

EXTERNAL BORDER OF THE EUROPEAN UNION – PERMEABILITY, CO-OPERATION, PERSPECTIVES

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Introduction

The existence of a boundary (the barrier effect) disturbs the magnitude of goods or passenger flows (as well as the flow of information and innovation diffusion), which is expected on the basis of the gravity models of trade (conform to the normal resistance from distance). The regression line, representing the intensity of interaction along distance, breaks down and drops at the distance corresponding to a political frontier. It was shown that this breakdown persists also on the boundaries featuring very high degree of permeability (e.g. on the internal boundaries of the European Union, Rietveld P, 2001), and even between some administrative units of a lower order (*Lowe–Moryadas*, 1975).

After the Union enlargement in 2004 the number and the length of the border segments between the European Union and the third countries (not associated and waiting for accession) increased abruptly. Until then such a situation had existed only on the thinly populated areas of Scandinavia. Now the boundary with Russia, Belarus', Ukraine, Moldova, Turkey, Albania, Macedonia, Serbia and Croatia crosses the entire continent from the Baltic Sea down to the Black Sea and surround the former Yugoslavia. This process brings about polarisation of the European border regime systems. To an increasing degree the weakly formalised borders (or the practically nonexistent ones) start to dominate in a pronounced manner inside the Union, and the highly formalised ones (with the visa requirement for the direct neighbours being the rule) on the outer fringes of the Union.

The purpose of the present report is to assess the effects from the strengthening of the function of border segments, which became an outer boundary of the European Union. These effects will be analysed on the example of the Polish eastern boundary. Analysis will be performed for the international economic linkages, and precisely – for the intensity and the structure of international trade of the border regions, as well as transboundary flows of persons and goods.¹ Four Polish prov-

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inces adjacent to the eastern boundary will be treated as the border regions (the province of *Warmińsko-mazurskie* – bordering upon the Kaliningrad district of Russia; province of *Podlaskie* – bordering upon Belarus'; province of *Lubelskie* – border with Belarus' and Ukraine; and the *Podkarpackie* province – border with Ukraine).

The database used in the paper are matrices for the years 2000 and 2005 covering 379 "poviats" (counties – LAU 2) versus all European countries. Figures comprising the amount of import and export are given for each relation and are expressed in US dollars based on information from SAD (Single Administrative Document) and INTRASTAT. The SAD forms constitute a complete basis encompassing the entire trade with the countries outside of the European Union. The INTRASTAT system is founded on the reporting from the companies conducting foreign trade. In accordance with the information obtained in the Polish Ministry of Finance, in Polish conditions the system includes 90% of the entire trade with the remaining 24 member countries of the Union. This brings about certain constraints in terms of comparability of the data from the years 2000 and 2005. In 2000 the entire Polish trade was registered on the basis of SAD. In the case of border traffic the main data source was the Polish Border Guard database. It contains the number of passengers and heavy goods vehicles and distinguishes for passenger transport between Polish citizens and foreigners crossing all Polish border crossings. The data allow to analyse the dynamics of cross-border movements as it covers the years 1990 to 2005.

On the basis of the dynamic analysis of economic linkages the conclusions have been formulated both concerning the observed spatial consequences of the broadening of the European Union for the areas situated at its outer border, and related to the perspectives in this respect.

Eastern Poland in the system of international economic linkages

The analysis of the spatial distribution of international economic linkages shows the extent, to which individual regions, and even towns, have become the elements of the European economic space. The image obtained is therefore a kind of measure of the true spatial economic integration. Consideration of dynamics with respect to the dispersion of international trade connections among smaller centres may be treated as an indirect measure of the effect of cohesion policy (ESPON 1.4.4. Final report, www.espon.eu). In addition, the shares of particular partners in the export of local administrative units allow, in particular, for the delimitation of the zones of strong interactions with the neighbouring countries. Thereby, they become the measure of the local integration potential of the border regions. Identification of the main directions of the socio-economic connections of regions has, as

well, a concrete application value. Their knowledge may be helpful in the conduct of policies related to transport, education and promotion (territorial marketing), and also in the field of use of the European assistance means. The spatially referenced economic interactions may be to some extent identified with demand for transport infrastructure.

