

THE FEATURES OF DEVELOPMENT OF TRANSPORT SYSTEM, LOGISTICS AND INFRASTRUCTURE IN THE COUNTRIES OF THE VISEGRAD GROUP: FROM «REAL SOCIALISM» REGIMES TO POST-COMMUNISM

The article is devoted to analyzing historical trends and peculiarities of formation and reformation of transport system, infrastructure, logistics and transport in general in the countries of the Visegrad Group – Poland, Hungary, Slovakia and the Czech Republic – in communist and post-communist periods. It is motivated that the solution of transport problems at the interface between the regimes of “real socialism” and post-communism was the initial stage of formation of the current transport system in the countries of the Visegrad Group. This was mainly due to the processes of diversified privatization and deregulation of transport system, infrastructure and logistics, which had a definite effect on the change in the ownership structure of transport, and hence on the further development of transport infrastructure and logistics both in post-communist and post-Eurointegration periods.

Keywords: transport, transport infrastructure, transport logistics, motorization, privatization, countries of the Visegrad Group.

ОСОБЛИВОСТІ РОЗВИТКУ ТРАНСПОРТНОЇ СИСТЕМИ, ЛОГІСТИКИ Й ІНФРАСТРУКТУРИ В КРАЇНАХ ВИШЕГРАДСЬКОЇ ГРУПИ: ВІД РЕЖИМІВ «РЕАЛЬНОГО СОЦІАЛІЗМУ» ДО ПОСТКОМУНІЗМУ

Проаналізовано історичні тренди й особливості становлення та реформування транспортної системи, інфраструктури, логістики і загалом транспорту в країнах Вишеградської групи – Польщі, Угорщині, Словаччині і Чехії – у комуністичний та посткомуністичний періоди. Вмотивовано, що вирішення транспортної проблематики на стику режимів «реального соціалізму» і посткомунізму було ініціальною стадією становлення чинної транспортної системи в країнах Вишеградської групи. Причому відбувалось це головню за рахунок процесів диверсифікованої приватизації і дерегуляції транспортної системи, інфраструктури й логістики, які визначально позначились на зміні структури власності транспортом, а відтак й на подальшому розвитку транспортної інфраструктури і логістики – як у посткомуністичний, так і в постевроінтеграційний періоди.

Ключові слова: транспорт, транспортна інфраструктура, транспортна логістика, моторизація, приватизація, країни Вишеградської групи.

Modern state of transport system, infrastructure, logistics and transport in general in the countries of the Visegrad group – Poland, Hungary, Slovakia and the Czech Republic – mainly relies on historical trends and features of their formation and reformation, in particular over the communist and post-communist periods. Thus, systematization and structuring of current transport infrastructure and logistics in the analyzed region are not possible without determining the patterns of their development and historical and transformational trends and features of formation in the past. Correspondingly, the topicality of the current research is mainly predetermined by the necessity to figure out peculiarities of the development of the transport system, logistics and infrastructure in the countries of the Visegrad group at the edge of their transit from the “real socialism” regime to post-communism as an initial stage of establishing current transport system in the region.

This range of problems was intentionally and briefly studied in the scientific works by the following scholars: R. Bauer¹, W. Hook², T. Komornicki³, S. Mitric and W. Suchorzewski⁴, D. Peters⁵, J. Pucher⁶, W. Rydzkowski and B. Spraggins⁷, W. Suchorzewski⁸, M. Turre⁹ and many others. However, they do not deliver a complex and systematic position as to understanding peculiarities of transport logistics and infrastructure in the Visegrad countries at the edge of their transit from the “real socialism” regime to post-communism as a precondition for establishing current transport system in the region in future. This is the basic aim and tasks of the current research.

Proceeding to the task we appeal to J. Pucher and R. Buehler's¹⁰ remark that the countries of the Visegrad group being in due time socialistic, but later becoming post-socialistic, have

¹ Bauer R., *Gospodarka Rynkowa w Transporcie*, „Przegląd Komunikacyjny” 1990, vol 11.

² Hook W., The political economy of post-transition transportation policy in Hungary, „Transport Policy” 1999, vol 6, s. 207–224.

³ Komornicki T., Factors of development of car ownership in Poland, „Transport Reviews” 2003, vol 23, s. 413–431.

⁴ Mitric S., Suchorzewski W., *Urban transport in Poland: the challenge of the ascending private car*, [w:] *Proceedings of the Conference Reconciling Transportation, Energy, and Environmental Issues, Organisation for Economic Cooperation and Development*, Paris 1994.

⁵ Peters D., *Planning for a sustainable Europe: a case study of EU transport infrastructure policy in the context of eastern enlargement*. Ph.D. dissertation, Wyd. Rutgers University 2003.

⁶ Pucher J., Capitalism, socialism, and urban transportation, „Journal of the American Planning Association” 1990, vol 56, s. 278–297.;

Pucher J., Road to ruin? Impacts of economic shocktherapy on urban transport in Poland, „Transport Policy” 1995, vol 2, s. 5–13.;

Pucher J., The transformation of urban transport in the Czech Republic, 1988–1998, „Transport Policy” 1999, vol 6, s. 225–236.;

Pucher J., The transport revolution in Central Europe, „Transportation Quarterly” 1993, vol 47, nr. 1, s. 97–113.;

Pucher J., Buehler R., *Transport Policies in Central and Eastern Europe*, Victoria Transport Policy Institute 2005, źródło: <http://www.vtppi.org/>

PucherCentralEurope.pdf [odczyt: 01.11.2018].

