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Competitiveness of the Polish system of road transport on the EU system of road transport – selected issues

Konkurencyjność polskiego systemu transportu drogowego w porównaniu z systemem transportu drogowego UE – wybrane zagadnienia

Abstract. Polish companies operating in the market of road transport services do not come only as some background for companies with foreign capital, but they are equal business partners and competitors in this market. Road cargo transport accounts for a major part of the system of transport in Poland and in the European Union. The paper is a comparative analysis of the structure of road transport sector, cost of carrier services in different countries and their economic performance. The paper is aimed at demonstrating that the structure of Polish road transport sector and its economic performance, compared to other EU countries, inhibit Polish entrepreneurs' adaptation efforts connected with the so-called Mobility Package. Studies have shown that the implementation of proposed changes will deteriorate the competitiveness of Polish carriers, who currently enjoy cost advantage over their competitors, but whose labour productivity is low, economic performance poorer and who suffer from unfavourable structure of road transport.

Key words: road transport, competitiveness, road transport sector structure, costs of transport services

Synopsis. Polskie przedsiębiorstwa rynku usług transportu drogowego nie stanowią już tła dla firm z kapitałem zagranicznym, lecz są równorzędnymi partnerami i konkurentami na tym rynku. Transport drogowy w Polsce stanowi podstawę polskiego systemu transportowego, a także jest istotnym elementem europejskiego systemu transportowego. Artykuł koncentruje się na wybranych aspektach określenia miejsca i roli transportu drogowego w strukturze polskiego systemu transportowego. Obecnie już z całą pewnością można mówić o dojrzałym, konkurencyjnym rynku usług transportu drogowego z rozwiniętymi procesami konkurencyjnymi stanowiącymi element nie tylko krajowego, ale też europejskiego, a nawet światowego systemu gospodarczego. Artykuł zawiera analizę porównawczą polskiego systemu transportu drogowego z systemami transportu drogowego wybranych krajów UE w aspektach kosztowych, a także innych czynników przewagi konkurencyjnej.

Słowa kluczowe: transport drogowy, konkurencja, struktura branży transportu drogowego, koszty usług transportowych

Introduction

Since the beginning of the short history of Polish market economy which was initiated by an economic reform taking place at the turn of the 1990s, the market of transport services has been through a lot of evolution. The beginning of Polish market economy was a time when a traditional transport sector was developed along with other fields of national market economy. Today, it is definitely possible to discuss a mature and competitive market of road transport services on which competitive processes have been fully developed and which comes as an element of the national, European and even global economic system. Polish companies operating in the market of road transport services do not come only as some background for companies with foreign capital, but they are equal business partners and competitors in this market. The particular segments of the market have also undergone some transformation in the fields of cargo transport and passenger transport in terms of structural and quality aspects. The use of road transport for individual needs has been systematically decreased. Transformation of traditional transport companies into more specialised logistics operators has become more and more common. Contract logistics has been trying to take a stronger position on the market of road transport services and – in a broader perspective – on the market of logistics services.

Development of road transport in Poland, which can undoubtedly be defined as a specific economic phenomenon, depends on numerous factors. Transport services provided by Polish carriers account for 25% of cargo transported by road in the European Union [Mindur 2017]. Surely, this situation has been affected by demand factors related to all the processes of pro-market orientation of Polish economy since 1989. The development of Polish economy in a new market reality and establishment of its competitive position in the international scene has resulted from the adjustment of the road transport sector to new requirements on one hand, and, on the other hand, growing needs of competitive economy have required efficient services in the road transport sector, first of all. After 30 years, when considered from the perspective of road transport, the above-mentioned interdependency can be undeniably defined as favourable. The main goal of this paper is a comparative analysis of the structure of road transport sector, cost of carrier services in different countries EU and their economic performance. The paper is aimed at demonstrating that the structure of Polish road transport sector and its economic performance, compared to other EU countries, inhibit Polish entrepreneurs' adaptation efforts connected with the so-called Mobility Package.

