

USE OF PESTEL ANALYSIS FOR ASSESSING THE SITUATION OF POLISH TRANSPORT ENTERPRISES (PART II)

Monika STRZELCZYK^{1*}, Monika CHŁAD²

¹ Częstochowa University of Technology, Częstochowa; monika.strzelczyk@wz.pcz.pl,
ORCID: 0000-0002-8066-2869

² Częstochowa University of Technology, Częstochowa, monika.chlad@wz.pcz.pl,
ORCID: 0000-0002-9925-6000

* Correspondence author

Abstract: This article constitutes the second of three parts of a publication titled: "Use of PESTEL analysis for assessing the situation of Polish transport enterprises". The aim of this article is to present the influence (positive or negative) which macro-environmental factors specified in the first part of the work have on the activities of studied enterprises. The defined factors will serve as a basis for creating a PESTEL analysis of the transport market in Poland. This analysis will be presented in the third part.

Keywords: strategic management, strategic analysis, macro-environment, transport company.

1. Introduction

National entities perform important functions in the economy. First of all, as a result of manufacturing, services and commerce processes, it is possible to provide products and/or services (supply function) that satisfy the needs of the society. Efficient and effective functioning of companies in the market is dependent on many factors. These factors can stimulate or inhibit the operations and development of an organisation. This is the reason why it is so important to constantly monitor the closer and wider environment of the company in order to adapt its activities to changing conditions. This observation can be based on an analysis of the environment. An analysis which takes into account changes of these factors in the long-term perspective has been known in the literature as strategic analysis. Multiple methods of strategic exist, one of which is the PESTEL analysis, here used to assess the situation of Polish transport enterprises. The basis for creating the analysis lies in discovering the environmental factors which determine the activities of enterprises. Generally speaking, these factors can be divided into two basic groups. The first group includes these factors that affect the operations of the company in the macro scale (wider environment), while the other

group functions in the micro scale (closer environment). During the preparation of a PESTEL analysis, factors which originate from the wider environment and nevertheless have a big impact on the functioning and development of a company are of particular importance.

2. Research method

The first part of the article defines the elements of macro-environment that affect the operations of enterprises. Having analysed publications which describe the issues of strategic management (Pierścionek 1998; Sołtysik 2000; Stabryła 2000; Krupski 2003; Gierszewska, and Romanowska 2003; Obłój 2007; Romanowska, and Krupski 2010; Kozioł 2010; Lichtarski 2013; Nowodziński 2013; Assylbekova 2016), the Authors listed all factors originating from the wider environment of an organisation which affect the operations of modern enterprises, including those companies which provide cargo transport services. Among them were such factors as: economic, political and legal, demographic, socio-cultural, technological and natural.

The main goal for the Authors in the second part of the article is to examine whether the previously defined macro-environmental factors have a positive or negative impact on the activity of transport companies. Own study was carried out in order to accomplish the main objective. The research tool was a *desk research* analysis. Thanks to the analysis of secondary data, it was possible to determine the impact of macro-environmental factors on enterprises operating in the transport services market. Results of this analysis are presented below.

3. Analysis of the impact of the macro-environment on Polish transport companies

According to the Authors, all macro-environmental factors affect, to a greater or lesser extent, the activities of transport companies. Economic factors will be the first factors analysed in the article.

3.1. Impact of economic factors on the situation in the Polish transport services market

Economic factors of the macro-environment include: economic growth rate, inflation rate, interest rates, unemployment rate, currency exchange rates and their stability. All the factors listed above affect the functioning of the companies in question. Table 1 lists economical factors and the type of impact they have on transport companies, described by the following terms: "positive" (if the factor is stimulating) and "negative" (if the factor is non-stimulating).

Table 1.*Economic factors and their impact on the activity of road hauliers (transport of goods)*

List of factors	Impact of factors on organisations
Rate of economic growth	positive
Inflation rate	negative
Interest rates	positive
Unemployment rate	positive
Currency exchange rates	negative
Currency stability	negative

Note: study based on own research.

