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IMPROVING TRANSPORT INFRASTRUCTURE: CHALLENGES BEFORE EURO 2012

Abstract

The paper presents the state of transport infrastructure in Poland in the perspective of near Euro 2012 championships. The bad condition of the road network is considered to be mainly a result of institutional chaos and instability of rules concerning the system of financing motorway building. Efficient development of the transport system also stems from inconsistencies with regulations concerning natural environment protection. An emphasis has been placed on the need to amend the existing law by adjusting it to the EU directives and patterns of infrastructure provision in other countries, e.g. public-private partnership.

Key words: infrastructure, transport, motorways, public-private partnership, externalities, Euro 2012

Introduction

UEFA's 14th European Football Championship Euro 2012 is a big challenge for the organizers – Poland and Ukraine, especially as regards infrastructure, whose condition is in quite poor shape in the two countries. The success of the event depends among others on providing effective transport of spectators between cities. Needless to say, the infrastructure, which should serve the citizens and visitors long after the championships, is a significant factor of development for the economy, due to its role in attracting investors or lowering transaction costs, for example. However so far the state of road networks in both countries has been their Achilles' hill and must be considerably improved before the first whistle on a stadium sounds.

In spite of a huge inflow of foreign funds since the fall of communism, and particularly after Poland's access to the EU in 2004, the country has not been able to build a basic motorway network connecting its major cities. The situation is even worse in Ukraine. In consequence, a road trip between two venue cities, Gdańsk and Donetsk, lasts currently 22 hours, not including a usual queue at the Polish-Ukrainian border and is mostly on single lane roads, with only 23 kilometers on motorway. A journey by train is even longer and takes as much as 43 hours. Despite a boom in the low cost airline travels between Poland and Western Europe there are still no cheap links between Ukraine and Poland.

The aim of the following paper is to present major obstacles in developing a transport network in Poland, with emphasis placed on road infrastructure, as well as to indicate possible solutions that should be implemented to attain the desired goals. The conclusions drawn may be found useful for Ukrainian partners as well and can be treated on one hand – as a warning, on the other – as advise on possible methods of developing a country's infrastructure.

The present state

The bad condition of roads in Poland is partly a heritage of the communist period, insufficient outlays on transport network improvement in the 1990's (in 2003, before the access to EU the expenses on infrastructure constituted 0.3% GDP in Poland, as opposed to 1.1% GDP in 15 "old" member states) as well as organizational inefficiency of public administration (Informacja... 2005). One may wonder if the pre-transition period may still be an excuse for the present situation. Mistakes or neglect have also been common in the sector in question within the last 20 years.

In 1994 an act was passed introducing the BOT (build – operate – transfer) model of financing the construction of major roads. According to the law, private enterprises would be granted a concession, enabling them to finance and build infrastructure. The companies were supposed to become owners of the objects and were allowed to charge tolls in order to recover the investment costs and operating maintenance expenses. After the specified concession period the ownership would be transferred back to the state. The role of the government consisted in paying the expenses for purchasing ground and archeological research and in giving credit guarantees up to 50% of the costs of construction. However it soon turned out that private entities were not able to collect enough resources to finance the construction on their own. Although the costs of building roads were about 70% of their level in Western Europe, the possible toll revenues were only 30% as high, which implies at least twice as long period of costs recovery as in the "old Europe".

In 2000 the act on toll motorways was amended, enabling the state to co-finance road investments. The National Motorway Fund was also created, but soon ceased to exist because of lack of sufficient receipts. After the elections the conception of stimulating the sector was changed, holding the state responsible for building motorways. The Ministry of Infrastructure came across an idea of securitization – borrowing money from the market secured against future revenues, as well as introducing toll stickers, obligatory for anyone using main roads. Eventually the idea of stickers was abandoned, and the other ideas didn't manage to spur the investment process either (Zieliński, Trębski 2007).

It was not until mid-2000's that the law was changed, allowing the state to co-finance the project under the scheme of public-private partnership. Unfortunately the act was defunct, which manifested itself in a fact that no road was build within two years after enacting, due to lack of executive orders (Niklewicz 2008). Nevertheless another presidential and parliamentary elections in 2005 turned the existing strategy upside down. The party newly elevated to power opposed joint investments of public and private sector, regarding them as time consuming and, above all, susceptible to corruption. The government, conflicted with almost all franchisees, claimed the state can build the transport network faster and cheaper than private firms, using funds from the (reformed) National Road Fund and tolls collected on motorways already put into operation. The Ministry even resorted to withdrawing the concession from a company building a part of A1 motorway; the decision was later recognized as illegal by a court, which resulted in another delay in construction.

