TRANSLOGISTIC PLATFORM: NETWORK COOPERATION

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ABSTRACT

In the article, logistics is a technology for managing network cooperation in a new model of economic growth that meets the requirements of people and goods mobility in the 21st century. Analysis of logistics as a factor of the current stage of economic growth is given. The main trends of formation and development of the translogistic platform as network cooperation in the product creation chain are considered; single / common business process; network interaction of business processes at the territorial level are considered. The conclusion is made about the need for development of logistics as a management technology that provides a synergetic effect on the basis of commercial and industrial network cooperation

Keywords: economy, logistics, translogistic platform, strategic partnership, economic growth, network management technologies, business processes.

Background. *The solution of urgent tasks of the Russian economy rests on a non-trivial process of «gathering» Russian businesses into production chains, clusters, agglomerations, «stitching» large regional production and consumption centers into meso- and macroregions with access to international economic corridors. Intensification of cooperative relations requires strengthening of horizontal links – interbranch and interregional – and can be productively implemented on the basis of logistics.*

Today, many states have taken the road of modernization / transformation of the economy through development of transport, logistics and trade infrastructure. The goal is not limited to the role of a «natural transit bridge», «natural gateway», «global transit hub», but provides for development of the country's economy as a global business center with new competitive advantages for participation in global value chains, with new competencies for implementation of large infrastructure projects, with opportunities to benefit from spatial location, international trade and investment.

Unfortunately, in Russia the potential of logistics as a rapidly growing sector of the national economy is clearly underestimated. Barriers for realizing the potential of logistics as a modern technology for supply chain management, organization of network business interaction, which reduces total costs, increases labor productivity and competitiveness, are:

– unbalanced state of the components of the logistics infrastructure (significant territorial and structural disproportions in location and development of the regions of Russia);

– lack of (especially new) competencies and insufficient scale of business of logistics companies;

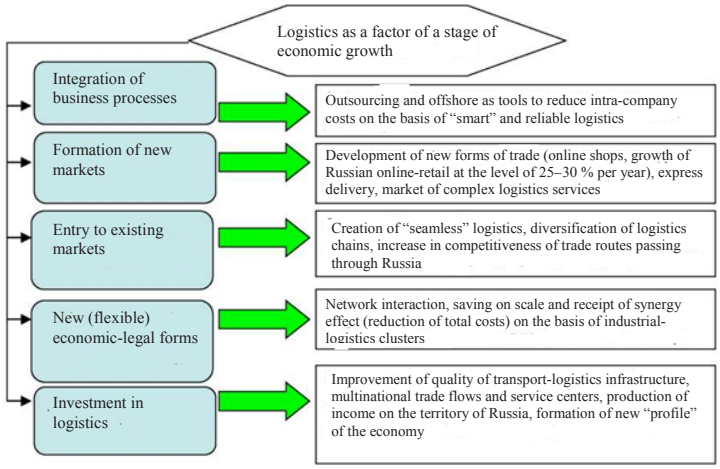
– lack of standards and generally accepted approaches to creation of logistics infrastructure facilities; reliance on developer classification of warehouse facilities (A, B, C, D), vicious when making decisions on formation of technical, technological and space-planning characteristics of facilities;

– backlog with introduction of electronic document management, high costs of administering logistics operations, inefficient customs procedures;

– insufficient organizational support for industrial cooperation and networking, territorial logistics infrastructure as a resource base for integrating the region's economy into the supply chain / value added, export flows.

Overcoming existing barriers is possible through formation of a national translogistic platform as a tool for organizing distributed production on the basis of a developed system of regional transport-logistics platforms / clusters with a specialized package of services (for oil and gas, machine-building, agro-industrial and other industries), interconnected via a route network, transport nodes, transport corridors.

Objective. *The objective of the author is to consider different aspects of a translogistic platform in modern conditions.*



Pic. 1. Logistics as a factor of a stage of economic growth.

