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**STRATEGIES OF TRANSPORT
HORIZONTAL INTEGRATION
AND THEIR INFLUENCE
ON THE COMPETITION**

Introduction

Integration of transport (understood as – diversified with a form and an area – coordination of action of subjects being functional on transport markets) is a process which brings not only benefits, but is also connected with costs and that's why it is possible to calculate the effectiveness of integration. This effectiveness depends on the market, on which integration takes place and on the strategy of integration. The market, its structure, and the specificity of the transport process have the crucial influence on the strategy of integration. However, even with such a restriction, it is possible to have a choice of detailed answers which will have the influence on the effectiveness – also because the integration of transport can limit the competition, which is the main factor of effectiveness on the markets.

The identification of strategies of transport horizontal integration, which is the subject of this article, was carried out at the same time for the passenger transport and the transport of goods. Such an approach is rather rare – the problem of integration is usually considered separately for the passenger transport and the goods transport. Meanwhile the essence of integration of these two kinds of transport seems to be quite similar. It is worth risking “the integration of the transport integration research”.

1. The process character of transport integration

Integration is a process leading to obtaining expected (politically or through the business) cooperative bonds on transport markets. The reason for taking actions leading to the increase of integration are the benefits which can be obtained by subjects of the transport market and by subjects of the surrounding markets. It is possible to rank among the most important benefits of transport integration such factors as:

- lower transit costs at longer distances,
- potentially faster delivery time in certain circumstances,
- reduction in the road congestion,
- more environmentally acceptable solutions to congestion and related problems,
- reduced consumption of fossil fuels and higher effectiveness of fuel use,
- safer transit of some dangerous products (cargo)¹.

Amongst basic costs of transport integration the following ones should be mentioned:

- planning the integrated transport network,
- preparing contracts and agreements amongst subjects interested in integration,
- information systems,
- dispatcher managing in the case of disruptions in traffic,

¹ D. Lowe: *International Freight Transport*. Elsevier, Amsterdam-London-New York 2006, p. 3.

- operations staff that are dedicated to the transfer clients, both in normal and in disturbed circumstances².

Integration means the coordination of companies actions of and it can lead to reducing the competition on transport markets, and in some cases even to the total disappearance of the competition. It depends, among others, on the advancement of the cooperation of market subjects. Examples of cooperating of competing – companies – are well-known, however, this cooperation is limited to some spheres of activities and it is transitory. Cooperation also leads to the reduction of competition strength, however, usually in the limited denotation and the time. Coexisting of cooperation and the competition is described in literature with the help of the theory of cooptition³. However, this conception does not give the satisfying reply to the question how to increase integration in the transport while preserving the competition on the market. And just seeking the balance between integration and the competition in conditions of the liberalization and the deregulation of transport markets is a crucial theoretical and practical problem of economics and transport policy.

On transport markets it is possible to find numerous examples, where in spite of coordination, the competition is not surrendering to the weakness and what's more, it is increasing. It is in particular about integration of cargo transport as part of the intermodal transport process. In case of the intermodal transport of a lot of market subjects it must closely cooperate as a part of one transport process, and at the same time a competition is staying amongst organizers of transport processes as well as the competition is not undergoing weakening of individual operators of the intermodal transport process. Competition between train and truck carriers can be an example although in case of the intermodal transport process they can constitute links of one the supply-chain. The different situation is appearing in the mass urban transport, here in case of integration it is reaching the coordination in a given area, it concerns all processes of transport coordinated systems – in this way integration concerns the entire system of the transport city (or of at least a few subsystems).

It is possible to consider two different strategies of transport integration:

- transport processes,
- transport systems.

The first is first typical for integration of transport of cargoes and passenger long-distance transport (mainly air). However the second universally appears in the group – passenger transport. Exactly in this case the most limiting by processes integration is visible of competition on the given transport market. The choice concerning strategy to a large extent depends on the technology of the transport and organization

² J. Viegas: *Integrated Transport Systems: Public-Private Interfaces*. In: *Handbook of Transport Strategy, Police and Institutions*. Eds. K.J. Button, D.A. Henscher. Elsevier, Amsterdam-London-New York 2005, p. 139.

