

The main features of the development of the toll road model in the republic of Azerbaijan

Abstract: The article examines the role of toll road services in the development of the national economy of the Republic of Azerbaijan. Conducted analyses suggest that the implementation of paid services in road infrastructure development is considered necessary. It should be noted that the funds collected for toll road services may lead to a reduction in state budget expenditures allocated to this area. In most foreign countries, the use of paid transportation services is considered economically viable. The article also identifies the positive impact of the toll road model on national economic sectors.

Keywords: Road infrastructure, transportation services, road revenues, tourism, highway.

Összefoglalás: A cikk az útdíjköteles közúti szolgáltatások szerepét vizsgálja az Azerbajdzsáni Köztársaság nemzetgazdaságának fejlődésében. Az elvégzett elemzések azt mutatják, hogy a fizetős szolgáltatások bevezetését a közúti infrastruktúra fejlesztésében szükségesnek tartják. Meg kell jegyezni, hogy a fizetős útszolgáltatásokért beszedett pénzeszközök az erre a területre elkülönített állami költségvetési kiadások csökkenéséhez vezethetnek. A legtöbb külföldi országban a fizetős közlekedési szolgáltatások használata gazdaságilag életképesnek tekinthető. A cikk azonosítja a fizetős úthálózat modelljének a nemzeti gazdasági ágazatokra gyakorolt pozitív hatását is.

Kulcsszavak: Közúti infrastruktúra, közlekedési szolgáltatások, közúti bevételek, turizmus, autópálya.

* *Azerbaijan Road Scientific Research Institute, Doctor of Philosophy in Economics*
Email: emin.aslanov@aayda.gov.az

Introduction

In recent years, Azerbaijan has been consistently implementing effective economic measures in the development of the transportation sector. The development of road transportation infrastructure is considered crucial for the economic development of any nation. In this regard, the construction of toll roads contributes to a reduction in the financial resources allocated from the state budget to this sector. Consequently, the volume of local and foreign investments in the construction of road infrastructure in various regions of the country increases.

Like in developed European countries, the development of toll roads in Azerbaijan offers numerous advantages. Toll roads help reduce traffic congestion by managing the density of transportation vehicles. Unlike toll-free roads where drivers often move even short distances, leading to frequent traffic jams, toll roads allow drivers to choose whether it is necessary to use the toll road based on the distance they intend to travel. Each driver is required to pay according to the distance traveled, and sometimes drivers can anticipate alternative routes in advance.

Overall, analyses indicate that the exploitation of alternative toll roads in our country reduces traffic congestion on regional and transit arterial roads for automobile transportation. Furthermore, toll roads also reduce congestion in public transportation in cities. The operation of toll roads in tourist areas is considered a significant advantage. Toll road services can ensure more efficient utilization of road infrastructure. Consequently, the maintenance and development costs of arterial roads from the state budget decrease.

THE MAIN CHARACTERISTICS OF DEVELOPING TOLL ROAD SERVICE

The implementation of toll roads in Azerbaijan can contribute to the development of the country's road infrastructure and automobile transportation. The use of toll roads also positively impacts the safety of transportation services.

It should be noted that one of the main advantages of toll roads is their ability to attract investments from local and foreign private entities for the development of transportation infrastructure. The application of toll systems allows each state to attract more funds for the construction and renovation of road networks. As a result, it becomes possible to reduce budget expenditure allocated to this sector and redirect the saved funds to other economic areas.

Toll roads also facilitate the regulation of transportation volumes in regions where tourism is developing. Having toll roads can help increase export opportunities for small and medium-sized enterprises in regions.

All these factors can contribute to more efficient multimodal transportation activities across various modes of transportation.

Figure 1. Baku–Guba–Russia road



Figure 2. Baku–Guba–Russia road



[1] https://www.yeniazərbaycan.com/Iqtisadiyyat_e89766_az.html - Feyzli İ M. “İlk ödənişli yol”

[2] <https://investors.wiki.ru/transportation-bond> – Транспортиная облигация.

In modern developed countries, toll roads also enable the enhancement of road infrastructure quality and safety. The financial resources entering the state budget in this area can also ensure the preservation of traffic safety. As a result, high-quality toll roads can contribute to reducing accidents in automobile transportation and provide high-level services to drivers and passengers [1].