⁷ Rydzkowski W., Spraggins B., Privatization and Deregulation of Transport in Poland: New Transport Policy Implications, „International Journal of Physical Distribution & Logistics Management” 1994, vol 24, nr. 2, s. 23–29.

⁸ Suchorzewski W., *The funding of public transport investment in Central Europe*. *Proceedings of Conference Financing Urban Public Transport*, Paper presented at Conference of European Ministers of Transport and Union Internationale des Transports Publics, Paris 1999.;

Suchorzewski W., *Urban public transport in Poland: main issues and perspectives*, Paper presented at UITP Conference „Changing European Market and Global Industry”, Lodz 2002.;

Suchorzewski W., *Urban transport in Poland*, Wyd. Ministry of Transport 2000.

⁹ Turre M., *Going trans-European: planning and financing networks for Europe*, Wyd. Pergamon 1999.

¹⁰ Pucher J., Buehler R., *Transport Policies in Central and Eastern Europe*, Victoria Transport Policy Institute 2005, źródło: <http://www.vtppi.org/>

undergone profound political and social-economic transformations since the collapse of the “real socialism” regimes in the late 80s – early 90s of the 20th century. But each country in the region due to specific time and circumstances of epochal changes has its own history of political, social-economic and systematic transformations into a democratic and market society. Therefore, even today between the countries of the Visegrad group there are certain distinctions as to which extent their political systems are democratic, and social-economic systems are market. On the one, hand it allows to unite the country of the analyzed region in a single analytical group, but on the other hand it is a precondition for their permanent clustering. At the same time it refers to the development of transport system, infrastructure and logistics, as in each country of the analyzed region political and social-economic development and reforms stipulated a corresponding “transport revolution”¹¹. Eventually, it means that namely changes in politics and social-economic sphere became catalyst for almost all transformations in post-socialist Europe over the late 80s – early 90s of the 20th century, demonstrating how dramatically politics and economy influenced each aspect of that time and current transport, infrastructure and logistic systems¹². In particular, taking into account the fact that as a result of trends and consequences of reforms (from authoritarianism, planned economy and absolutely state ownership to democracy, capitalism and private, state, municipal and shared ownership) transport systems stopped being predominantly an element of planning and forecasting activity, but naturally, though chaotically started falling under the processes of restructuration, privatization and deregulation¹³.

One of the most vivid factors of the “transport revolution” in the late 80s – early 90s of the 20th century in the countries of the Visegrad group was a dramatic growth of the number of car ownership and usage of private (first of all automobiles) vehicles and a corresponding reduction in the level of public transport using, however together with the processes of producing considerable social inequality¹⁴ (see Table 1). Herewith, such modal shift in using public transport in the majority of the countries of the analyzed region corresponded with similar changes in the system of railway transport from the state sector to private transport companies¹⁵. At the same

www.vtppi.org/PucherCentralEurope.pdf [odczyt: 01.11.2018].; Pucher J., The transformation of urban transport in the Czech Republic, 1988–1998, „*Transport Policy*” 1999, vol 6, s. 225–236.

¹¹ Pucher J., The transformation of urban transport in the Czech Republic, 1988–1998, „*Transport Policy*” 1999, vol 6, s. 225–236.; Pucher J., The transport revolution in Central Europe, „*Transportation Quarterly*” 1993, vol 47, nr. 1, s. 97–113.

¹² Pucher J., Buehler R., *Transport Policies in Central and Eastern Europe*, Victoria Transport Policy Institute 2005, źródło: <http://www.vtppi.org/PucherCentralEurope.pdf> [odczyt: 01.11.2018].; Pucher J., The transformation of urban transport in the Czech Republic, 1988–1998, „*Transport Policy*” 1999, vol 6, s. 225–236.

¹³ Rydzkowski W., Spraggins B., Privatization and Deregulation of Transport in Poland: New Transport Policy Implications, „*International Journal of Physical Distribution & Logistics Management*” 1994, vol 24, nr. 2, s. 23–29.; Bauer R., Gospodarka Rynkowa w Transporcie, „*Przegląd Komunikacyjny*” 1990, vol 11.

¹⁴ Pucher J., Buehler R., *Transport Policies in Central and Eastern Europe*, Victoria Transport Policy Institute 2005, źródło: <http://www.vtppi.org/PucherCentralEurope.pdf> [odczyt: 01.11.2018].; Pucher J., The transformation of urban transport in the Czech Republic, 1988–1998, „*Transport Policy*” 1999, vol 6, s. 225–236.; Rydzkowski W., Spraggins B., Privatization and Deregulation of Transport in Poland: New Transport Policy Implications, „*International Journal of Physical Distribution & Logistics Management*” 1994, vol 24, nr. 2, s. 23–29.; Hook W., The political economy of post-transition transportation policy in Hungary, „*Transport Policy*” 1999, vol 6, s. 207–224.

