

# CHAPTER 5

## ROLE OF TRANSPORT OPERATORS IN THE SUPPLY CHAIN

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### **Abstract**

The chapter describes the complex situation of road carriers during the dynamic changes in the market for transport and forwarding services. Increasing globalization, innovation in the market, new growing customer needs (increasing expectation due to the high quality transportation service), emerging new competitors and changes in the legislative area - are the elements which have an enormous impact on the road operators. The goal of chapter is to describe the role of transportation enterprises during the above mentioned processes. The topics were presented on the example of Polish carriers.

Keywords: transport operators, transport operators, supply chain

### **5.1. Introduction**

Transport is undoubtedly an important factor that intensifies the development of both individual regions and entire economies. The relationship between the development of the national economy and transport systems operating within supply chains due to the fact that transport "handle" other economic sectors, especially industry, construction and agriculture. In recent years the situation in the Polish economy forcing efforts on companies from TSL sector to develop and sustain a competitive advantage through the implementation of modern management techniques, both at the operational and strategic level. The search for ways to reduce costs, increase customer expectations regarding the improvement of the broader quality of transport services, as well as reducing time forming processes ultimately total value for the customer's favor, actually enforce the

concentration of activities in the framework of modern solutions for use in supply chains (Romanow, 2008).

## **5.2. Characteristics of transport market in supply chains**

In Poland, for years the majority of cargo is transported by using the cars and the road network. These means of transport moves around mostly processed goods, and train - mainly raw materials and bulk goods. Consequently, the economy is becoming more technologically advanced, and thus increasing the exchange of goods processed. Hence it can be concluded that the transport needs will be reported to the transport of flexible, quickly reaching customers and offering additional services. Against this background - in comparison to rail - much better presents itself road transportation and associated logistic services. Rail transport, despite significant investments, are still characterized by long delays in modernizing rolling stock and infrastructure. Therefore, it is expected that without radical changes in the railway it will be difficult to persuade customers to switch transport preferences, thereby halting the expansion of road transport.

Supply chain management with viable road transport is becoming more and more complicated challenge. One of the most important basis for the functioning the production companies are striving to optimize inventory levels and supply organizations, in order to deliveries within the JIT system reduced the cost of maintaining storage facilities for production materials needs. Today's supply chains are therefore under increasing pressure. When lengthening the distance that overcome goods and materials, time available for supply is reducing. Steady economic growth and increasing global trade causes the dynamic development of the transport sector. Growing pressure to reduce costs and increasingly common trend among companies to focus on their core competencies make the transport functions or - more broadly - logistical services are entrusted to specialized companies, leading to increased demand for their services with an indication of transportation in the lead role.

Over the last two decades of cooperation between enterprises in supply chains (national and international) is undergoing intensive evolution of structural and organizational issues. In the initial phase, companies have limited themselves to only the usual exchange and did not have a strong desire to strengthen relations with its partners. It's known that the company's success depends not only from itself but from all those cooperate with company (Ciesielski, Długosz, 2010, p. 11). Intense competition and the dynamics of changes in the domestic and international markets - due to the increasingly complex processes associated with international

trade transactions - have become the determinants of the development of Polish carriers. A strong need to adapt the transport and forwarding services, adapt to the requirements and growing needs of cell of the supply chains and the need to adapt to changing realities - these are the reasons for the further development of enterprises in this sector. Analyzing the Polish market for road transport one should pay attention to the high degree of complexity concerning the segmentation of this market. This is due to the fact that apart from its primary division (freight and passenger transport services) trade relations are characterized by a high degree of autonomy and individuality. This market formed segments with the following services (Rucinska, 2012, p. 159):

- cargo transport provided by the national carriers,
- for in-country logistical needs (supply chain),
- analogous - provided by foreign carriers (road cabotage in Poland),
- transportation provided by polish carriers for the Polish foreign trade,
- transportation provided by polish carriers for foreign goods (cabotage in other countries, cross-trade, transit),
- auxiliary motor transport (freight and logistics car).

