



ISSN: 2350-0328

**International Journal of Advanced Research in Science,
Engineering and Technology**

Vol. 6, Issue 11, November 2019

The analysis of international routes selection for the operation of buses for passenger transportation

Nasriddinov Keldim

Tashkent Institute of Design, Construction, and Maintenance of Automotive roads

ABSTRACT: Ever-growing population, growth economic activity and the constant race for economic prosperity has led us to an increase in motorization. The transport sector plays an important role because not only using under-reported fossil energy sources and pollution, but because of our social and economic structure is a sector that can hardly change because of a lot of social resistance. One significant prerequisite for becoming environmentally friendly, Sustainable system is the right provision of data to the regulator (quality and quantity as well). The average all country's Ministries of Transport is constantly working to improve the technical policy on road transport with the introduction of scientific achievements of innovative technologies. The development of transport corridors, high-speed communications, the creation of effective operational logistics systems. This will contribute to the competitiveness of the transport system in the regional global transport markets, as well as the active implementation of new initiatives and projects supported at the highest national and international levels.

KEYWORDS: Unified Transport System, routes selection, analysis, passenger transportation, multimodal transport.

I. INTRODUCTION

In conditions of the dynamic development of the country's economy, increasing the efficiency of using the created production potential, reliability and regularity of transport support for the national economy, the transport system plays an important role. Unified Transport System (UTS) is set of of communication, transportation, technical devices and mechanisms, controls and communications, arrangement of all types of transport, united by a system of technological, technical, information, legal and economic relations that ensure the satisfaction of the national economy in the transportation of goods and passengers.[1] It combines railway, automobile, marine, river, air, oil and gas pipelines, gas pipelines, urban, industrial and electronic (power lines) modes of transport. Ways of communication are roads, railways and waterways, overhead lines, pipelines, monorails and cableways, special highways, equipped, adapted and equipped for the movement of rolling stock, the movement of goods and passengers. Transportation means rolling stock, pipelines, containers, pallets, disposable or multi-turn containers. Rolling stock includes locomotives, wagons, ships, planes, helicopters, airships, cars, semi-trailers, trailers, transport tractors, transport capsules. Technical devices and mechanisms are loading and unloading machines, conveyors, bins, bag-forming machines, etc. Control and communication tools are a set of devices that provide for the collection, storage, processing and transmission of information.[2] Arrangements for all types of transport are railway stations, railway stations, airports, marinas, garages, parking lots, docks, repair shops and factories, warehouses, loading and unloading points, compressor and pump stations, service stations, etc. In a market economy, the clientele's requirements for coordinated interaction to coordinate the work of various modes of transport with the goal of "door-to-door" and "on time" principles objectively come to the fore. Therefore, in the transport market, competitive factors are often inferior to the integration ones, which coordinate both transport and the clientele in mutual benefit. Close interaction of various modes of transport is the basis for the effective functioning of a single transport system of the country.[3]

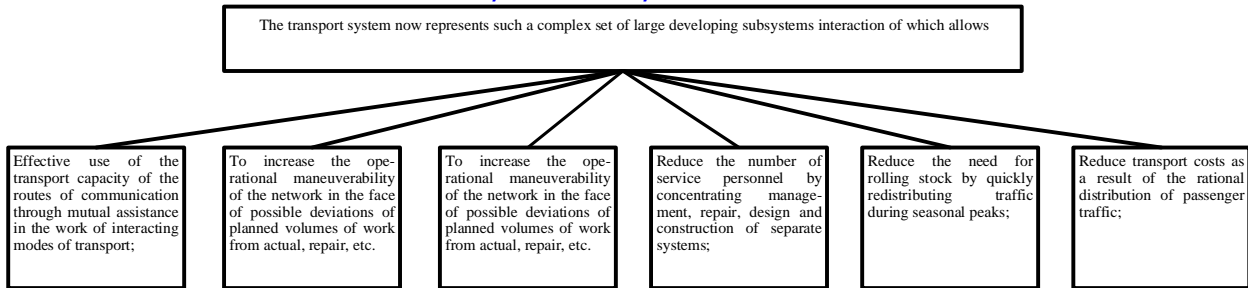


Figure 1. Transportation subsystems

The unity of the system is achieved in:

The technical field of interaction, which involves the unification, standardization and harmonization of the parameters of technical means of different modes of transport, the creation of reliable communication systems between operatives and computing complexes, development of technology without overloading messages.