The first economic factor: economic growth rate, is the percentage ratio of the real Gross Domestic Product (GDP) growth to its value in the base period (Black, 2011). Changes occurring in annual periods indicate the rate of economic growth. In 2016 in Poland, a slowdown in economic growth could be observed. Despite this fact, according to the Polish Central Statistical Office (pol. Główny Urząd Statystyczny – GUS), the real gross domestic product in 2016 was 2.8% higher compared to 2015. In 2017, economic growth gradually accelerated from quarter to quarter. In the third quarter, the seasonally adjusted GDP (in constant 2010 prices) increased in real terms by 1.1% in comparison with the second quarter and was higher than the year before by 5.0% (Central Statistical Office, 14.11.2017). It can be therefore concluded that the rate of economic growth is accelerating. The economic growth in Poland in 2017 is expected to amount to 3.6% and be 0.9 percent points higher than in 2016. In addition, the real GDP growth rate will increase gradually and amount to 3.8% in 2018 and 3.9% each in 2019 and 2020 (Polish Council of Ministers [Rada Ministrów], 25.04.2017).

Undoubtedly, this situation creates comfortable conditions for running a business. The rate of unemployment seems to be equally optimistic – it is at its lowest level in 26 years. However, the increasing rate of economic growth and the decrease in unemployment rate may contribute to inflation growth. According to the National Bank of Poland, the inflation rate CPI (Consumer Price Index) amounted to -0.6% in 2016. The phenomenon of so-called "deflation" occurred. In the following year, the same index reached 1.9%. Prognoses for the coming years do not seem equally optimistic. According to the November projection, the CPI will amount to 2.3% in 2018 to eventually reach the rate of 2.9% in 2019 (National Bank of Poland, 11.2017; National Bank of Poland, 13.11.2017). Increasing inflation will have a negative impact on the functioning of enterprises. Its effects may include an increase in consumer goods prices, resulting in lower demand for such goods. In turn, lower demand for consumer goods may cause a decrease in demand for transport services.

However, the interest rates, which remain at an all-time low, are advantageous to entrepreneurs providing cargo transport services (National Bank of Poland, 06.2017). In December 2017 The Monetary Policy Council of Poland (pol. Rada Polityki Pieniężnej) stated that the reference rate in Poland will remain at 1.50% (National Bank of Poland, Basic rates...). This rate has remained unchanged since 2015. Economists predict that interest rates

will remain at their current level until the end of 2018. Low interest rates encourage taking loans. In transport companies, these loans can be invested in infrastructure, which will enable even faster development of transport.

However, haulers must take into account the risk associated with changes in currency exchange rates. In November and December of 2016, the Polish zloty witnessed depreciation. According to the National Bank of Poland, the zloty was weakened due to the occurrence of global factors. As a consequence, exchange-rate volatility increased dramatically. After this period, the rate zloty gradually increased against the euro just to continue its downward trend in the following months. This strongest impact of further decrease in the national currency's international value will be observed by companies providing international transport services. It can therefore be concluded that fluctuations in currency exchange rates undoubtedly increase the risk factor of activities performed by transport companies. The fact that these changes practically cannot be predicted also contributes to their disadvantage.

To sum up, economic factors of the macro-environment are characterised by high variability over time. At the same time, they exhibit a strong influence on the operations of business entities. Therefore, it is necessary to monitor them constantly. This will enable better planning of activities in transport companies and reduce the risk associated with running a business.

3.2. Political and legal factors and their impact on the functioning of transport enterprises

The next group of analysed macro-environmental factors are political and legal factors. They are listed in Table 2.

Table 2.

Political and legal factors and their impact on the activity of road hauliers (transport of goods)

List of factors	Impact of factors on organisations
Access to the market	negative
Tax rules	negative
Labour law	negative
Technical standards	positive

Note: study based on own research.

