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Kukharchuk A., Grishchuk P., Savko D., Ladutska N.

The Role of Multimodal Transportation in the Modern World

Belarusian National Technical University
Minsk, Belarus

The movement of cargo and different goods is a necessary condition for the existence and normal development of society. Meeting public transport needs and striving to carry out these transportations at the optimal economic, environmental and organizational level is the driving force for the development of the world transport system.

Multimodal transport is in high demand across the market, especially for medium- to long-distance shipping. Multimodal transportation of goods involves the use of several modes of transportation such as rail, ship, and truck. Different means of transport are used throughout the delivery process to create the most efficient and economic route for a given set of dispatch and delivery points. Thanks to an optimal combination of transport modes, delivery timing improves, costs fall, and cargo remains secure [1].

As a modern efficient organisation mode of transport, multimodal transport is characterised with one striking feature of ‘one charge, one document, and entire trip liability’. A multimodal transport operator is responsible for the fulfilment of the multimodal transport contract and charges the shipper only once for the freight of the entire trip. Only one contract of carriage, a multimodal transport document, is used for the entire trip.

This service innovation ensures that the goods will move to their destination as fast and securely as possible, at a cost known in advance.

From the above definition, it can be concluded that multimodal transport has several advantages such as:

– Door-to-door transport time reduction.

Multimodal transport reduces the total transit time by carrying out transport operations at a faster speed. One of the major reasons for this is that since there is only one operator, in charge of the whole transport, he is capable of intercepting the cargo whenever there is a change of mode and ensuring that this change is affected without delay. There is another reason which might account for the fastest possible delivery. MTO wants the container to come back as soon as possible after the delivery of cargo so that he can have a higher utilisation ratio of the container and eventually earn more freight.

– Cost-effectiveness.

When using Multimodal transport both MTOs and shippers are able to know about the total transport cost in advance. It`s ensure to control transport cost more effectively. The reduction of transit time by multimodal transport also leads to a reduction of financing costs, because the shorter the transit time, the shorter the interest payment period.

– Reliability.

Seamless transport is guaranteed at each stage of the multimodal chain, because they are closely controlled by a single operator, i.e. MTO. That`s why the transport process is made more reliable. As a result, there is a significant reduction of breakdowns in the supply process, which lessen the need for safety or buffer stocks for shippers or receivers [2].

The most common scheme is to transport cargo to the destination by road from railway stations, sea and river ports and airports. At the same time, all types of transport can be combined in any combination.

Among the most used types of multimodal transports we can mention:

- Short sea shipping.

This type is used when large cargo ships cannot receive goods in all small ports. In this case, it is necessary to transport goods in cargo minibuses so that they can arrive from an oceanic port to a small port. This type of ship is called a sheep feeder or "feeder". In this type of transport, multi-modality includes the transfer of mini-ships to large ships.

- Land transport (road/rail).

This type includes the transfer of cargo between two types of transport, usually between road transport to reach storages or distribution centers, and rail for transport over long distances faster and without the obstacles such as land traffic.

At present combined transportation as "highway – railway – highway" has become an indispensable attribute of transport infrastructure and organization on the European continent, since in the conditions of heavy traffic on European roads in addition to improving the efficiency of transport they allow to unload motorways and limit the negative impact of trucks on the environment.

In accordance with market reforms, senders can choose between different types of transport. Multimodal transport combines the strengths of various types, minimizing the negative aspects, i.e. strengths of rail and water transport (cost, capacity, safety, fuel economy) combined with the strengths of the automotive sector (mobility, speed, door-to-door delivery). When you need to deliver the goods as quickly as possible the client uses road transport, and when it is necessary to send cargo as economically as possible, rail or sea transport is used.

An effective multimodal transport system brings short-term benefits to local traders and transport operators, as well as longer-term consequences in the structural changes of a country's transport and international trade development.

Three key players are involved in the multimodal transport operation such as service providers, transport users and the government. All of them take economic and financial benefits. Service providers: boosting their profession as international transport operators, increase in their local market shares and opening new markets overseas, increasing their financial liquidity through the collection of prepaid freight on containerised door-to-door transport contracts. Transport users: punctuality, reduction of transit time, cargo costs and other associated costs, increase in cargo security, pre-agreed price, closer commercial relationships with services providers. Government: rationalization and updating trade-and transport-related administrative procedures and regulations, stimulation of trade, promoting of new activities for the country`s transport sector, improving the country's balance of payments by saving hard currency [2].

Thus, multimodal transport is the most successful example of technical and technological interaction. They provide technical flexibility of the transport chain and high quality of service with sufficient profitability. Multimodal transport has a high potential in the field of transportation, and its importance will increase.

References:

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