

# Ways to Increase The Efficiency of Motor Vehicle Services

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**Abstract-** The article describes the current relevance of the development of road transport in Uzbekistan, its scientific and theoretical basis. The measures to be taken to develop and effectively use the potential of road transport services in Uzbekistan, the benefits of the development of road transport services designed in this regard.

**Keywords:** Transport, transport system, road transport, transport services, freight, passenger traffic, annual freight volume, current and projected freight volume, road transport efficiency, technical and operational indicators, economic efficiency.

## I. INTRODUCTION

One of the most important infrastructure sectors of the world economy is the transport system, the development of which is one of the priorities of economic policy of each country. The globalization of international trade and economic relations around the world, high competition in domestic and foreign markets, business and tourism potential are determined by the development of the transport system.

The Action Strategy of the Republic of Uzbekistan for 2017-2021 sets the tasks of "accelerated development of the service sector, as well as radical improvement of transport services to the population, improvement of freight and passenger traffic, improving their safety, first of all, development of regional roads" [1]. given. Effective implementation of these tasks requires improvement of the road transport system of Uzbekistan. Therefore, one of the most pressing issues today is the improvement of transport infrastructure in accordance with international standards and the systematic organization of transport services, increasing the efficiency of customers and transport enterprises.

## II. LITERATURE REVIEW

Issue of statistics of competition of small business and private entrepreneurs assessment methods were studied by Odilov R.[12], econometric model of production capacity usage of textile enterprises in Uzbekistan were researched by Tursunov B.O. [13,14], Modernization and intensification of agriculture in the republic of Uzbekistan were investigated by Yuldashev, N. K., Nabokov, V. I., Nekrasov, K. V. [15,16], evaluation of textile and clothing industry clustering capabilities in Uzbekistan were made by scientists as well as Ergashxodjaeva, S. J., Kyvyakin [17], Regional features of industrial production dynamics in the research of textile enterprises financial security in Uzbekistan were researched by Zarova E.V, [18], Features Of Investment In Mutual Fund and The factors effecting net actives of investment funds were studied by economists Burkhanov A. U., Hudoykulov H. H. [19,10] and et.al.

Economist G.A. According to Samatov, "In each of the tariffs for the carriage of goods by road, not all factors are taken into account, but only some, the most important in a particular transport situation. For example, to calculate the cost of transport at the interest rate, it is necessary to take into account the distance of the vehicle, the mass of the cargo and its class, which characterizes the level of utilization of the vehicle's carrying capacity. When calculating the tariff for the use of trucks on time, the load-carrying capacity of the vehicle, the time of its use and the total walking distance are taken into account "[3].

S.A.Salimov states that "the correct formation of the tasks of planning, management and rationalization of road transport is the basis for the efficient operation of transport and optimization of all elements of the transport process in transport systems [4].

According to the Russian scientist VM Kurganov, "The criteria for selecting vehicles are the safety of goods, their efficient use and transportation capacity, and the reduction of transport costs. Advanced modes of transport, such as packaging, container, joint, are achieved for logistics purposes "[5].

In this regard, foreign scholars have expressed the following views:

According to D. Benson and J. Whitehead, "In order to solve the problem of optimal management of freight processes in industrial transport systems, it is necessary to consider a number of specific examples of optimization of transport processes and the development of mathematical models of continuous transport. In this regard, it is necessary to select economic criteria that will affect the level of organization of transport with the participation

of different sectors of transport and develop methods that will allow to successfully implement such control during the operation of the transport system "[6].

According to M. Bodmer and J. Martins, "One of the tasks of logistics is to create an integrated system of regulation and control of material and information flows. The use of modern means of tracking material flows will help to introduce "paperless" technology. Instead of many documents accompanying cargo in transport (especially in international transport), the data is transmitted synchronously with the cargo through communication channels, containing all the information necessary to describe the goods "[7].

According to J. Bendikovich, "The main organizational structures that meet the highest requirements are the regional transport companies for the collection and distribution of goods that provide short-distance transport in the trade area. Such companies typically transport goods in small batches and save costs by using their own terminal to collect and distribute goods, which leads to large inventory costs instead of a distribution center of an industrial company serving a particular region "[8].

According to E. Mirotina, "Along with the use of a progressive technical base, the creation of a fundamentally new technology requires the implementation of the following set of organizational and technological measures: coding of goods, shippers and consignees, wagons and other vehicles, as well as bus stations for vehicles The development of a unified system should be convenient for the automatic reading of freight and road signs by modern sample recognition devices "[9].

From the above, it can be concluded that the transport system plays a leading role in the sustainable development of the economy, and one of the key sectors in improving the level of socio-economic development is road transport.

