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## ROLES AND FUNCTIONS OF THE TRANSPORTATION PROCESS PARTICIPANTS AND FEATURES OF THEIR RELATIONS UNDER CONDITIONS OF THE INDUSTRY REFORMING

**Introduction:** Effective performance of the transport sector plays an important role in shaping the economic, financial, politically stable and developed country. It increases the competitiveness of the national economy and positively affects the quality of the life. As you know, different actors are involved into providing transportation process, the main purpose of which is to obtain the greatest benefit. Their coordinated activities affect the safety, efficiency, economy and environmental performance of transport services. the relationships between participants of transportation process are changing in modern conditions of reforming. **Objective:** In order to understand the impact of current trends in the transport market onto the interaction between participants of transportation process is important to identify features of the transportation process. Namely, we need to define their roles, functions and objectives and to analyze the current situation in the transport market. Later it is necessary to predict the trends that will occur in the future, and determine how they will affect the effectiveness of the industry as a whole. **Results:** Bottlenecks in the structural organization of the railway sector in Europe, America and Asia have been identified and analyzed. Depending on this, roles and functions of the participants of transportation process were identified, which are interacting in the modern market. We also highlighted the basic principles of infrastructure pricing and identified possible common objectives for transportation companies and infrastructure managers that would meet the basic requirements of the end user. **Conclusions:** Ukraine is at the stage of reform and we should correspond the regulatory framework with the world in order to further integrate in the global plane. This includes conditions of interaction of transportation process participants and its regulation on the transport market

*Keywords:* pricing, infrastructure, marginal costs, natural monopoly, tariff

### Analysis of recent research

Over the last 20-30 years, given the globalization of today's economy, the world market of transport services has undergone significant transformations, including followings:

1. The liberalization of the market, the rejection of discriminatory regulation, changing outdated monopolistic tendencies, increased competition, the development of interoperability.

2. Unification and universalization of vehicles, technologies, specifications, active development and modernization of transport infrastructure, changes in the functioning of national transport systems in accordance with international systems.

3. Increased transparency of companies operating in the industry, the openness of information, including financial information.

Strengthening the role of logistics also greatly influenced the market of transport services. Basic principles of logistics based on the achievements of information technology and the demands of the international level.

By integrating Ukraine into the global economic and political relations we move towards strengthening the national economy, which requires the development of transport infrastructure, information and telecommunication systems, the development of intermodal transport, improving service quality and implementing ways to reduce their costs.

All these processes have left their mark on the roles, functions and scope of activities of market participants and the structure of their relationships.

Ukraine is at an intermediate stage of reforming, an important element of which is change of outdated for today's demands of the market organizational structure and eliminate monopolistic tendencies that have developed historically and hindered development of the industry as a whole. One can not ignore the fact that we have a valuable experience of countries with developed market economies.

Thus, the separation of infrastructure management from train operations became a way of improving the transparency and non-discriminatory access to the market.

### **Examples of a new structural organization of the industry**

Currently, there are several models of the structural organization of the industry, among which the main ones are the so-called «European» and «American» models. «European» model implies a competition not between vertically integrated companies, but between transportation companies. Thus, companies use single infrastructure.

In these models, essential distinctive element is the transfer of property to the state or to a private company. Such category, as ownership is related to the central problem of economics - the problem of limited resources. In field of limited resources a conflict over their usage always emerges. In the provision of services in rail transport such conflict is primarily concerned with infrastructure. It is understood that the problem can not be completely solved by establishing property rights. But it allows to achieve a degree of stability and predictability, because in some way it reduces the uncertainty of the environment.

Examples of 'European' structural organization are such countries as the UK, Germany, France, Finland, Estonia. In the UK, there is an independent non-profit infrastructure company Network Rail, 100 % of which belongs to the state. The Network Rail incomes are formed not only through fees from independent carriers, but also due to significant government funding. In Germany the infrastructure company is also state-owned and is a separate company DB Netz in the holding company Deutsche Bahn AG. In France, till 1997 the infrastructure had been owned by the state company SNCF. After the reorganization the RFF company was created by the state, which took over the ownership of infrastructure, and the main task of which

is its development now, while SNCF is still responsible for the operation and maintenance. Estonian company infrastructure, as in Germany, is an independent company AO EVR Infra group in the state JSC «Estonian Railways» and is wholly owned by the state.

In «American model», which is a vertically integrated too, vertically-integrated companies directly compete with each other and provide services on their own infrastructure.

USA, Canada and Mexico Infrastructure Companies are parts of vertically integrated companies and are 100 % private (in Mexico on the Rights of the concession). In the United States the most of infrastructure is owned to cargo carriers (Burlington Northern Santa Fe, Union Pacific, CSX Transportation, etc.), regional and local companies, carriers of passenger and Amtrak terminal companies that provide shunting operations, sorting cars etc. In Canada infrastructure is owned by freight carriers such as Canadian National, Canadian Pacific Railway and others, as well as regional and local companies. In Mexico the main infrastructure owned by companies: Transportacion Ferroviaria Mexicana, Ferrocarril Mexicano, Ferrocarril del Sureste, Ferrocarriles Chiapas Mayab, etc., as well as regional and local companies in small areas.