In the year 2000 Poland was characterised by a very uneven regional breakdown when it comes to exports (see *Figure 1*). These mainly derived from Warsaw and the western part of the country, in which almost all poviats (counties) participated in trade. In contrast, in eastern Poland, trade was concentrated almost uniquely within the largest centres. The main areas of the absolute concentration of exports nationwide were: (a) the Warsaw agglomeration, (b) certain urban areas in Upper Silesia, (c) the Legnica-Głogów copper-mining district, (d) other large urban and industrial agglomerations, above all that of Poznań, and (e) selected smaller centres in which modern industrial plants are located (mainly with foreign capital playing a role). An even larger concentration is to be noted for imports.

There was a stronger export orientation of industry in western and northwestern Poland, and, to a somewhat lesser degree, also in southeastern Poland. It can be supposed, as well, that the low level of export in the East was linked with the generally lower production level, while in some regions of central Poland it was the effect of production mainly for the domestic market (*Komornicki, 2003*).

The regional distribution of the main export centres in the year 2005 (after the enlargement of the European Union) remained almost unchanged (*Figure 1*). A distinct diffusion of the export activity into the more peripheral areas could be observed, though, especially in central and southeastern Poland. A very distinct increase of export was noted in the areas of functioning of the special economic zones (particularly so for the zones of Wałbrzych, Mielec and Gliwice (*Figure 2*)). The global value of export decreased only in few counties. The increase, however, was generally somewhat higher in the eastern half of the country, and relatively lower on the areas, which had already before had strong international economic connections.

In case of import the analogous phenomenon of de-concentration appeared to a much lower degree. The increase was proportional in the biggest import centres. There was a slight reduction in this context of the role of Poznań, while the significance of the Tri-City (Gdańsk–Sopot–Gdynia), Wrocław and Cracow increased. Again, some of the special economic zones (first of all the one of Wałbrzych) turned out to be perceptible. In several dozen peripheral counties the value of imports decreased (*Figure 3*). This value increased very intensively in Lower Silesia, and in the eastern regions of Lubelskie and Podlaskie. Both in the case of export and of import North-western Poland turned out to be the region featuring a relatively weaker dynamics. This significance of international trade for this region was high already in 2000.

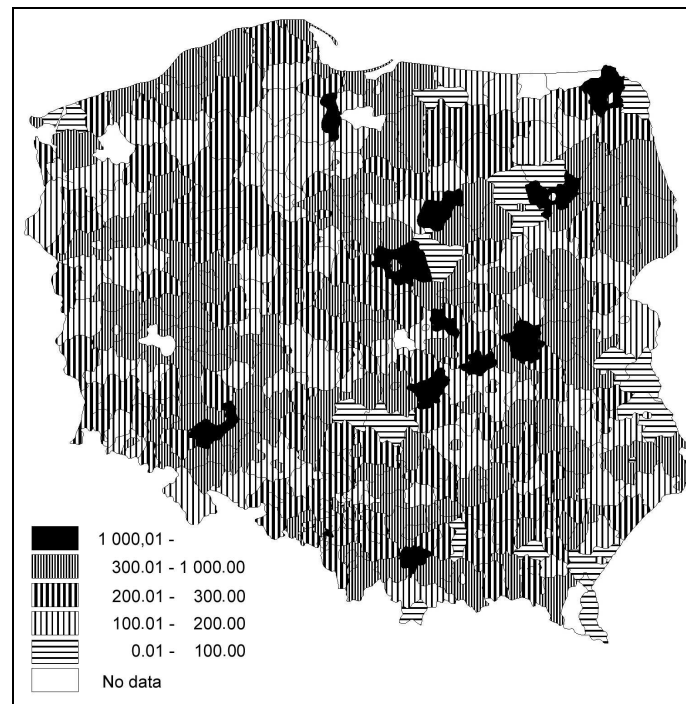
Export from the area was largely based on products of the Polish wood-and-paper and light industries. The very high percentage-wise increases in some peripheral units of Mazowieckie are the result of a statistical phenomenon of the very low initial values.