The above described turbulences contributed to the fact that in 2007 Poland had only 709 km of motorways and 504 km of express roads. Three years earlier only 8% of national roads (and 5% of railways) met standards of the European Union (Information...). Since 1990 the traffic increased dramatically, but the transport network didn't keep pace with it: between 1995 and 2006 the length of railways in operation decreased by 16% despite an increase in transport (measured in tones) by 30%. In the same the road system expanded by 7% with a 60% increase in the amount of vehicles.

Moreover, the technical condition of Polish roads also raises anxiety. In 2003 30% of them were in bad shape, another 30% – unsatisfactory and only 40% – good. One sixth had

uneven surface, as many – cracks, 37% – deep ruts, 22% – bad anti-slippery properties and every fourth bridge was in poor condition. As a result transport is quite dangerous – in Poland there are 11 victims per 100 accidents, while in EU-15 only 3 (Informacja... 2005).

The biggest risks for efficient work of the transport system include:

- the size of the network insufficient for increasing number of vehicles and the intensity of traffic,
 - a lack of a complex network of motorways, express roads and fast railways,
 - a growing burden of the economy with transport externalities,
 - transport intensity much larger than in the EU,
 - the low level of intermodal transport development,
 - a lack of a rational toll system for transport infrastructure usage,
- the low share of transport investments outlays in GDP and of expenses on public transport services financing (Informacja...2005)

Table 1. Transport infrastructure in Poland (as of December 31)

Specification	1995	2000	2006	Dynamics (2006/1995*100)
Railway lines operated				
– in kilometres	23986	22560	20176	84,1
– per 100 km ² of total area in km	7,7	7,2	6,5	84,4
Hard surface public roads				
– in thousands of kilometres	237	250	254	107,2
– per 100 km ² of total area in km	75,8	79,9	81,2	107,1
of which:				
improved in thousands of km	196	206	227	115,8
motorways in km	246	358	552	224,4

Source: Concise Statistical Yearbook 2007, GUS, Warsaw 2007.

Table 2. Transport of goods and passengers in Poland

Specification	1995	2000	2006	Dynamics (2006/1995*100)
Transport of goods				
– railway transport				
in thousand of tones	225348	187247	291420	129,3
in million tonne-kilometres	69116	54448	53623	77,6
– road transport				
in thousand of tones	1086762	1006705	1113880	102,5
in million tonne-kilometres	51200	75023	136490	266,6
Transport of passengers				
– railway transport				
in thousand of passengers	465901	360687	264047	56,7
in million passenger-kilometres	26635	24092	18187	68,3
– road transport				
in thousand of passengers	1131593	954515	751470	66,4
in million passenger-kilometres	34024	31735	28148	129,3

Source: Concise Statistical Yearbook 2007, GUS, Warsaw 2007.

Table 3. Registered road vehicles

Specification	1995	2000	2006	Dynamics (2006/1995*100)
Road vehicles	11186	14106	18035	161,2
of which: passenger cars	7517	9991	13384	178,0
Ratio of number of vehicles and length of roads in km	47,2	56,4	71,0	150,4

Source: Concise Statistical Yearbook 2007, GUS, Warsaw 2007.

Diagnosis of the problems

A fundamental problem with the road infrastructure stems from the fact it has both characteristics of a public good – as it is non-rival and in many instances non-excludable, as well as those of a public utility. These features cause difficulties in providing its optimal supply. In case of motorways methods of ensuring means for their maintenance and cost recovery include toll stickers, toll gates or financing by the state, while the choice of the method as well as the level of fees is often a subject of controversy.

The rail transport demonstrates properties of a club good, for it is technically easier to prevent access to the infrastructure. In both cases a crucial issue is to create a legal and organization system so as to guarantee the efficient provision of the network and services, taking into account not only commercial costs and benefits for operators, but also externalities and universality for users (Button 1993, p. 177). Arising difficulties in the quantification of demand and costs, estimating values of non-pecuniary effects and forecasting distributional consequences of the decisions do not make this task easier by any means.