Such a high degree of differentiation segments of the Polish road transportation market is analogous to market structures in other EU countries. One major obstacle in the study and absorptive capacity of these segments of the market is the lack of official records and statistics illustrating the key parameters characterizing the activities in each of them. Unknown is the number and structure of the subjects from the supply side. The demand side is reflected not through the prism of users of services offered, but by the structure of cargo transport. Central Statistical Office in Poland estimated only specifies size of the substitution activity, which is the transport for their own needs and individual automotive. There is also no reliable information about the scope and scale of operations of foreign operators involved in some of these segments, and there are no official price quotations and analyzes negotiated between carriers and ordering parties.

Therefore the characteristics of road transport operators engaging in less or more formal business relationships with entities operating in the networks of supply chains and analysis of existing cooperative relationships make it difficult for gaps in the polish statistical information about companies and the situation on the transport market. It is difficult to carry out such a full characterization without previous diagnosis of the condition, including:

- structure of the market entities (number of different forms and sizes of enterprises, employment, number of emerging new businesses and bankruptcies, the share of companies in the market sharing),
- the level and structure of operating costs,
- the size and structure the fleet of carriers in gainful activity and transport activity of other companies,
- achieved economic results (indicators of the level of costs, profitability, etc.).

### **5.3. Statistical information from market of transport services**

It should be noted that the collection of data from transport companies is also becoming increasingly difficult due to the increasing reluctance to provide information for doing research by individuals and institutions. Nevertheless, it is worth presenting key figures characterizing this sector for the purpose of illustrating the situation on the domestic market for road transportation in Poland.

According to the Office for International Transport (OIT) and Central Statistical Office (CSO) in Poland currently operates approx. 240 thousand transport companies, including approx. 90 thousand freight road transport operators engaged transportation vehicles over 3.5 tonnes (permissible gross weight) and almost 42 thousand coach carriers. According to the CSO transport industry generates nearly 10% of national gross domestic product and performs their transport record level of more than 70% of all transport in the country. In addition, according to Eurostat data polish carriers are the largest force in the international transport of goods (especially in transport cabotage), and the industry is employing over 1 million people (550 thousand truck drivers in 2013). Currently, the number of employees in these entities have increased, approaching 580 thousand. and approx. 260 thousand bus drivers. But that's not all employees of the sector. It should also include employees in transportation companies: customs agencies, shipping operators, warehouses, garages, point of sale of spare parts and replacement tires. This is approx. 7.5% of all employees in Poland. Most companies in the sector of transport services are enterprises included in the group of micro-enterprises, one third of them has four vehicles, one-fourth has a fleet numbering from 5 to 10 cars. Only 15% have from 11 to 20 vehicles, and a one-sixth companies have from 21 to 50 trucks. Over 40% of companies employing less than 10 people, one third - to 49, and only 5% - more than 250 employees. A large group carriers (42%) focuses on providing services in the country, 37% have operations both abroad and in Poland, and every fifth just outside of Poland

(Pierzynska, 2015, p. 243). The transport industry revenue is estimated to be in the range of 65 billion dollars per year. The Polish international transport companies perform two times higher transport work than their competitors from Spain or Germany with a score of between 120 billion tonne-kilometres., with a number more than 140 thousand trucks. The size of Polish transport performance ranks in the forefront of European carriers. Even in 2011, according to Eurostat data they realized the size of 207.7 billion tonne-kilometres, which meant then second place in the EU for carriers from Germany with 323.8 billion tonne-kilometers in their account, but before Spain with 206.9 billion tonne-kilometres. Also the rate of revenue growth in the EU during the decade was three times higher than the increase in transport work; carriers margins also have risen. In the period 2006-2014 Polish transport companies first emerged its stake in transport work within the framework of the EU in international transport, reaching 22.8%, and then increased it to 27%, becoming the European leaders ahead of transport and companies from Spain and Germany.