In terms of cargo delivery, the functioning of Polish road transport is subject to regulation through such legal instruments as acts, regulations and conventions (Bentkowska-Senator, and Kordel, 2016, p. 505). The laws, regulations and conventions regulate in the first place such issues as: access to the profession of hauler, functioning of transport companies within the territory of the European Union Member States, cabotage services, norms concerning driving time and driver labour, etc. However, in practice, many of the implemented regulations do not correspond with economic reality, thus making them impossible to apply. Moreover, European and national regulations often differ from each other, which means that

entrepreneurs feel lost and unsure as to exactly which ones should be used. Legal instruments are usually too complex for entrepreneurs and prove difficult to interpret. In addition, according to a report prepared by the Polish Ministry of Development (Polish: Ministerstwo Rozwoju), Polish entrepreneurs express a negative opinion of the tax law. The entities surveyed also admitted that the labour law was also a factor that negatively impacted the functioning of enterprises (Polish Ministry of Development, 10.2016). To sum up, the factors related to obtaining access to the transport services market, the tax law and the Polish labour law undoubtedly make it difficult for entrepreneurs to run a business.

Considering aspects of transport enterprise activities through the prism of technical standards, it can be concluded that they have a positive impact on their functioning. According to the definition provided by the PWN dictionary, a technical standard is "a document specifying the properties or quantitative requirements (e.g. dimensions) that a given object should reflect" (SJP PWN). The scope of regulations contained in technical standards for transport is widely applicable. The developed technical standards relate to such things as:

- requirements which must be met by transport vehicles (especially those which transport food and dangerous goods),
- the method of packaging and labelling of transported goods,
- requirements regarding equipment for relocating and lifting the loads,
- regulations defining the method of placing and securing the loads on the means of transport.

Application of technical standards that guarantee the correctness of performed processes ensures, among other things, safety in transport. In addition, national standards developed on the basis of international standards guarantee the correct implementation of transport operation both at home and abroad. Their application allows us to ensure that the customers receive transport services of appropriate quality.

The political and legal environment is not advantageous to running a freight transport service company. Technical standards, which enable the improvement of transport enterprise operations, are the only positive sign of the introduced regulations.

3.3. Socio-demographic impact on the functioning of Polish transport companies

According to the Authors, not all socio-demographic factors presented in the first part of the article affect the activities of Polish transport companies. Those relevant to the subject at hand are detailed in Table 3.

Table 3.

*Socio-demographic factors and their impact on the activity of road hauliers
(transport of goods)*

List of factors	Impact of factors on organisations
lifestyle	positive
international migration: – positive balance; – negative balance.	positive negative
internal migrations	neutral

Note: study based on own research.

Currently, an ever-increasing pace of life can be observed. In order to provide for themselves and their families, Poles are undertaking more and more work. In 2016, a clear improvement occurred in the material situation for all socio-economic groups of households in Poland (Polish Central Statistical Office [GUS], 02.06.2017). A certain paradox emerged as a result. A society which is in possession of sufficient financial resources does not have time for shopping outings. The occurrence of this phenomenon contributed to an increase in demand for transport services. There are many sources of such demand. One of the sources is the implementation of transport services providing delivery of goods purchased in super- and hypermarkets to any specified address. Another source is connected to operation of online shops and the necessity to deliver the ordered products directly or indirectly to their final consumers. The development of the Internet was conducive to the occurrence of this phenomenon. Thanks to the development of Internet technology, it is possible to shop without leaving one's home at any given time. As a result, as many as 13 million people (45% of the total population) aged 16 to 74 made online purchases at least once in 12 months in 2017 (CSO [GUS], 14.12.2017), which is 3.1% more than in the preceding year (CSO [GUS], 09.12.2016). This without a doubt led to an increase in the number of transports, especially those that the literature describes as "last mile" delivery (Gajewska 2009; Chodak and Łęczek 2014; Amodeo et al., 2015; Faccio and Gamberi 2015; Iwan et al., 2016; Smyk 2017). It is assumed that the importance of e-commerce will continue to increase in the coming years, resulting in an increase in demand for transport services.

The improvement of the material situation of the society also contributed to an increase in consumption. According to the data published by the Central Statistical Office (GUS), total consumption in the third quarter of 2016 amounted to 4.1% and increased by 1.2% in real terms (CSO [GUS], 30.11.2016). In the first quarter of 2017, total consumption slightly decreased (to 3.9%), just to increase back to 4.3% in the second quarter (CSO [GUS], 31.08.2017). It can be thus concluded that the increase in consumption definitely contributed to the rise in demand for transport services connected to both enterprise supply and distribution of goods among customers. As a result, in the third quarter of 2017, an increase of 10% in gross value added within transport and storage was observed in comparison with the corresponding quarter of 2016 (CSO [GUS], 30.11.2016). It is a very good score.