Neglecting the above mentioned topics may lead to social tension that can give rise to blocking investments by different pressure groups. Unfortunately, the Polish law is not fully adjusted to the EU directives that require reports on influence on the environment for every investment. Should it not be amended, the 14.9 bln euros that have been earmarked for infrastructure improvement will not be paid out. The appropriate legislature must be enacted before August 2008, however the act is jeopardized, since in April the project had not even been accepted in public consultations. Besides, the existing environmental law is often ambiguous, e.g. does not contain strict terms of issuing administrative decisions.

Moreover the country has not implemented UE's programme "Nature 2000" in full and the resulting state of suspension hampers investments. In certain cases the protected areas overlap with construction sites already in operation. A spectacular example was the blocking by ecologists of the Augustów bypass in North-Eastern Poland. In consequence of the protests the European Commission initiated a violation procedure against the country in 2006 and next year the Commission filed complaint to the European Court of Justice for not setting territories of special protection of birds. In sum, ecological problems were a cause of an impediment of 65 road investments in the middle of the decade.

Poland has been a recipient of huge inflow of European funds, aimed among others on building and improving transport network. For this reason it became one of most attractive markets in the sector. However, a lack of a clear system of financing prevents effective use of the money – e.g. in 2005 and 2006 investors made use of only 16% of the available sum of EU funds for national road investments, and every year the General Directorate of National Roads and Motorways (GDDKiA) does not spend 10% of granted sums (Zieliński, Trębski 2007). Therefore sources of financing are sufficient, but the problem is in the ability of administrative structures to make use of the money.

The need to erect stadiums, railway terminals and other objects for Euro 2012 simultaneously with new roads raises prices for building materials and wages of workers, thus increasing competition within the industry. The augmented demand combined with bureaucratic inertia and protracted formal procedures result in frequent situations where the lowest price offered in a tender exceeds the reservation price an public investor is willing to pay (Grzeszak 2007).

Fortunately the plans are not menaced by a deficit of technical possibilities or workforce, except for engineers with building qualifications, since documents confirming their skills are not acknowledged by Polish law.

So far instead of building motorways all effort was focused on making plans and creating institutions. After every elections new cabinets reformed the existing programs and replaced existing bodies responsible for their implementation with new ones. In consequence the administration lacked continuity and sense of stability, but was exposed to repeated organizational and personnel shocks.

Table 4. Target network of motorways and express roads in Poland

Road no.	Route	Total length	Existing	Advancement*
A1	Gdańsk – Gorzyczki (Ostrava)	582	43	7%
A2	(Berlin) – Świecko – Warsaw – Kukuryki – (Minsk)	610	252	41%
A4	(Dresden) – Jędrzychowice – Wrocław – Kraków – Karczowa – (Lviv)	670	375	56%
A6	(Berlin) – Kołbaskowo – Szczecin	29	22	76%
A8	Wrocław bypass	35	0	0%
A18	(Berlin) – Olszyna – Krzyżowa	78	17	21%
Motorways – total		2004	709	35%
S1	Pyrzowice – Cieszyn – Boguszowice – (Český Těšín)	130	77	59%
S2	Warsaw bypass	40	0	0%
S3	Świnoujście – Zielona Góra – Lubawka – (Prague)	470	80	17%
S5	Grudziądz – Bydgoszcz – Poznań – Wrocław	400	30	8%
S6	Goleniów – Gdańsk	330	39	12%
S7	Gdańsk – Warsaw – Kraków – Rabka	720	72	10%
S8	Wrocław – Warsaw – Budzisko – (Kaunas)	680	26	4%
S10	Szczecin – Piła – Toruń – Płońsk	460	37	8%
S11	Kołobrzeg – Poznań – Tarnowskie Góry	600	10	2%
S12	Piotrków Trybunalski – Lublin – Dorohusk – (Kiev)	315	4	1%
S14	Łódź bypass	42	0	0%
S17	Warsaw – Zamość – Hrebenne – (Lviv)	310	17	5%
S19	(Hrodna) – Kuźnica – Lublin – Barwinek – (Prešov)	570	0	0%
S22	Elbląg – Grzechotki – (Kaliningrad)	60	0	0%
S51	Olsztyn – Olsztynek	25	0	0%
S69	Bielsko-Biała – Zwardoń – (Bratislava)	48	13	27%
S74	Sulejów – Kielce – Tarnobrzeg – Nisko	215	0	0%
S79	Warsaw-airport – Warsaw-Marynarska	5	0	0%
Express roads – total		5420	405	7%

* as of end 2007

Source: Autostrady w Polsce, Drogi ekspresowe w Polsce, <http://pl.wikipedia.org>, access: April 20, 2008

To sum up, obstacles in fast progress in the transport infrastructure development arise from numerous changes in programs of developing transport infrastructure and institutions responsible for the task, lack of a consistent and stable system of financing the programs as well as lack of cooperation between central and local governments.

