

Globally Important Transport Corridors and Azerbaijan

Amirkhan Pashayev
Western Caspian University
Department of tourism and economy of
fields Baku, Azerbaijan
emirxan.pashayev@wcu.edu.az

Abstract—The article talks about investments in the transport sector of Azerbaijan against the background of the start of activity of globally important transport corridors. Cargo and passenger flows, types of transport and investments in this area are discussed. Effective suggestions are made by analyzing the current situation

Keywords—Transport sector, investments, cargo transportation, transport corridors

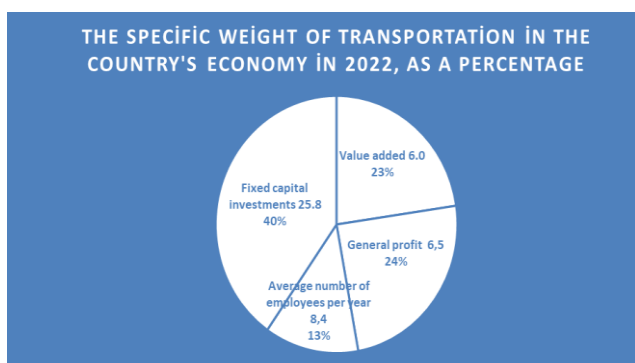
I. INTRODUCTION

Considering the lack of a generally accepted approach to the concept of "investment in the transport sector", in order to ensure the sustainability of the long-term economic growth of the development of this field, the priority aspects of the measures to increase the efficiency of investments in the transport sector have been proven, accordingly, effective use of traditional and modern methods is suggested.

The concept of "investment in the transport sector" carries out the subjective definition of this issue from the point of view of Azerbaijan, therefore we believe that in this definition, the main aspects of the efficiency of investing in the transportation sector, which is important for our country, should be emphasized.

As can be seen from the diagram prepared on the basis of the data published by the State Statistics Committee of Azerbaijan, in 2022, the specific weight of transport in the country's economy for investments in fixed capital is equal to 25.8 percent. In 2022, 6.0 percent of the added value, 6.5 percent of the total profit, and 8.4 percent of the average annual number of employees belong to the transport sector of Azerbaijan.

The specific weight of transportation in the country's economy, as a percentage



Picture 1. Source: Prepared by the author based on the data of the State Statistics Committee of the Republic of Azerbaijan [14]

As can be seen from the diagram, the share of the transportation sector in investments in the Azerbaijan economy in 2022 is 25.8%. Financial resources are the basic component of the sustainable economic growth dynamics of the transportation sector. Various schools of economic theoretical thought have constructive suggestions for solving the problem of lack of funds in investments. For example, classicists argue that household savings depend on the interest rate, while Keynesians relate changes in savings to changes in volume and income. As a result, the amount of investment is determined by the projected efficiency of the investment and the same interest rate.

II. DESCRIPTION OF THE PROCESSING SYSTEM

Therefore, among the factors mentioned above, we recommend that the following points be taken into account, in order of importance for our country's transport sector:

- Production of vehicles capable of carrying cargo and passengers, meeting the requirements of national, regional and global transport services. Of course, this is the main category of the development of the transport industry. This factor, which remains weak in the production of vehicles and the provision of transportation services, is a specific factor for Azerbaijan. This is the most important problem of our country's transportation sector. First of all, in the international division of labor of Azerbaijan, the specialization of vehicle and spare parts processing enterprises has not been determined, existing transport services consist of transit freight and passenger transport, at the regional or regional level, ships belonging to the Caspian basin countries are produced and repaired in small numbers in maritime transport, these show that the existing opportunities in the transport sector are not being used effectively.

- From the world experience analyzed in the thesis, it is seen that even in developed countries, state support is needed to increase the efficiency of investments in the transport sector, this issue is more severe in Azerbaijan. Increasing the efficiency of investments in the transportation sector depends not only on the speed of freight circulation, but also on the supply and demand of freight transportation, which constitutes the price of freight transportation. For this reason, while calculating the efficiency of the investments, the amount of cargo carried during the year and the average price of the transportation fee are taken into consideration.

- As a result of the analyzes and measures taken to increase the efficiency of investments in the transportation sector, increasing the safety of the vehicles, increasing the speed of movement, accelerating the load circulation, ensuring the proper use of storage farms provide a continuous and sustainable income increase in this area. The calculation of the efficiency of investments in the transport sector is made

using two different methods, namely comparative and full efficiency. When choosing the most efficient investment project, when the comparative efficiency method is used, the calculation of additional investment and variable costs is taken into account instead of the optimization of fixed costs. Total investment costs are taken into account when selecting the most profitable project using the full efficiency method.