In export and import alike the degree of concentration of trade in the capital of the country, Warsaw, underwent in the years 2000–2005 a decrease. This is a confirmation for the proposition that the enlargement of the Union was conducive to the development of the direct international contacts by the companies from smaller centres. Despite this, Warsaw remained the unit featuring a gigantic balance trade deficit (much higher than Poland as a whole).

Already in 2000 on the majority of the territory of Poland the trade with the countries of the European Union dominated. There were, however, very significant interregional differences in the shares of export to the EU15 countries in relation to its total value.

Figure 2

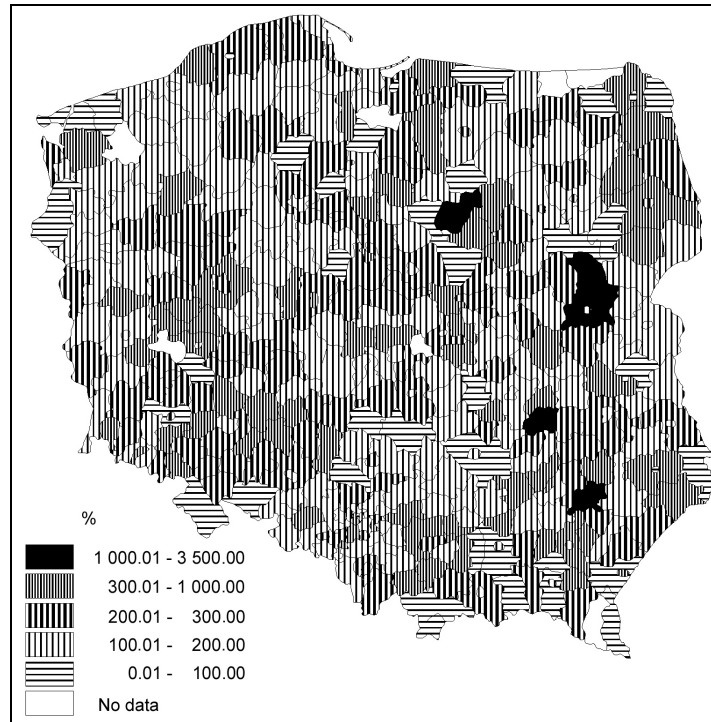
Change of the export value in the years 2000–2005 (2000=100)



Source: Own elaboration based on Polish Ministry of Finance materials; prepared for ESPON 1.4.4 Final Report.

Figure 3

Change of the import value in the years 2000–2005 (2000=100)



Source: Own elaboration based on Polish Ministry of Finance materials; prepared for ESPON 1.4.4 Final Report.

The importance of the Union in exports decreased gradually towards the East (dropping to below 50% to the East of Vistula and to even less than 25% within the eastern borderland), to the advantage of the increased share of export to the countries of the former USSR. The spatial differentiation of the shares of the European Union in the value of imported goods was, on the other hand, much smaller. This share was generally high also in eastern Poland, except for the border counties. In 2005 there was a distinct increase of the significance of export connections with the European Union in eastern Poland.

This took place both owing to the general increase of the export value, and owing to the enlargement of the Union itself (some eastern regions concentrated trade with such countries as Lithuania, Slovakia and Hungary, now EU member countries). The increase of exports to the EU countries was in relative terms the highest in the East. At the same time, western Poland opened up to a greater extent to trade

with the third countries. Thereby, a partial evening out of the disproportions in the trade structure between the eastern and the western halves of the country took place.

Yet in 2000 the four analyzed eastern provinces were the location of very strong concentration of export to the directly neighboring countries. This applied, in a particular manner, to the export to Ukraine, which was concentrated in the Lubelskie and Podkarpackie provinces. The reasons for such a state of things should be sought in the lower quality requirements from the side of the Ukrainian or Belorussian market. Numerous small businessmen from eastern Poland could not stand the challenge of the European Union market competition, while their not always quite modern products can still be sold in the East. A part of the effect ought also to be attributed to the location in the vicinity of the border of the companies dealing with re-exporting of goods having been imported to Poland before (Ukraine imports from Poland, in particular, coffee and bananas). The real significance of the trade with Ukraine, Belarus and Russia was even bigger within the confines of the borderland in view of the still functioning unregistered trade.