¹⁵ Pucher J., Buehler R., *Transport Policies in Central and Eastern Europe*, Victoria Transport Policy Institute 2005, źródło: <http://www.vtppi.org/PucherCentralEurope.pdf> [odczyt: 01.11.2018].

time, of great interest is the fact that dependence of the road transport (first of all automobiles) started over the last years of the “real socialism” regimes, movement towards “market capitalism” significantly accelerated this trend and stipulated terrific transformations in the state transport policy, logistics and infrastructure.

Table 1. Private ownership of transport means (the number of automobiles per 1 000 people) in the countries of the Visegrad group over the “real socialism” regime and post-communism (1970–1996)

Year	Poland, №	Hungary, №	Czechoslovakia, №	the Czech Rep., №	Slovakia, №
1970	15	22	64	–	–
1980	67	95	152	–	–
1985	98	135	180	–	–
1988	119	163	196	216	158
1990	138	189	211	233	–
1992	169	217	219	250	176
1996	195	220	–	325	191

Źródło: Pucher J., The transformation of urban transport in the Czech Republic, 1988–1998, „*Transport Policy*” 1999, vol 6, s. 225–236.; Pucher J., Road to ruin? Impacts of economic shocktherapy on urban transport in Poland, „*Transport Policy*” 1995, vol 2, s. 5–13.

What refers to the historical period of the “real socialism” regime (see Tables 1 and 2), in due time, especially in the 70s-80s of the 20th century, domination of public transport over private was predetermined by several factors. First of all, according to the socialist ideology of “communist dictatorship” held a view and declared that owning and using private vehicles was expensive and hard, while public transport was widely spread and so much subsidized that it almost cost nothing. Thus, socialist governments of Poland, Hungary and Czechoslovakia imposed very high expenses on owning and using cars and other vehicles by means of the system of regulated prices¹⁶. Besides, they restricted their own car production (first of all personal cars), organized long queues for new national means of transport and banned or limited import of “western” vehicles¹⁷. As a result, demand on private transport means significantly has overtaken their supply and thus purchase of cars was often accompanied by bribes and political ties. It was supplemented by the fact that fuel prices in the countries of the analyzed region were, at least in the 80s of the 20th century, standardized and this led to formation of the black market of ration cards and growth in price on fuel for those who wanted to travel more than it was possible due to the official sharing of fuel¹⁸. Secondly, quite obvious was rather low quality of national transport means and services, thus vehicles

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¹⁶ Pucher J., Buehler R., *Transport Policies in Central and Eastern Europe*, Victoria Transport Policy Institute 2005, źródło: <http://www.vtpi.org/PucherCentralEurope.pdf> [odczyt: 01.11.2018].

¹⁷ Pucher J., The transformation of urban transport in the Czech Republic, 1988–1998, „*Transport Policy*” 1999, vol 6, s. 225–236.

¹⁸ Rydzkowski W., Spraggins B., Privatization and Deregulation of Transport in Poland: New Transport Policy Implications, „*International Journal of Physical Distribution & Logistics Management*” 1994, vol 24, nr. 2, s. 23–29.

frequently got broken and it was hard to repair them (due to the lack of replacement parts). Besides, at that time road and transport network in general was rather primitive in comparison with the western standards and characterized by the deficit of fuel filling stations, vehicle service stations and other object of service infrastructure¹⁹. Thirdly, before the 70s of the 20th century governments in the socialist countries of the analyzed region treated private vehicles as luxury and real sign of capitalism, materiality and consumerism, which contradicted that time regimes of “people’s democracy” and “real socialism”. Only in the course of the late 70s of the 20th century restrictions on private means of transport (in particular automobiles) were eased in response to growing demand of people on articles of popular consumption²⁰.

As a result all this generated a stereotype, according to which an average citizen of that time socialist Poland, Hungary and Czechoslovakia perceived a private car as an elite and high-quality means of transport, which due to its restricted market admission was rather a status symbol. It was enhanced by the fact that socialist governments in the region allowed small supply of cars – first of all as a reward for faithful party members. And even after some liberalization of the transport market in the 70s of the 20th century, even at the end of the epoch of “real socialism” regimes owning a private car was limited to a small vehicle, though it was still accompanied by a negative and scornful social attitude. Correspondingly and on the contrary, public transport was the most relevant means for a planned social economy with its restrictions on consumption, mobility and selection of sites for living. It resulted in a limited motorization, which apparently helped “communist dictatorship” to keep control of their population, which was positioned as a “captivated horseman”²¹.

All in all, it led to the perception of public transport as a vital means of life, which was rendered to all at a low price. And thus, it resulted in lavish financial support and investment on the side of governments to all types of public transport activity. Though, even despite this fact, except for the subway in big cities, public transport services in the socialist countries of the analyzed region usually were of low quality in comparison with public transport in the West. The point is, that in almost all socialist cities buses, trolleybuses and trams were overcrowded, slow, ill-coordinated and were characterized by often breakage²². It was pre-determined by the fact that socialist public transport in fact had no competitors and thus was not concerned with comfort and safety of drivers and passengers. As in many spheres of socialist economy, staff overage, lack of working motivation, excessive bureaucracy and extreme inefficiency also characterized public transport. Thus, only stability, frequency and

¹⁹ Pucher J., The transport revolution in Central Europe, „*Transportation Quarterly*” 1993, vol 47, nr 1, s. 97–113; Pucher J., Road to ruin? Impacts of economic shocktherapy on urban transport in Poland, „*Transport Policy*” 1995, vol 2, s. 5–13.