Table 1

Comparative analysis of logistics development indices by countries

Positioning of individual countries in the rating LPI2014, World Bank			Positioning of Russia and China by group indices LPI2014 (LPI 2012 / LPI2010 / LPI2007)		
Place	Country	Value of LPI-2014	Category	Place	Country
1	Germany	4,12	Customs	1 (21 /6/ 12)	Norway
2	Netherlands	4,05		38 (30/32/35)	China
				133 (138/115/137)	Russia
3	Belgium	4,04	Infrastructure	1 (1 /1/ 3)	Germany
4	Great Britain	4,01		23 (26/27/30)	China
				77 (97/83/93)	Russia
5	Singapore	4,00	Shipment	1 (9/7/45)	Luxemburg
7	Norway	3,96		22 (23/27/28)	China
				102 (106/96/94)	Russia
8	Luxemburg	3,95	Quality and competence	1 (23/13/17)	Norway
9	USA	3,92		35 (28/29/27)	China
				80 (92/88/83)	Russia
28	China	3,53	Control	1 (7/4/5)	Germany
88	Kazakhstan	2,70		29 (31/30/31)	China
				79 (79/97/119)	Russia
90	Russia	2,69	Timeliness	1 (11/1/25)	Luxemburg
99	Belarus	2,64		36 (30/36/36)	China
				84 (94/88/86)	Russia

Source: «Connecting to compete 2014. Trade Logistics in the Global Economy. Logistics Performance Index and its Indicators», World Bank, 2014.

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

Results.

1. Logistics as a factor of a new stage of economic growth

A new stage of economic growth uses a «new portfolio of resources», the main characteristic of which is their flexibility, ability to complement and replace each other, and mobility. It relies on service economy (which does not have anything in common with de-industrialization of the economy), offering a complex range of services to service industries and sectors of the economy in order to minimize costs / increase productivity, optimize business processes and management systems. At the same time, the service economy itself can and produces new products, technologies, businesses and, consequently, new markets.

Logistics in modern conditions determines the directions of global flows of goods and services, effective logistics creates competitive advantages at the level of business organizations, regions, national economies, expands and unifies existing markets and facilitates entry into new markets. Logistics extends and diversifies the value chain, it can form the structure of the national economy, defining its «profile». Finally, logistics stimulates the flow of investment, gives them a sustainable character, allows us to consider their potential as a key strategic resource (see Pic. 1).

In turn, development of the logistics services market is influenced by innovations outside the logistics sector. New industries, new technologies and new product streams require a new design, global supply chains (GSC) and global value chains (GVC) that may not fit into existing system of transportation and location of logistics infrastructure. In this case, the previous infrastructure does not allow to realize the potential of new innovative solutions in the field of supply, which undermines reliability of service provision and raises the need to design a new supply chain configuration. The need for new logistical interactions is also due to rising energy sources prices, increased transportation costs for the product, may be caused by geopolitical risks. Suppliers and their customers face inevitably the problem of product distribution / supply at lower costs.

Thus, changes in the economy under pressure of logistics make the government and private sectors think about what type of investment is required, in what directions, what level / quality is needed to maintain the country's competitiveness. Understanding the motivation for making decisions in the field of logistics, as well as their impact on the economies of different countries, is an important starting point in the study of how multinational commodity flows reflect the characteristics of the markets of any economy and simultaneously form and promote economic growth.

Our analysis of the Russian market of logistics services shows:

– the bulk of services in the sphere of transportation, storage, management of stocks and supply chains is carried out by own forces of enterprises of commodity producers (68 %);

– 2PL providers prevail in the market structure (the share of services of 3PL providers does not exceed 8 %);

– the share of oil and gas transportation services is high (80 % of the turnover of the transport and logistics services market), and of raw materials.

Comparative analysis of the logistics development index, calculated by the World Bank, indicates a

significant backlog of logistics services in Russia, including compared with China (see Table 1).

The fragmented state of the components of the logistics system, characteristic of modern Russia (significant territorial and structural disproportions in location and development of logistics infrastructure, underdevelopment / inconsistency of the structure of the logistics services market with modern needs, insufficient use of logistics management principles in implementation of transit potential), is a powerful constraint in implementing the idea about creating a common economic space and a single market for logistics services.