Migration of people may also affect the functioning of transport enterprises. Internal migrations are defined as a "change of place of residence (permanent or temporary) in the territory of Poland, related to crossing the administrative border of a gmina, including – in case of urban-rural gminas – changes of the place of residence within a gmina, i.e. from rural to urban areas and vice versa" (CSO [GUS], Terms used in official statistics). According to the authors, internal migrations are neutral to the situation of Polish transport companies. The case is different for international migration. Internal migration involves both migrating abroad (emigration) and arriving in the country to settle (permanent residence) or for temporary stay (immigration) (CSO [GUS], Terms used in official statistics). In 2010-2014, a negative balance of international migration was recorded in each consecutive year. The situation changed in 2016. It was only then that a positive migration balance was observed (it amounted to 1.5 thousand people (CSO [GUS], 30.10.2017)), i.e. more people came to Poland than left it. This situation may be caused by tensions occurring abroad. In this case, contrary to a negative international migration balance, it is possible for an greater demand for products, goods or services, to occur, which will result in an increased demand for transport services fulfilled by Polish transport companies.

Socio-demographic factors influence the operations of hauliers in multiple ways which can be positive, negative or neutral. It should be noted that according to the Authors of this article, socio-demographic factors are closely connected to economic as well as political and legal factors of the macro-environment. Shifts in one of these areas lead to changes in the society. In turn, these changes shape the reality in which Polish transport companies operate.

3.4. Impact of technological factors on the development of Polish transport enterprises

The progress of civilisation influenced the initiation of revolutionary changes in technology. Innovative solutions in various areas of human activity are being developed all over the world. One of them is transport itself. According to the Authors, technological factors are of particular importance for ensuring efficient and effective operation of carriers. Presented in the table below is the type of influence by discussed factors.

Table 4.

Technological factors and their impact on the activity of road hauliers (transport of goods)

List of factors	Impact of factors on organisations
new technologies	positive
pace of changes occurring in technology	positive
attitude towards innovations	negative
new technologies	positive

Note: study based on own research.

Without a doubt, the development of modern technologies has an impact on the evolution of transport services. They allow for better organisation of processes in transport companies. The pace of changes occurring in technology is significant. In most cases, implementing innovative solutions involves significant costs and necessary reorganisation of processes.

However, to maintain a competitive position on the market, entrepreneurs are forced to take risks and introduce changes in these areas.

According to research, the innovativeness of Polish enterprises deviates from European standards. Poland can be found far down the international innovation rankings. According to an European report titled *European Innovation Scoreboard 2017*, Poland belongs to the group of moderate innovators: in 2010, the total innovation index was 52.8 points. As time went on, the score was gradually increasing. In 2016, it amounted to 54.8 points, placing Poland on 25th position among the Member States (European Commission, 16.06.2017).

A slight improvement in the field of Polish innovation can therefore be noted. In fact, 2012 can be considered the year when this disadvantageous trend was reverted. At that time, the share of innovative enterprises in both the industrial sector and services increased. In service companies contrasted with industry companies, an increased share of funds spent towards software purchases (10.2% compared with 1.7%) and marketing of innovative products and services (17.9% compared with 2.2%). However, it must be stressed that this beneficial trend in the industry has continued from that moment on, while the index of innovation in service companies is systematically decreasing (Polish Ministry of Development [Ministerstwo Rozwoju], 10.2016). In summary, it can be concluded that managers recognise the need for applying innovative solutions in production, service and trade enterprises. Nevertheless, the amount of funds necessary to engage in this process, and the insecurity about the changes introduced, hinders the development of innovation in Polish enterprises.

3.5. Functioning of transport companies and the natural macro-environmental factors

The environmental (natural) factors listed in Table 5 influence the functioning of enterprises in the transport market to a greater or lesser degree. According to the Authors, the most significant factors include: the availability of natural resources, the cost of energy and the rate of its increase. Factors related to environmental protection are also important.