²⁰ Pucher J., Buehler R., *Transport Policies in Central and Eastern Europe*, Victoria Transport Policy Institute 2005, źródło: <http://www.vtpi.org/PucherCentralEurope.pdf> [odczyt: 01.11.2018].

²¹ Pucher J., Buehler R., *Transport Policies in Central and Eastern Europe*, Victoria Transport Policy Institute 2005, źródło: <http://www.vtpi.org/PucherCentralEurope.pdf> [odczyt: 01.11.2018].

²² Pucher J., Capitalism, socialism, and urban transportation, „*Journal of the American Planning Association*” 1990, vol 56, s. 278–297.

cheapness of public transport compensate all its disadvantages, especially on the background of other well-developed economies within the region of Poland, Hungary and Czechoslovakia. And against the backdrop of people's poverty it determined impossibility not only to own, but even to move by personal transport means. A vivid example became the fact that at the end of 1988 only 10% of the Czechs and Slovaks used cars to get to work²³.

Situation in the countries, which later composed the Visegrad group, started changing only after the collapse of the Warsaw Treaty at the late 80s – early 90s of the 20th century, as during that period (especially over 1989-1992) the majority of principles and regulations of transport programs and policies in the region changed significantly. One of the crucial changes was a dramatic reduction of subsidies from the central government for support and development of public transport. On the contrary, the main part of the burden connected with financing capital investments and acting subsidies in the sector of public transport was shifted to municipal authorities. Therefore, not capitals, but individual towns and villages were obliged to pay operative and capital subsidies on public transport (except for the railway transport) in separate populated areas, while central authorities became enlisted to this only in the frames of little financing by means of special infrastructural funds. For example, in Czechoslovakia, the central government in this period offered to cover only 30% of expenses on means of transport and infrastructure for electric trams and trolleybuses and 10% of expenses on purchase and maintenance of buses²⁴. In practice, local governments in Czechoslovakia (and later the Czech Republic and Slovakia) did not have possibilities to render support to all necessary funds, and the central government could not repay them promised assistance²⁵. As a result, later subsidy programs of public transport (partially except for the subway and railway transport) on the part of central governments in the part of the countries from the region were fully cancelled, while the remained programs were reconsidered in the context of changing state budgets.

The results of reduction in financing appeared to be destructive for the sector of public transport, especially because the bodies of local authorities were in an awful financial state and could not compensate for the subsidies, reduced by central governments. That is why, along with reduction of state subsidies for the system of public transport in the countries of the Visegrad group it became necessary to raise fares both in an absolute representation and in line with inflation, salary and costs of using personal means of transport (first of all automobiles). Thus, in course of 1988-1994 price for a one-way ticket in trams in Warsaw rebound by over 400 times, and the percent of an average hour salary, necessary to pay for this ticket, only in 4 times, i.e. 26%. Moreover, a liter of petrol in 1988 cost 7 times more

²³ *Dato o Doprave v Praze*, Wyd. Institute of Transportation Engineering of Prague 1998.; Pucher J., The transformation of urban transport in the Czech Republic, 1988–1998, „*Transport Policy*” 1999, vol 6, s. 225–236.

²⁴ Pucher J., Buehler R., *Transport Policies in Central and Eastern Europe*, Victoria Transport Policy Institute 2005, źródło: <http://www.vtpi.org/PucherCentralEurope.pdf> [odczyt: 01.11.2018].

²⁵ Pucher J., The transformation of urban transport in the Czech Republic, 1988–1998, „*Transport Policy*” 1999, vol 6, s. 225–236.

than a tram ticket, while in 1994 the price was only twice of it²⁶. On the analogy, in the Czech Republic over that time the price for public transport grew in 72%, including inflation adjustment, as a result of what the price of ticket was twice of that for petrol over 1989-1997. These dramatic changes of relative prices (which were peculiar of all countries in the Visegrad group) and deterioration of quality of services presupposed a considerable shift from passenger carriage to transit of goods – in the direction from public and industrial transport to private transport²⁷. Besides, reduction in demand for public transport in post-communist period (first of all in Poland, Hungary, less in the Czech Republic and Slovakia²⁸) was stipulated by a high level of unemployment²⁹.

All this standardized the fact that if the state policy of the Visegrad countries in the sector of public transport became less advantageous, they became more adjusted to the processes of owning and using private means of transport, first of all automobiles. Especially on the background the point that almost all restrictions on owning cars were removed, it opened a market to foreign and national (in particular Poland and the Czech Republic³⁰) manufacturers of motor vehicles, what resulted in growth of quality and number of cars, which became affordable for people from post-communist countries. It was also contributed by the fact that since the mid-90s of the 20th century real salary in the countries of the Visegrad group grew, due to what growth of real income of people stimulated a bigger level in owning and using automobiles and corresponded to reduction in the level of using public transport and negative elasticity of its income. Almost immediately after the collapse of the system of the Warsaw Treaty it was supplemented by the fact that in the countries of the analyzed region started the processes of improvement and development of road networks, in particular with the focus on high-speed arterial roads, suburb lines around cities, narrow streets at the key intersections with main inter-city and international routes. It means that after the collapse of the USSR an increase in the level of motorization in the Visegrad countries was accompanied, though not absolutely relevant in terms of rates, by development of road infrastructure³¹, but at the same time by reduction in quality of public transport (on the background of socialist period in comparison with western countries).

