INCREASING THE EFFICIENCY OF USING THE COMPETITIVENESS OF MOTOR VEHICLE ENTERPRISES

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Abstract. This article provides the recommendations for increasing the competitive potential of Uzbekistan transport enterprises through intelligent transport systems, implementation and development of intelligent transport systems in the transport enterprises as well.

Keywords: transport, development, systematization, efficiency, services, competition, intelligent transportation systems.

Introduction.

The development of the country's economy is one of the important issues of economic research, the use of intelligent transport systems directly in transport enterprises. In the context of globalization, the quality of transport and logistics services at the national, regional and international levels is becoming increasingly important. In this process, the market of road transport services is an important segment, its share in GDP is 6.8%. At the same time, transport, including road transport, has a significant impact on the rapid development of other sectors, along with energy and natural resources. In developed countries, the share of transport in the cost of goods and services is 8-9%, which is 1.5 times higher in countries without direct access to sea routes. This, in turn, further highlights the need for effective use of the competitive potential of road transport enterprises.

Today, systematic measures are being taken to effectively develop road transport, provide it with modern vehicles and increase its competitiveness. Five priority areas for further development of the Republic of Uzbekistan in 2017-2021 The Action Strategy identifies specific tasks to radically improve the provision of transport services. In this regard, it is important to improve the components of competitive potential in the industry based on digitalization, expand the range of services to the rolling stock and use of intelligent transport systems to increase the competitiveness of public transport enterprises.

By the Resolution of the President of the Republic of Uzbekistan dated July 11, 2017 No. PP-3127 "On measures to further improve the road safety system" and the Cabinet of Ministers "On measures to further improve the road safety system of the Republic of Uzbekistan" dated May 19, 2018 The concept of road safety in the Republic of Uzbekistan for 2018-2022 was approved by the decision of the Government of the Republic of Uzbekistan. The Roadmap for the implementation of the concept provides for Equipping them with modern security systems in the
production of road transport, including through the introduction of information and communication technologies, the annual report of the President of the Republic of Uzbekistan "Doing Business" of the World Bank and International Finance Corporation in the "Road Map" approved by the Resolution of the Government of the Republic of Uzbekistan dated February 5, 2019 No. PP-4160 "On additional measures to improve the rating of the Republic of Uzbekistan": Improvement of information and communication systems in the transport system of the Republic of Uzbekistan, use of GPS-navigation in cargo transportation.

**Literature review**

F. Kotler, one of the well-known scientists, describes the service as follows: "Service is any activity that one party can offer to another." GA Samatov, MA Ikramov, SA Salimov, MN Irisbekova, MN Ravshanov and TU Kadyrov, experts in the field of road transport in the country and research on the innovative development of the industry, the scientific works of scientists and experts highlight the specifics of the organization and management of the process of providing road transport services, the scientific and methodological basis for increasing competitiveness and evaluating its effectiveness.

**Research methodology**

Covering the scientific content of the article is based on the economic feasibility of the organization based on the global navigation system, and thus the development of proposals and recommendations to increase economic efficiency.

**Analysis and results**

Effective use of competitive potential through the use of intelligent transport systems in transport enterprises in our country can be thought of as a process of performance of specific tasks at a certain stage by the functions of modern management of the competitive management system of transport enterprises in the following logical sequence:

- planning to achieve the required level of competition;
- organization of system activities;
- coordination of the participants of the competition management process;
- incentives - means incentives for employees involved in the process of competitive management;
- analysis of the effectiveness of control and competition management system;
- use of intelligent transport systems.

Achieving competitive advantages based on a systematic approach requires the application of appropriate methodologies and methods for the formation of competitive potential, making deep and well-thought-out decisions on its management. At the same time, attention will be paid to the basic principles of the concept of ensuring competitiveness, aimed at increasing the volume of services, expanding the range of activities and development of new market segments.
The following can be taken as basic principles:
- the principle of achieving economic efficiency;
- the principle of ease of organization and management;
- the principle of economic security;
- the principle of traffic and environmental safety;
- digitization of information technologies and communications;
- the principle of ensuring the harmony of the interests of the state, society, transport operators and customers, etc.

In the management of competitive potential, first of all, the expansion of production capacity, development of new areas of activity, improvement of the institutional and legal framework, as well as the search for and development of additional human resources, investment sources are interrelated components. In the presence of a large number of business entities engaged in the market of transport services and various types of transport and logistics activities, the purpose of the correct formulation and implementation of a strategy for managing competitiveness is to reduce financial risks in production.