Overcoming of fragmentation is possible when creating a «single regulator / coordinator» – development institute, which will allow to collect an integral strategic architecture for logistics and manage its changes based on information technologies. Such architecture will absorb the world's innovative developments. As a result, new integrated unified models will appear, introduction of which in all sectors of the Russian economy will create prerequisites for harmonizing the transition to international standards of logistics interactions.

The main positive effects of implementing an integrated logistics architecture will be manifested in integrated development of territories and regional unions, linking production clusters and consumption centers, creating new high-tech jobs. There will be new competitive routes, transport corridors, transport and logistics clusters, inscribed in international geopolitical consortia and cooperation.

So, the complex architecture of logistic interactions means that long-term benefits in the form of adding value, increasing trade and investment are possible only on the basis of solid integration of business processes of companies, which in combination will provide a high-tech result / product. It is a comprehensive view of the modern logistics architecture that avoids distortions in development of its individual components and ensures economic growth for companies, regions and countries.

Proceeding from this, it is proposed to develop and implement a strategy for development of a single market for logistics services on the basis of network cooperation of companies / organizations as a tool for strategic management. The development of the strategy will allow: (1) to identify «weak places» and «missing links» of logistics, so as to increase its potential, to achieve sustainable economic growth; (2) to prepare subprograms for integrated (interrelated) development of all components of the logistics system, including its staffing; (3) to create the basis for integration of business processes in industrial and logistics clusters on the basis of information technologies and the corresponding technological platform (terminals, warehousing); (4) to develop a model of strategic interaction between participants in integrated supply chains to improve the quality of management, reduce total (total) costs, optimize the financial result; (5) to propose tools for implementing the strategy and developing key competencies of companies in the Euro-Asian economic space, using targeted program projects.

To achieve these guidelines, we propose to create a translogistic platform as a space for coordinating management of global supply chains at the regional, national and international levels.

Today the term «logistics platform» is widely used, especially when it needs to be emphasized: a) importance of conjugation and complementarity of objects of transport and logistics infrastructure, possibility of their joint use; b) ability of agents-participants in the supply chain to network interaction to create and bring consumer value to the client; c) need to coordinate business processes within the boundaries of network interaction in order to simultaneously solve two tasks – improving the quality of service and reducing costs.

The logistics platform is a tool that allows to fully use the potential of logistics as a technology for managing supply chains, network interaction.

Translogistic[1] **platform** *is an economic space of network interaction / cooperation of companies, which is structured by a single / common process of product manufacture, a single (built by common standards) business network management technology, coordinating participants in the integrated value chain in regional, national and global markets.*

This approach includes three components: (1) a translogistic platform of the integrated supply chain, supporting production, value-added and trade cooperation in the chain of product creation and bringing it to the consumer (product markets); (2) a translogistic platform of a single / common business process that operates on the basis of complementary resources and competencies, combined into networked cooperation to achieve common results; (3) translogistic platform of network interaction of business processes at the territorial level: centers / parks, cities, agglomerations, regions / meso-regions, national, transnational formations. The key characteristic in all cases is network interaction based on logistics, which, as is known, is characterized by voluntary participation, coherence of actions, openness, trust between participants and the presence of a network cooperation coordinator.

The results of a study conducted by the consulting company KPMG showed that one of the priorities for the supply chain is «lowering the level of costs and current capital» (46 % of respondents). The solution of this problem is connected with ensuring transparency and awareness of producers about the supply chain: 40 % of respondents admit that they are not sufficiently informed about their supply chain, and only 14 % indicated that they possess complete information from their suppliers of the first, second and third levels; every third respondent believes that the problem of lack of awareness is related to imperfection of IT systems or the lack of required skills, but transparency of supplier organizations is surprisingly low [1].

The problem highlighted in this example indicates the unsettled (with rare exceptions) integrated supply chain, and more broadly, the lack of a common logistics platform along the product / value creation chain that ties the manufacturer and supplier together with a common business process with integrated business planning models, with shared values and standards of cooperation.