²⁶ Mitric S., Suchorzewski W., *Urban transport in Poland: the challenge of the ascending private car*, [w:] *Proceedings of the Conference Reconciling Transportation, Energy, and Environmental Issues, Organisation for Economic Cooperation and Development*, Paris 1994.; Pucher J., Road to ruin? Impacts of economic shocktherapy on urban transport in Poland, „*Transport Policy*” 1995, vol 2, s. 5–13.

²⁷ Pucher J., Buehler R., *Transport Policies in Central and Eastern Europe*, Victoria Transport Policy Institute 2005, źródło: <http://www.vtppi.org/PucherCentralEurope.pdf> [odczyt: 01.11.2018].; Pucher J., The transformation of urban transport in the Czech Republic, 1988–1998, „*Transport Policy*” 1999, vol 6, s. 225–236.

²⁸ *Transport Yearbook 2002*, Wyd. Czech Statistical Office 2003.

²⁹ Hook W., The political economy of post-transition transportation policy in Hungary, „*Transport Policy*” 1999, vol 6, s. 207–224.

³⁰ Pucher J., The transformation of urban transport in the Czech Republic, 1988–1998, „*Transport Policy*” 1999, vol 6, s. 225–236. *Urban transport in the Europe and Central Asia Region*, Wyd. World Bank 2002.

³¹ Pucher J., Buehler R., *Transport Policies in Central and Eastern Europe*, Victoria Transport Policy Institute 2005, źródło: <http://www.vtppi.org/PucherCentralEurope.pdf> [odczyt: 01.11.2018].; Pucher J., The transformation of urban transport in the Czech Republic, 1988–1998, „*Transport Policy*” 1999, vol 6, s. 225–236.

Therefore, a dramatic transition from mass public transport to mass private transport, on the one hand represented consumers' advantages as to convenience, comfort, speed, flexibility, independency, but, on the other hand, caused considerable problems concerning traffic congestions, demarcation of pathways for public and private transport, deterioration of infrastructure, lack of parking lots, air contamination, as well as noise and accidents, which were (and even are solved) very slowly and gradually³². However, on the contrary, after overcoming a "primary shock" caused by transition to capitalism in the early 90-s of the 20th century the systems of public transport in the countries of the Visegrad group, started gradually, but partially recovering, modernization, privatization and even corporatization. It was represented by stabilization of passenger traffic flow in public transport, growth in quality of service and monitoring, modernization and renovation of transport means and infrastructure in the sector, growth in operational efficiency, and rationalization of fare. At the same time, due to ill-financing, technical support, coordination, planning and other governments' actions, modesty of local budgets and ambitious policy of road engineering in the countries of the region still existed the policy of widespread use of private means of transport, and therefore the "policy of non-assistance" in renewing a customer database of public transport.

It became clear due to constantly growing competitiveness of private transport, its low density, polycentric nature and multi-mandate character of movement³³, which for decades has been inherent to western countries and is becoming more and more co-opted in the analyzed region. The abovementioned fact, especially on the edge of epochs in the 90s of the 20th century, was enhanced by the factor of future membership in the European Union, which already had quite effective transport system and policy, which is obligatory to follow for all EU members. Correspondingly, transition from monopolized public transport to liberal private transport in the countries of the Visegrad group before and while joining the European Union was determined by the requirement to conform to the EU policy³⁴. Moreover, taking into account the fact that the transport policy of the European Union had a significant influence and is still influencing intercity transportation, as it is aimed at (including the means of the European Investment Bank, the European Bank of Reconstruction and Development and the Structural Funds and Cohesion Fund) reestablishing variable means of communication, which stopped over the period of "real socialism", in particular in the Visegrad countries³⁵.

It is worth mentioning that before joining the EU, i.e. in the period of post-communism, these projects to be implemented were predominantly financed from the national budgets,

³² Pucher J., The transport revolution in Central Europe, „*Transportation Quarterly*” 1993, vol 47, nr. 1, s. 97–113.; Pucher J., The transformation of urban transport in the Czech Republic, 1988–1998, „*Transport Policy*” 1999, vol 6, s. 225–236.

³³ Pucher J., Buehler R., *Transport Policies in Central and Eastern Europe*, Victoria Transport Policy Institute 2005, źródło: <http://www.vtpi.org/PucherCentralEurope.pdf> [odczyt: 01.11.2018].

³⁴ *Urban transport in the Europe and Central Asia Region*, Wyd. World Bank 2002.; Peters D., *Planning for a sustainable Europe: a case study of EU transport infrastructure policy in the context of eastern enlargement: Ph.D. dissertation*, Wyd. Rutgers University 2003.