The national transport system as an element of the national economic system

The current condition and development of the Polish transport system depend on the growth rate of national economy. The Polish transport system comes as an important element of the national economic system. Its proper operation allows all interested parties to achieve their developmental aims efficiently. Therefore, the research on both these systems (the national economic system and the national transport system, including road transport) should be carried out simultaneously, with consideration of their mutual relations. Considering the above-mentioned conditions, some selected macro-economic indices which allow us to set the data on the current condition of the market of road transport services in Poland against some specific background are presented in Table 1.

Table 1. Selected economic indices in the years 2016–2018
Tabela 1. Wybrane wskaźniki ekonomiczne w latach 2016–2018

Specification	2016	2017	2018
Gross domestic product (% year of the year)	3.1	4.8	5.1
Domestic demand (% yoy)	2.8	4.7	5.3
Individual consumption (% yoy)	3.9	4.8	4.3
Gross fixed capital formation (% yoy)	–	–	8.7
Industrial production (% yoy)	6	6.2	6.8
Real retail sale (% yoy)	6.1	5.2	7.1
Unemployment rate (%)	8.3	6.6	5.7
Gross real wages (% yoy)	4.2	3.4	5.3
Budget deficit (% yoy)	2.8	11.4	8.5
Inflation (% yoy)	–0.6	2.0	1.6

Source: own study based on 2018 Statistical Yearbook of the Republic of Poland [GUS 2018].

Considering the data presented in Table 1, it is possible to assume that during the analysed period (2016–2018) the growth rate recorded for Polish economy was considerably high. The development of Polish economy was relatively evenly distributed in the particular quarters and years. Also, during the analysed period, the GDP growth rate index was maintained at the high and relatively constant levels of 3.1% (2016) and 5.1% (2018). While analysing the above-mentioned indices for the development of market economy in Poland retrospectively over the past 30 years, various conditions of Polish economy in the particular periods of time should be emphasized. Undoubtedly, it is possible to notice that there were years of fast and slow development or even stagnation. For example, in the years 2004–2007 economic conditions were favourable and the GDP growth rate reached the level of 5% approximately. The economic crisis of 2008 affected Polish economy and the situation was reflected in economic indices related to the operation of the transport system, including the road transport system. An important moment, which had a lot of impact on formation of the road transport system, was the accession of Poland to the EU structures and the acceptance of the Schengen Agreement.

While observing global production in the years 2016–2018, it is possible to notice its stable growing tendency. The years 2016–2018 were characterised by moderate capital expenditures. Hence, the growing level of Polish economy in the recent years has positively affected the development of the transport system, including the road transport system.

The value of the market of transport services, warehousing and mail (objects and passengers) in Poland has grown up to PLN 170 billion approximately, which is about 10.6% of the GDP (2018).