Polish carriers also took over a large part of the cabotage market - in-country transport (Central Statistical Office, 2015; Eurostat, 2015) in the countries of the "old" EU, which meant that in 2013 earned an operating 4.5-5 billion (more than half of all domestic receipts from transport). Currently this sum comes close to 5.5 billion, while Polish transport companies are the undisputed leaders of the EU market of cabotage services. Road transportation carriers at the same time generate more than 80% surplus in transport services and more than 52% the surplus of the whole sector. These data can be understood looking at so significantly parameter, which is the average load in the European international transport. It amounts to 13.6 tons. Polish carriers loaded on their trucks for an average of 15.4 tons and empty runs are an average of 13% of their course and are usually on the way to loading. Carriers from Poland usually carry over long distances. More than half of the orders requires a move from 500 to 1999 km, 10% - more than 2000 km for 40% - up to 499 km. Usually, Polish transport company is not a large one. According to the OIT data, in 2013 the number of trucks amounted to 144 250, while the number of carriers - 26 614. Interestingly, the first number decreased, while the other - have increased. This meant shredding of the process fleets. OIT data referred to the fact that 65.5% companies (17 445) had from 1 to 4 trucks with a total fleet of 36 249 vehicles. This represented about 25% of the entire fleet of transport in Poland. Large companies have not been many - 73 players were on the state of more than 100 tracks, representing a total of 12 592 tracks (8.7 percent fleet).

In road transport were carried 1547.9 million tonnes of goods in 2014, i.e. by 0.3% less than in 2013 and transport performance in tonne-kilometres was higher by 1.2%. The share of hire or reward transport in the total transport amounted to 56.5%, while transport on own account accounted for 43.5%. The share of hire or reward transport in the total road transport performance amounted to 83.9% and the share of own account transport – 16.1%. Hire or reward transport carried 874.3 million tonnes (1.9% more than in 2013), while transport performance was higher by 2.0%. Transport on own account provided 673.6 million tonnes of goods (3.1% less than in 2013) and transport performance decreased by 2.7%. The achieved volume of goods carried in road transport in tonne-kilometres accounted for 14.4% of total road freight transport of EU which Poland gave the 2nd position among 28 Member States of EU, behind Germany but before Spain and France. In international transport, Poland had even the higher share (above 24%) and was on the 1st position before Spain and Germany. In 2014, there was noted the decrease of 0.8% in carriage of goods in national transport in comparison with 2013, while transport performance in tonne-kilometres was lower by 3.7%. International transport increased by 4.9% in tonnes and by 4.8% in tonne-kilometres. In comparison with 2013, the share of international transport in total transport grew from 14.1% to 14.8% for tonnes and from 59.5% to 61.5% for tonne-kilometres.

#### **5.4. Barriers to the development of transport companies**

Quoting statistical data should also pay attention to those that apply to linear road infrastructure. According to the Polish Ministry of Infrastructure and Development accounted for most of the investments for the period 2011-2013. In total, from November 2007 to the end of 2013 it was built 835.3 kilometers of motorways and 955 km of express roads, 212.9 km and 687.8 km of bypasses major rebuilding and strengthening national roads. This allowed for a significant improvement in the condition of roads. Established in the National Roads Construction Programme for 2011-2015 the threshold of 66% of national roads with good surface has been achieved in 2013. Also it has improved safety - the number of accidents on public roads has fallen below 40 thousand annually.

One of the most important parameters affecting the profitability of Polish carriers involved in handling entities in the supply chain is the height of freight rates, and on the other hand - the amount of costs incurred by the company. Currently, freight rates in domestic oscillate between 3.00-3.30 PLN per one kilometer for the 40 ton loaded the car kit (data from the half of 2015). Profit in favorable conditions dating back several - dozen pennies on kilometer. This is due to the oversupply of service and the distortion of competition. One and the other is

a complex phenomenon and needs special analysis. The amount of deductible expenses in road transport, as in any other area of the economy is largely based on governmental duties such as; excise duties contained in the fuel, vehicle tax (also called tax tools), property tax (transport base), fees for using the environment (emission and fuel reload), e- toll, and of course income tax, VAT, fees for permits and licenses and employment costs. A seemingly similar situation is in other EU countries.