³⁵ Tuire M., *Going trans-European: planning and financing networks for Europe*, Wyd. Pergamon 1999.

and not supra-national funds and thus were characterized by slow progress³⁶. And only since 2004, when the countries of the Visegrad group stopped being post-communist, funding of transport projects in them (in different periods the situation differs) became more forward-thinking and comprehensive³⁷. Though in general it looked like central governments and bodies of local authorities of the countries in the Visegrad group started implementing transport projects being still post-communist candidates for joining the European Union and continued to enhance, develop and even complete them being already the EU members. All in all, it means that the EU transport system and policy played an exclusively mediate and directive, but not a conceptual role, as well as performed isolated and selective influence on the policy of transport, infrastructure and logistic orientation, development and maintenance within the frames of public and private transport in the countries of the Visegrad group³⁸. Herewith, orientation of the countries under analysis on the European Union and the EU influence on the countries of the Visegrad group appeared to be crucial, as due to them all the requirements as to open competition in rendering transport services marked organizational structure and economic efficiency of the transport system, in particular public and private transport. As a result, namely due to this the countries of the Visegrad group, after the collapse of the Warsaw treaty system, naturally had to modify their legislations to conform to the EU standards, which contributed to transnational and transport competitiveness.

In general, it is determined that at the edge of political epochs the transport system and orientation of the countries of the Visegrad group were mainly characterized by a significant growth in the level of motorization (which is traditionally assessed by the number of private means of transport per 1 000 people). In particular, as the study in Table 2 shows, ownership of private automobiles was growing in the course of the whole period of 1976 – 2001 (which could be undoubtedly named absolutely post-communist). The point is that over that time and in the late 80s of the 20th century in the countries of the Visegrad group the number of owners of private means of transport per capita doubled. It was stipulated by the fact (which includes) that within the frames of partially liberated reforms, performed by socialist governments in the late 80s of the 20th century, especially in Poland and Hungary, less in Czechoslovakia, started the processes of increase in demand for consumer goods, in particular for private cars³⁹.

³⁶ Peters D., *Planning for a sustainable Europe: a case study of EU transport infrastructure policy in the context of eastern enlargement: Ph.D. dissertation*, Wyd. Rutgers University 2003.

³⁷ Pucher J., Buchler R., *Transport Policies in Central and Eastern Europe*, Victoria Transport Policy Institute 2005, źródło: <http://www.vtpi.org/PucherCentralEurope.pdf> [odczyt: 01.11.2018].

³⁸ Peters D., *Planning for a sustainable Europe: a case study of EU transport infrastructure policy in the context of eastern enlargement: Ph.D. dissertation*, Wyd. Rutgers University 2003.; Suchorzewski W., *Urban public transport in Poland: main issues and perspectives*, Paper presented at UITP Conference „Changing European Market and Global Industry”, Lodz 2002.

³⁹ Pucher J., Buchler R., *Transport Policies in Central and Eastern Europe*, Victoria Transport Policy Institute 2005, źródło: <http://www.vtpi.org/PucherCentralEurope.pdf> [odczyt: 01.11.2018].

Table 2. Level of motorization and private ownership of transport means (in the number of transport means per 1 000 people) in the Visegrad countries and other post-communist countries in Europe (1976–2001)

Country	Year					GDP per capita, in US\$	
	1976	1980	1990	1996	2001	1996	2001
Belarus	12	31	59	101	142	2 150	7 630
Bulgaria	51	56	146	204	262	1 140	6 740
Estonia	12	31	154	277	347	3 390	9 650
Latvia	12	31	106	153	250	2 063	7 760
Lithuania	12	31	133	212	340	2 230	8 350
Macedonia	80	108	121	139	151	1 090	6 040
German Democratic Republic	122	151	296	440	486	15 498	17 668
Poland	37	67	138	209	272	3 590	9 370
Russia	12	31	65	92	140	2 740	6 880
Romania	9	11	56	107	144	1 420	5 780
Slovakia	112	148	163	198	240	3 700	11 780
Slovenia	80	108	289	365	433	9 680	17 060
Hungary	69	85	188	239	244	4 430	11 990
Ukraine	12	31	63	93	106	–	4 270
Croatia	80	108	147	175	257	4 610	8 930
The Czech Republic	112	148	228	325	369	5 200	14 320
Average data	52	74	147	208	261	4 195	9 639
Countries of the region	83	112	179	243	281	4 230	11 865

Źródło: Pucher J., The transformation of urban transport in the Czech Republic, 1988–1998, „*Transport Policy*” 1999, vol 6, s. 225–236.; *World Road Statistics*, Wyd. International Road Federation 1997.; *World Development Indicators 1999*, Wyd. World Bank 1999.; *Motor vehicle facts and figures*, Wyd. American Automobile Manufacturers Association 1982.; *International Statistics*, Wyd. German Federal Statistical Office 2003.

It was supplemented by tendencies and correlation of increase in income per capita in post-communist European countries, as it is found that growth in private income has predominantly been in direct proportionality, however with some exceptions, with the level of motorization in the region⁴⁰. There were and still are several reasons for such variability of income and a share of private ownership. First of all, statistical data may be unreliable and based on different methods, i.e. may take into account only quantity, but not quality of automobiles, and thus of great significance is the fact that means of transport in the countries of the Visegrad group were usually older, secondhand and of much lower quality than those in western Europe or Northern America, for example⁴¹. Besides, information about income of population in the countries of the analyzed region was (and still often is) inaccurate, as black markets and black economies played (and still play) a significant role, although this data was not reported on in the

⁴⁰ Pucher J., The transformation of urban transport in the Czech Republic, 1988–1998, „*Transport Policy*” 1999, vol 6, s. 225–236.