### III. ANALYSIS AND RESULTS

Many scientists have conducted research on the development of the road transport services market.

In particular, Professor M.A. Ikramov believes that in order to increase the efficiency of the organization of the road transport process, it is necessary to pay attention to the following:

- construction of a set of intersectoral models to address the problems of optimal use of technical means in transport systems;
- installation of a single system of tariffs for the carriage of goods by road;
- defining a system of integrated comparable performance indicators of vehicles;
- optimization of methods and structure of transport process management in transport systems;
- improving current and future transport planning;
- selection of the optimal vehicle. At the same time, a crucial role is played by the creation and implementation of modern economic and mathematical models of optimal planning and management of cargo transportation processes [2].

### IV. RESEARCH METHODOLOGY

An increase in the share of the development of transport services in GDP by 1% will lead to an additional 0.9% or almost 1% increase in GDP. Proof of this idea can also be seen in the following correlation graph (Figure 1).

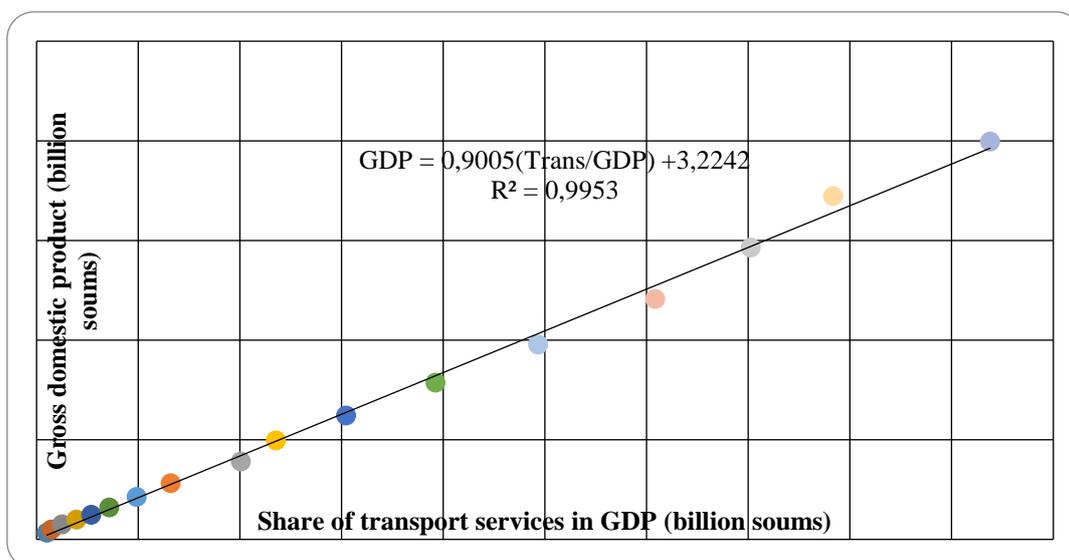


Figure 1. Schedule of correlation between GDP and transport services in Uzbekistan [10].

According to him,  $GDP = 0.9005(Trans/GDP) + 3.2242$  when  $R^2 = 0,995$ ,  $n=17$  and  $F=3169.32$  will be. Therefore, in the stability of our national economy and international globalization, transport services have proven to be a constant stimulus.

During the years of independence, the growth rate of the transport system's workload in natural terms has lagged far behind its growth rate in terms of its share in GDP. It is obvious that the lack of modern means of transport and low efficiency of their use not only negatively affects the competitiveness of the industry, but also leads to an increase in the cost and price of services, as well as a high cost of goods and services in the economy.

Analyzing the state of development of transport services in the Republic of Uzbekistan in 2020, the share of road transport in the total volume of transport services amounted to 54.3%. Pipeline transportation services accounted for 17.6% of transport services. Railway transport services accounted for 15.1% of transport services. The share of goods and passenger services in air transport was 5.8%, and ancillary transport services - 7.2%.

The largest share of transport services falls on road freight and passenger services. This type of transport is considered to be the most in demand compared to other modes of transport due to its flexibility and relatively low cost of services provided. In 2019, the share of freight services was 30.4% and the share of passenger services was 69.6%. In 2020, the share of road transport services in the total volume of freight services was 32.1% and the share of passenger transport services was 67.9%.

The Logistics Efficiency Index includes a network of services that support the physical movement of goods inside and outside the country. Logistics Efficiency Indexes (LPIs) measure the efficiency of countries in moving goods across borders. According to the World Bank, Uzbekistan ranks 99th out of 160 countries in the Logistics Efficiency Index (LPI) with a index of 2.58, and second in Central Asia.