Technological sphere of interaction, which is provided by the unity of technologies, the use of a comprehensive system of operation of different modes of transport, combined and interconnected schedules of transport, continuous schedules transport hubs, unified processes. Information sphere of interaction, which ensures the compatibility of information on content, on the forms of presentation, speed and timeliness of issuing information by one mode of transport for decision-making on another, on classifiers.

The economic area of interaction, which is based on a single system of planning, operation, distribution between modes of transport, optimal management of the functioning and development of all modes of transport. Significant reserves of efficiency improvement are opened with further development of coordination of the main types of passenger transport with urban passenger transport

II.METHODOLOGY

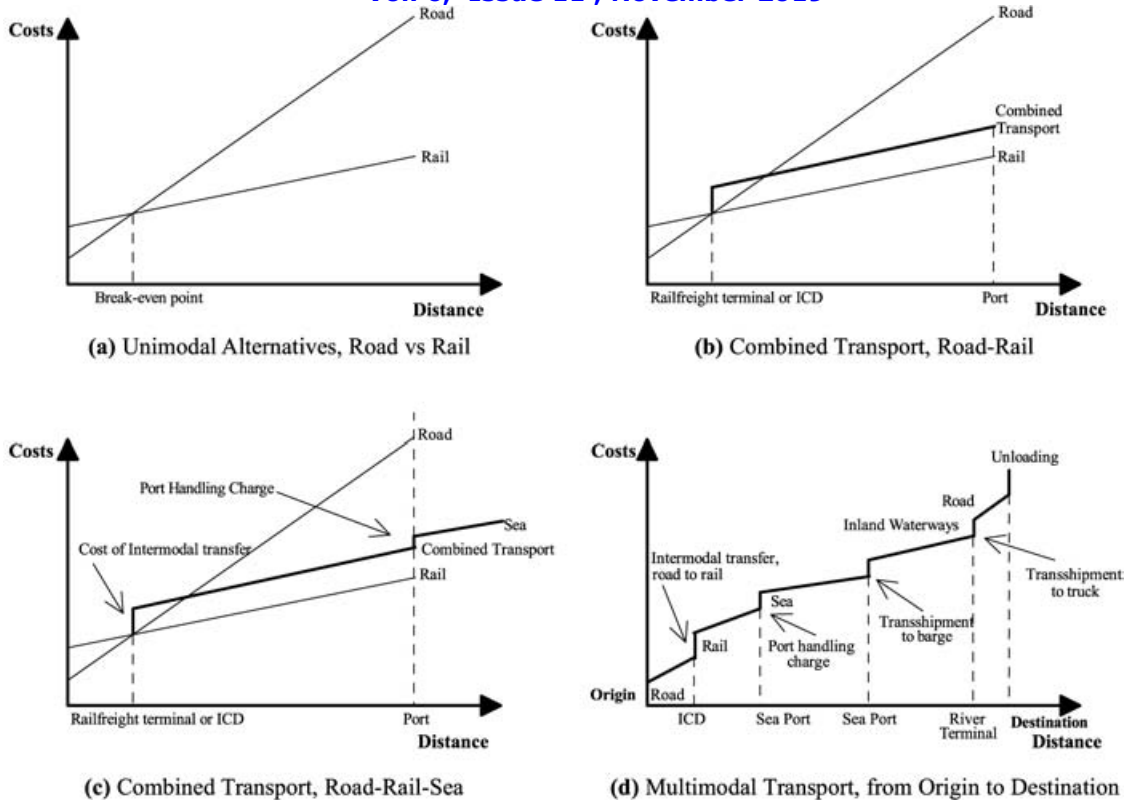
The choice of mode of transport or the combination of mode of transport has a direct impact transportation costs. The aim of this phase is then to propose a methodology about the cost and time components of multimodal transport. There are internal and the external costs associated with multimodal transport. Domestic costs consist transport costs, time costs (intermodal transfer) and transportation costs Janik[4],[5]. External costs include the cost of both environment and risk or accident. In this study, transportation costs and time each route can be calculated using Equation (1)--(4), which has been adapted from Janik[5]. After that, to calculate transportation costs and time for each possible multimodal transport route that was adapted from Beresford and Dubey [6] and developed by Beresford [7], as improved Banomyong and Beresford[4] see fig.2 :

$$Transport\ Cost = \left[\frac{(Demand)}{(Load\ Factor) \times (Vehicle\ Capacity)} \right] \times (Cost\ per\ Frequency) \quad (1)$$

$$Time\ Cost = (Demand) \times (Time) \times (Cost\ per\ unite\ of\ time\ per\ unite\ of\ demand) \quad (2)$$

$$Handling\ cost = (Demand) \times (Cost\ per\ unite\ of\ demand) \quad (3)$$

$$External\ Cost = \left[\frac{(Demand)}{(Load\ Factor) \times (Vehicle\ Capacity)} \right] \times (External\ Cost\ per\ Frequency) \quad (4)$$