Thus we can conclude that the separation of infrastructure management from train operations in countries with developed market economies occurred in two ways: institutional and organizational. But despite the fact, that each country went its own way of reform can be traced similarities in new organizational structures railways in Europe.

### **The roles and functions of transportation process participants in the modern terms**

Financial cash flows and the process of subsidies distribution became transparent due to the separation of infrastructure management from train operations as well as roles and tasks of key stakeholders of rail transportation (government, transportation companies, infrastructure managers, end-users of the services) became clearer.

Thus, the government has an important, irreplaceable role: Guided order to increase social welfare, the government determines the direction of the industry and the transport policy. Therefore, as the owner of the assets (infrastructure) and guarantor of the public interest, the government performs the following functions:

- 1 Formation of transport policy;
- 2 Providing concession to operating companies and managers of infrastructure;
- 3 Financial supports of construction, maintenance and renewal of infrastructure;
- 4 Support in the form of subsidies to transportation companies whose activities are unprofitable due to social orientation.

In turn, as the owner of the railway infrastructure, the Government appoints a body that is responsible for creating quality conditions of the transportation process, namely:

- conveying capacity and functionality of infrastructure;
- reliability and safety infrastructure;
- providing information on the activities of infrastructure;
- determining economically reasonable fee for access to infrastructure.

The governing body is responsible for infrastructure development and maintenance of railway transport infrastructure, distributes and manages infrastructure facilities. The prices, that are to be determined, must meet the following pricing principles:

1. Transparency should provide service users the opportunity to receive full information about price components for allowing them to evaluate possible alternatives that is an important element of commercial enterprise. Moreover transparency promotes better understanding of the stakeholders. Knowing the price components the parties can predict possible changes.

2. They should provide a high degree of equivalence between those who benefit from the use of infrastructure, and those who bear the costs of their provision for use and maintenance. This statement is based on democratic principles and leads to the costs reimbursement.

3. Transaction costs should be taken into account when setting prices for access to the infrastructure and when deciding to invest in infrastructure. These costs are the result of the complexity of the world and the bounded rationality of economic agents. They depend on where the coordination system conducted economic transactions. Too high transaction costs may prevent the implementation of economic action.

4. Price system should contribute not only to providing optimal number of tracks of correct quality, and result in minimal inputs and technologies to minimize costs. Unlike perfect competition

markets, technical efficiency is not achieved automatically in the field of rail transportation. Considering only the actual expenditure when pricing Infrastructure Managers lose incentive to reduce costs and, thus, there is technical inefficiency. An important observation is that the degree of technical efficiency can not be provided without the appropriate regulatory - legal framework.

Transportation companies, in turn, are independent companies that act as intermediaries between infrastructure owners and passengers and shippers. Transportation companies should provide:

- the required frequency, speed, communication and availability of transportation;
- reliable and safe transportation in a safe rolling stock;
- true, accurate, consistent and relevant traffic information.

It should be noted that an important feature of the separation of infrastructure from operations is the emergence of a large number of independent transportation companies which, at the same time can not exist without close interaction. More effective their work will be in the case of the existence of common goals and perspectives of the conditions for exemption from general liability - each company is only responsible for their actions.

To prevent suboptimization, a commonality main goal of all entities railway industry is important. That may be the aim of meeting the needs of users of transport services of passengers and shippers and improving service quality.

## Conclusions

Note that the separation of infrastructure management from train operations is not essential for the passengers or consignor companies, as fundamental to them is that their cargo (or passengers themselves) were transported at specified time at a specified location on contractual terms. So, to achieve this goal, first of all the following requirements are to be implemented:

- Safety;
- Reliability;
- Mobility;
- Appropriate and flexible information system;
- The convenience and comfort of travel;
- Availability of transport services;
- Sustainability.

Creating a legal framework is an important step in the development of effective relationships between the subjects of the transportation process. With the prospect of Ukraine's integration into global and European transport systems the regulatory framework should meet the requirements of the international community. Reform of Ukrainian Railways conducted in accordance with the requirements of the EU Directives, as the first stage of the association had already been signed. Such adaptation is a legitimate reason for the EU membership. «The concept of the State program of reforming the railway transport of Ukraine» was adopted by the Cabinet of Ministers of Ukraine. Also «State program of rail transport for 2010 – 2015» was approved by the Cabinet of Ministers of Ukraine in Dec. 16, 2009. «Railway Transport Development Strategy for the period up to 2020» has defined the conceptual basis of the formation and implementation of state policy on providing industry development of railway transport of Ukraine.