The following two situations should be avoided when developing a competitive management strategy:
- deep specialization of transport services production should be avoided. At the same time, the road transport enterprise becomes very sensitive to changes in market conditions;
- deep diversification of transport services will not yield the desired results. That is, it leads to the fragmentation of production, financial and other resources. As a result, the level of competitiveness decreases due to an unreasonable increase in production costs. The overall result of the implementation of the competitiveness management strategy is the effective use of the aggregate potential of the enterprise and the improvement of its management to a higher level of quality.

The above criteria not only determine the efficiency of business structures operating in the transport system but also increase their importance as business entities that rationally use public resources.

The direction of ITT development is to create a single information space that unites vehicles, road equipment and traffic control centers across the country. Today, ITT is widely used not only in road transport but also in rail and other modes of transport.

Intelligent transport systems - primarily, means of automation of transport control and management, information and communication technologies, dynamic geographic information and is a system created based on a single information environment in the transport infrastructure, the integration of vehicles aimed at improving safety and efficiency.

There are two main purposes for applying ITT:
- increase the speed of vehicles;
- ensure traffic safety.

In many countries, the use of smart management contributes to the modern technological development of society, the level of technology and the qualitative development of transport systems. The first generations of ITT focused on automated management, information management, and situation management. Modern intellectual management is a scientific field that combines several scientific disciplines: mathematics, logic and system analysis, the theory of transport systems, geoinformatics, navigation, etc.

Analyzes show that the rapid growth of the road fleet has led to a decrease in traffic speeds in this mode of transport to 30-40 km / h, which in turn hurts transport and environmental safety. To overcome these problems, the introduction of intelligent transport systems in the process of traffic management in large settlements will reduce the level of traffic congestion and increase their mobility, the possibility of rational use of road transport. A promising area of ITT use is the use of a global navigation satellite system to determine the location of these vehicles in real-time. ITT significantly reduces operating costs and delivery time in freight and passenger transportation.

The problem of congestion in the road network is growing every year, as well as continues to damage the road surface, the environment and the conflict networks in the transport networks of major cities. These circumstances necessitate the solution of transport problems using modern tools and approaches, taking into account economic, social and environmental indicators, in the context of continuous development of road networks, improving the quality of road transport services and the transition to a new level of information, a source of increased transportation costs in regulated cities. is calculated. Queues appear at such intersections, which waste time and cause frequent emergencies. Since transport costs are an important social problem of economic and environmental importance, solving the task of reducing them is of great scientific and economic importance. Road networks in large settlements, the current state of traffic, especially on city streets, do not correspond to the daily growth rate of the number of vehicles. Based on the results of observations, several ways to overcome this situation can be listed:

- reconstruction of road networks of major cities;
- prohibition of certain types of transport in cities, especially on busy roads;
- optimization of the existing traffic control system.

While the first method requires very large capital expenditures, long-term construction work also leads to a deterioration in the transport supply situation.

The second method helps to clear some intersections and road sections, but it does not solve the problem radically, as the risk of congestion in other parts of the road network increases.

In the third method, the optimization of existing freight and passenger flow management systems allows for the most efficient management of the rolling stock
in real-time, taking into account the situation in the controlled area of the road network.

ITT can create a mutually coordinated environment for the management of freight and passenger traffic through the road transport infrastructure with information and communication technologies of a single transport system.

The following tasks will be solved with the help of information and communication technologies:
- increasing the mobility of the population, management of passenger and freight traffic (through the collection, transmission, processing and receipt of information on the movement process);
- establishment of high-speed communication in global transport systems (based on quantitative assessment of the results of practical monitoring of traffic flows);
- quality control of transport services (characterized by indicators such as fuel consumption, safety, efficiency and environmental damage);
- expanding the capabilities of automatic control systems to meet the growing demand for freight and passenger transportation by all means of transport;
- optimization of logistics in transport;
- improving road safety.

ITT is an intelligent system that uses innovative developments in modeling transport systems and regulating traffic flows, providing more information to customers and ensuring transportation safety, as well as coordinating the interactions of different modes of transport in the transportation services market.

The essence of the development of ITT is based on expanding the opportunities for drivers and passengers to obtain reliable transport information on the current state of transport processes through the interaction of transport and management systems with road infrastructure. Based on the data obtained, road users will be able to quickly make the right decisions on the management of transport processes, which will improve transport and environmental safety, as well as save on transportation costs.

In an urban setting, not only do large measurements have to be made to control the movement of vehicles but additional effects in traffic management, such as the geometric features of the streets, must also be taken into account the architectural development of the city. In this case, congestion can occur due to the uneven distribution of freight and passenger flows, so it is necessary to have information on changes in the characteristics of traffic flows in the relevant hauls, including those equipped with technical means of transport control.