The total number of road transport enterprises operating in Uzbekistan in 2020 compared to 2005 increased by 88%. As a result of reforms implemented in recent years to support and develop small business and private entrepreneurship in the country, the share of private road transport enterprises increased from 90.0% to 96.5%. The number of enterprises operating in the field of road transport in 2020 will be 7780, of which 79% are small businesses and micro-firms.

The growing share of private carriers in the market of road transport services is rapidly adapting to the market of transport services, 85-90% of their cars are small tonnage and trunk trucks, as well as foreign-style minibuses, which are more convenient for passengers. and trunk buses. Cargo transported by road in the country accounts for more than 39.0% of the total cargo, and its importance is growing due to the development of international economic relations.

The impact of technical and operational indicators of road transport enterprises on the volume of traffic can be studied by the following expression. To do this, the volume of annual freight traffic by road transport enterprise is determined [11]:

$$Q=(T_n*V_m*\beta*q*\gamma_c*Ac*\alpha_B*\Delta_k)/(l_{юк}+ t_{np}*V_m*\beta*) \quad (1)$$

Here:  $Q$ – annual traffic volume,  $\tau$ ;  $T_n$ – average daily working hours of cars, hours;  $V_m$ – average technical speed of cars, km/h;  $\beta$ – average distance utilization factor;  $q$ – the average load carrying capacity of cars,  $\tau$ ;  $\gamma_c$ – the coefficient of utilization of the average load-carrying capacity;  $A_c$  – the average number of cars on the list;  $\alpha_B$  – average park utilization rate;  $\Delta_k$ – amount of calendar days;  $l$  load – average freight distance, km;  $t_{np}$ – time spent on loading and unloading in one trip.

## V. ANALYSIS AND RESULTS

Using formula 1, the effectiveness of changes in technical and operational indicators of the Central Asian Trans JSC on the basis of the current technical and operational indicators and the use of innovative marketing methods, according to experts.

Current and projected annual traffic of Central Asia Trans JSC:

$$Q_a = \frac{(8 * 50 * 0.5 * 20 * 0.7 * 150 * 0.7 * 365)}{(450 + 4 * 50 * 0.5)} = 195109,1 \text{ tn} \quad (2)$$

$$Q_n = \frac{(T_n * V_T * \beta * q * \gamma_c * A_c * \alpha_B * \Delta_k)}{(l_{юк} + t_{np} * V_T * \beta*)} \quad (3)$$

$$Q_n = \frac{(7 * 50 * 0.6 * 20.2 * 0.74 * 150 * 0.72 * 365)}{(440 + 3 * 50 * 0.6)} = 233476,5 \text{ tn} \quad (4)$$

The volume of transport services is determined not only by how much cargo or passenger traffic, but also by how far they are delivered. Therefore, we evaluated the economic indicators (income, profit, transportation cost, etc.) through the transport performance indicator. The economic effect of increasing the volume of transport services is determined by the difference between the rate of income for each ton of kilometers of transport work and the cost of transportation, the volume of additional transport work. Also, the results of project activities to increase innovation efficiency are reflected in the following economic benefits:

$$I_{effect} = (P_n - P_a) * (d - S_T) \quad (5)$$

$$I_{effect} = (102729660 - 87799095) * (160,6 - 116,3) = 659\,944\,860 \text{ c}\ddot{y}\text{m} \quad (6)$$

According to the results, through the application of innovative marketing, JSC "Central Asia Trans" received 660.0 mln. soums will achieve economic efficiency. In order to improve the technical performance indicators discussed above, it was found that the project result of 10 innovative marketing measures will increase revenue by at least 17% and improve all technical performance by 3-4%.

## VI. CONCLUSIONS AND SUGGESTIONS

The intersectoral importance of road transport requires the formation of flexible systems of customer-oriented transport services that can ensure the competitiveness of both sectors of the economy and industry enterprises. The direct application of opportunities to implement strategies to improve the quality and expand the range of transport services to the provision of road transport services requires an analysis of its organizational and economic mechanisms on the basis of a new approach.

Currently, the following problems related to the development of road transport in Uzbekistan need to be addressed:

- insufficient development of the transport services market;
- deterioration of vehicles and difficulties in their restoration;
- insufficient information security of road transport;
- low quality of road transport services;
- shortcomings in the planning of routes;
- the system of insurance of goods and vehicles does not work well;
- low level of service in the provision of road transport services;
- difficulties in the organization of transportation, including several modes of transport, etc.

It is necessary to develop a scientific basis for a systematic approach to solving the above problems related to the activities of road transport enterprises, as well as to create a concept aimed at ensuring the competitive advantage of road transport enterprises on the basis of customer-oriented service. It is necessary to develop ways to increase the efficiency of road transport enterprises on the basis of the impact of technical and operational indicators on the final transport performance, directly reflecting the state of improving its technical and operational performance and its effective use.

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