⁴¹ Pucher J., Buehler R., *Transport Policies in Central and Eastern Europe*, Victoria Transport Policy Institute 2005, Źródło: <http://www.vtpi.org/PucherCentralEurope.pdf>[odczyt: 01.11.2018].

official statistics and this diminished real income and purchasing power of population. Secondly, private ownership of an automobile is a very important symbol of social-economic status and personal liberty and therefore a great number of people in the region bought vehicles just to show that crucial symbol of prosperity and independence, and to do that they often overstepped the boundaries of their financial-economic resources and real transport needs⁴². Thirdly, even at that time private ownership of transport means in the countries of the Visegrad group (see Table 2) achieved a rather high level, played the so-called “saturation effect”, as the increase in income led mainly to purchasing more expensive cars and not just to growth in number of automobiles (including cheap cars). Controversial situation was inherent to a number of other post-communist countries in Europe, where an increase predominantly took place (and takes place even now) due to a number of transport means, as general levels of motorization remained rather low. Fourthly, personal (own) transport means became more and more necessary only in some post-communist countries of Europe, as it has been mentioned above, in the analyzed region the system of public transport declined, while fares were growing unevenly⁴³.

Besides, difference in correlation between income of population and level of motorization in the countries of the Visegrad group was determined by distinctive features of the state policy in the transport sphere, in particular in the sphere of progressive private (first of all automobiles) and regressive public (country, town and inter-city) transport (especially in Poland and to a less extent in other countries of the region). That is why, the result of using private means of transport and reduction in using public transport became a rapid shift of modal shares of transporting⁴⁴. Thus, over the mid-80s of the 20th century – 2000 the share of public transport in the overall motorized transportation in big cities in Poland, Hungary, Slovakia and the Czech Republic reduced from 75–85% to 50–60%. Even bigger share in the sphere of transportation public transport lost in small towns and villages, many of which just lost such type of transportation⁴⁵. The same processes took place in the sphere of railway transportation, because its share in transportation of freight dramatically reduced, though in general all-freight railway operations rapidly grew (and are still growing). For instance, a share of railway transportation in tones per kilometers from all freight transportation in the Czech Republic in fact reduced almost in three times from 73% in 1990 to 25% in 2002. In Poland over the same period the reduction was from 67% to 39%. Herewith, among all countries of the Visegrad group such losses in railway transportation were covered first of all due to motorization of road freight

⁴² Pucher J., Road to ruin? Impacts of economic shocktherapy on urban transport in Poland, *“Transport Policy”* 1995, vol 2, s. 5–13.; Pucher J., The transformation of urban transport in the Czech Republic, 1988–1998, *“Transport Policy”* 1999, vol 6, s. 225–236.; Komornicki T., Factors of development of car ownership in Poland, *“Transport Reviews”* 2003, vol 23, s. 413–431.

⁴³ Pucher J., Buehler R., *Transport Policies in Central and Eastern Europe*, Victoria Transport Policy Institute 2005, źródło: <http://www.vtpi.org/PucherCentralEurope.pdf> [odczyt: 01.11.2018].

⁴⁴ Pucher J., Buehler R., *Transport Policies in Central and Eastern Europe*, Victoria Transport Policy Institute 2005, źródło: <http://www.vtpi.org/PucherCentralEurope.pdf> [odczyt: 01.11.2018].

⁴⁵ Suchorzewski W., *The funding of public transport investment in Central Europe. Proceedings of Conference Financing Urban Public Transport*, Paper presented at Conference of European Ministers of Transport and Union Internationale des Transports Publics, Paris 1999.; *Yearbook of Transportation 2002*, Wyd. Institute of Transportation Engineering 2003.

transport, as over the analogous period of time, in the Czech Republic, for example, tonnage of transportation by road means of transport grew almost tripled (from about 15 000 to more than 45 000 mln tons/km), and in Poland it almost doubled (from 40 000 to over 74 000 mln tons/km/km)⁴⁶.

As a result, in combination with the growth of using private means of transport (first of all automobiles) a dramatic increase in their tonnage caused great pressure on the restricted capacities of transport/transit networks in the countries of the Visegrad group⁴⁷. It was amplified by rather sharp changes of models of land-use and land-surveying in the countries of the analyzed regions. The point is that during the regimes of “people’s democracy” socialist cities in Poland, Hungary, and Czechoslovakia were densely populated first of all along with main public transport arterial roads, as even in the late 80s – early 90s there almost did not exist suburban spread of low density. The main reason was that practically all new houses built by the state belonged to the state, and thus it concentrated in extremely densely populated block of flats on the periphery of cities, where still was some land, available for such large-scale projects. But even in such peripheral settlements there was practically no need in private means of transport, because they were well served by public transport services. Nevertheless, the situation started significantly changing in the early 90s of the 20th century, when the focus of attention was shifted to new industrial and residential buildings in suburbs⁴⁸. As a result and with the aim to avoid congestions and because of high prices for land in central parts of cities, many companies, enterprises and trade centers were stationed on the periphery, along main traffic roads⁴⁹. Similar construction was repeated in case of living dwellings, however on the contrary to the period of “real socialism” regimes they stopped being complexes of high density, but transformed into low-noise detached houses for one or several families⁵⁰. Therefore, public transport services in new suburb areas of different (first of all big) cities in the countries of the Visegrad group appeared to be small in number quantity and thus were substituted by private transport sector. It happened especially as a result of the fact that statutory and regulatory base of land-using in suburb areas around big cities was much weaker than that in the central parts of cities, and due to this the so-called “suburb settlements” started practicing any accrued taxes and social-economic development, aimed at creating job opportunities, independent of the “center”.