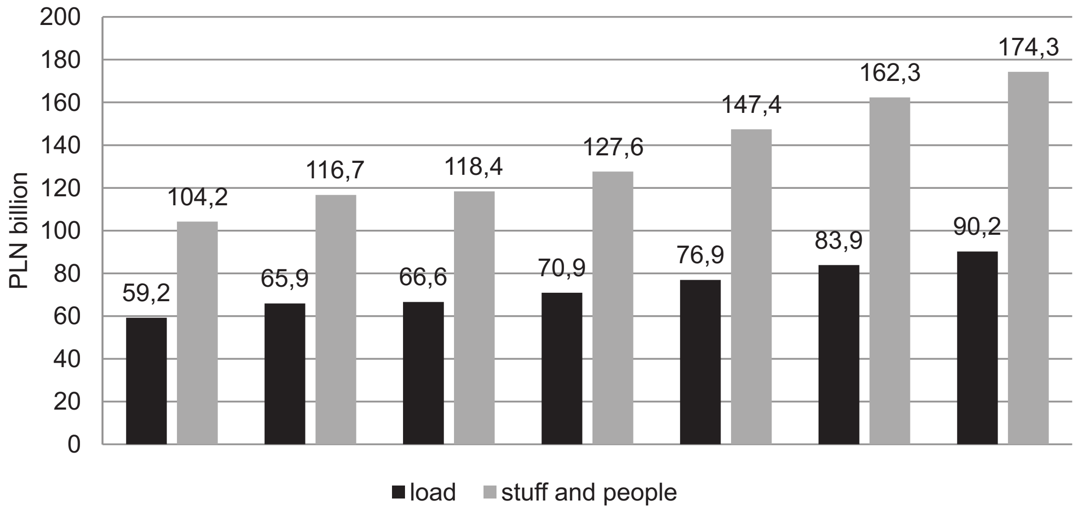

Figure 1. Revenues from the sale of transport services in the years 2012–2018
Rysunek 1. Przychody ze sprzedaży usług transportowych w latach 2012–2018
Source: own study based on 2018 Statistical Yearbook of the Republic of Poland [GUS 2018].

It should be emphasized that the shares of the particular profiles of business activities (services) on the logistics market are not even in its total revenues and the top position is taken by transport, forwarding and warehousing. In Table 2 the shares of the particular business activity profiles in the revenues of the market of logistics services in Poland are presented.

Table 2. The share of the particular business activity profiles (types of services) in the total revenues of the market of logistics services in Poland in the years 2011–2016
Tabela 2. Udział poszczególnych profili działalności (rodzajów usług) w całkowitych przychodach rynku usług logistycznych w Polsce w latach 2011–2016

Business activity profile	Share in the total revenues (%)					
	2011	2012	2013	2014	2015	2016
Transport	34.63	33.83	34.93	32.83	32.93	32.98
Forwarding	46.86	45.86	45.96	46.53	46.71	46.79
Warehousing	14.85	14.85	15.40	16.40	16.60	16.70
Customs services	0.84	0.84	0.80	0.80	0.80	0.80
Cross-docking	1.38	1.38	1.42	1.42	1.42	1.43
Logistics consulting	0.70	0.70	0.50	0.50	0.50	0.50
Others	0.74	0.50	0.99	1.52	1.04	0.80

Source: own study based on 2018 Statistical Yearbook of the Republic of Poland [GUS 2018].

Transport, forwarding and warehousing services have always been the centre of the market of logistics services. Despite the growing significance of other logistics services, it seems that this situation will not change in the years to come.

The position of road transport in the mode structure of the national transport system

At present, road transport is a mode of transport which prevails in cargo transport in Poland and in the European Union. Its share in transport performance (without air and sea transport) has been maintained at a stabile level of, approximately, 72% for many years. Economic significance of road transport as a service sector in the European Union is determined by the fact that it generates a turnover at the level of EUR 470 billion (including cargo transport – EUR 330 billion and passenger transport – EUR 140 billion) and provides employment to 5 million people approximately [European Commission 2017].

Considering the domestic market of transport services, it is estimated that in 2018, it concentrated about 132 thousand companies, which was approximately 3.6% of all enterprises in Poland [Enter Poland 2015]. It should be emphasized that the growing domination of road transport on the market of transport services has already reached the value of over 80% of total general transport. The volume of cargo transported by the particular modes of transport is presented in Table 3. The percentage share of the particular modes of transport in cargo transport is presented in Table 4.

Table 3. Cargo transported in the years 2014–2018
Tabela 3. Ładunek przewożony w latach 2014–2018

Transport mode	Amount of cargo transported (thous. t)				
	2014	2015	2016	2017	2018
Road transport	1 553 050	1 1505 719	1 546 572	1 747 266	1 873 022
Rail transport	227 890	224 320	222 523	239 501	249 260
Sea transport	6 781	6 963	7 248	8 254	9 149
Pipeline transport	49 810	54 850	54 058	52 393	55 287

Source: own study based on 2018 Statistical Yearbook of the Republic of Poland [GUS 2018].