Reforming the system of rail transport is not only important for today, but also listing an objective necessity. Backlog reforming other CIS and European countries reduces the competitive opportunities of Ukraine Railway Transport in the global transport market, making it impossible to use the full extent of market mechanisms of management and further development of the industry. Railway reform in the first place requires a qualitative improvement of the legal framework and organizational structure, which requires a systematic, comprehensive approach. Also need a systematic analysis of the impact of restructuring on the participants of transportation process. Reforming the system of rail transport is not only important for today, but also listing an objective necessity. Backlog reformation of other CIS and European countries reduces competitive opportunities of Ukrainian Railway Transport on the global transport market, making it impossible to use the full market economic mechanisms and further development of the industry. Railway reform requires a qualitative improvement of the legal framework and organizational structure, which requires a systematic, comprehensive approach. Also, a systematic analysis of the impact of restructuring on the participants of transportation process is needed.

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## РОЛІ, ФУНКЦІЇ УЧАСНИКІВ ПЕРЕВІЗНОГО ПРОЦЕСУ ТА ОСОБЛИВОСТІ ЇХ ВЗАЄМОВІДНОСИН В УМОВАХ РЕФОРМУВАННЯ ГАЛУЗІ

**Вступ.** Ефективна діяльність транспортного сектору відіграє важливу роль у формуванні економічно, фінансово, політично стабільної та розвинутої держави, підвищує конкурентоспроможність національної економіки, позитивно впливає на якість життя населення. Як відомо, у забезпеченні перевізного процесу беруть участь різні суб'єкти, основною метою діяльності яких є отримання найбільшої вигоди. Цілі їхньої діяльності можуть не збігатися, але ж саме злагоджена їх діяльність впливає на рівень безпеки, оперативності, економічності та екологічності транспортних послуг. У сучасних умовах глобалізації, реформування галузі характер відносин учасників перевізного процесу змінюється. **Мета.** Для чіткого розуміння впливу сучасних тенденцій ринку транспортних послуг на ефективність взаємодії учасників перевізного процесу важливо визначити особливості суб'єктів перевізного процесу, а саме їх ролі, функції та цілі, відслідкувати та проаналізувати сучасну ситуацію, що склалася на ринку, зробити прогноз тенденцій, що будуть спостерігатися в майбутньому, та визначити, як саме вони впливатимуть на ефективність галузі в цілому. **Результати.** Було проаналізовано та виявлено вузькі місця в структурних організаціях залізничної галузі країн Європи, Америки та Азії. Залежно від цього були виявлені ролі та функції суб'єктів сучасного ринку транспортних послуг, а також основні принципи ціноутворення на об'єкти інфраструктури та визначені спільні цілі для компаній-перевізників та компанії інфраструктури, що мають задовольняти основні вимоги кінцевого споживача. **Висновки.** Україна, перебуваючи на етапі реформування, має узгодити нормативно-правову базу із світовою з метою подальшої інтеграції галузі залізничних перевезень у світову площину. Це стосується і умов функціонування учасників перевізного процесу та регулювання їх взаємодії на ринку транспортних послуг.

*Ключові слова:* ринок транспортних послуг, структурна організація галузі, інфраструктура, компанія-перевізник, компанія інфраструктури, ціноутворення

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## РОЛИ, ФУНКЦИИ УЧАСТНИКОВ ПЕРЕВОЗОЧНОГО ПРОЦЕССА И ОСОБЕННОСТИ ИХ ВЗАИМООТНОШЕНИЙ В УСЛОВИЯХ РЕФОРМИРОВАНИЯ ОТРАСЛИ

**Введение.** Эффективная деятельность транспортного сектора играет важную роль в формировании экономически, финансово, политически стабильного и развитого государства, повышает конкурентоспособность национальной экономики, положительно влияет на качество жизни населения. Как известно, в обеспечении перевозочного процесса принимают участие различные субъекты, основной целью деятельности которых является получение наибольшей выгоды. Цели их деятельности могут не совпадать, но именно слаженное их взаимодействие влияет на уровень безопасности, оперативности, экономичности и экологичности транспортных услуг. В современных условиях глобализации экономики, реформирования отрасли значительно изменяется характер отношений участников перевозочного процесса. **Цель работы.** Для четкого понимания влияния современных тенденций рынка транспортных услуг на эффективность взаимодействия участников перевозочного процесса важно определить особенности субъектов перевозочного процесса, а именно их роли, функции и цели. Необходимо отследить и проанализировать современную ситуацию на рынке, сделать прогноз тенденций, которые будут иметь место в будущем, и определить, как они будут влиять на эффективность отрасли в целом. **Результаты.** Были проанализированы и выявлены узкие места в структурных организациях железнодорожной отрасли стран Европы, Америки и Азии. В зависимости от этого были обнаружены роли и функции субъектов современного рынка транспортных услуг, а также основные принципы ценообразования на объекты инфраструктуры и определены общие цели для компаний-перевозчиков и компании инфраструктуры, которые должны удовлетворять основные требования конечного потребителя. **Выводы.** Украина, находясь на этапе реформирования отрасли, должна привести в соответствие к мировой нормативно-правовую базу страны в целях дальнейшей интеграции отрасли железнодорожных перевозок в мировую плоскость. Это касается и условий функционирования участников перевозочного процесса и регулирования их взаимодействия на рынке транспортных услуг.

*Ключевые слова:* рынок транспортных услуг, структурная организация отрасли, инфраструктура, компания-перевозчик, компания инфраструктуры, ценообразование

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