The main difficulty in making observations is the high cost of existing complexes or the low accuracy of the use of counters and the high time spent. Modern universal computing and storage tools allow you to measure the flow of content in motion with minimal use of human resources and investment.
One of the promising areas of ITT use is the use of the Global Satellite Navigation Satellite System (GLONASS) and the detection of the location of vehicles at any place and time. However, at present, GLONASS does not provide sufficient accuracy to determine the location of vehicles, which limits the ability to use ITT in real-time. Also, GLONASS capabilities are limited in the context of transport tunnels and multi-story urban buildings. To meet these requirements, it is necessary to integrate location detection technologies with wireless technologies to create a seamless virtual traffic management environment in any environment.

The following functional subsystems can be included in the ITT to increase the safety of freight and passenger transport by road:
- tracking systems for vehicles on the route;
- systems for analyzing the distribution of freight and passenger flows along the routes;
- the warning system of passengers about the availability of rolling stock, the time of arrival at the stop address;
- video monitoring systems of the situation in the cabin of motor transport;
- automatic analysis of the speed of traffic on the sections of the road network, etc.

The development of ITT in road transport will undoubtedly significantly reduce operating costs in freight and passenger transportation. Effective use of ITT based on satellite systems in large megacities leads to a significant reduction in travel time. This can also be achieved by installing flexible traffic lights at intersections where the intensity of traffic in perpendicular directions varies significantly during the day.

In some areas, the ability to quickly change traffic speeds and notify drivers promptly will help increase traffic and environmental safety. The positive aspects of the introduction of ITT in transport are related to the provision of appropriate emergency medical care, traffic safety, fire safety and other services, and emergency medical care in the event of traffic accidents with serious consequences.
Figure 1. ITT-based road transport deliveries
the mechanism of formation of a reliable system of the chain

ITT-based transport management is characterized by the ability to obtain rapid solutions in a short period and can be considered as a means of overcoming information barriers caused by complexity, on the one hand, and a large-scale data processing and analysis system, eliminating the human factor (Figure 1).

The information systems and automated management process simplifies the initial data collection and delivers it for final use by the intelligent system.

- real-time location on the map;
- traffic management on the given routes;
- management of transport service areas;
- Tracking vehicle speed, fuel consumption, etc.
ITT-based management not only facilitates the collection of initial data but in some cases they solve complex problems in a short period that cannot be solved by humans. ITT not only facilitates human labor but also makes wise decisions instead.

Based on the above considerations, it is possible to formulate the goals and objectives of creating a reliable supply chain system for the transport system based on ITT, as well as the mechanism of their interaction.

Thus, ITT has been used as a means of overcoming information barriers as well as to obtain results that many human and mechanical systems cannot achieve. The introduction of information and communication technologies in the system of road transport management in the framework of general innovative projects can be achieved through the active use of important elements of the modern intelligent transport system.

One such modern solution is a satellite traffic monitoring system. Equipped with UZGPS/GLONASS monitoring, it allows to determine the location of the object, to obtain information about their movement, to control fuel consumption, as well as to identify cases of stops and off-road use.

The effectiveness of ITT application is determined by the ability to save the amount of labor, time, resources and resources, which corresponds to a unit of efficiency of technical systems and structures associated with its creation.

The benefits of using ITT are reflected in the following:

a) in the volume of transportation (increase in volume and quality of transportation, increase in the range of transport services);

b) technological (increase in labor productivity and improvement of working conditions);

c) functional (increased management efficiency);

g) social (improvement of living standards through the use of innovations).

Competitive advantages are achieved through the use of ITT through the intensive development of the transport enterprise, increasing the efficiency of resource use and ensuring the competitiveness of transport services.

Solving the management tasks of transport companies on vehicle monitoring will not only reduce the state's operating costs for vehicles by 15-30% per vehicle but also allow the operator to earn additional income from a wide range of services in the field of car insurance, transit.

**Conclusions and recommendations**

1. The scientific and theoretical basis for the effective use of the competitive potential of enterprises of the road transport system has been studied and the principles of increasing their competitiveness have been identified. In a competitive environment and equal production capacity between competitors, competitive advantage is achieved through competitive transport services.

2. The role of road transport in the transport system of the country, the current state of development of the capacity to provide transport services It is difficult to
implement measures to improve its efficiency without improving the system of assessing the competitiveness of the enterprise. In assessing the competitiveness of road transport enterprises, a group of criteria aimed primarily at consumer requirements and a system of indicators representing them has been developed.

3. Management of competitive potential and increase its efficiency based on the modern concept of improving the management system of the enterprise of the road transport enterprise. Opportunities for the use of cost calculation methods to assess the effectiveness of competitive capacity management were revealed.

4. Based on the analysis of the factors motivating the use of intelligent transport systems in the provision of transport and logistics services in the road transport system, the advantages of its use are systematized.

References:

6. www.stat.uz