Theoretical aspects of innovative trends and features of the transport services on the modern transport market

Ekaterine Tavberidze 1+

1 Ioan Cuza University of Iasi, Business Administration, Iasi, Romania

Abstract. The article provides views of various authors on the definition of "innovation" in the field of transport services, as well as the author's understanding of this issue. It introduces the term "innovation" in the legal turnover, says about the state impact on innovation, encouragement and tries to identify a possible approach to the development of the desired definition. In the second part of the paper, the tendencies of development logistics services in the modern world are mentioned, statistical data of import and export of logistics services and continuing growth of demand at market of these services

Keywords: innovation in transport services, logistics, features of transport services.

JEL Codes: L910.

1. Introduction

Under modern conditions, the concept of "innovation" is used extensively. However, despite this, we still do not have the definition adopted at the legislative level.

Back in the 20th century, during many decades, economists knew that innovation was the main source of long-term economic growth, the core competitiveness in the world markets for goods and services, and a source of solutions to many social problems[1]

2. Theoretical aspects of innovative trends in transport market

The term "innovation" was first introduced by scientist Joseph A. Schumpeter in 1912 in "The Theory of Economic Development." By innovation, he meant innovation, that is applied in the field of technology or management of a business unit. According to Schumpeter, innovation is one of the main generators of revenue. Most often, innovation generated by research and development activities, changes market conditions.

He drew attention on the fact that a new combination of factors of production can be a combination of new and existing productive forces. The new combination was manifested in the form of a new product, service, engineering, technology, etc. Joseph Schumpeter emphasized the importance of organizational innovations in the organization of production; he saw the importance of innovation in the fact that they form a new market. What is the theoretical basis for the development of innovations in the field of international transport services? Schumpeter identified the five most common types of changes:

- The introduction of new technology, new technological processes of specific production.
- The introduction of products with new properties.
- The use of new raw materials.
- Changing the organization of production, including resource provision.
- The creation of new markets[2].

* PhD student, e-mail: katrinacat89@mail.ru; T. +40729 246338.
The next German economist who made a contribution to the development of innovative theory was Gerhard Mensch (1880-1975). He continued Schumpeter's study and divided innovation on the: basic innovation, improving innovation and pseudo innovation.

Basic innovations are at the heart of a new economic cycle, they form a new industry or profession.

Improving innovations are technological improvements and are manifested in the practical implementation of the new features underlying basic innovations. It is improving innovation which is the basis of short and medium waves.

Pseudo innovations directed to a partial improvement of outdated technology, social systems and institutions [3]

Without the introduction of the term "innovation" in the legal turnover, talk about the impact of state on innovation and their promotion is problematic. As part of our thesis research we will try to determine a possible approach to developing the required definition. But first we will try to understand how the requirements of this definition must match. First, the term must have relative stability, that is, it should not be tied to the needs of a single normative act, and to be as wide as possible, and at the same time quite unique. Second, it must conform to the interpretation adopted in international instrument by the WTO, EU, etc.

In our opinion, this issue should be solved with the state's position: what it is going to encourage: activity or result. If we talk about the scientific search, each search needs encouragement: as effective, as not. If we speak about promotion of innovative processes, we think, it should be linked to the outcome. It is a worldwide practice.

Moreover, what we should determine for which generally all this activity is carried out, why investors agree to finance this activity? It is known that the investor is not investing money in any technology, any company as such. The investor invests money in the business, i.e. in the creation of a mechanism of making money. Therefore at the analysis any proposal he is only interested in the fact it happen as a result of its implementation to build or improve the mechanism of making money, how much it will be reliable and efficient.

Since the benefits, unlike profits may be both direct and indirect, that we are talking about the benefits, rather than profits. Innovation still only creates the conditions for obtaining benefits in the future.

Consequently, the definition should include concepts such as "economic benefits" and "improving consumer properties of a product."

For today, there are traces for global trends: the role of the state in the formation and regulation of institutions that provide an innovative way of development of the economy increases the rate of diffusion of new technologies and launch innovative products on the market, a rapidly growing R & D funding, increased interaction between the business and academic sectors.

Therefore, summing up all of the above, we can formulate the following definition of innovation: "Innovation - new or improved products (goods, works, services), process (technology) of its production or use, innovation or improvement in the organization and (or) production economy, and (or) the sale of products that provide economic benefits, creating conditions for such benefits, or increase work products (goods, works, services).

According to this definition, innovation can be defined as the execution of works and (or) services for the implementation of innovations.

For the purpose of our research, based on the study and analysis of the existing definitions of the term "innovation", we have formulated the author's definition of "innovative services in the field of international
transport of goods." In our opinion, innovative services in the field of international transport of goods - a system of technical, technological and organizational innovations brought to the stage of practical use and provide commercial efficiency in a market economy.