Table 5.

Natural factors and their impact on the activity of road hauliers (transport of goods)

List of factors	Impact of factors on organisations
Availability of natural resources	neutral
Natural environment requirements and protection standards	negative
Costs of energy and the rate of their fluctuations	negative

Note: study based on own research.

Environmental pollution is a major problem occurring during the transport of goods. Published data clearly indicate that within the European Union, transport is responsible for generating 28% of the total CO₂ emission. It should be emphasised that within that amount, as much as 84% is generated by road transport (Sivets, and Jacyna, 2014, p. 137). This led the issues related to environmental protection to increase in importance over time, becoming

particularly important for ensuring a sustainable development of the transport sector (Nowakowska-Grunt, and Strzelczyk, 2014; Kadłubek et al. 2016; Nowakowska-Grunt, and Strzelczyk, 2016). In 2006, certain solutions were proposed to allow transport to become more environmentally friendly. Special attention was paid to the need to limit the adverse impact of transport on energy consumption and the environment (European Commission, 11.2014). Solutions aimed at reducing environmental problems include regulations on exhaust emission, promotion of alternative sources of energy to fuel transport, and propagation of means of transport (incl. railway and water transport) that allow to reduce fuel consumption (Sivets, and Jacyna, 2014, p. 137).

One of the options aimed at solving the problem was to use alternative power systems in the vehicles. The most popular among them are LPG (Liquified Petroleum Gas (Buczaj, 2006, p. 14)) and CNG (Compressed Natural Gas (Buczaj, 2006, p.14)) installations. Currently, another natural gas deposit has been discovered in Poland. This is good news for entrepreneurs who want to make use of more eco-friendly forms of vehicle fuel. Nevertheless, as emphasised by M. Wysokiński and A. Gromada, it is impossible in Poland to extract an amount of natural gas sufficient to meet the demand and ensure continuous delivery to all users, especially that consumption of this resource is increasing year by year. For this reason, Poland remains dependent on natural gas supplies from abroad. Currently, the largest supplier of natural gas is Russia (Wysokiński, and Gromada, 2016, pp. 103, 106-107). In addition, Poland has signed gas supply agreements with the USA and Qatar.

Reducing the harmful impact of transport on the natural environment will also be made possible by introducing the European exhaust emission standards. However, the application of these standards has become problematic for carriers. On 1 July, 2011, under the "user pays" Directive 1999/62/EC (European Parliament and of the Council, 17.06.1999) the Electronic Toll Collection System came into force in Poland. Its introduction became disadvantageous from the point of view of carriers in possession of outdated fleets that did not meet the strict emission standards. As a consequence, the costs of business activity increased significantly, especially in terms of road tolls and environmental fees (Sivets, and Jacyna, 2014, pp. 139, 144).

In addition to the aforementioned fees, fuel costs constitute a significant share of transport companies' operating costs (ca. 40% of the total). According to S. Kot, it is those large transport companies that are most affected by fuel price fluctuations on the market (Kot, 2015, p. 393). An important role in the shaping of these prices is played by excise duty rates. Recently, politicians have been seeking to raise this tax. These efforts have been fruitless so far, which does not imply that the problem will not reoccur in the near future. Increasing the excise duty will lead to a rise in fuel prices and will undoubtedly contribute to the emergence of a difficult situation on the transport services market.

Continuous pollution of the environment by road transport has led to actions undertaken to limit this phenomenon. In addition, limited access to natural resources and the high

exploitation costs thereof are of no help to the entrepreneurs, instead only generating additional costs. Without a doubt, this aspect of the environment paints the future of Polish transport companies in bleak colours.

3.6. Prosperity on the international market and its impact on the situation of Polish transport companies

The opening of borders has resulted in greater freedom to provide transport services across the European Union. Polish enterprises were also those to take this opportunity. Nevertheless, the current situation on the international market is difficult. This fact may adversely affect the operations of Polish transport companies, in particular those operating in international markets on a large scale. Table 6 presents the degree of impact that each element constituting the international macro-environment factors has on the hauliers.

Table 6.