Apparently, as part of the collected funds back to the transport undertaking in the form of reimbursement of excise duties, subsidies for training drivers or tax credits for the purchase of new means of transport. The question therefore arises, how long Polish companies will be able to compete with EU carriers supported economically by their state? The difficult financial situation is also complicated by long payment periods (even of up to 90 days) or problems with efficient collection of debts for the services of dishonestly operating shipping companies. These situations are frequent direct cause of bankruptcy, particularly micro-enterprises the transport industry. The problem is also constantly changing and too complex right, sometimes lack coherence with EU transport regulations. Gradually decreasing the number of domestic freight, the problem is also constantly changing and too complex law, sometimes lack coherence with EU transport regulations. Gradually decreasing the number of domestic freight, the company with over 20 years of experience are withdrawing from the cargo market. Unfortunately it is becoming clearer the increasing fragmentation of carrier's fleet. For this there is strong competition in the market , plus low margins, which for most businesses is a serious barrier for their development. These barriers are of course more. In addition to those mentioned previously related to fiscal policy also we observe burdensome administrative and organizational barriers, including inefficient, bureaucratic and inflexible customs system. Quite archaic solution is the polish system of issuing permits for transport of non-hazardous waste. For the most unfriendly carriers can be considered the system via-toll, mainly:

- the need to bring a deposit for the device (6- fold higher than in form eg. Austria),
- the inability to download the device without a contract and registration system for passing single ride,
- a few customer service points,
- frequent malfunction of gates,
- lack of current information about the status of an account,

- controversial rules for calculating penalties by multiplying the statutory rate driven by the number of gates,
- more than 100% increase of fee in the toll from the previous vignette system.

As a result of the intervention of the organizations carriers - work is in progress to make significant changes to that system, and the case it appears to be developmental. Observing over the last years, growth in wholesale fuel prices one may have the impression that price increases do not fully associated with the market situation. Another worry is the increase in rates for compulsory vehicle insurance. In the last several months, insurance rates risen by up to several thousand PLN for a single truck. It's hard to find any circumstances that justify such an increase. Dumbfounding is the passivity of financial supervisors, despite many signals coming from the transport environment to investigate the matter. A weakness of the polish transport are also employees. There is a lack of qualified drivers on the labor market. More and more experienced drivers have retired and in their place lacks new. This is partly because the high cost of obtaining (approx. 10 thousand PLN) professional qualifications, together with a license for specific category. Currently on the polish market for domestic and international Road transport are missing approx. 30 thousand professional drivers. Another worry is the fact that in Poland there is no appropriate institution which would monitor the road transport market and to make any detailed economic analysis, in particular as regards the minimum operating costs transport companies. Economic analysis can be support of transport process efficiency and standardization processes (Stajniak, Koliński, 2016, p. 37-46). Such a institution together with the already existing services of supervision should be able to intervene in the case of operating the below rates. In a situation where dumping is no longer a marginal phenomenon and really threatens the economic health of the other carriers, more and more enterprises in favor of increasing the regulatory role of the state. This would contribute certainly to the construction market based on competition lasting quality and balancing the interests of customers, carriers and the state as representative of the general public. So far, every attempt of the information determining and announcing a minimum freight rate on the verge of profitability encountered opposition authorities. It is unclear where does this attitude of officials: whether from a lack of belief in the effectiveness of economic policy instruments of the state or motivated by a doctrinal and fears being accused of an attack on the free market? Let us hope that in the end tangible arguments will prevail. Especially in this case, the legislative route can be relatively simple.

The economic downturn a few years ago strongly affected the carriers. This was due to fewer transports as a consequence of stagnation in production recorded in 2009-2011 which translated into a smaller number of orders. This situation does not improve the strong internal competition, supported by their governments, foreign rivals, receiving payments for fuel, allowances for transport and transport law less restrictive, such as a working time of drivers. All these factors do not facilitate the functioning of Polish entrepreneurs involved in the transport. The situation is getting worse by, among others, limited in this year, permits for transport to Russia and further restrictions on CO<sub>2</sub> emissions, which force from 2014 onwards investments in new vehicles. Today unfavorable factor for the development of the transport companies activities is not only internal competition, poor quality and inconsistent laws or weaker access to external financing, but above all – consolidation of foreign players. In total, since only 30% of companies perceive the problem of financing, as indeed onerous. In practice, the transport industry is globally very important customer for financial institutions. Also in Poland, most of the heavy equipment fleet is leased and purchased from its own funds. Currently, the key challenge for the transport industry is coping with the changes that have forced foreign competitors and the principals.

