 recorded a significant increase in turnover of Russia's southern ports. According to the Association of Sea Commercial Ports, the growth of turnover southern harbors has shown its greatest dynamics (22.1%), ahead of its main competitors in the Baltic Sea (8.1%). The share of the harbors of the Azov-Black Sea are almost a third of total Russian turnover. The transport system of Russia as a whole and some of its key segments in need of investment and do not have the reserves' long-term sustainability. "Significant" "places" on the network of railways and roads are ways to sea ports, airports and border checkpoints (Dmitriev, 2012).

According to forecasts of Ministry of Transport of Russia, by 2030 the share of turnover in the harbors of the Azov-Black Sea basin, including the Crimea, will be more than 400 million tons of cargo per year, which is twice the volume today.

According to the forecast expert, the market structure of transport and logistics services in 2016 will appear as shown in the Figure 1.

As can be seen from the figure, the growth trend of storage services is maintained (in 2013, the storage services market

Figure 1: Forecast of the Russian market structure of transport and logistics services in 2016-2017



shares of 3.2%). Today it is the most promising segment of the market of transport and logistics services. But, at the same level of storage infrastructure remains quite low. So, of all warehouses volume in Russia only 4% opportunity to provide high-speed execution of loading and unloading a truck.

6. PROGRAM "DEVELOPMENT OF RUSSIA'S TRANSPORT SYSTEM (2010-2020)"

In accordance with the Decree of the Russian Federation to the Federal Target Program "Development of Russia's Transport system (2010-2020)" the Government of the Russian Federation will be held following program:

- Development of modern and efficient transport infrastructure for the acceleration of movement of goods and lower transport costs in the economy;
- Increasing the availability of the transport complex of services for the population;
- Increase the competitiveness of Russian transport system and transit realization in capacity of the country;
- Improve the safety and sustainability of the transport system;
- Improving the investment climate and development of market relations in transport.

To achieve these goals requires the following tasks (Shcherbakov, 2013):

- Development of means of communication (public roads, railways, inland waterways);
- The construction of high-speed roads and railway lines for the organization of high-speed passenger movement;
- Formation of a single road network year-round accessibility to the public;
- The development of the airport network (airports-hubs, nodes and local domestic Russian aero-ports);
- Increasing the capacity of Russian ports, etc.

Transportation through the territory of Russia is uneven due to the structure of the resettlement of the population of our country. Main highways are located precisely in the European part of the country.

The transport sector, as well as all branches of our national economy, requires the mobilization of investments.

The problem of formation and development of our country's transportation does not give due importance to the government level: There is a large number of plans for reforming the logistic transport system of the state, but most of them have remained on paper, completely unfulfilled in life.

7. CONCLUSION

Thus, based on this article, we can infer that the transport logistics market is faced with problems such as the poor infrastructure of the Russian Federation, a huge geographical extent of the country, lack of investment and growing demand for transport and logistics services. To address these problem requires deliberate state policy of development of logistics, which could make it one of the leading sectors in the domestic economy.

To secure the implementation of service technology becomes important stage monitoring economic performance and condition of the terminal network factors: The volume of demand, the placement and loading of specific terminals, their status, uptime and operating costs and profit. Stage monitoring should be performed based on SAP BI software in real time to govern the operation of the terminal service system.

The newest system property service networks, as opposed to locally installed thermo-channels, is the ability to customize and adapt to the expense of the general reserve fund services market changes, repair and maintenance services using analytical SAP storage capacity.

Thus, developed and tested in practice, technical, methodological and pro-software enables the mobile terminal network as a service component-conductive transport and logistics system of domestic and international passenger and freight traffic on lines of communication.

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