Factors and Trends That Influence the Global Integrated Transport System

LPhD Eng Ovidiu Sorin Cupșa

Constanța Maritime University

ABSTRACT

Multimodalism is not a current concept; it has been used in the human history ever since the beginning of diversification of transportation phase. Along with the expansion of transportation networks, the ***interlinking*** and ***integration*** of all these networks in a global transport network, the multimodal transport systems, allowed the access in almost all the points from the surface of the Earth in which there are human communities.

The process of globalization had as a consequence the creation of a worldwide ***global integrated transport system***, a system that is permanently influenced by the evolution of the regional commercial markets.

Keywords: *globalization,global integrated transport system, multimodalism, intermodalism, trends.*

1. INTRODUCTION

The global transport system represents the totality of production factors that compete for the achievement of the transport activity in the global transport market.

The main production factors of this transport system are: ***the roadways, the transport terminals, transportation*** and ***the workforce*** used to serve them.

The organization of the efficient exploitation of these production factors and their ***combination possibilities*** for serving the purpose for which they were conceived (the transport activity) form the ***logistic system*** of the transport activity.

2. THE STRUCTURE OF THE INTEGRATED TRANSPORT SYSTEM

Generally, the passenger or cargo transport which is done through the use of ***only one transportation facility*** or of more transportation facilities which serve ***only one transportation facility*** is called ***uni-modal transportation.***

The passenger or cargo transport which is done by means of a combined system of two or more transportation facilities, having ***different ways of movement,*** is called ***multi-modal transport.***

The transport facilities, which compose a system, have ***terminals*** at their extremities, which allow the loading-unloading of cargo.

The transport terminals may be ***specialized*** to serve only one way of transport - ***uni-modal terminals***.

They generally form an ***extremity of the global transport network.***

Most of the transport terminals confer ***the possibility of transfer*** of the parcels between ***different ways of transport*** and are called ***multi-modal terminals.***

The interlinking of different transport systems, through multi-modal transport terminals at the extremities, allows the creation of ***integrated multi-modal transport flows- intermodal transports.***

The integration of the transport systems is being done by means of the inter-modalism: they are interlinked and inseparably associated with one another, interdependent and substitute for a common purpose.

The assembly of production factors, from which the totality of transport systems interlinked with one another is made up of, constitutes an ***integrated transport system.***

The main evolutions in the transport activity plan had, at times, low consequences, and other times immediate ones on the evolution of human civilization at a social and cultural plan.

The table below is an attempt to exemplify, for an easier understanding, some ways in which the evolution of an economical characteristic has consequences at a social and cultural level, by only tangentially touching this aspect, which is the object of study of other sciences, like sociology or social science.

Economic level	Social level	Cultural level
Efficiency and swiftness regarding the passenger and cargo transfer	Reasonable access to goods and at creating a pattern for a global consumer	The creation of a global culture based on common elements
Economical growth by developing new markets	The growth of the people's welfare and quality of life.	The increase of the importance of human rights and the value of life
Safety, predictability, and reasonable access to travel	The growth of social mobility of traveling for recreational and economical purposes	The development of multiculturalism and of inter-ethnical tolerance

Therefore the logistic system based on inter-modalism allowed the transport activity to exceed the classical approved limits, placing a strong impression economically, socially, and culturally on the current human society.

From this perspective ***the global transport network,*** which includes the ***totality of the integrated transport systems*** around the globe, forms ***a unitary assembly*** of production factors combined efficiently with one another and substituting for the same purpose, assembly which shall be called the ***global integrated transport system.***

The global integrated transport system has the following ***characteristics:***

- it is an ***intermodal system***;
- it is oriented toward ***ensuring an easier access*** to people and goods in the system, from any location around the globe;
- it is organized in such a manner in order to ensure ***the fastest transport*** of people or goods toward any destination around the globe;
- it is a system in which ***the need for transport is balanced*** by the global supply and demand.

3. THE DETERMINISM BETWEEN THE GLOBAL INTEGRATED TRANSPORT SYSTEM AND GLOBALIZATION

Certainly the global integrated transport system does not accomplish its purpose with the same efficiency all around the globe.

There are ***huge discrepancies*** between the peak areas of this system situated in the ***developed regions*** of the world (Europe, North America, and South East Asia) and the ***poor regions*** (Africa, Latin America, and Central Asia).

However, the global integrated transport system allowed in the last decades the creation of a ***logistic global system***, system which through its local and regional subsystems accomplishes the efficient combination of all the global production factors that compete for the achievement of the transport activity.

The integration of the markets has as a consequence the ***reduction of discrepancies*** between the poor and the rich regions of the world and the transport represents one of the engines of this process.

In fact, there is a ***double determinism*** between the development of the transport activity and globalization:

- the development of the global integrated transport system makes it possible for the interlinking of the markets and their integration in a worldwide market;
- the integration of the markets in a worldwide market creates new needs for transport and has, as a consequence, the development of the global integrated transport system.

The integration of the markets at a global level is a historic process, which began nearly 6000 years ago. The most important step in this integration took place after World War II, through what is known as ***globalization.***

Through ***globalization*** it is meant the process through which the flows of the production process and the commercial flows of the cargo exchanges, resulted from the production process, gain ***a global nature***, exceeding the physical or political boundaries of a state or region.

Globalization is not a linear and uniform process at the level of all the markets. It is manifested through ***the regional integration of the markets*** and the development of some ***multilateral commercial relations***, which create interdependence between these markets.