³ F. Prevot: *Coopération et management descompotences*. "Revue Française de Gestion" 2007, (176), p. 184.

of the market, however it isn't possible to claim that these factors explicitly fix the strategy of integration. Examples of applying exchanged strategies on different transport markets are well-known, it is also possible to talk about the quite similar climb in the scope of different integration of services (e.g. telecommunications). Such moulding the strategy is a research and practical problem of integration of transport systems in order to curb the negative influence of this strategy on the competition as well as the possibility of replacing this strategy with strategy of integration of transport processes. The one from exchanged directions of action seems second to be not an only fascinating theoretical problem in conditions of the development of the telematics of transport more and more implementations are real also in this scope.

2. Integration of transport processes

The intermodal transport links transit processes of different modes of transport. The notion of intermodal transport is usually applied to the freight transport. However, it seems to be the narrowing of the real meaning of this term. The European Commission notices this problem and it leads to the effective use of different modes of transport in the service of transport needs, and it focuses on limiting transport made only with the help of cars⁴. Therefore the notion intermodality is more and more often applied to the passenger transport : „[...] passenger intermodality is the priority of policy and planning, it is a kind of transport which enables to use different transport modes in one transport process”⁵. It is also justified to apply a wider (in frames, however, concerns also a coordination of branch of the transport) meaning of transport integration with reference to the passenger transport.

Freight forwarding companies are performing the role of the integrator in the intermodal transport process (in the passenger transport it can be organizer of the travel tourist office or the operator which on behalf of the passenger arranges the further transport) which are being called operators of the intermodal or combined transport. Integration can also follow in the result of action taken by one of operators which in such a case is carrying freight forwarding activities out. Intermodal operators are most often enterprises being a property of rail companies. These are exactly railways which are most interested in the development of the intermodal transport as the alternative for the rival road transport. Therefore in spite of the fact that the rail transport is losing the share in the market of the freight transport, intermodal operators are getting the consistent rise in transport⁶.

⁴ J. Karsten: *Passengers Consumers, and Travellers: The Rise of Passenger Rights in EC Transport Law and Its Repercussions for Community Consumer Law and Policy*. “Journal of Consumer Policy” 2007, 30(2), p. 120.

⁵ *Towards Passenger Intermodality in UE*. Report 3 for DG TREN. Dortmund 2004.

⁶ *Transport intermodalny w Europie*. „Rynek Kolejowy” 2006, (4).

The idea of the strategy of transport integration process is shown in the Figure 1. In the intermodal transport process it is reaching cooperation of hauliers competing subjects together are carrying out activities connected with transferring charge. And most important: integrating transport is only being carried out by one subject and exclusively with reference to the given transit process. In the process a competition is possible between integrators. What's more, they are competing not only amongst themselves to provide transport services, but also about chosen operators of transit services. In conditions of the deregulation of the transport also the decrease in the number of operators of intermodal transports is observed which leads to the competition on the market⁷. In the process, in spite of integration, a strong competition is possible on the transport market. It is increased for intermodal operators thanks to the competitiveness of the transport mode about the natural, low transport availability (railway and inland waterways transport). And at the same time road hauliers participating in the integrated transport process are increasing their competitiveness in the process and can develop activity in spite of regulations limiting the development of the road transport.