The crisis has revised approach by all stakeholders of the industry to the business. Consolidating market and the displacement of its Polish carriers are the main reasons for the low margins and worse conditions of the transactions. In Poland there are successive foreign logistics operators with their own transport potential in search of profits, which can no longer count by working on existing markets in western Europe. In addition, Polish carriers can not count on support from the government. Adding new burdens and deficits of EU programs dedicated to the transport sector some tend to abandon the business, the other mostly frustrated. The level of the index financial condition of the transport industry (July 2015), which was obtained as measured at just over 50 points shows how strong and realistic are fears called by the Polish carriers.

So what are the prospects for the coming years? Carriers may find a niche in the market of - contrary to appearances, there are still sectors of the economy that need special transport, thus giving a chance to transport companies to achieve a long-term development. Carriers can also change your approach enough to understand that during the revision phase the winning players should be consolidated. There is little research that would take into account the entire spectrum of companies operating in the transport industry. Therefore, the conclusions from the current measurement bring a number of important data that can be an encouragement for deep reflection on the future of Polish road transport.

It is interesting to consider the idea of creating a national buying groups, made up of dozens of dynamically operating operators providing logistics services, cargo handling, warehousing, storage and transport. Companies operating in the supply chain put today increasingly complex services, aimed at optimizing costs. It is thus an ideal time for the appointment of clusters, create groups, building common networks and associations that will provide a real counterweight to the strong and experienced foreign rivals. It is also a time to determine the long-term direction of development for the entire transport sector in Poland.

Forecasting economic conditions, including that relating to the road transport sector in Poland is not easy task. The main difficulty is mainly due to its strong engagement with other sectors of the economy under supported of supply chains. This is not also the only reason. On the long term, 'normal' relationship between the transport sector and its economic environment impose additional factors whose impact can be run both evolutionary and more violent, leading to structural changes. As an example may be mentioned the one hand, the increase in energy prices, on the other hand - changes in the size and structure of the transport accompanying economic development that is intended towards preferring the use of new technologies. It is also worth to mention about:

- possible, preferred to further liberalize rail transport market,
- development of transport infrastructure,
- seeking to integrate various transport modes in logistics chains as part of combined transport,
- popularization of intelligent transport systems,
- need to include more and more restrictive and stringent environmental standards.

These factors may, and probably will materially affect the structure of demand (ie. reducing the demand for raw materials, increasing demand for services) and as a consequence - cause the relationship between transport and the environment will be dynamic. Due to the above-mentioned issues it is difficult to develop reliable forecasts of market development in road transportation area. It requires taking into account the probability of processes, events and phenomena often have no precedent in the history of road transport, both in Poland and in the European or global dimension (Balke, Dorosiewicz, 2014, p.231).

## **5.5. Conclusions**

In conclusion, in the longer term the market probably gain an advantage carriers offering a comprehensive service package - including connecting

integrated transport logistics services and warehouse, able to join in the recipient's delivery system on-line, investing in management systems. Therefore, the market will reinforce even more the economies of scale - larger companies cope better with the rationalization of costs and necessary modifications. In addition, specialized carriers thrive well: among others, in the transport of bulky, transport of dangerous substances, etc. However, the Polish market is waiting for "cleansing" - has to align supply and demand for transport services and, consequently, may disappear from the market from 20 to as much as 40% of transport and forwarding operators. Probably it will force the long-awaited consolidation of the market through savings, which gives the effect of a larger scale of operations. Another phenomenon which we can expect from operators is looking for stable and more profitable niches in the network of cooperative relations between the chain of transport and storage links.

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