In the post-Soviet space, the experience of using toll roads was first observed in Russia. For example, in Russia, from 2007 onwards, private road construction companies also began building toll roads. Currently, there are toll services available on 1100 km of federal and regional roads of importance in Russia. [1].

In developed countries like Spain, the United States, and Japan, the model of developing toll road infrastructure also brings significant revenue to the national budget.

For example, in Turkey, the existing highways in the European part of the country are tolled. Additionally, Turkey's famous bridges such as the Bosphorus Bridge, Fatih Sultan Mehmet Bridge, Yavuz Sultan Selim Bridge, Osman Gazi Bridge, Eurasia Tunnel, and others are also tolled. The implementation of toll roads plays a significant role in the development of the country's road infrastructure. Quality services on toll roads also have a positive impact on the economic development of the country [1].

In developed countries like the United States and other European Union member states, financing for the construction and maintenance of transportation infrastructure networks, including tunnels, seaports, and railway transportation lines, is increasingly being facilitated through the issuance of transportation shares. This directly leads to an increase in the income of shareholders. The application of this experience can also be utilized in our country for financing the activities of transportation infrastructure sectors [2].

If we compare the key indicators of automobile roads in the Republic of Azerbaijan in 2022, we can observe significant changes. For example, in the country, the length of automobile roads in 2022 was 78,348.7 km, while the length of republican-level roads was 4,806.9 km. The length of newly commissioned automobile roads across the country was 41.5 km (*Table 1*). Additionally, the length of locally significant repaired roads was 104.7 km, and at the municipal level, it was 656.1 km. As the analysis shows, the total length of roads put into use in our country during the year is significantly lower.

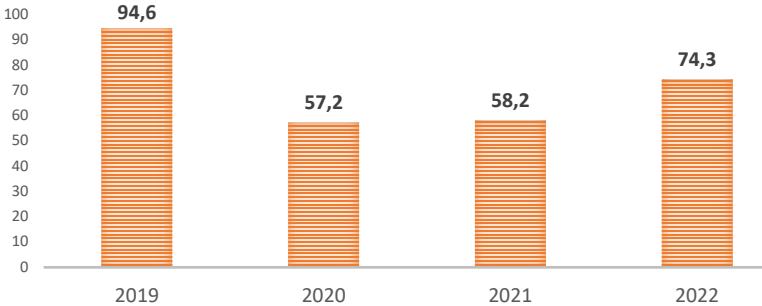
Table 1. Key indicators of the Republic of Azerbaijan's road network. (2022)

Indicators	Total	Nationally important	Locally important	City	Sector	Municipality
The length of the roads for automobiles, in kilometers.	78348,7	4806,9	14109,1	9429,4	13545,2	36458,1
The length of newly constructed roads for automobiles utilized within the year, in kilometers.	41,5	–	–	18,7	–	22,8
The length of repaired roads for automobiles within the year.	1040,3	0,6	104,7	246,9	32,0	656,1

Source: Compiled by the author based on the statistics of transportation in Azerbaijan for 2023, available at www.stat.gov.az.

In the Republic of Azerbaijan, there has been a significant change in the number of passengers per kilometer of road for automobile transportation between 2018 and 2022. For instance, while in 2018 there were 92.1 thousand passengers transported per kilometer of road, this indicator sharply decreased in the years 2020-2021. In 2022, the number of passengers transported by automobile roads increased, reaching 74.3 thousand passengers (*Graph 1*).

Graph 1. The number of passengers per kilometer of roads for automobile transportation in the Republic of Azerbaijan, in thousands



Source: Compiled by the author based on the statistics of transportation in Azerbaijan for 2023, available at www.stat.gov.az

[1] https://www.yeniazərbaycan.com/Iqtisadiyyat_e89766_az.html – *Fəyzli İ M. “İlk ödənişli yol”*

[3] <http://www.aayda.gov.az/az/news/1177> – *“Azərbaycanda ən müasir yol infrastruktururu qurulur”*

[4] <https://aztv.az/az/news/2159/azerbaycanda-yollarin-tikintisinde-veziyyet-ne-yerdedir-markvideo-mark> – *“Azərbaycanda yolların tikintisində vəziyyət nə yerdədir?”*

THE MAIN PROSPECTS FOR THE IMPLEMENTATION OF PAID ROAD SERVICES IN THE NEAR FUTURE IN THE REPUBLIC OF AZERBAIJAN

In the recently liberated territories of Karabakh, significant measures have been undertaken towards the restoration of road infrastructure in recent years. Several projects have already been implemented in this direction. For example, upon the directive of the country's leadership, 17 million manats were allocated from the state budget for 2023 to the Azerbaijan State Highway Agency for this purpose [3].

