



International Conference of Economics, Finance and Accounting Studies

International Conference of Economics, Finance and Accounting Studies is a double-blind peer-reviewed, open-access journal published to reach excellence on the scope. It considers scholarly, research-based articles on all aspects of economics, finance and accounting. As an international congress aimed at facilitating the global exchange of education theory, contributions from different educational systems and cultures are encouraged. It aims to provide a forum for all researchers, educators, educational policy-makers and planners to exchange invaluable ideas and resources.

Existing Problems in Ensuring Safe Road Traffic and their Modern Solutions

Mahmudov Bahriiddin Jo'rayevich

Dean of the Faculty of Business Administration, Doctor of Economics, Professor, Namangan
State Technical University

Sariboev Jahongir Baxodirovich

Student of 58TVM-22 of Namangan State Technical University

Abstract

The article scientifically analyzes the causes and consequences of existing problems in the field of ensuring safe road traffic. The author analyzed the main factors affecting the origin of traffic accidents, in particular, issues such as the failure of the road infrastructure, low driver culture and discipline, and the ineffectiveness of the traffic control system. Also, the article examines international experiences in solving problems and offers modern solutions based on digital technologies. In particular, scientific and practical recommendations are given for the use of "smart" cameras, automated control systems using artificial intelligence, and software products that monitor driver behavior. The article suggests the introduction of innovative approaches to improve road safety, and is of importance to decision-makers, experts and academic researchers in the field.

Keywords: Infrastructure, engineering, communication, ecology, transport, logistics, innovation, technology, safe movement.

Today, ensuring road safety has become an important socio-economic issue that determines economic development and the quality of life of the population. According to the World Health Organization, approximately 1.3 million people die in road accidents worldwide every year and more than 50 million people are injured to varying degrees. This problem is also relevant in Uzbekistan, where the number of road accidents is increasing. This situation, along with economic losses, is causing a serious loss of human resources.

In addition to traditional methods, there is a need to use modern digital technologies to solve existing problems in ensuring road safety. In particular, "smart" control systems, artificial intelligence and automated control mechanisms have proven themselves in world practice as effective solutions in this area.

Based on this, the main purpose of this article is to identify the root causes of the problems arising in ensuring road safety, to propose modern innovative solutions based on international experience,

and to develop scientific and practical recommendations for their effective application in the conditions of Uzbekistan.

A number of decrees and resolutions of our President Sh.M. Mirziyoyev set new tasks and measures in the direction of comprehensive improvement of road infrastructure. This led to the further development of the sector. In particular:

A number of measures were taken within the framework of the implementation of the Resolution of the President of the Republic of Uzbekistan No. PP-316 dated July 12, 2022 on approving the National Program “Safe and Smooth Road”, which is intended to be implemented during 2022-2026.

Many measures are being taken in Uzbekistan to ensure the convenience and safety of road traffic. In recent years, special attention has been paid to eliminating existing problems in the field of road safety in the country, improving road infrastructure in accordance with international standards, reconstructing roads, and increasing the comfort and safety of road traffic.

In particular, in the past period of 2023:

15,621 new road signs were installed, 35,984 old ones were replaced;

6,531 speed limit signs were installed in front of schools, and initial, directional and distance signs were installed on 2,959 routes; 157 new traffic light objects were built, 85 of which were reconstructed;

78 new pedestrian traffic light objects were built, 17 of which were reconstructed; 10 square kilometers of roadbeds were marked;

269 km of settlements were equipped with artificial road lighting, 301 km of pedestrian sidewalks and bicycle lanes were built;

91 km of settlements were equipped with barriers (fences) to restrict pedestrian traffic on the carriageway in places where crossings are not marked; 245 km of barriers (BDO-5) and metal barriers were installed

10 km² (planned 12 sq km) of roads were repaired and their throughput was increased by changing the geometric parameters of 35 (planned 45) intersections;

25 (planned 29) turn-around points on highways were changed to “droplet” turn-arounds;

8 points of control of weight and volume indicators of vehicles were established.