- Regarding investments, which is one of the basic elements of economic growth, after examining the results of the researches made by economic theorists in the transportation sector and applying them in this sector, taking into account the economic opportunities of our country, every year from freight transportation (230 million tons of transit cargo), There are opportunities to generate large amounts of income with the strategic currency (with the shipping and transit price of a kg of cargo depending on its type). It is worth remembering that a profit of 8-18 USD is obtained for every 1 ton of transit cargo passing through the territory of our country [15]. This is approximately as much as the appropriation allocated from the budget to increase the military defense power of our country. In order to increase the efficiency of the investments made by the relevant institutions in the transportation sector, it is necessary to monitor the trends in the transportation sector at the regional and global level, to take into account the important factors affecting the investments in this direction, and to organize a private institute (institution) that conducts research on change forecasts. According to the information of the State Statistics Committee of the Republic of Azerbaijan, the specific weight of transportation in capital investment in the country's economy varies between 10 and 20 percent in different years [14]. From a macroeconomic point of view, this is a fairly high indicator, transport is an important area of the economy. Passenger and freight vehicles included in the state list according to the rules accepted in the country, all kinds of transport, sea transport, air transport, road transport, refers to inland water transport, urban and suburban electric transport, metropolitan transport, as well as road pipeline transport, located on the territory of the country [7]. The geostrategic location of our country's lands is an important factor in benefiting from the opportunities of regional and global transportation routes. In order to ensure the implementation of freight and passenger transport through the "North-South" and "Asia-Caucasus-Europe" global transport corridors passing through the territory of the Republic of Azerbaijan: There are railway, water, road, air, pipelines. In addition, the metro, which is a part of transportation in Baku, the capital of the country, operates. There are extensive road and modern navigation infrastructures that enable the movement of land and other modes of transport [7].

- In the transportation sector, freight and passenger transportation services that meet the requirements and are inexpensive can only enter the market as a result of quality and professional activities. Such activities require healthy and trained personnel.

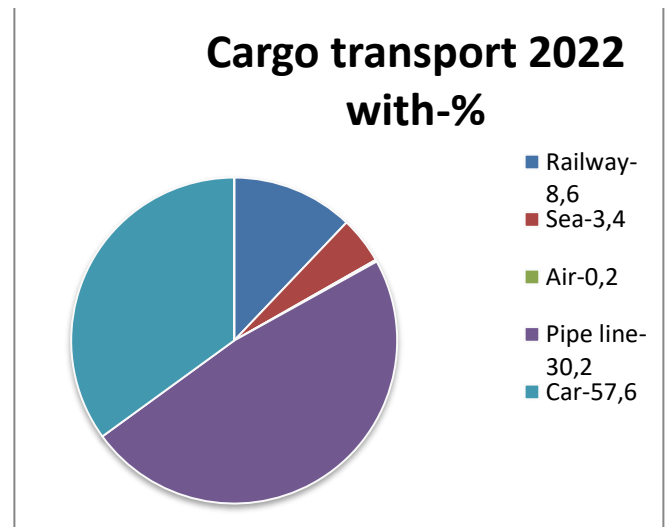
Investments in the transportation sector are such an area of the country's economy that consistently in this field:

- companies operating in the transportation sector offer cargo and passenger transportation services that meet the requirements of the international market;

- income from the transport sector is ultimately geared towards improving the welfare of citizens;

- continuous renewal and development of the transportation sector is supported within the framework of state programs.

In 2022, the structure of cargo transportation by transportation types, as % of total



Picture 2. Source: Prepared by the author based on the data of the State Statistics Committee of the Republic of Azerbaijan [14]

The factors that determine the transformation of the issues of the national transport sector of Azerbaijan in the conditions of global competition have been determined and the role of investments in increasing productivity has been revealed. In economics, the concept of the transport sector applies to two subjects, private and state. However, as a result of the rapidly developing processes in recent years, private and state institutions have lost their original meanings and are adapting to the requirements of a brand new era.

In most developing countries, the main condition for increasing investments in the transport sector to a cost-effective level is the creation of a favorable business environment in the country. On the other hand, transnational companies are interested in highly profitable transport projects in the country where such conditions exist. In other words, currently the effectiveness of investments in the transport sector is related to supporting multinational companies. Companies from countries such as Turkey, China and Germany can be given as examples of such developments.

Factors related to the transportation sector and businesses positively affect the economic-geographical distribution of production categories. It is internationally recognized that the transport sector currently accounts for approximately 12% of world GDP. It is known that the difference in the percentage of GDP used to estimate the size of the freight and passenger transport market is associated with inefficiencies in supply chains in many parts of the world, which has increased the demand for large amounts of investment compared to previous years.

