

TRANSPORT SYSTEM IN RELATION TO EXTERNAL ENVIRONMENT

Daniel Salava¹, Libor Švadlenka², Barbora Chromcová³

Summary: This article deals with influencing of transport demand on external macroeconomical environment from viewpoint of transport services demand forming with regard to capability possibilities of transport systém, next viewpoint is represented also by possibilities of competition development on transport market including all relevant important aspects with aim of transport services higher quality assurance.

Key words: transport, demand, capacity, competition, economy, user.

INTRODUCTION

Transport development assessed from technological and economical viewpoint is based on interdependent relations between both systems, which reciprocally support and influence each other. Dependence on capability of transport system is relevant factor impacting transport demand development. Very important category is thus transport demand, but also supply on transport market with all tendencies of transport operators to overtake competitors. Cognition of competition must run naturally according to certain system. Transport companies should make efforts to achieve certain competitive advantage. They must search possibilities how to distinguish supply of own services from competition. Form of intermodal transport is in freight transport and form of integrated transport systems is in passenger transport.

1. TRANSPORT DEVELOPMENT IN RELATION TO ECONOMY

Transport development strategy is integral part of state economy strategy. Existing consideration of dependence shows, that macroeconomical selections in areas of:

- global production volume and national income,
- region economy structure,
- goods turnover principles,
- localization of economy activities,

influence volume and also characters of transport demand.

¹Ing Daniel Salava, Ph.D., University of Pardubice, Jan Perner Transport Faculty, Department of Transport Management, Marketing and Logistics, Studentská 95, 53210 Pardubice, Phone.: +420 466 036 376, E-mail: daniel.salava@upce.cz

²Doc. Ing Libor Švadlenka, Ph.D., University of Pardubice, Jan Perner Transport Faculty, Department of Transport Management, Marketing and Logistics, Studentská 95, 53210 Pardubice, Phone.: +420 466 036 375, E-mail: libor.svadlenka@upce.cz

³Ing Barbora Chromcová, University of Pardubice, Jan Perner Transport Faculty, Department of Transport Management, Marketing and Logistics, Studentská 95, 53210 Pardubice, Phone.: +420 466 036 382, E-mail: barbora.chromcova@student.upce.cz

Thus, changes in economy system mentioned and realized in certain period can cause changes in transport demandingness and both factors impact on transport demand volume.

Variety according to its particular parts and branches as a result of developing policy of region is very important aspect. This fact is valid in the whole economy and in certain concrete period. Changes in economical system have external character from viewpoint of transport. We can separate in the whole economy system such branches of industry, which has character of mass production (huge volume of production in tons, e.g. heavy industry), or industries without need of transportations of huge masses of products. This separation is significant, because development proportion of these two industry types can reflect degree of quantitative increase of transport demand or can reflect required characters of transport services, the structure of economy development is important as well. Strategy of economy development from transport viewpoint can be:

- expansive – when mass industries develop quicker than other and volume of transportations grows proportionally or quicker,
- restrictive – when other industries develop quicker than mass industries, thus volume of transportations grows more slowly than other spheres of economy life,
- neutral – when increase of economical variables is compensated by transport demandingness decrease. It results in the fact, that transportations generally keep the same level. It is neutral strategy only from quantitative viewpoint. However, it is necessary to consider continuous development of transport services quality as well.

Transport strategy of economy on the side of demand is result of made macroeconomical selections both in past and in future. Main macroeconomical selections and area of transport activities can be expressed as follows:

- sort structure of production and its volume influences transportations volumes, type of hauled loads and requirements for transport modes and types of means of transport,
- localization of economy activity determinates routing and distance of transportations,
- principles of production turnover influences frequency of transportations, quantity of reloadings and transfer direction,
- production technology in economy influences traffic volume, proportions of transportations of work in progress, intermediate products and needful raw materials,
- economically-financial system, especially pricing principles and costs calculations and also evaluation of economic activity efficiency influences user's decision-making about transport services,
- transport accessibility and quality of provided services as a result of relations customer-carrier on transport market.

If these above-mentioned macroeconomical aspects except transport accessibility and quality of provided transport services are considered as basic characters of situation in economy system, then transport demandingness of economy can be expressed as function of economy system and also transport system.

Introduced relations reflect interconnection of transport and economy system. Each economy industry has its own particularities, thus also different parameters and requirements for transport system. Functional dependences must be firstly considered separately for particular industries, then transport demandingness can be considered generally. Because transport demandingness is factor of demand and demand depends on transport demandingness, it is necessary to realize its interconnection with capacitive index of transport system.

2. IMPACTS OF TRANSPORT SYSTEM COMPETITION ON EXTERNAL ENVIRONMENT

Searching of information about competition and orientation on competitive firms is very important also on the field of transportation. It is recommended to create balance between orientation on customer and orientation on competitive firms. Firms are damaged by changes of customers needs and by latent customer more often than by common competitive firms. Firms that check both customers and competitive firms usually apply right market strategy.