2. Translogistic platform for production network cooperation

The manufacture of different products has not the same number of stages of manufacturing, and consequently, the need for network interaction will also be different. The longest chains of value creation

[1] The term «translogistic» indicates overcoming of boundaries between the companies participating in the network, as well as intra-regional, interregional, inter-ethnic interaction.

Table 2

«Buyer–supplier» in the supply chain: the strength of interaction

WEAK ⟷ STRONG

	«Free», independent of each other relations	Sticky relationships	Vertical integration
Ownership relations	The buyer is not the owner of any supplier	The buyer maintains a certain level of relations with the supplier	The manufacturer company is the owner of the supplier company
Industry's characteristics	Low level of technology, labor-intensive production process, low development of technical specifications to parameters. Savings on scale	Low level of technology, labor-intensive production process, high requirements to terms of reference / parameters. Savings on diversity	High requirements for technology and the level of technical parameters of the product, labor-intensive or capital-intensive production process. Savings both on diversity and scale
Product's sector	Not durable for the consumer	Not durable for the consumer	Durable for the consumer
Product's characteristics	Standard, not differentiated (standard clothing, electronics, toys), long or short life cycle	Designer's, developed product (designer clothes, shoes), short life cycle of the product	Sensitive to quality product with a long life cycle
Buyer's characteristics	Large retailer in the low price segment. International retailer (product network in the triangle)	Brand owner. International retailer (grocery chain in a triangle)	Producer. Brand owner
Supplier's location	Developing countries from a low-income group of countries	Developing countries from a low- or middle-income group of countries	Developing countries from a medium- or high-income group of countries
Transfer of technologies buyer–supplier	None	Possible	Mandatory

Source: Backer K. D. Miroudot S. Mapping Global Value Chains/OECD Trade Policy Papers. No. 159//dx.doi.org/10/1787/.

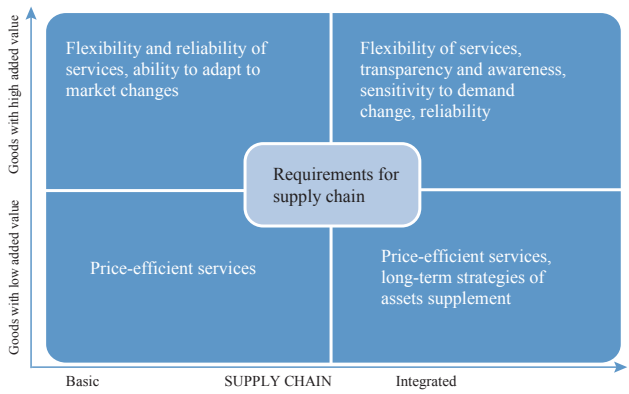
are built in the food industry, automotive, clothing, electronics production.

In other words, the need for integrated logistics will depend on the complexity and duration of the product creation chain (see Pic. 2).

The company can differentiate its products according to the degree of their complexity and thereby segment the markets of the logistics services required for it: transportation, outsourcing, management logistics in the interests of the client. Table 2 shows the types of buyer-supplier interaction, depending on different criteria.

The more complex products the economy produces, the more it needs to build integrated supply chains, requires a developed infrastructure network and availability of complementary, integrated services, that is, application of logistics as a technology for network interaction. If there are no well-built logistics platforms that provide multimodal and intermodal transportation, online information communications, financial and other business services, to move goods and coordinate the process of producing added value, production chains will tend to be simplistic and closed.

The dependence of the Russian economy on imports is well known. It's not just about his high share of food supplies. There is high specific weight of imports in the costs of enterprises for raw materials,



Pic. 2. Supply chain requirements, depending on the levels of added value.

materials, purchased semi-finished products and components for production of goods and services. The production dependence on imports of imported products is not so much the result of being involved in global value chains, but rather the result of technological backwardness of Russian production chains that were forcibly cut off by the producer of the product and replaced for deliveries from abroad. At the same time, a branched system of successive productions is cut off from participation in the production chain, which turns out to be unclaimed.