Effectively organize the activities of the Center for Analysis of the Technical Condition of Highways and Traffic Safety in order to analyze the technical condition of public highways using advanced information technologies, manage highway assets and maintain a unified cadastre system, and organize and maintain weight and volume control points;

Installation of 50 thousand road signs on highways, introduction of vibrating horizontal lines to warn drivers;

Submission to the Cabinet of Ministers of a draft resolution on regulating the movement of heavy vehicles in order to ensure the long-term service life of highways.

introduction of separate state registration numbers, technical passports and registration in a unified electronic system for special vehicles of categories "H3" and "O4" with a total mass (with cargo) of more than 44 tons and dump trucks operating in open pits (quarries);

rules for the movement of large and heavy vehicles on public highways and the transportation of goods; the procedure for granting local freight carriers permits for the movement of heavy and large vehicles exceeding the norm along public highways with payment;

It is indicated that the procedure for introducing and collecting payments for compensation for damage caused by violations of the rules for the movement of large and heavy vehicles on public roads and the transportation of goods is envisaged.

At the same time, in the direction of improving the condition and infrastructure of roads, it was determined that only the Road Safety System will be responsible for installing road signs, traffic lights and lamps, drawing lines, marking pedestrian crossings, and in general, for the regulation of roads in regional and district centers, and to finance these works, the republican and regional funds “Safe Road and Safe Pedestrian” will be established in the system. In addition, the task of establishing specialized scientific and practical centers in the field to ensure that rules and regulations on the roads coexist with science was set. Based on international experience, it can be said that improving the traffic standards for freight vehicles will lead to an increase in the service life of roads in the country and a reduction in costs allocated for their repair.

Improving modern road safety can be achieved through a combination of technology, policy, and education, and there are several effective areas for improvement:

1. **Intelligent Transportation Systems:** Implementing intelligent transportation systems that use real-time traffic data to optimize traffic flow, reduce congestion, and improve overall safety.
2. **Automotive Safety Technology:** Promoting the introduction of advanced safety technologies such as automatic emergency braking, lane departure warning systems, and vehicle-to-vehicle communication to prevent collisions in motor vehicles.
3. **Strengthening and enforcing traffic laws:** Enforcing strict enforcement of traffic laws and implementing penalties for reckless driving, speeding, and other violations to discourage dangerous behavior on the roads.
4. **Infrastructure Development:** Invest in infrastructure improvements such as better road signs, smart traffic signals, and well-designed intersections and roundabouts to reduce the risk of accidents.
5. **Awareness campaigns:** Educate drivers, pedestrians, and cyclists about the importance of obeying traffic laws, wearing seat belts, and practicing safe driving.
6. **Education and Certification Programs:** Provide comprehensive driver education and certification programs, including defensive driving courses and education on the dangers of distracted driving.
7. **Alternative Transportation Integration:** Promote the use of alternative modes of transportation, such as public transportation, cycling, and walking, to reduce the number of vehicles on the road and minimize traffic-related hazards.

By addressing these areas, we can create a safer traffic environment and reduce the number of accidents and injuries on our roads.

The results of the study show that a number of pressing problems remain in the field of ensuring safe traffic. The main problems are the inadequate road infrastructure, low levels of driver culture and discipline, and the insufficiently effective operation of the traffic control system. All of these factors lead to an increase in the number of road accidents, a decrease in public safety, and socio-economic losses.

To solve the problems, it is recommended to widely introduce digital technologies that have proven effective in world experience. In particular, the use of smart cameras, automated control systems, and artificial intelligence technologies can reduce traffic violations and strengthen control. At the same time, it is necessary to strengthen information and educational campaigns aimed at increasing the traffic culture of the population.

In conclusion, there is an opportunity to raise road safety in the country to a high level by forming a comprehensive approach to ensuring safe traffic, involving modern innovative solutions in this

process, and digitizing this area. In this direction, the joint activities of relevant government bodies, research institutes, and the public are of great importance.

REFERENCES

1. Ўзбекистон Республикасининг Конституцияси (ЎзРнинг 24.04.2003 йилдаги 470-П-сон қонуни таҳририда). - Тошкент.
2. Ўзбекистон Республикасида янги йўл ҳаракати қоидаларини тасдиқлаш бўйича 27.11.2023 йил. Тошкент.
3. Ўзбекистон Республикаси Қонуни 172-сон “Йўл ҳаракати қоидаларини тасдиқлаш”. 12.04.2022 йил.
4. Х.Азизов “Ҳаракат хавфсизлигини ташкил этиш” Жиззах Политехника институти 2022 йил 5. Ф.Отаханов “Йўл ҳаракати хавфсизлигини таъминлашнинг ташкилий-ҳуқуқий масалалари” 15.02.2022 йил Тошкент
5. Ўзбекистон Республикасининг "Оммавий ахборот воситалари маълумотлари.