Despite the problems, such as lack of financing innovation, primarily due to the lack of venture funding, the lack of government guarantees in the early stages of the innovation process, a strong monopolization of the markets, mainly due to the dominance of large companies, our country has a number of benefits that will contribute to accelerated transition to innovative development: an advantageous geographical position, relatively high educational level of the population, the availability of highly qualified scientific personnel for the development of innovative industries.

The special state goal should be the promotion of innovation in all sectors of the economy, including transport services. Popularization of innovation is a very important factor, as mastery of the broad masses of the development of innovative ideas - one of the essential conditions for the transformation of consciousness of society and the economy.

The development of international transport services will be facilitated by the implementation of priority directions of innovation policies implemented by the state, consisting of the creation, development and dissemination of techniques and technologies that lead to radical changes in the technological base. These works are, as a rule, cross-sectoral in nature and cannot be solved with the existing single-product (industry) the principle of organization and planning, works by major industry scientific and technical projects that require large-scale concentration of resources that are beyond the power of individual enterprises, scientific and technical support for measures aimed at realizing social objectives of society (through the development of health, education, culture, environmental protection, infrastructure).

Transport in the context of globalization and the rapid growth of international trade is one of the most important factors in the economic development of the country. An efficient transport system is conducive to the growth of national and regional economies; it becomes an important factor in shaping the competitive advantages of domestic carriers.

The market for transport services in the world is currently undergoing a process of fundamental changes that have a dramatic impact on the role and scope of activities of the participants and the structure of their relationship.

The main driving forces for the market in question are:

- The globalization of client companies.
- The concentration of client companies on core competencies and outsourcing non-core.
- Reduction in product life cycles and new approaches to marketing and distribution of the product, the increased role of innovation accelerated development of e-business.

**Transport's production is displacement.** Useful effect appears as a result of displacement, the final outcome - delivery of goods and people to the point of destination. This is the main "product", i.e., transport service, which has the form of consumption of immateriality. However, like all products, it is characterized by its qualitative features, i.e. to sell it successfully you need to ensure a high level of quality of transport services: delivery just in time, without loss, with a maximum share of facilities for customers. Provision of all this requires considerable material, labor and financial resources. Consequently, transport services have a certain value (use and exchange), which occurs in the transport process and is included in the price of goods at the place of consumption. However, the price of transport products on the market, like any other commodity, should be determined by supply and demand based on socially necessary labor and consumer properties of traffic.
Thus, the features of the market of transport services are:

- immaterial nature of the transport production, as well as any services (inability to accumulate “in reserve”, the coincidence of processes of production and sales, etc.);
- universality and mass transport market in society, its monopoly;
- The role of rail transport in the transport market largely depends on its universality productivity, placing communications, level of technology, and the freight capacity, cost, convenience, and safety of transportation. These figures characterize the volume and quality of the proposals of transport services;
- Demand for them, according to cargo shipping, shape socially necessary requirements in the material exchange. Supply and demand for transport services by modes of transport determines the level of participation of each of them in the transport system and at the same time is an incentive for their development.

An important principle of the modern market is to focus on the final result. In this light, the main thing is not the cost savings and the provision of high quality services that meet the requirements and (or) the desires of the consumer. Such quality usually requires an increase in costs. However, due to the increasing demand for such services, increasing the number of sales (and even more so at a slightly higher price), manufacturer's profit may even increase, consumers will be more durable quality product (thus saving on the purchase frequency) or the most complete and the desired service.

3. The main trends of development of logistics services in the modern world

One of the main trends of development of modern economy is steady growth of share of services. For many countries now the trends of increasing the volume of production of services are characterized, income from service activities, employment growth in this sector, competition, exports and imports services [4].

The big impact on dynamic development of international services trade has high level of development of modern information technology, the widespread use of which facilitates various types of services even for those consumers who are far from the manufacturer. The modern market of international services is characterized by an increasing degree of mobility of both producers and consumers due to reducing transport costs; increasing the share of services provided remotely (without direct personal contact of producer and consumer of the services); increase of the demand for services previously had the commodity form: it concerns financial services, banks and insurance firms.

These changes, together with the growing trade between the countries and the ever-increasing movement of people, determine the enhancement of the role of logistics services in today's global marketplace. Therefore, recently, the growth in the volume of logistics services, which was typical for developed countries, already began to be observed in almost all the countries involved in world trade in goods and services. Moreover logistics has become to be a kind of catalyst of flowing globalization.