International factors and their impact on the activity of road hauliers (transport of goods)

List of factors	Impact of factors on organisations
degree of globalisation of a country	positive
international political and legal regulations	negative
political and legal circumstances in other countries	negative
occurring armed conflicts or a threat thereof	negative
threats of terrorism	negative

Note: study based on own research.

The process of globalisation has been observed to progress for many years. Globalisation is a "process based on expanding international trade and increasing the flow of capital, people and technology as well as diluting cultural differences (SJP PWN)". According to M. Nowicka-Skowron and A. Mesjasz-Lech, this phenomenon led to an increase in the intensity of traffic in all kinds of goods (Nowicka-Skowron, and Mesjasz-Lech, 2013). As a result, there was an rise in demand for all types of transport services.

Transport of goods is subject to Polish and EU legal regulations. While national legal regulations are part of the political and legal factors of the macro-environment, it is the EU acts that have been included as an international factor of the macro-environment. Due to the fact that EU regulations form the basis for national acts and regulations, they govern the same issues, above all:

- access and practices in the profession of road transport operator,
- rules for access to the international road transport market,
- norms on working and driving hours of drivers and their rest periods,
- requirements related to recording devices installed in vehicles, including their design, installation, use and supervision.

International regulations are very complex and complicated, which causes some difficulties in their application. In the case of international transport services, the problem lies in legal provisions implemented by other Member States. These provisions should be known

to entrepreneurs obligated to strictly adhere to them. They may concern such things as: the possibility of importing/exporting certain product groups to a given country, the mode of transport, equipment of transport vehicles etc. For example, in May 2017 legislation on the place of weekly rest was introduced in Germany. Weekly rests are to take place at home, at a company base or at a designated accommodation equipped with sanitary facilities. Failure to comply with this obligation will result in a fine imposed on both the driver carrying out the transport and the company. This situation will surely contribute to increased operation costs and can negatively impact the financial state of Polish transport companies.

The functioning of Polish carriers is also influenced by the political and legal situation in other countries. The tense situation on the international market gives rise to many dangers lurking for carriers. Armed conflicts and the growing threat of a terrorist attack mean that the current risk of operating on the international market is quite high. In most cases, the elements which constitute international factors have a negative impact on the activity of companies in charge of cargo transportation. However, this negative impact will be smaller in the case of enterprises providing national services and will increase appropriately with the introduction of international transport services into the offer.

4. Summary

Activities of Polish transport companies are determined by their wider and closer environment. The wider environment, which the literature refers to as the macro-environment, has a negative impact on the situation of carriers, while the carriers have no (or little) influence over them. Elements that define the macro-environment include: economic, political and legal, socio-cultural, technological, natural and international factors.

Some of these factors are beneficial to running a business. These include those factors which have been considered as positive in the study. Taking into account the realities of cargo transport enterprises, the Authors considered the following macro-environment factors as positive: the rate of economic growth, the interest rates and the unemployment rate, technical norms introduced voluntarily in the companies, the lifestyle of the society, a positive international migration balance, the pace of changes occurring in technology as well as implementation of modern (innovative) technologies, and finally the progressing globalisation.

The following factors can be mentioned as negatively impacting the activities of Polish transport companies: the inflation rate, the exchange rates and stability of the Polish zloty, political and legal regulations which define terms and conditions of access to the transport services market, tax norms and the labour law, a negative international migration balance, companies' attitudes towards implemented innovations, requirements related to environment

protection, increasing costs of energy and the dynamics of changes thereof, international political and legal regulations, the political situation in other countries, armed conflicts and the danger of their occurrence, and finally the growing threat of terrorism in Europe. According to the authors, internal migrations and the availability of natural resources are the only factors neutral to the activity of carriers.

There is a large number of factors which constitute the macro-environment of a company. Some stimulate the development of the transport services market, while others inhibit this process. It is important to remember that enterprises are unable to directly influence the shaping of these factors. All they can do is observe the situation on the national, European and international market and adjust their activities to the existing conditions. The macro-environment factors specified and described in this article will serve to perform a PESTEL analysis of transport companies engaged in cargo delivery in Poland. This analysis will be presented in the third part.

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