The data presented above indicate the absolute domination of road transport. Over the past few years, however, this tendency has been slightly decreased. Based on the above--mentioned data and with the consideration of other sources, it is possible to formulate some fundamental conclusions as to the place and the role of road transport on the market of transport services in Poland, namely:

- prevailing significance of road transport in total cargo transport;
- specific phenomenon that can be observed in Polish economy and on the European market (every fourth driver in the EU is a Polish driver);
- high supply of transport services provided by private entrepreneurs;

Table 4. Share of the particular modes of transport in cargo transport in the years 2014 and 2018
Tabela 4. Udział poszczególnych rodzajów transportu w transporcie towarowym w latach 2014 i 2018

Transport mode	Share in cargo transport			
	thous. t	%	thous. t	%
	2014		2018	
Total	1 837 531	100.00	2 186 718	100.00
Road transport	1 553 050	84.51	1 747 266	79.90
Rail transport	227 890	12.40	239 501	10.50
Sea transport	6 781	0.004	8 254	0.004
Pipeline transport	49 810	0.03	52 393	0.023

Source: own study based on 2018 Statistical Yearbook of the Republic of Poland [GUS 2018].

- strong competition which results in falling prices and growing quality of services;
- constant increase in operation costs of road transport.

At this point, the field of regulations in the development and operation of the market of road transport services should be emphasized. In the 1990s, as a result of fast development of international road traffic, some serious problems with the throughput capacity at the borders were observed. The fast growth in the number of Polish carriers resulted in a situation in which foreign authorities permanently refused to grant permits for international road transport operation [IRU report]. Accepted in 1991, the Act on International Road Transport Operation introduced operating licenses which could be granted only to carriers who:
- had at least three years of practice in national transport or one year of practice in international transport, with relevant documents to prove it;
- had clean criminal records in the last three years and were not punished for any offences against road traffic safety or against the property.

The amendment to the legal regulations in 1997 facilitated development of transport companies through the implementation of a legal practice which allowed carriers to pass their operating licenses to each other, selling particular vehicles with operating licenses. They were signed over to their new owners – such operations were confirmed by relevant administrative decisions. The Polish Act of 17 November 2006 on road transport and traffic introduced some significant changes to the access to the occupations related to providing road transport services (including forwarding services, for example). An important aspect in the field of legal regulations referring to road transport was the Mobility Package. Published in 2017, it included a set of directives proposed by the European Commission. The new regulation initiatives refer to, among others, the access to the market of cargo road transport, social regulations in road transport, tolls for using transport infrastructure and interoperability of various toll collection systems.

In the future, the Mobility Package will significantly contribute to an increase in costs related to provision of transport services by Polish carriers; hence, it will affect their competitiveness on the EU market of road transport services, mainly because it will be necessary to comply with the regulations referring to salaries paid at the levels established in the countries where services are provided.

The share of Polish road transport companies in the European market

The competitiveness of the Polish system of road transport in comparison to the EU transport system can be analysed in various aspects and from different perspectives. The position taken by carriers coming from various countries can be evaluated based on the dynamics of changes in the volume and performance of transport and the shares of carriers from the particular countries in services related to cargo turnover on the European market. The dynamics in the volume and performance of transport is presented in Figure 2, assuming that the base year is 2000 = 100%.