According to the research and consulting firm "Armstrong & Associates Inc", the volume of the international transportation market in 2018 was \$9.6 trillion. In maritime, rail and air transport, the costs associated with holding inventory accounted for one-third of total costs. The same company predicted that the annual growth rate of over 5% in

total international transportation costs will continue until 2023. As a result of the analysis, it was determined that the volume of the total cargo and passenger transportation market will exceed 12 trillion USD in 2023. Other research companies predict that investments in transportation infrastructure such as roads, ports, railways and airports will increase and the volume of the international logistics sector will exceed 15 trillion dollars by 2023 [16].

The need to meet the increasing demand for both passenger and freight services in an efficient, safe and environmentally friendly manner in the transportation industry has become a globally recognized phenomenon. Intelligent Transportation Systems (ITS), created with the use of information and communication technologies, facilitate the solution of economic, environmental and social problems by providing fast and effective access to information. Such solutions essentially enable the integration of road transport with other modes of transport, each mode complementing the other, and a more efficient global transport system is built [8, p. 14]. Although many different models have been developed in the transportation sector in developed countries, it is seen that developing countries are also trying to benefit more from these technologies.

For the European Union region, the transport sector is a very important part of the economy. Thus, 5 percent of the total production and total employment in the European Union region is provided by the transportation sector. The number of people directly employed in the transport sector in the European Union region is approximately 10 million, and employment in road transport constitutes 52 percent of all transport sector employment [8, p.5]

When we look at the income distribution based on transportation in the European Union countries, storage and support activities rank first with 33.7%, road passenger and freight transport services with 32.7%, air transport with 9.8%, air transport with 9.8%, with 33.7, storage and support activities, sea and inland waterway transport is 9.4 percent, and rail transport is 6.2 percent [13, p.12].

In 2012, the share of transportation and communication activities in Turkey was around 14 percent of the Gross Domestic Product. Considering the distribution of transportation types in passenger and cargo transportation in Turkey, 90.5 percent of domestic passengers and 87.4 percent of cargo were transported by road until 2011 [8, p.6].

On the other hand, the share of the Azerbaijan transport sector in the total profits in the country's economy in 2019 was 7 percent, and the annual average number of employees was 8 percent. The structure of freight transport by types of transport in 2019, expressed as a percentage of the total, is railway - 6.5 percent, maritime transport - 2.5 percent, airline - 0.1 percent, oil pipeline - 16.5 percent, gas pipeline - 8.4 percent, road transport - 66.0 percent. In addition, the share of railways in the percentage structure of revenues from transportation in the transportation sector in 2019, maritime transport - 2.55%, air transport - 33.83 percent, the share of pipeline - 32.36 percent, road transport - 26 percent, It's 04. The share of the metro was 0.97 percent[14].

III. PERFORMANCE IMPROVEMENT

According to the Decree of the President of Azerbaijan Ilham Aliyev dated 02.04.2018, the Baku Transport Agency Charter can be called the legal basis for the implementation of

Intelligent Transport Systems in our country. The direction of activity of the institution, which is accepted as a public legal entity, is to ensure the safe, uninterrupted and comfortable movement of vehicles and pedestrians on the territory of the capital. The main objectives of the implementation of ITS are: increasing the security in the transport system, increasing the density of transport infrastructure, increasing the quality of the service provided to transport users, minimizing the ecological and socially harmful effects of transport flows, increasing efficiency in freight and passenger transport, introducing technological innovations in public transport, transport to increase investment attractiveness in the sector.

Since the administrative region of the Baku Transport Agency is currently limited to the capital, it is possible to observe that the division of responsibilities for the implementation of ITS among the institutions in Azerbaijan is not clearly defined in terms of law.

The existing ITS, together with the above-mentioned legislative provision and institution, primarily the Ministry of Economy, the Ministry of Transport, Communications and High Technologies, the Ministry of Ecology and Natural Resources, the State Customs Committee, universities, educational institutions, non - public institutions and private companies operating in the sector should be considered as stakeholders related to ITS. In this context, although ITS is implemented in all relevant areas in Azerbaijan, most of the applications do not have the necessary compatibility, expansion, unity, integration and standardization capabilities in intelligent transportation systems, therefore, they do not have a high-level strategy covering the entire administrative region of the country and the implementation of these systems. There is a need for a correct and planned coordination of organizations.