In the liberated territories of Karabakh, the construction of the Ahmadbeyli-Fuzuli-Shusha highway, considered one of the main road infrastructure projects, is planned to be completed in 2024. Additionally, the construction of the Fuzuli-Hadrut highway was successfully completed with high quality in 2023. In general, the implementation of paid road services in the recently liberated areas of Azerbaijan may lead to a reduction in expenditures allocated from the state budget to this area in the coming years [4].

Figure 3. Ahmadbeyli-Fuzuli-Shusha automobile road



Note: Will be opened for use in the second half of 2024

Since 2023, Azerbaijan has initiated the experience of using toll roads. The Baku-Quba-Russia automobile road is considered the first toll road. A new 150-kilometer-long highway, starting from the town of H.Z. Tagiyev, has 129 kilometers of its section operating as a toll road. The collection of fees on this road will enable the maintenance of roads without state budget expenditures and encourage the construction of new roads [1].

The implementation of toll road services in the Republic of Azerbaijan will lead to the maintenance of transit routes at a higher level, an increase in transit transportations, and the development of road infrastructure. The use of toll roads in our country will result in a decrease in human casualties in car accidents and provide a continuous financial source for road maintenance [5].

It should be noted that toll roads encourage vehicle owners to choose more optimal routes and to consider using other modes of transportation as well. As a result, the transportation process on major highways in the country can be more efficiently organized. The utilization of toll road services in Azerbaijan will allow for a reduction in state expenditures allocated for road maintenance. This will enable financial resources from the state budget to be allocated more efficiently and fairly to other economic sectors. Other sectors of the national economy can also develop with state financial support.

The use of toll road services in Azerbaijan can ensure investment in road infrastructure. This, in turn, can contribute to the continuous development of the country. Furthermore, the implementation of toll roads offers numerous economic benefits. The collection of toll fees from drivers of motor vehicles can increase investments in road construction and modernization in the country. The deployment of toll roads in Azerbaijan can contribute to the economic development of regions by facilitating the opening of new manufacturing and tourism service establishments, ensuring employment, and improving the living standards of people residing in regions.

The operation of toll roads increases the utilization of road infrastructure. This allows for the intensification of traffic on arterial roads by releasing additional road capacities, creating intersections, and changing road directions. The application of toll charges on automobile roads in Azerbaijan is a means to alleviate traffic congestion on toll-free roads.

The utilization of toll roads in Azerbaijan will have a significant impact on the development of transportation and logistics services in the country. Toll roads across regions can create new transportation routes for tourism, thereby enhancing the efficiency of freight and passenger transportation services in regions. Additionally, transportation time and costs will be reduced significantly.

The implementation of toll roads in Azerbaijan will stimulate the development of new logistics centers and transportation intersections in regions. Moreover, the increase in the utilization length of toll roads will accelerate the establishment of new warehouses, terminals, and logistics complexes in regions.

[5] <https://qafqazinfo.az/news/detail/azerbaycanda-bu-yolun-odenisli-olacagina-qerar-verildi-411377>
– “*Azərbaycanda bu yolun ödənişli olacağına qərar verildi*”

RESULT

The creation of toll roads in the Republic will contribute to the development of logistics infrastructure and the increase in economic potential across regions. It is precisely for this reason that the construction of toll roads is considered one of the main priorities in the development of the country's road transportation infrastructure. In general, the conducted analysis shows that in the coming years, the introduction of toll roads for automobiles across the regions of the Republic of Azerbaijan can have a positive impact on the development of national economic sectors. Therefore, it is necessary to implement continuous economic measures at the state level in this direction.

THE MAIN FEATURES OF THE DEVELOPMENT OF THE TOLL ROAD MODEL IN THE REPUBLIC OF AZERBAIJAN RESUME

The article examines the role of toll road services in the development of the national economy of the Republic of Azerbaijan. The analysis shows that it is considered necessary to introduce paid services in the development of road infrastructure. It should be borne in mind that the funds raised for toll road services may lead to a reduction in expenditures allocated to this area from the state budget. In most foreign countries, the use of paid transport services is considered cost-effective. At the same time, the article determines that the toll road model has a positive impact on the national economy.