The global or international transport system was fully formed in the 20th century, however, and after that it is in a constant state of development. A great importance in this system have innovative also the information technologies, which contribute to this development. The main directions of development are: development and introduction of new types of transport, increasing the capacity of transport routes, movement speed increase, improve safety and increase capacity. Today, the management of the system is connected with the implementation of a vast number of operations, such as traffic lights control, arrows control on the railroad tracks, supervisory control of airplanes, etc. Basic quantitative evaluation indicators of the global transportation system are cargo and passenger turnover, total length of routes and number of
people involved in the work of the system. The elements that make up a modern infrastructure of Railways, are transport corridors crossings, types of vehicles (Fig. 1).

Transport corridors are set of main transport communications of various transportation with the necessary means to provide transportation of goods and passengers between countries. The system of international corridors includes export and transit pipelines.

Transport nodes are complex transport devices in the junction point of a certain amount of transport, which perform local and urban transportation of passengers and cargo. These nodes act as control valves, failure of which creates a problem for the functioning of the entire system.

Big cities always are big transport nodes. In them trade, developing industry, as well as many jobs available in transport terminals are concentrated. Most cities arise exactly at the intersection of aquatic or terrestrial routes. For example, such city ports as London, Marseille, Paris and so on. Global transport system contains a regional transportation system of inhomogeneous structure. For example, in developed countries, transport network is quite dense (50 - 60 km per 100 sq. km), and in developing countries they are much smaller (5 - 10 km per 100 sq. km.) 30% of the global extent of the ways is in North America, which is the leader in cargo handling most vehicles.

The total length of the world's transport networks (without seaways), more than 38 million km: motorway - 26 million km; railroad tracks - 1.24 million km; pipelines - 1.8 million km; airways - 9.6 million km, river ways - 0.57 million km. In developed countries, the length of transport networks is about 79% of the world total length of the transport networks. They can account for up to 75% of global turnover.

Fig. 1. Infrastructure of line of communication (created by author)
Logistics services are specific products, bought and sold in international transport markets, which differ depending on the types of transport, geographic areas of carriage, and types of goods. In the global import and export of all kinds of services, the share of transport services is about 24% (5.5 trillion U.S. dollars). Certainly, providers of freight forwarding services to the world market are inferior in value indicators to exporters of goods, but only the biggest ones[5].

The logistics service provider is the United States. Their export is about 80 - 90 billion dollars. But they import freight forwarding services in the year in the amount of 90 - $100 billion. The largest exporters of these services in the world are Germany (25 - U.S. $26 billion), Japan (40 - 45 billion U.S.) as well as Britain, the Netherlands, Hong Kong (22 - U.S. $28 billion), Korea and others [6]. Sole leader in import logistics services are also the United States. After U.S. by volume of imports of transportation services are: Germany - $52 billion (7.56% of the market), Japan - $42.3 billion (6.24% of the market), United Kingdom - $35.8 billion (5.21% market share); France - $29.5 billion (5.01% of the market), Denmark - $23.9 billion (3.48% of the market), India - $31.1 billion (3.47% of the market); Republic of Korea - $29.9 billion (3.41% of the market), Italy - $22.6 billion (3.3% market) the Netherlands - $16.6 billion (2.41% of the market), etc. (These are average volume). [7]

A large proportion of the global turnover currently applies to maritime transport (62%), second place takes rail transport (16%), the third - road transport (8%) (Fig. 2). According to passenger turnover first position on the world market has road transport (71%), the second - air (18%), the third - rail (10%). As regards maritime transport, it is in last place, and it accounts for about 1% of the world passenger [8].

According to a new "Business Plan transport company - 2011 (with financial model)", developed by the experts of the consulting company Intesco Research Group, in the period from 2006 to 2008 the market of logistics services grew rapidly. [9]. In 2010, the economic situation changed, the market grew by 25%. Thus, the global transport system, including lines of communication, transport companies and vehicle was fully formed in the 20th century. However, its improvement and development today is the continuous process that reflects the growth of values of turnover and passenger turnover, the total length of routes and the number of people engaged in the work of the system.

4. Conclusion

The main factors of development of the global transport system are innovation and information technologies, the usage of which contributes to the development and introduction of new types of transport, increase the capacity of transport routes, increase movement speed, improve safety and increase the carrying capacity.

In today’s world a single logistics center has developed under the form of co-operation of activities of a small number of powerful transport and freight forwarding companies and hundreds of thousands of small and medium forwarders and logistics companies. According to the International Federation of Freight Forwarders Associations [10] currently in this field in the world operates 35,000 large and medium shipping firms with personnel totaling about 8 million people. Logistics companies control about 60% of traffic trunk modes and up to 75% of international traffic.

5. References


[9] Zhelyabin I., Delivery from door to door, Bulletin of transport information No 5, 2011 p. 21