In the years 2000–2005 there has been, however, a decrease of export to Ukraine exactly from the area of the borderland (the provinces of Lublin and Podkarpackie voivodship). Introduction of visas for the eastern neighbouring countries in October 2003 could have constituted also a factor limiting the local contacts of the smallest businesses. On the other hand, though, there was a very strong increase on the remaining areas, first of all in western Poland (Lower Silesia, Wielkopolska) and partly in northern Poland. In many units there located the value of export increased there more than ten times over (e.g. in Gliwice, Olsztyn and in the counties near Wrocław). The increase exceeded 500% also in Warsaw, Opole and Gdynia.

In the year 2000 the territory of the eastern border provinces of Poland accounted for only 10.4% of total Polish exports (of which 4% originated from the Podkarpackie province). The share of the same provinces in the value of imports was at the mere 4.8%. These ratios did not correspond to the share of the provinces in question in terms of population. Thus, the value of exports per capita was on this area among the lowest in Poland (only 338 USD in Podlaskie and 342 USD in Lubelskie provinces, while the average for the country was 817 USD). Situation was similar in case of imports (only 245 USD per capita in the Lubelskie province – compared to 1265 USD for the country as a whole – the lowest value among all provinces). The share of EU15 in export value was there also among the lowest in Poland and amounted to just 53% in the province of Podlaskie, and to 54.7% in Lubelskie province (70.1% for Poland as a whole). The most important trade partner was Germany, but its share in the volume of trade was distinctly lower than in the case of other regions. In terms of imports the share of the European Union was, except for the province of Podlaskie, higher than on the average in the country. This, however, was a typical situation for the majority of provinces, to which the

raw materials imported from other directions would not come (this being especially visible for fuels).

In the period 2000–2005 the value of export from the four provinces analysed increased more than threefold, from 2.3 billion USD to more than 7.3 billion USD. Simultaneously, though, the share of this area in the total value of exports dropped to 8.5%. Hence, the dynamics of increase was lower than on the average in Poland. In the case of imports, despite the increase of the absolute value, from 2.3 to 4.8 billion USD, the share of the four provinces in total imports remained constant, at 4.8%. The share of export towards the territory of the European Union increased mainly owing to the Union's extension, yet in all the analysed provinces – except for Warmińsko-mazurskie – it remained lower than the national average. The proportion of goods exported to the “old” member countries increased in Podlaskie and Warmińsko-mazurskie, but it clearly dropped in Lublin and Subcarpathian provinces. The overall significance of the Union in export remained distinctly lower than on the average in the country, although the difference was already much smaller than in 2000. In the group of the western European countries Germany preserved its domination and a close to 20% share in export. The significance of Italy decreased somewhat, while position of France was maintained. There was, however, an abrupt drop in the role of Ukraine. Only in the province of Lubelskie there was a drop from close to 20% in the year 2000 to just 7.7% in 2005. Export from this province to the immediate neighbour decreased even in absolute numbers (from 135 to 119 million USD). At the same time, in the very province, there was a surprisingly high increase of export to Belarus', from the mere 18 million USD in 2000 to 70 million in 2005.

The share of the European Union in import decreased, and this even with consideration of imports from the new member countries (except for Warmińsko-mazurskie). For the area of the EU from before 2004 the decrease amounted to close to 12 percentage points in the Lubelskie province, and to as much as 24 percentage points in the Podkarpackie province.