Advantages of competitive firms are for example:

- competition decrease antitrust risks,
- competition increase demand,
- competition leads to differentiation in manufacture and in consumption,
- competition increase strengths against to regulators and trade unions,
- competition is the engine of development of economics and society.

As we said, it is possible to apply "clear" competition in the field of transportation or regulated competition between various kinds of transportation. The kind of competition that can be found in various kind of transportation depends on market structure of relevant kind of transportation. Individual kinds of transportation are characterized with specific technical-economical characteristics. Specific advantages used in passenger and freight transport flow from it. Principle of cooperation between various kinds of transportation is based on the basis of these characteristics. This is the other side of competition - using of advantages of various kinds of transportation for reach of synergic effects on both side - provider of transportation services and customers.

Transport policy of Czech Republic for years 2005-2013 points out that meaning of cooperation between kinds of passenger and freight transportation. Basic advantages of intermodal transport:

- increase of safety and protection of transported goods,
- increase of rationalization, efficiency and speed of manipulation,
- rationalization of packaging of individual consignments,
- international unification of used techniques,
- decline of transportation costs.

Support of development of modern logistic system is another important benefit of intermodal transport. Development of new more suitable technologies and technical instruments in this issued field continues currently. It should be more preferable to use international experiences and join to european projects focused on development of intermodal transport systems.

In the field of passengers transport, the cooperation between individual kinds of transportation is enforced by creating of integrated transport systems (IDS). It is the real chance that leads to improvement and improvement of quality of transport services in cities and regions. IDS is characterized by individual delivery conditions (agreed individually), by individual fares, timetables, corporate documents, by complex transport information system and by intermodal terminals between individual kinds of transportation.

In connection with transfer of responsibilities for ensure of transport services in regions to region authority the process of integration of transport services will spread to whole area of regions. In connection with creation of public transport, it is necessary to regulate competition between individual kinds of transportation simultaneously with increase of strength of competition between transport providers in individual kinds of transportation. Cooperation between individual and public transport must not be left out during this process.

The condition of the same conditions for individual subjects providing services on transportation market is "Fair market". We can review this issue in national and european transport area. Fair market place of Pan-European predicts harmonization of "national harmonization processes". Currently this issue is solved and discussed in process of harmonization of transport market conditions.

Harmonization of conditions is tracked on following fields of research:

- operating with same conditions,
- tariffs systems with same conditions in all countries,
- countries are financing same interest,
- countries will follow,
 - the same system of charging of external costs,
 - the same tariffs in this system,
 - the same way for transfer these costs of transport provider.

Realization of these long-term aims has got strong political limitation. We have to use all ways of harmonization to success in this process for example we have strongly change legislation. Fair market place is promoted by European Union like tool for refreshment of railway transport. This aim is introduced in strategic documents.

Transport policy of the Czech Republic for years 2005-2013 proposes solution of harmonization of conditions of transport marketplace and charging of user of infrastructure:

- objectiveness charging of using of infrastructure,
- charging of damages on environment and health,
- charging of loss due to congestions,
- charging of loss do to accidents.

Government like insurer of normal working and development of own transport systems disposes with all kinds of harmonization tools. Government forms own marketplace and involves possibilities of transporters to success on own and international market. Basic tools of harmonization are:

- legislation,
- financial support,
- internalization of external costs,
- tariff's system and charges in tariff's systems,
- management of transport infrastructure.

Competition between road and railway transport create strong press on railway and is cause of fact, that railway is not able to adequately react and is forced out from transport market. It depends in this process especially on quality of road network and density of railway infrastructure. Directive no. 2001/16 ES of interoperability of conventional transeuropean railway systems is decisive for railway transport of Czech Republic and for carriers in railway transport.

Legislative changes in business in railway transport in Czech Republic relate to ensuring of access to transport route, acquisition of licence and certification of safety.

Access to railway transport route means, that each carrier has right for operating of railway transport on state railway network by own train, if he proves necessary qualification and financial capability and integrity and obtains licence from Railway Authority.

CONCLUSION

Distinction of supply is in strong competitive environment other way of avoidance to direct competition. But distinction of supply can be copied by competitive firms. Firms must permanently think about new attributes and values of provided services. By choice of possibilities of service customers value increase, we must consider how it will be judged by customers and how competitors will react probably on new situation. Harmonization between individual kinds of transportation means issues and it is the subject discussed for long time. It is possible to include it to following areas: economical, legislative and technical-technological.

ACKNOWLEDGEMENT

This article was written within the solution of researchal project nr. VZ MSM 0021627505 „Transport Systems Theory“.

REFERENCES

- (1) KOTLER, P. *Marketing Management*. Grada Publishing, Praha 2001. ISBN 80-247-0016-6.

- (2) LIBERADZKI, B. *Transport: Popyt. Podaż. Równowaga*. Warszawa: Wydawnictwo Wyższej Szkoły Ekonomiczno – Informatycznej w Warszawie, 1998. 154 s. ISBN 83-906188-2-6.
- (3) ŠARADÍN, P., ŘEZNÍČEK, B. *Marketing v dopravě*. Grada Publishing, Praha 2001. ISBN 80-247-0051-4.