Remedies

The administrative and legislative activities should concentrate on facilitating procedures in order to unblock investment processes through curtailing time needed to prepare and accomplish the construction of transport network. According to the General Directorate an emphasis should be put on amendments in the competitive tendering law, environmental law, regulations concerning the land development plans and keeping special rules of preparing road investments (Program... 2006). The Ministry of Infrastructure extends the list of necessary changes with the acts on building, on protection of agricultural and forest lands, on real estate management, on geodesy and cartography, on the provision of water and sewage channeling and on local taxes (Podsumowanie... 2008)

Excessive formalities are typical for the competitive tendering law. Assessment of qualifications of potential contractors and that of presented offers is subject to sophisticated and time-consuming procedures and the terms allowing lost parties to appeal may put off the start of the project for several months. For such reasons as many as 98 investments were blocked in the whole country in 2005 (Program... 2006).

An urgent concern is the problem the evaluation of the impact of investments on the natural environment, as the current law is inconsistent with EU regulations. In order to fix it, The Ministry of Environment is about to establish a national commission for environmental impact assessment to deal with the documentation of most important investments, an issue local governments have not been able to cope with.

Common solutions relating to providing means for road building applied abroad are based on two models: financing the investments by the state and public-private partnership (PPP). In the most widespread variant of the latter a private firm, supported by public funds, builds a motorway and then operates it, receiving toll revenues, and after a specified time (20 to 30 years usually) transfers the object to the state.

The model of state financing has been in force in Germany for 75 years. Motorway building is backed by the federal budget and their usage was free for 70 years. However in 2003 the burden for taxpayers was considered too excessive and toll for trucks was introduced. An example of cooperation between local governments and private investors is provided by Spain, where the regional authorities initiate the construction and the investment and further operation is the domain of 13 consortiums owned by private companies and local governments. The state guarantees credits and takes on the exchange rate risk. As a result the country has build 2500 km of motorways. A combination of the two methods is applied in Croatia, which is an illustration of great success, given it is on one hand – a country outside the EU and thus with a much smaller financial support from foreign institutions, and on the other hand – a mountainous and technically difficult territory. Nevertheless a 1500-km long motorway network was accomplished in spite of the obstacles (Zieliński, Trębski 2007).

Because the investments under consideration require significant outlays the public sector typically not possess at adequate level, it is necessary to attract private entities to develop the infrastructure. The PPP scheme makes the cooperation of private and public sector possible, with mutual benefits for both. Global experience suggests it is a faster and cheaper way of investing than the state financing model. Only in 2006 and 2007 as many as 383 project in the world were carried out under PPP, worth 127 bln USD, including 70 bln USD in Europe

(Biznes tworzy... 2008). The advantage is that huge outlays by the state are avoided in the construction stage, as most of the building costs are born by private firms. As soon as the investment is accomplished, the operator starts to earn money, which is an incentive to finish construction without delay.

Recapitulation

The main impediment in the fast completion of transport infrastructure in Poland is the poor system of institutions and laws, which does not guarantee full absorption of European funds. A systemic encouragement for private capital should be set up, e.g. under the form of PPP. At the same time a thorough analysis of externalities must be always taken into consideration, because the effects of neglect, although postponed, may strike with redoubled strength – suffice it to mention conflicts with local residents, ecologist groups and the European Commissions, resulting even in an order to dismantle the object. Last, but not least, after the rules of financing are set, their stability is of great importance for an undisturbed process of investment. Otherwise the attainment of the objectives set for the unique football holiday will be endangered.

In such circumstances not only would Poland and Ukraine lose revenues from visitors, but also prestige and reputation, which would be difficult to regain for a long time.

Figure 1. Motorways and express roads in Poland planned on June 2012



Source: own compilation based on: (Podsumowanie... 2008).

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