Border traffic

In the period 1990–1997 the passenger cross-border traffic (in both directions) increased in Poland from 84.2 million to 273.9 million persons (*Komornicki, 1999*). This increase was followed by a stagnation, and in the years 2000 and 2001 a decrease was observed. The traffic was dominated by the persons doing their shopping in Poland. In 2003 altogether 181 million persons crossed the borders in both directions. In 2004, though, there was anew an increase, associated with the accession to the European Union. This increase took place across all the border segments except for those with Russia and Belarus'. On the majority of the border segments

it is the foreigners that cross the borders predominantly. The difference in these terms is decidedly the most pronounced on the local Polish-German border crossings (neighbouring upon the bazaars, like Łęknica), and also on the borders with Belarus' and Ukraine. There are border crossings on the eastern borders, where the share of Polish citizens in crossing the boundary does not exceed 5%. Poles dominate, on the other hand, among those registered at the airports and on the Czech and Slovak borders.

The analysis of the intensity of traffic in the period of 24 months (September 2002 – August 2004) allows concluding that there is a characteristic seasonal cycle with a distinct summer maximum and a drop in the winter months (see *Figure 4*). This cycle was disturbed by a breakdown associated with introduction of visas on October 1, 2003. The delay, after which the fluctuations of traffic returned to the earlier rhythm was, however, quite short. Already in December 2003, the intensity of border traffic corresponded to the level from the preceding year. This was partly due to the increase in the travels of Polish citizens (occurring exactly just after the introduction of visas – perhaps denoting the temporary takeover of a part of trade activity from the Ukrainians).

In 2005 there was a dramatic increase in the share of Polish citizens in the border traffic. This should be first of all linked with the increase of the fuel prices in Poland, which motivated the inhabitants of the border regions to fuelling their vehicles in Ukraine. Another factor may be constituted by the more rigorous procedures, applied by the Polish Border Guards with respect to the citizens of Ukraine. Even though they may have a visa they happen to be returned away from the border due to the suspicion of having the intention of taking up an illegal job in Poland. Such situations had as a rule not been taking place in the preceding years.

The dynamic increase of the intensity of HGV traffic lasted over the entire decade and continues nowadays. In 1980 all of the Polish borders were crossed in both directions by altogether 295,000 HGV, by 1990 this number increased to 1.1 million, and by 2003 to close to 6.2 million. During the entire decade the dominating role was played by the lorry traffic across the Polish-German border. On the eastern side after 1998 the border crossing in Kukuryki was no longer the one most loaded with cargo traffic (see *Figure 5*). Currently, the decisively biggest intensity of truck traffic is observed in Budzisko on the Lithuanian border. The role of the Polish-Ukrainian crossings has relatively increased in these terms, as well, especially of the crossing point in Dorohusk (Warsaw–Kiev highway).

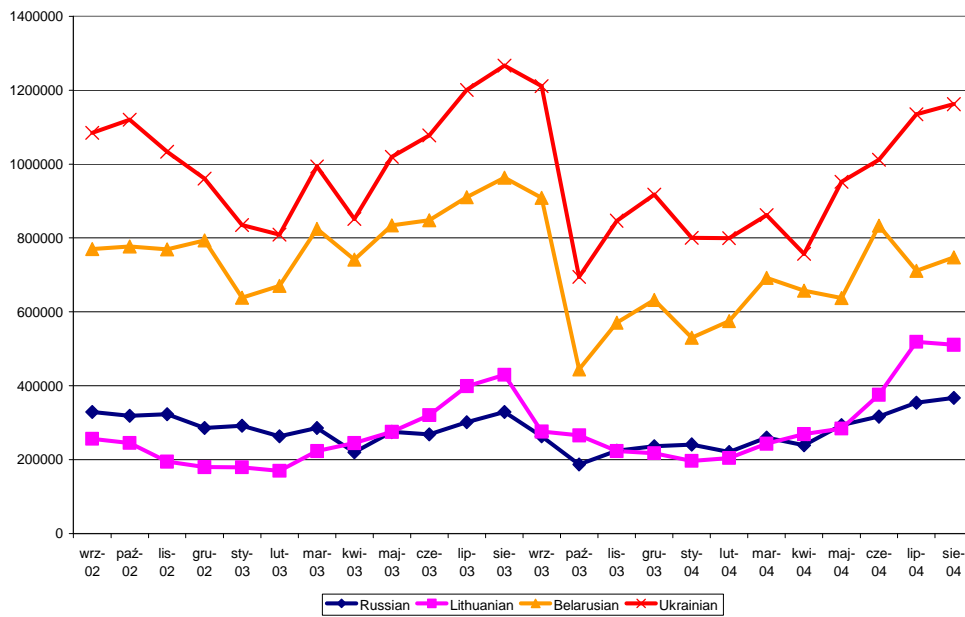
The traffic of trucks across the Polish eastern border had been increasing incessantly since the collapse of the Soviet Union (the years 1990–1992) until the year 1997. In the years 1998–1999 there was a short-lived breakdown, associated with the so-called Russian crisis, and then further rapid intensification. The breakdown of the year 1998 was clearly smaller on the Ukrainian than on the Belarusian border. The period of regress was, on the other hand, much longer for the vehicles