All this means that despite control over land-using and tough policy in the sphere of housing facilities with high density of inhabitation in the countries of the Visegrad group after the

⁴⁶ *Transport Yearbook 2002*, Wyd. Czech Statistical Office 2003.; *Transport Statistics 2002*, Wyd. Polish Central Statistical Office 2003.

⁴⁷ Pucher J., Buehler R., *Transport Policies in Central and Eastern Europe*, Victoria Transport Policy Institute 2005, źródło: <http://www.vtpi.org/PucherCentralEurope.pdf> [odczyt: 01.11.2018].

⁴⁸ Sykorova I., Sykora L., *Prague Metropolitan Area*, [w:] *Urban Land Institute Market Profiles 1998: Europe*, The Urban Land Institute 1999.; Sykora L., *Suburbanization: the social, economic, and ecological impacts*, Wyd. Institute of Ecopolitics 2002.; Pucher J., The transformation of urban transport in the Czech Republic, 1988–1998, „*Transport Policy*” 1999, vol 6, s. 225–236.; Suchorzewski W., *Urban transport in Poland*, Wyd. Ministry of Transport 2000.

⁴⁹ Suchorzewski W., *Urban transport in Poland*, Wyd. Ministry of Transport 2000.

⁵⁰ Pucher J., Buehler R., *Transport Policies in Central and Eastern Europe*, Victoria Transport Policy Institute 2005, źródło: <http://www.vtpi.org/PucherCentralEurope.pdf> [odczyt: 01.11.2018].

collapse of the system of Warsaw Treaty, sufficient stimulation of public transport did not take place, and on the contrary, in particular due to the tendency of commercial and residential building on the periphery, was initiated and later a tendency towards autonomous/private property and usage of private means of transport enhanced. As a result after several decades of using overcrowded public transport and living in monolithic multiple-dwelling complexes, over the first decade of post-communism, i.e. before the beginning of the 21st century, growth in motorization by means of private vehicles and population shifts to suburbs did not look at least strange⁵¹. It was supplemented by the fact that in the countries of the Visegrad group during this period started growth in number of private entrepreneurship and middle and high-class experts, who obviously became owners of not only new private automobiles, but also family houses in suburbs⁵².

Thus, a dramatic transition from public transport to private transport in the countries of the Visegrad group was conceived as a civilizational shock only in the course of the first/post-communist decade. Later, growth in the level of motorization in the countries of the analyzed region was stereotyped and predominantly aimed as the processes of “pursuing” development of the transport system. The point is, that the level of ownership and using private means of transport in the countries of the Visegrad group unconditionally (of course not at the rates as before) continues growing, but as in Europe in general. Similar processes also characterize public transport, as its number in Europe is gradually decreasing, however, in the countries of the Visegrad group it happens not as dramatically as it was in the early 90s of the 20th century. In conclusion, it means that though the system of public transport in the region is making great efforts as to spreading and improving their services, they are in the situation of “losing competition” in comparison with an extremely popular sector of private transport. And even if in the end they can reach the western European standards of service quality, the best they can hope for is to conserve the usage of private transport at the current level. Even despite it, the majority of people in the region support the idea to provide transport and road priority to the very public transport, even in case it requires restrictions over using their private means of transport⁵³. In conclusion, we may say that it works with the idea proposed by W. Rydzkowski and B. Spraggins⁵⁴, according to which in the late 80s – early 90s of the 20th century in the countries of the Visegrad group started the processes of privatization and deregulation of the transport system, infrastructure and logistics. Namely these processes had a cardinal impact on the change of the structure of transport ownership and thus further development of transport infrastructure and logistics both in post-communist and in post-Euro-integration periods.

⁵¹ Pucher J., The transformation of urban transport in the Czech Republic, 1988–1998, „*Transport Policy*” 1999, vol 6, s. 225–236.

⁵² Sykorova L., Sykora L., *Prague Metropolitan Area*, [w:] *Urban Land Institute Market Profiles 1998: Europe*, The Urban Land Institute 1999.

⁵³ Suchorzewski W., *Urban public transport in Poland: main issues and perspectives*, Paper presented at UITP Conference „Changing European Market and Global Industry”, Lodz 2002.

⁵⁴ Rydzkowski W., Spraggins B., Privatization and Deregulation of Transport in Poland: New Transport Policy Implications, „*International Journal of Physical Distribution & Logistics Management*” 1994, vol 24, nr. 2, s. 23–29.

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