In Russia, the process of import substitution now has a leading role in ensuring growth in the real sector of the economy. The Government of the Russian Federation adopted the Import Substitution Program, primarily in those sectors where the dependence on imports ranges from 60 to 90 %. According to the plans of the Ministry of Industry and Trade, by 2020 it is necessary to ensure a radical decline in the market share of imports in more than 2 000 types of products.

The formation of a complete production chain is (1) substitution of imports of finished products by importing components for its production; (2) production of components and transition to the import of parts for components; (3) production of parts and completion of the full production cycle.

Import substitution is accompanied by a change in the sectoral and spatial structure of production, access to new markets for the domestic producer. Localization involves production cooperation and networking, demands for integrated supply chains, logistics services / products.

Thus, the question arises of assessing the extent to which the transport and logistics infrastructure is ready to connect production / technological chains in which the business operates; how they relate to the existing transport and logistics infrastructure; what needs to be done to collect new logistics chains, including transport routes and economic agents; which components should a translogistic platform include to ensure localization of own production; how quickly the missing links can be built.

3. Translogistic platform of a single / common business process

The platform of the business process, built on the use of complementary resources and competencies, allows implementation of «seamless» logistics for development of interrelated and complementary industries, related activities in the direction of obtaining a common result / goal. Coordination of interests implies existence of a focal point, functions of which can be performed by a company-integrator. In such network cooperation, availability of common technological standards and regulations, formation of a common operating platform, which gives an opportunity to consolidate assets, to gain economies of scale, to ensure the quality of services at competitive costs, acquires an independent value.

Dubai World Central (DWC) is a globally integrated transport and logistics platform covering countries / markets in Europe, Africa, Southeast Asia, the Far East, and integration of business processes with complementary resources and competences based on logistics.

United Arab Emirates (UAE) use their natural competitive advantages – geographical location, historical role of trade and modern tourism. Dubai is a gateway to the Middle East, Asia and North Africa and specializes in serving international cargo flows between India, Southeast Asia, Africa, the Far East and Europe. During recent years Dubai has rapidly transformed into a world hub for re-exports. The infrastructure facilities are Al Maktoum Airport and the Jebel Ali seaport (the largest container port between Singapore and Rotterdam), an industrial center for preparation for transportation and delivery of perishable products, including those treated with cold (possesses the latest technologies and occupies key positions in this market) – are interconnected by a common logistics zone and operate on a common operating platform with direct access to the UAE road network, air and sea corridors, thereby reducing the flow time of cargo sea-to-air / air-to-sea. The operating platform functions in a free economic zone, as a result of which transport and logistics services are provided with an unprecedented level of accessibility, speed and efficiency.

The development of transport, logistics and trade infrastructure in the region is seen as a leading lever for profound changes in the direction of participating in global value chains, diversifying the structure of the economy, benefiting from spatial distribution, international trade and investment. At the same time, the goal is not limited to the role of a global transit hub for international trade and tourism, but it provides for transformation of the region into a global business center at the world level, which provides professional support for business – accounting, legal and banking. Competences developed in the UAE for creation and operation of global transport and logistics hubs have now become the subject of export: Dubai Port World is a consultant for the international sea trading port of Aktau (western transport hub, Kazakhstan) to diversify its activities; in early 2016, an agreement was signed with RPIF (Russian Private Investment Fund) on establishment of a joint venture (DP World Russia), which invests up to $2 billion in various Russian ports and transport and logistics infrastructure enterprises.