with Polish registration plates than for the foreign registrations (Ukrainian, but also Russian, Romanian and Bulgarian in the transit traffic). The number of Polish trucks crossing the Ukrainian border exceeded only in 2002 the level from 1996. After 2002, however, the increase in this group was more dynamic than for the foreign trucks. It should be remembered, though, that the distinction into the vehicles with Polish and foreign registration is not fully precise. In practice, namely a vehicle registered in one country may belong to a company from another country, and the driver may be the citizen of yet another country.

The dynamics of traffic growth (especially on the Ukrainian border) exceeded the dynamics of foreign trade, which is an evidence of both high share of transit traffic, and of the gradual increase of the share taken in Polish foreign trade by the road transport. On the eastern border, after 1998, the crossing in Kukuryki ceased to be the most intensively used one in cargo traffic. Currently, cargo traffic is decidedly more intensive at the crossing in Budzisko on the Lithuanian border.

Figure 4

*Passenger traffic at the Polish Eastern border
 (September 2002 – August 2004)*



Source: Author's elaboration based on the unpublished Border Guard materials; prepared for Espon 1.4.4., Final Report, 2007

There was also a relative increase of the role, in this respect, of the Polish–Ukrainian border crossings, especially the one in Dorohusk. The direction Dorohusk–Lublin–Warsaw–Berlin has been in the years 1995–2004 the main direction of the Ukrainian transit to Western Europe. After 2004 the traffic of trucks in Dorohusk stabilised. The increase of the traffic of heavy goods vehicles in the years 2004–2005 took place first of all at the border crossing of Korczowa along the direction of E–40 route (Dresden–Cracow–L’viv). In the previous years the biggest goods flows were observed along the direction of Kiev–Warsaw–Berlin. The change may be caused by a relative advance of the construction of the Polish motorway A–4 (the segment between Cracow and Bolesławiec, some 40 km from the German border).

Summing up, it should be stated that the cross-border traffic of trucks in eastern Poland is to a large extent the transit traffic. Yet, there exists an interrelation between the setting of the transit roads and the location of towns conducting trade with Ukraine and Belarus’. This concerns first of all the towns (counties) situated directly at the border crossing, namely – Przemyśl, Chełm and Tomaszów Lubelski on the Ukrainian direction and Biała Podlaska on the Belarusian.

In the period of 24 months, here analysed in detail (September 2002 – August 2004), HGV traffic was subject to standard seasonal oscillations with a clear peak at the end of the calendar years and even more pronounced minimum in January. The influence of the introduction of visas for Ukrainians on the intensity of traffic is not perceptible. The spring increase in 2004 was observed earlier than in the preceding year, which allows to assume that either the accession of Poland to the European Union had no influence on the magnitude of traffic, or this impact could be positive. In these terms the situation is different from the one observed on the Belarusian border, where a decrease of traffic was observed in May 2004.