The most important regional markets, established through multilateral commercial agreements, not being the only ones, at a worldwide level are:

- ***European Union (E.U.)***- is a confederation of states founded in 1958, which includes 27 European states since 2007, covering a market of 485 million inhabitants;
- ***North American Free Trade Agreement (N.A.F.T.A.)***- established in 1992 between USA, Canada and Mexico- covers a market of 375 million inhabitants;
- ***The Association of Southeast Asian Nations (ASEAN)***-an economical union formed between 10 states from Southeast Asia, which covers a market of 560 million inhabitants;
- ***The Organization of Petroleum Exporting Countries (OPEC)***-a cartel formed in 1965 between 12 of the largest petroleum exporting states;
- ***Asia-Pacific Economic Cooperation (APEC)***- was initiated in 1989 uniting 18 states, including the USA and Australia;
- The cooperation treaty between Argentina, Paraguay, and Uruguay starting with 1994, whose objective was the creation of the ***Southern Common Market-MERSOCUR***;
- The African states also signed regional treaties: ***Economic Community of West African States (C.E.D.E.A.O.); Economic Community of Central Africa (C.E.E.A.C.); The Union of the Arab Maghreb (U.M.A.), and so on.***
- Other large global markets are represented by states such as: ***Japan, Germany, Great Britain*** and ***the BRIC countries-Brazil, Russia, India, and China.***

For all of these markets the global integrated transport system represents the optimum global solution for interlinking.

Although it is impossible to measure which is the total of transported goods at a global level, a global estimation can be based on the extrapolation of the existent data of the World Bank, of the International Monetary Fund and of the United Nations Conference of Trade and Development (UNCTAD).

The quantity of transported goods at a global level can be estimated at nearly ***50 trillion tons*** during 2009-2010, as following:

Type of goods	The quantity of transported goods (trillion tons)	Total balance
General merchandise	7,37	15%
Solid bulk	25,11	51%
Liquid bulk	16,43	34%
Total	48,91	100%

In terms of the commercial exchange volume, the quantity of merchandise is not a relevant indicator.

It must be taken into account the fact that any quantity of goods can suffer of the course of the intermodal flow multiple transports, the same amount of goods is transported as raw material, semi-finished products, and finished products.

Therefore, the transported quantity of goods and the share that the various types of goods have in the overall turnover lose relevance.

A much more relevant indicator is the ***ton-kilometer.***

A ton-kilometer is the equivalent of the movement of a parcel which has the mass of a ton on a distance of a kilometer.

4. THE ROLE OF GLOBAL INTEGRATED TRANSPORT MARKET

The ***global production*** of goods and services has doubled in less than a quarter of a century: in 1995-estimated by the World Bank at nearly 30.000.000 trillion USD and in 2008-estimated at over 60.500.000 trillion USD.

Simultaneously, ***the import-export global market*** tripled, increasing from nearly 6.500.000 trillion USD to over 19.500.000 trillion USD.

It can be said that over a quarter of the global production of goods is intended for ***export,*** and the rest is intended for the ***internal consumption*** of the inhabitants of the states in which those goods are being produced.

The demand for transport is a ***derived demand*** from commercial exchanges.

The purpose of this activity is to move in space the goods resulted from the production process, according to the commercial demands.

Therefore, it can be said that by extrapolation, that, in the share of global transports, in 2009, the international transports had a share of approximately 21,7%, increasing to a share of 32,5% in 2008 and tending to occupy increasingly more space.

The difference of 67,5%, from the total of goods and services, is intended for internal transport, one that has a ***basic character.***

The basic character lies in the fact that even the goods intended for export are transported by internal routes in the production process from the raw material to the finished product.

Meanwhile, in the export share of ***international services,*** as defined by the *Balance of Payments Manual (1993),* of the International Monetary Fund, ***transport services*** occupy the ***first place***, with a share of 35%.

By ***means of transport***, according to the definition found in the manual *The totality of transport services (water, air, land, inland, in space, pipeline),* which one national economy provide to another, and includes ***passenger transport, goods transport, renting means of transport with a crew and the auxiliary and related services*** of this activity.

The following are not considered part of the transport service:

-goods' insurance-which is included in the insurance services,

-goods intended for own consumption of the crews and transport vehicles (food, fuel, spare parts, etc.), purchased from the transport terminals (ports, airports, railway terminals and

bus stations) - which are included in the trade of goods,

-repairs of the transport infrastructure (terminals, transportation)- which are included in the construction industry,

-rental of vehicles without crews- included in other services.

In the table below the share of international transport services from all the services can be seen, according to the IMF and World Bank estimates:

Type of service	The share from the total of services
Transportation	35%
Tourism	25%
Insurance, finances	13%
Other services	28%
Global Total	100%

Basically no production activity can take place if the workforce, the raw material, and the means of production cannot be transported where they are needed for the production flow.

At the same time, the delivery of the finished products and services towards the final consumers cannot be done outside the transport activity.

The transport activity is a crucial one for the economy and trade.

Both depend directly on the transport of passengers and of goods.

As shown above, the need for transport is a basic one, that is why *transports have an integration role of all the other markets.*

5. CONCLUSIONS

Hence, by integrating these markets, in the last decades, the global transport system has allowed *the orientation of the transport activity toward the consumer,* turning this activity into an *acceleration factor of the globalization,* of growing markets, interlinking them and generally developing the exchange economy.

It is estimated that, as a feedback of this globalization process, that in the next 50 years, the global integrated transport system will suffer an accelerated growth process, both in efficiency and in the degree of markets' service.

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