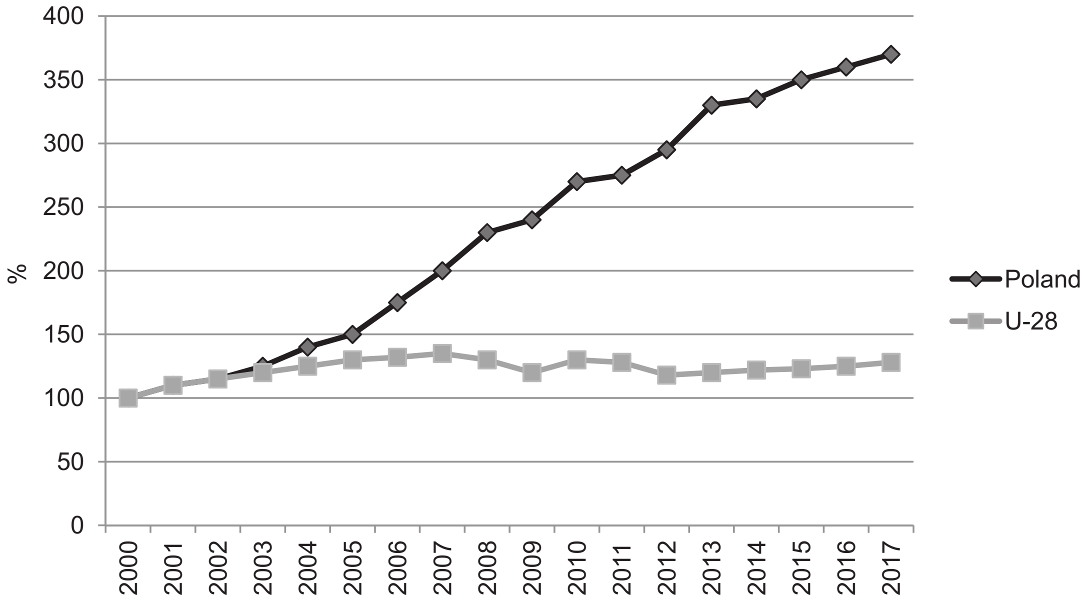

Figure 2. The dynamics of changes in the volume and performance of cargo road transport in the EU-28 and in Poland in the years 2000–2017 (year 2000 = 100%)

Rysunek 2. Dynamika zmian wielkości i wydajności drogowego transportu towarowego w UE-28 i Polsce w latach 2000–2017 (2000 r. = 100%)

Source: own study based on Statistical Yearbooks of the Republic of Poland of relevant years [GUS 2000–2017].

The data presented in Figure 2 indicate that the performance of cargo transport services provided by Polish road transport companies in the years 2000–2015 was characterised by growth dynamics which was much higher than the average in the EU-28 (growth by 247.6%). It proves their high competitiveness and constant development.

Considering the volume of transport, it is usually analysed in terms of shares taken in the international markets (export and import, cross-trade and cabotage) and national markets (where services are provided by domestic carriers). Domestic transport accounts for approximately 2/3 of the total transport operations in the EU, expressed in tonne-kilometres. In 2015, the total domestic transport provided by carriers from different countries accounted for 65.1% in the performance of transport in the EU. Intensified integration within the single market contributed to some faster growth in international road transport than in domestic road transport. In the years 2005–2015 the number of tonne-kilometres covered in international transport was increased by 46% and in domestic transport it was higher only by 6%. Some dynamic growth in cabotage transport services (Table 1) should be also noticed. In the years 2005–2015 there was an increase in cabotage transport services by 115%, however their share in total transport is rather small and it is only 1.8% [Eurostat, 2018a].

Table 5. International and domestic cargo road transport in the EU-28 in the years 2000, 2005, 2010 and 2015
Tabela 5. Międzynarodowy i krajowy transport drogowy towarów w UE-28 w latach 2000, 2005, 2010 i 2015

Transport	Share in cargo road transport							
	billion tkm	%	billion tkm	%	billion tkm	%	billion tkm	%
	2000		2005		2010		2015	
Domestic	1 086.4	72.0	1 225.8	68.3	1 176.9	67	1 151.0	65.1
International	421.6	28.0	568.8	31.7	578.4	33	616.9	34.9
including cabotage	no data	no data	14.9*	0.8	20.5	1.2	32.1	1.8
Total	1 509.5	100	1 794.6	100	1 755.3	100	1 767.9	100

*For the EU-25.

Source: own study based on [Eurostat 2018a].

After the accession of Poland to the European Union, Polish carriers started to participate in international transport more intensively, which was reflected in the data provided by the Statistics Poland (Główny Urząd Statystyczny). In the years 2004–2015, an increase in transport operation was as follows [GUS 2005–2016]:
- in domestic transport – 37.8 billion tkm (growth by 64%);
- in international transport – 110.4 billion tkm (growth by 251%), including export – 33 billion tkm; import – 32.2 billion tkm, cross-trade – 37 billion tkm and cabotage – 8.1 billion tkm.