Summary

Altogether, it can be admitted that the international economic links of the eastern border areas, two years after the extension of the European Union, are characterised by the following properties:

- Lower than the national average intensity of the official economic connections,
- Relatively high, although decreasing, diversification of the foreign partners,
- High increase and moderate de-concentration of the trade activity after the accession of Poland to the European Union,
- Strong, although quickly decreasing concentration of export connections with Ukraine (Lubelskie and Podkarpackie provinces),

- Average and even more quickly decreasing concentration of connections with Belarus' and Russia (Podlaskie, Warmińsko-mazurskie),
- Increasing trade significance of the EU partners from other new member countries,
- Slowly increasing role of eastern partners in import,
- Concentration of connections with intensity exceeding the national average in only few centres,
- Marginal share in foreign trade of the counties situated directly at the border (except for the units surrounding the cargo border crossings),
- Increasing significance of the transit location with respect to Lithuania and Ukraine, and a stable role in this context with respect to Belarus' and Russia.

The analysis conducted leads also to the general conclusion that the effects of accession to the European Union were unequivocally positive for the economies of the provinces studied. This is demonstrated by the intensification of export to the so-called “demanding markets” with simultaneous slowdown of the upward tendency in the domain of the share in import from Western Europe. At the same time, however, comparison with other regions of the country proves that the potential associated with accession has been used in the East to a relatively smaller degree. The beneficiaries of the advantages accruing from the accession have become mainly the large enterprises, existing already before on the European market. The effect of creation of new connections has not appeared in the small and medium enterprises, located in the counties having earlier weak international connections.

The analysed provinces of Eastern Poland play to an increasing degree the supra-regional and international functions. Their development requires, therefore, better infrastructural connections with central Poland and farther – with the inside of the European Union. Still, in the provincial development strategies and in other planning documents the development opportunities are seen primarily in the servicing of transit and in local transboundary co-operation. The external costs of the heavy road traffic in transit (environmental and linked with the consequences of road accidents) nullify, namely, to a large extent, the profits connected with servicing of such traffic (Węclawowicz and others 2006). Lower significance ought also be attached to the currently frequently repeated postulate of opening up new border crossings with the eastern neighbours. It is more important to try to improve the system of customs and border controls. Without shortening of these procedures construction of the consecutive border crossings shall not decrease the function of the eastern boundary as a spatial barrier. The experience to date teaches, as well, that opening up of new crossings does not secure smooth traffic flow, because, similarly as the already existing ones, they get blocked owing to the struggle with the alcohol smuggling and due to the border procedures of the neighbouring countries. In case of overcoming of the formal barriers (elimination of smuggling and

border corruption) it would be possible to put to work the local crossings in the tourist regions (Forest of Białowieża, Bieszczady Mts., Vistula Lagoon).

Within the eastern border-adjacent areas the export ties with the direct neighbours have undergone a decrease. In the country-wide setting this was compensated for by the new connections of the companies located deeper inside Poland. Within the territory of the direct borderland this may, however, constitute a threat to the small businesses (the negative effect of the enlargement of the European Union). Local contacts of the smallest businesses may have been effectively limited by the introduction of visas for the eastern neighbour countries.

In the coming years it should be expected that the situation in the field of border traffic across the eastern border would remain stable. One should not expect a mass increase of tourism in the eastern direction, while the number of persons crossing the boundary in connection with petty trade will remain at the level similar to the present one due to the border procedures of the neighbouring countries (including corruption-related activities – sale of places in queues). Accession of Poland to the Schengen agreement will also be a factor limiting traffic increase in the East, resulting, beyond doubt, in the more stringent visa regulations for the citizens of Ukraine, Russia and Belarus’.

After 2013, in the case of positive political and market transformations in Eastern Europe, more important transformations may take place in the structure of the Polish-Ukrainian and Polish-Belarusian traffic. It cannot be excluded that the visa obligation would then be abolished (entry without a visa into the territory of the entire Union). Situation at the eastern border should then become similar to that in the 1990s along the border with Germany (Poland playing the role of Germany). Lower prices of products and services, given the simultaneous improvement of standards in trade, and increase of safety, may bring about mass travels for shopping (not only of alcohol and tobacco products) of the citizens of relatively poorer Polish eastern border regions. This would cause demand for a high number of local border crossings. In case the eastern neighbours do not adopt the market oriented and the pro-European policies, one can expect further stagnation, or even a decrease of the intensity of cross-border traffic.

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