Source: Adapted from Beresford (1999)

Figure 2. Cost model for multimodal transport

The main tasks are:

Choosing the optimal transport network of the city in conjunction with the development of the main types of passenger transport. Particular attention should be paid to improving the interaction of railways and shuttle bus Experience shows that in most cases for large transport hubs effective is the construction of peripheral stations of transfers from the railway on shuttle bus Experience, highways to communicate with airports and other passenger centers. The effectiveness of these measures is greatly improved with the correct assessment of the cost of the passenger hour, taking into account the "transport fatigue" of passengers. Also in the future development need methods to assess the impact of regularity and reliability of passenger modes of transport, note-keeping of passengers' time:

- Developing uniform principles and regulations for calculating the parameters of passenger transport systems Cities;
- Implementation of a unified system of analysis and survey of passenger flows on interacting modes of transport;

International road transport of passengers includes the transport of passengers by vehicles carried over the territory of more than two or more States, they can be regular and irregular, as well as pendulum. Regular agreements are carried out under agreed and published contracts, which define the terms of transportation, fares and schedules of vehicles on a certain route, indicating the points of stop for boarding and disembarking passengers. Pendulum situations include transportation, when at a certain time from the territory of one state to the place of temporary stay in the territory of another state is transported groups of passengers, followed by their return by buses of the same carrier to state their initial departure. There are currently regular bus lines of varying lengths (300 to 5,000 km). On international lines are used roomy and comfortable buses with high speeds. Features of the design of these buses are adjustable seats with a deflecting back, adjustable footrests and large windows with smoky glasses to reduce blindness. Buses are equipped with air conditioning and air suspension, have a refrigerator, TV, radio-infected. Buses have toilets, which allows to increase the operational speed of traffic due to the decrease in the number of stops.

III.CONCLUSION

The legal rules governing the general organization and execution of passengers and cargo are generally established by two strict intergovernmental agreements. Under the technical terms of the ECE (European Economic



ISSN: 2350-0328

International Journal of Advanced Research in Science, Engineering and Technology

Vol. 6, Issue 11, November 2019

Commission), an agreement has been drafted on the construction of international highways, which is planned to further develop the network of highways and highways. Given the development of international traffic in our country in the coming years and the prospect, it is possible to note this will be tourist trips. Gradually pendulum and irregular transport will be replaced by regular.

REFERENCES

- [1] N. K.B., "Economics is a mathematical model of planning and organizing the operation of passenger vehicles in cities," 1987.
- [2] N. K.B., "Econometric analysis and forecasting demand for urban transport services," *Acad. Sci. Ukr. USSR Inst. Cybern. named after V.M. Glushkov*, 1983.
- [3] K. M. B. Abduvaliyev A.A., Isaev L., Nasretidinov K.B., Mikhailov E.M., Begmatov I.Y., Khinyev A.F., "No Title," *Sano-Standart*, 2015.
- [4] R. Banomyong and A. K. C. Beresford, "Multimodal transport: The case of Laotian garment exporters," *Int. J. Phys. Distrib. Logist. Manag.*, vol. 31, no. 9, pp. 663–685, 2001.
- [5] M. Janic, "Modelling the full costs of an intermodal and road freight transport network," *Transp. Res. Part D Transp. Environ.*, vol. 12, no. 1, pp. 33–44, 2007.
- [6] T. development of a Decision, support system in multimodal transportation routing within G. Mekong, and S. Countries, "Kengpol, A., Meethom, W. and Tuominen, M.," *Int. J. Prod. Econ.*, vol. 140.
- [7] F. Southworth and B. E. Peterson, "Intermodal and international freight network modeling," *Transp. Res. Part C Emerg. Technol.*, vol. 8, no. 1–6, pp. 147–166, 2000.