The analysis of the changes in the performance of transport indicates that Polish carriers achieved success and the growth in their performance of transport services considerably differs from the results achieved by their competitors from other countries. Polish carriers recorded the highest growth in transport performance (258.7 billion tkm) in the years 2000–2015, and it was four times the number of tonne-kilometers which was reported by Spanish carriers and six times the number of tonne-kilometers which was reported by German carriers, who occupied the subsequent positions on that list. The high dynamics in performance of transport was reported for Bulgarian, Lithuanian and Croatian carriers; however, the levels of growth reported for them did not exceed 26 billion tkm [DG MOVE 2017]. The expansion of Polish carriers on the European market resulted in fact that they took over a large share of cargo which had been so far transported by carriers from other countries. Carriers from Italy, France, the Great Britain and Belgium were affected by that situation in the most negative way. Polish carriers have held the greatest share in international transport for several years (in 2015 was as high as 25.2%). The next positions have been taken by Spain (11.7%) and Germany (7.6%). The domination of carriers from Central and Eastern Europe in cross-trade transport is even more conspicuous. They provide over 80% of such transport services and the largest share is taken by Polish carriers (29.5%). Among the EU-15 countries, only Portugal (3.5%) and the Netherlands (3.1%) stand out in that sector [Koźlak 2018].

An important factor of competitiveness in cargo road transport is the price of the service, which largely depends on the prime costs related to providing services (and, obviously, the margin).

Based on some interviews with road carriers, the AECOM research team [2014] defined a typical structure of cargo transport costs in some EU member countries (Fig. 2). In the research, costs related to drivers included wages and remuneration surcharges and costs related to training. Fuel costs were calculated based on the purchase prices, including fuel taxes. The category of other costs included depreciation, maintenance costs, costs related to tyres, insurance, financial expenses, taxes and tolls.

In majority of the EU member countries, the level of labour costs exceeds 33%; according to the above-mentioned research survey, Poland is the only country where labour costs were at a lower level of 20%. This level corresponded to the data published by the Statistics Poland [GUS 2017]. The costs related to fuel ranged from the levels of 24% and 38% of the total costs. In comparison to other countries, Polish carriers report a considerably large share in the category of other costs. It results from high costs related to outsourced services, especially costs of fleet leasing and depreciation. The structure of costs related to cargo transport in the selected EU member countries is presented in Figure 3.

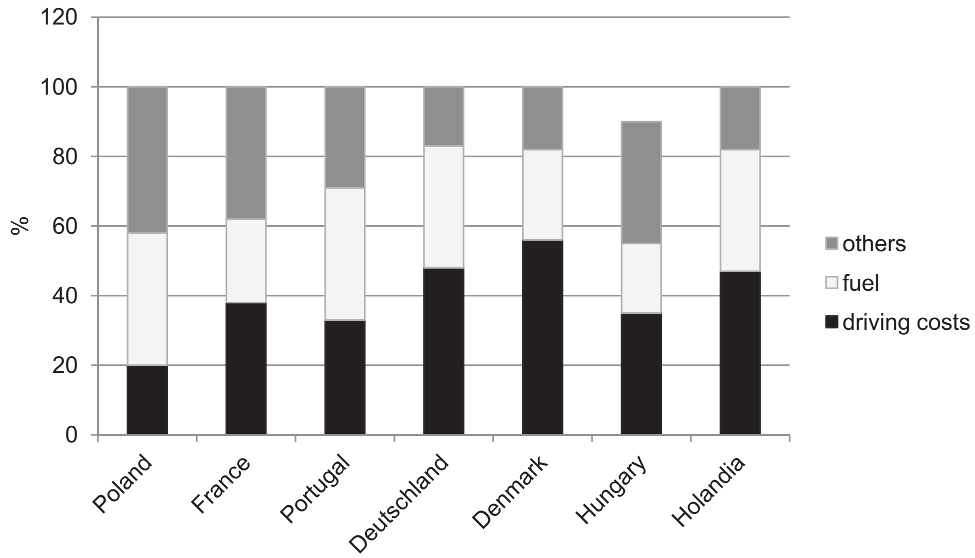

Figure 3. The structure of costs related to cargo transport in the selected EU member countries in 2012

Rysunek 3. Struktura kosztów związanych z transportem ładunków w wybranych krajach członkowskich UE w 2012 roku

Sources: [AECOM 2014].