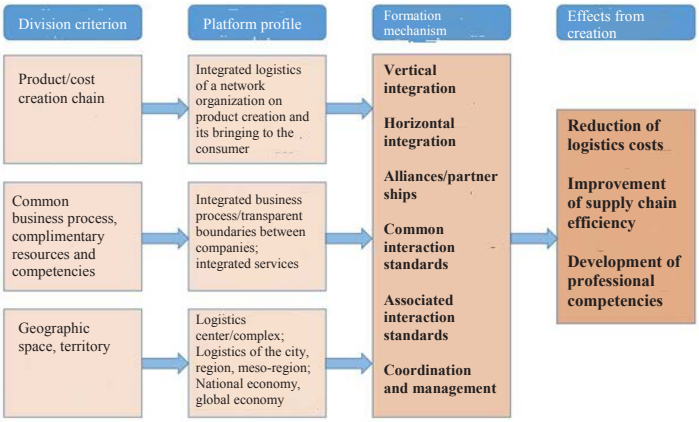
4. Translogistic platform at the territorial level

As a rule, the translogistic platform is «tied» to any territory. In this case, we talk about logistics centers, logistics parks, transport and logistics complexes. We can also choose larger territorial units: city logistics platform, transport and logistics platform of the region, the country.

In Portugal, 12 logistics platforms are identified according to criteria such as strategically defined zones with a specialized infrastructure that allows to provide high-quality services; accessibility of several modes of transport with the possibility of their combination; competitive costs of the services provided. Together they form a national logistics platform that strengthens the country's role as a «natural gateway» to Europe.

Part of the planning for development of a large region (meso-region) of Mexico City, home to 40 million people, is the design of a network of logistics platforms [2].

In May 2015, the multimodal transport and logistics complex South Urals (Chelyabinsk) was launched, the delivery time of cargoes decreased from 50 to 7 days. In the future, it is planned to create a free economic zone and a number of productions on the territory of the complex. The outlines of Chelyabinsk-Yekaterinburg HSR project have already been defined with the prospect of entering Moscow-Beijing HSR. The new transport hub will include logistic centers of two regions, including TLC South Urals. Reconstruction of highways, including to the border with the Republic of Kazakhstan, construction and



Pic. 3. Profiles of logistics platforms and effects from their formation.

reconstruction of Chelyabinsk airport (Balandino) with construction of a border crossing point at the airport will allow the South Urals to become the new Russian «gateway to Asia», access to Asian markets and implement plans for development of the transport corridor to Kazakhstan and China.

As we can see, in all the examples given, the translogistic platform is a geographical space with specialized infrastructure and services strategically located on the territory in such a way as to ensure the logistics of the territorial markets, their interaction with other regional, national / global markets, inter-organizational and interregional network cooperation of enterprises.

The formation of a territorial logistic platform is most often associated with the building up and modernization of physical infrastructure: construction and reconstruction of warehouses, terminals, etc. In recent years, Russia has been developing precisely in this direction: construction of logistics and distribution centers, growth of a private wagon fleet, infrastructure of seaports and land ports. It is no coincidence that Russia has moved from the 97th place to the 77th in the rating of countries on the index of logistics development (LPI), determined by the World Bank (2014), according to such an indicator as «infrastructure».

However, large infrastructure projects must be strategically linked with development of industrial production centers, localization of consumer demand, industrial parks / complexes, economic zones, that is, they should be supported by business activity, commodity and human flows, which will ensure the loading and efficient use of transport infrastructure facilities.

By the totality of the characteristics, it is possible to identify certain «profiles» of logistic platforms, mechanisms for their formation and effects from functioning (Pic.3).

Conclusions.

1. Translogistic platform of any profile has a technological, organizational basis that provides network interaction and thereby form a common economic space for integrated logistics services.

2. The technological basis of the translogistic platform is formed by supply chain management models; IT-technologies that support the functioning of business processes and control in real time mode; developed logistics infrastructure as a basis for interfacing all modes of transport and organization of multimodal transport, warehousing and terminal facilities. The technological basis forms a common operational platform, which allows implementing common technological standards and regulations.

3. The organizational framework of the translogistic platform is a mechanism for coordination and management of network interaction through creation of project multifunctional teams / offices operating on a common information platform; long-term service (routing, schedule threads, flexible tariff policy); electronic document management, «single window», «single ticket», «single tariff», etc. Networking is based on alignment of a single business process – inventory management, transportation, distribution, development of new products / services – for customer service and assumes the optimal combination of vertical and horizontal integration mechanisms based on logistics.

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