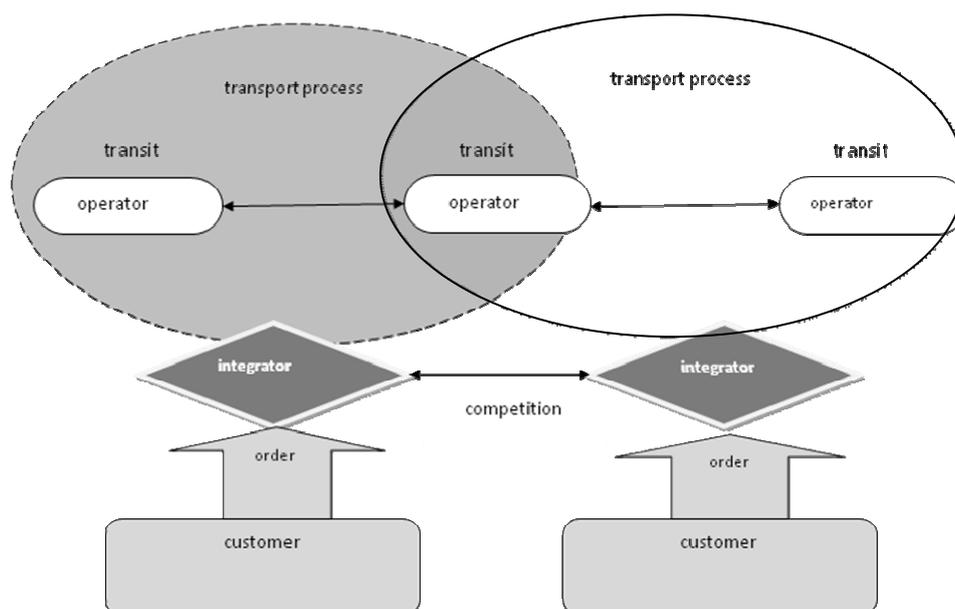


Figure 1. Integration of the transport process

Source: R. Tomanek: *Organizacja transportu jako instrument integracji*. W: *Integracja systemów transportowych w warunkach gospodarki rynkowej. Procesy, mierniki, modele. III etap badań statutowych*. Red. M. Michałowska. Wydawnictwo Akademii Ekonomicznej, Katowice 2007.

⁷ B. Slack: *Intermodal Transportation*. In: *Handbook of Logistics and Supply-Chain Management*. Eds. A.M. Brewer, D.A. Henscher. Elsevier, Amsterdam-London-New York 2001.

Presented strategy, as it has already been mentioned, is mainly used in transport of cargoes. On the market of passenger transport the organizers of transports (integrators) are more rarely met with an exception of urban and (more rarely) of regional mass transport, however, these organizers integrate the entire markets and not separate transport processes. Individual hauliers sometimes apply the strategy of integration of the transport process offer the organization of supply for their passengers, to the wider scale this way integrated services for individual passengers are providing air alliances (but as part of one mode: of the air transport). However, unrolling dynamically low-cost lines already notice integration as the source of costs. And more easily it is possible to move these costs to the passenger which in such a situation is taking the role of the integrator on to itself and alone is incurring costs connected with it (and risk).

3. Integration of transport systems

In conditions of mass transports (typical for the mass passenger transport) integration is being organized differently. It is done by fusing of transport systems supporting transit needs of the given market. In the process of integration of the transport process it is a part of the system and it concerns all processes carried out by the given system. If the process is going beyond the integrated system integration is not full. For example integrated (systemically) the urban transport in area is not guaranteeing the integrated possibility the agglomeration of travel beyond the area of action of the organizer of transports.

Integration of transport systems can differ in power depending on what is its object. In particular it is possible to talk about integration (from weakest to strongest advancements of integration):

- in the scope of the communications information (about information on routes, timetables, fares),
- ticket and fare integration (here very different solutions are available),
- network integration (can appear independently of ticket and fare integration ticket),
- wider integration – concerning also a coordination of functioning of the transport with surrounding it⁸.

Fusing of transport systems follows on the plain of producing favours or of their – sale are it two, alternative sub-strategies of discussed here strategy of integration of the transport⁹. In the first case a coordinated system of producing services is arising, and in the second – of their sale.

⁸ D. Velde: Op. cit., pp. 128-129.