The above-mentioned data indicate that the lowest labour costs in transport can be observed in Polish companies (the available data indicate that the lowest labour costs can be observed in Bulgarian companies). The highest labour costs are reported in Denmark and they are almost tenfold higher than in Bulgaria. It should be emphasized that given in the absolute values, labour costs in the EU member countries which joined the EU in 2004 and in 2007 are much lower than in the EU-15 member countries, however, as a result of the convergence process, the discussed difference has been gradually decreased. The dynamics of remuneration growth in road transport is higher in the EU-13 countries than in the EU-15 countries. It results mainly from the obligation imposed in some countries on foreign carriers to pay the minimum wages (among others, in Germany, France and Italy).

In the EU, the costs of fuel change according to the situation on the global oil market, nevertheless the differences between the countries are quite considerable. In the EU taxation on energy products has been standardised and the minimal levels of taxes which are calculated into the price of fuel have been established. Apart from that limitation, the EU member countries can freely shape their domestic tax rates in a way which is in line with their current policies, which is usually reflected in the prices of fuel. The lowest prices of diesel oil are reported in Luxembourg and Bulgaria, the highest – in Italy and Sweden. In the most expensive country fuel costs over 40% more than in the cheapest country. Compared to the countries of Western Europe, relatively cheaper fuel in Poland reinforces the competitive position of Polish carriers. A weak point of Polish road transport companies is low work efficiency; it is reported to be several times lower for Polish carriers than for German, Danish, Dutch or British carriers. Companies of Western Europe have some technological and innovative advantages in terms of product, process and organisational innovations. It is also possible to discuss some capital advantage because Western European companies have higher equity levels and they have an easier access to external funding. Furthermore, Western European companies offer higher quality and broader ranges of services related to cargo transport. It results from their technological and capital advantage. Services of higher added value are offered mainly by medium-sized and large companies with their own cargo handling terminals and logistics centres. Polish transport companies which operate on the European market specialise in simpler services of transporting cargo from its sender to its recipient.

Conclusions

Some available forecasts provided by the government agencies and independent experts and scientists allow us to state that the competitive position and the role of road transport in Poland continue to strengthen, also in terms of the structure of the national transport system and in the perspective of competition in the field of international transport. All activities undertaken to limit the role of road transport in Poland are inefficient; hence, the pursuit of the properly balanced structure in the cargo transport can be achieved only by providing favourable conditions for cooperation between the particular transport modes and by achieving synergic results in that field. In accordance with the forecast published in the Transport Development Strategy (with a perspective until 2030) by the Ministry of Infrastructure and with consideration of the particular transport modes, the largest share of demand for cargo transport will belong to road transport; the demand for cargo transport performance (tkm) in terms of the spatial configuration will grow in the sector of international transport – by 2.8–3.2% on average annually. The aim of the Polish transport and economic policy is to achieve higher integration of road and rail modes of transport (with consideration of needs and possibilities of other modes of transport in that respect) and, eventually to increase the throughput capabilities of the transit system in cargo transport. A necessary condition to achieve the above-mentioned aim is to provide infrastructural and organisational conditions for the operation of logistics chains. Some important signals in that field can be observed in the form of plans for, among others, the construction of the Central Communication Port or for the establishment of the national logistics operator, etc. The achievement of the above-mentioned aim will also depend on maintaining the high competitiveness level of Polish carriers in road transport. Although the present situation of Polish carriers in the European market is favourable, the implementation of the Mobility Package, as it is proposed by the European Commission, may considerably worsen their competitiveness. In the near future, Polish carriers will certainly face some problems generated by protective activities undertaken by the particular EU member countries in order to support their own transport companies. Therefore, it is very important for companies to become aware of the significance related to the development of their own competitiveness factors which refer not only to competitive prices of services resulting from low labour costs, but also to the increase in work efficiency, to the increase in innovation, higher corporate culture and synergic effects resulting from cooperation among particular elements of the national logistics system.

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