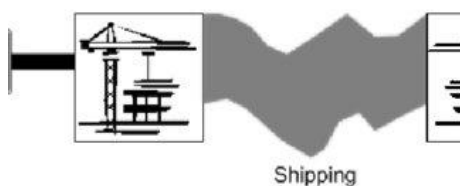
It is possible to observe that the public sector in Azerbaijan is more active in the implementation of intelligent transportation systems. Since the private sector is relatively weak in terms of human, financial, physical and information resources, it cannot compete with the public sector, which has all kinds of opportunities. Therefore, the participation of national private companies of Azerbaijan in the implementation of ITS should be encouraged by the state.

Other problems that may arise in connection with the implementation of ITS in our country are as follows: protecting the private data used in these systems, increasing compliance with international standards, applying ANS at the regional level, complying with the laws required by international transportation in the customs clearance of cargoes transported for commercial purposes, reducing costs by increasing commercial electronic control applications, cargo and passenger transportation.

Although political, legal, cultural and economic relations form the basis of deepening the integration with the countries of the region, it is possible to ensure its sustainable quality through transportation. There is a need to increase the freight and passenger traffic with the countries included in the Commonwealth of Independent States, which has an important place in the recent history of Azerbaijan.

IV. CONCLUSION

Multi-modal transport system



Picture 3. Source: Prepared by the author.

The concept of multimodal transportation has emerged as a result of the integration of cargo transportation with the requirements of the modern age. The economy is regulated by various means, such as the application of technological innovations, the professionalism of personnel, the business and competitive environment, in the conditions of the complexity of transport operations [12, pp.41-61]. Thus, multimodal transportation increases its importance in the international trade cycle day by day in parallel with alternative transportation systems. The introduction of multimodal transport can reduce traffic congestion. Currently, there are at least two different types of transportation in cargo transportation; the carriage of goods is based on a single contract of carriage; cargo transport document is prepared with the cargo carrier at the initiative of the cargo owner; the entire transport process is organized by the transport operator; In multimodal transportation, the international transportation commissioner and the multimodal transportation operator are responsible to the

cargo owner for all actions and mistakes until the delivery of the cargo. The implementation of multimodal transportation in the corridor defined as Zengezur at the international level can increase the efficiency of cargo transportation not only between Nakhchivan, but also between Turkey and Europe and Azerbaijan.

REFERENCES

- [1] Constitution of the Republic of Azerbaijan // Law Publication House, Baku - 2017, 92 p.
- [2] Scientific News of Azerbaijan State University of Economics; II: Volume 6, April - June 2018
- [3] Asadov A.M. The formation and continuous development of a new transport system in the Republic of Azerbaijan: scientific-theoretical foundations and perspectives. "Europe" publishing house, Baku - 2014, p. 338.
- [4] Pashayev A.Z. "Investments directed to the transport sector" Azerbaijan State Maritime Academy Scientific Works No. 1 Baku - 2016; p. 169..
- [5] Rudiger D., Stanley F., Richard S. Macroeconomics. Eleventh edition. - Baku., "East-West", 2015. -637 p.
- [6] United Nations Trade in Goods Database (as of 2015).
- [7] A.Z. Pashayev "Economics of Maritime Transport". Methodical means. Baku, ADDA 2021, 189 p.
- [8] T.R. Ministry of Transport, Maritime Affairs and Communications "Intelligent Transportation Systems Applications and an ITS Architecture Proposal for Turkey" Hasan TUFAN Transport and Communications Specialist Thesis 2014.p.110. Ankara.
- [9] Pashaev A.Z. "Directions of increasing the profitability of investments in the transport sector of Azerbaijan" Publishing House "Technical University", 2017, Publishing House "Technical University", TBILISI-2017
- [10] Innovative Behaviour in Space and Time Cristoforo S. Bertuglia, Silvana Lombardo, Peter Nijkamp Springer Science & Business Media, 2012, 437 p.
- [11] ITS America. (2011). Sizing the U.S. and North American Intelligent Transportations Systems Market: Market Data Analysis of ITS Revenues and Employment. Washington: ITS America.
- [12] Aleksandar Erceg, Biljana Činčurak Erceg and Zafer Kilic (Croatia; Turkey) Multimodal transportation – economic and legal viewpoint from Croatia and turkey. 20th international scientific conference Business Logistics in Modern Management October 7-9, 2020 - Osijek, Croatia; 375 p.
- [13] ERF. (2013). ERF 2012 European Road Statistics. Brüksel: ERF.
- [14] [<https://www.stat.gov.az/source/transport/>]
- [15] [<http://transit.az/az/abouthttp://>]
- [16] [<https://www.freightwaves.com/news/howbig-is-the-logistics-industry>]