⁹ R. Tomanek: *Konkurencyjność transportu miejskiego*. Wydawnictwo Akademii Ekonomicznej, Katowice 2002, pp. 115-117.

Integration of transport systems on the level of providing services consists of integration (horizontal) of operators providing services, in the most advanced figure: by the merger or takeovers (Figure 2). In this way one individual operator exists on a given market, it enables it to provide integrated services (although it does not have to mean full integration: there are well-known cases when even as a part of one carrier the service offer is not integrated and what's more a competition is appearing amongst individual divisions). Such a situation takes place e.g. when one haulier which offers transport is active in an urbanized area with different branches of transport. Such a solution was quite common in Poland before 1990 and at present is found in such cities as Poznań, Wrocław, Kraków. It is also quite often applied strategy of integration in many cities worldwide.

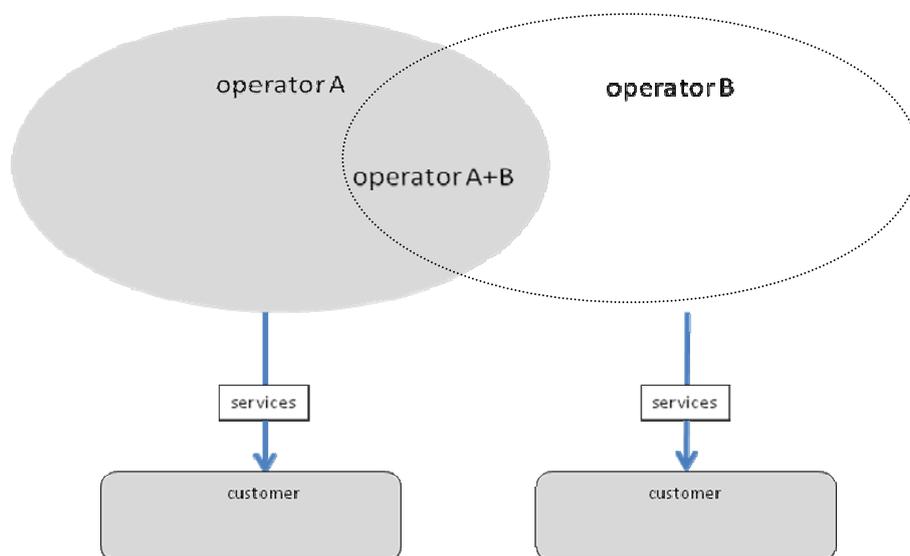


Figure 2. Integration of the transport system on the level of producing services

Source: R. Tomanek: *Strategie integracji i ich wpływ na konkurencję na rynkach transportowych*. „Zeszyty Naukowe”, nr 495, Uniwersytet Szczeciński, Szczecin 2008, p. 282.

Most importantly, this strategy usually leads to a major limitation of the competition. It is necessary, however, to notice that it means competition “in the market” which doesn’t exclude the possibility of competition “for the market” (the possibility of competing “in the market” and „for the market” was first raised in 1859 by Edwin Chadwick)¹⁰. However, the competition “for the market” is more frequent on smaller markets. On such markets integration of the transport system on the level of producing

¹⁰ M. Mougeot, F. Naegelen: *Was Chadwick Right?* “Review of Industrial Organization” 2007, 30(2), p. 122.

services does not have to lead to limiting the competition. It is necessary to notice that possibilities of the competition “for the market” are constantly increasing. The globalization of the operators of the mass transport cause that they can fight easier and easier for markets of the mass transport even in big cities. On markets of the urban transport one can also in Poland see anxieties of such a development of the situation. In Poznań, for example, municipal authorities are considering the change of the organizational form of the urban transport’s operator (MPK Poznań) only for fear of that this company will not win a tender for providing transit services¹¹. The offer of the company on the market of Poznań and surroundings is quite big: MPK Poznań has (in the move) of 513 vehicles, including 248 tram waggons and makes the over 34 min annually veh-km¹². Anxieties of the tender in the case of such a great transport system show uprisings the possibility of the competition “for the market” in the urban transport. So in the case of this strategy of integration preserving the competition is possible.

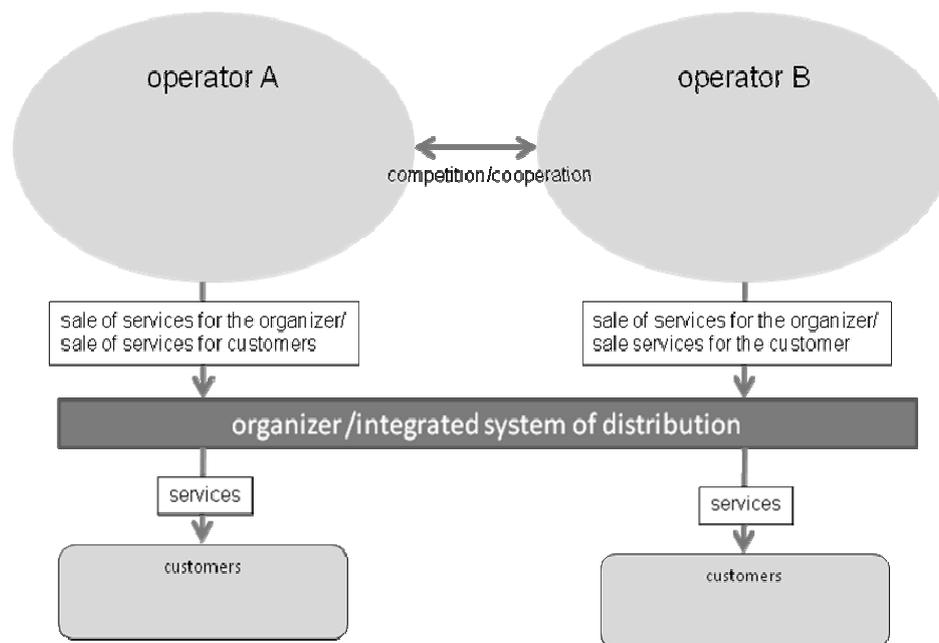


Figure 3. Integration of the transport system on the level of the sale of services

Source: R. Tomanek: *Strategie integracji...*, p. 283.

¹¹ http://www.miasta.gazeta.pl/poznan/1,37794,5275032,MPK_będzie_wozic_poznaniaków_bez_przetargu.html (28 June 2008).

¹² *Dane za 6 miesięcy 2007*. „Komunikacja Miejska w Liczbach” 2007, (1).

Integration on the level of the sale can be based on a coordination of sale by operators, but is also possible in conditions of the competition amongst operators of services. In the first case it consists of linking distribution channels by operators and in the second case it means creating the individual (or board of directors of the transport) which buys services of operators for the purpose of selling these services to passengers (the coordination concerns the demand for transit services in this case). This individual must be independent of operators and that's why is created or employed by recipients of services, especially by the authorities responsible for the organization of the mass transport. Schematic diagram of integration of transport systems on the level of the sale of services is shown on Figure 3.

Integration on the level of the sale of services does not have to lead to the reduction of competition. When the intermediary is the independent subject of the operators, called in the urban transport the urban transport authority, keeping the competition amongst operators is possible. It is the competition "in the market" and it requires the market of the appropriate size (it cannot be the market causing coming into existence the natural monopoly of only one operator). The urban transport authority is an appointed distributor of services, where strong regulations or the high level of subsidising services (essential to carry them on) give the authorities the right to introduce to the market such a subject which is accepted by the operators, it also means coming into existence the monopson – the scheme of competition on such a market was shown on Figure 4. Such markets are found in the regional and passenger urban transport.

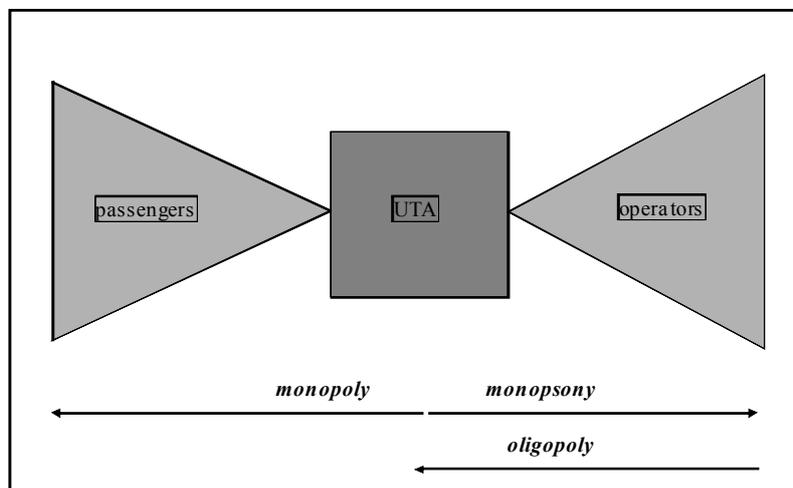


Figure 4. Integration of the transport system on the level of the sale of services by the urban transport authority (UTA)

Source: R. Tomaneek: *Funkcjonowanie transportu*. Wydawnictwo Akademii Ekonomicznej, Katowice 2004, p. 167.

The urban transport authority definitely enable integration if the market is big enough to make the competition “in the market” possible, there appear the conditions of the increase in the effectiveness caused by the competition. All the same, operators on the given market have to rely on one purchaser which is a clean off-licence (monopson) with all faults in such a situation. What's more, urban transport authority are usually public subjects. It brings numerous negative economic consequences. Referring to the story of changes of the organization of the urban transport in Poland after 1990, it is possible to notice that markets with urban transport authorities at first had the big economic advantage over monopolized markets through of one thing, the council – operator where urban transport authorities existed also lower individual costs and the higher share of profits from the sale of tickets in profits as a whole. A Katowice urbanized area counting the over 2.5 mln can be an example of inhabitants: thanks to the urban transport authority (Municipal Transport Union of the Upper Silesian Industrial District – KZK GOP) managed to integrate the urban transport which is own objective 23 of administrative districts. Since in the Katowice urbanized area 28 operators are providing transit services (in it one tram haulier, the rail transport is not the own objective of administrative districts), it is possible to talk about the competition for contracts with KZK GOP what is a factor of the effectiveness¹³.

At present this majority concerns only some markets in Poland. Urban transport authorities in many cases became bureaucratic, poorly reacting to the market changes, but more to political changes occurring at authorities of cities structures. However, in the biggest urbanized areas it is hard to imagine functioning of the urban transport for itself without these individuals.

Conclusion

Observation of changes happening in the sequence of 20 last years in the transport in world and in Poland allows to determine economic benefits which are the result of extending the scope of the competition in transport. Appreciating the benefit of integration of the transport one should be aware of the fact that impairing rival influences can be one of serious costs of this process.

On the basis of presented characteristics of different strategies of horizontal integration it is possible to say that in the case of real transport systems it is also possible to apply mixed up strategies which join the elements of essential strategies, e.g. in the scope of integration of transports of the urban and regional transport. In particular it is possible to consider moving experience from integration of the transport of charges to conditions of the mass passenger transport. Fitting a given strategy to the local

¹³ <http://kzk-gop.com.pl/dzialalnosc/fakty> (28 June 2008).

conditions can be a complicated application problem. However, it is essential to notice the potential and real contradiction between integration and competition as well as to make an assumption that in conditions of market economy only in very special cases the demand for integration justifies resignation or a serious restriction of competition. Integration is not a value in itself and as each economic process it has the determined economic effectiveness appointed not only through results, but also through costs (including lost benefits). Only such an economic bill can be the base of rational decisions in the scope of the transport policy.

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