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**POLISH ROAD FREIGHT TRANSPORT AND PROCESS OF INTERNATIONALISATION –
SELECTED EFFECTS FOR QUALITY AND COMPETITIVENESS**

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Abstract. This article analyses conditions of functioning of Polish road transport carriers according to the internationalisation process and its potential effect on the quality of services and competitiveness. Conditions underlying the Polish road transport sector and its position in the EU transport market are discussed along with the factors that determine the quality of services and competitiveness of the carriers. The relationships between quality and competitiveness are also identified to establish the strength and direction of their impact. Considering the specificity of the Polish market of road freight transport (vast supply fragmentation) and growing competitiveness in international markets the objective of this paper is to answer the questions: whether internationalisation processes influence the quality of transport services, and to what extent; if internationalisation processes play a role in the improvement of transport services (competitiveness), and if there is a dependence between the quality of services and competitiveness of road carriers, including the aspect of internationalisation? The data was interpreted using descriptive statistics, an analysis of variance (ANOVA), as well as the determined correlation and determination coefficients. This study identified the significant role of internationalisation on the service quality and competitiveness of carriers. It also confirmed a positive correlation between them. Equally important was the fact that qualified and well-educated staff was the most important factor in improving quality and competitiveness.

Keywords: road freight transport; service quality; competitiveness; transport market; internationalisation; Poland

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1. Introduction

Transport market development is determined by the functioning of an economy and by the civic, technical and technological processes which accompany its development. Liberalisation and integration are the driving forces of globalisation (Nijkamp, 2003). They have a direct impact on the functioning of transport markets. The new spatial order, access to geographically remote markets, growing social needs and changes in the consumption structure all serve to trigger quantitative and qualitative changes in economic systems, including transportation.

The European freight transport market is particularly dependent on road transport. Road motor vehicles are a significant component of inland transport, which is also performed by rail and inland navigation waterways transport. In 2016, the road transport was responsible for 75% of the freight labour-transport performance in tonne kilometres in the EU Member States. The structure of inland transport indicates that the majority of the freight was transported by carriers from 10 countries (87%). It is worth noting that Polish sector was ranked fifth in EU road transport performance (in tonne-kilometres).

The international nature of transport determines the competitiveness processes. Integration and globalisation processes afford different conditions for service provision. Access to the European market is almost unlimited, stimulating the internationalisation of the transport sector. Cabotage transport is an exception, as it aims to protect resident carriers and to maintain market equilibrium in domestic markets. In most of the EU states, the choice of the road transport for freight deliveries is driven by price and quality considerations. The flexibility, availability and speed of the service as well as its adjustability to specific characteristics of transported commodities are the determinants of inter-branch freight transport competitiveness – in which road transport has a clear advantage. Today, this sector tends to consolidate with companies from other branches (inter-modal transport) and to integrate with subjects operating in the TSL logistics sector and with manufacturers of goods. This cooperation results in long-term contracts for providing services to the food, clothing and car industries, among others. These contracts affect the qualitative development of road carriers as well as their image and position in the market. Thus, they determine the conditions underlying the system and the road freight transport market.

Providing transport services in foreign markets is a strategy of qualitative development, enabling a company to identify its strengths and weaknesses and enhance the reinforcement of intellectual resources, which are currently the main assets for effective building international competitiveness both at micro and macro level (Cieślak, Michałek, 2017, 2018; Mačerinskienė & Survilaitė, 2019; Zygmunt, 2019). Polish road carriers are rarely the main transport manager in western European markets. Subcontracting services allows them to observe their competitors' practices and provides a source of information on the conditions of services and the functioning of carriers in other countries. The ability to make use of such information allows these companies to gain a competitive advantage in the domestic market.

The successful expansion of the Polish carriers in the EU market after 2004 became possible once they adopted the cooperation conditions, service provision and service attributes. The process of liberalisation has, however, been not uniform, which was particularly evident in access to cabotage markets in the EU Member States. The longest transitional period was for the German market (the 3+2 years system was the longest possible time period). At the same time, it was the most attractive market because of its importance in foreign trade and its geographical location. In 2017, the Polish carriers performed 40% of total German cabotage. The German market was also significant from the perspective of the structure of the cabotage transport performed by the Polish carriers (73% of total Polish cabotage).

This article attempts to establish the importance of the internationalisation process in the performance of Polish road freight companies. Special attention has been paid to the role of this process in determining the quality of service and the competitiveness of carriers. The relationships between these two aspects have also been analysed. A questionnaire-based survey was the main research instrument. The respondents evaluated six factors which were significant for the quality and competitiveness of their services:

- processes of competitiveness in the domestic market,
- processes of competitiveness in international markets,
- activities of international companies,
- benchmarking,
- access to cabotage transport,
- qualified and well-educated staff.

The scores assigned by the respondents were subjected to statistical analysis using descriptive statistics, an ANOVA analysis of variance, as well as correlation and determination coefficients.

The first part of the article presents definitions of quality and competitiveness while taking into account the internationalisation in transport market. The methodological part discusses the collected material and describes the research methods. The next part of the manuscript presents study results concerning the factors determining the quality of services and competitiveness of operators including the relationships between them. The article ends with a synthetic overview of the study and a discussion of the results and indicates the possibilities of further research.

2. Literature review

Internationalisation is a process defined as the employment of resources in foreign activities involving integration, knowledge (its successive development and awareness of how foreign markets operate), intangible assets and legal aspects (Hertz, 1993). It affords opportunities for companies to expand and to penetrate new, attractive markets (Ciešlik et al., 2019). The internationalisation of a company's operations is often feasible only after earlier liberalisation (e.g. due to integration), but it requires adaptation of activities to legal requirements which may also affect competitiveness (Poliak et al., 2019). Liberalisation may also act as a barrier to further expansion. The causes of failure have been identified by Kubíčková and Toulová (2013). One of the barriers to the internationalisation of companies operating in foreign markets is the necessity to improve quality while maintaining unchanged prices. It may, thus, be concluded that entrepreneurs are aware of the necessity of taking due care of quality development, which would, consequently, determine their competitiveness. The cited study was conducted using a sample of Czech companies classified as small and medium enterprises. It seems that the study's findings largely correlate with the situation of Polish companies in the same sector, being usually poor in capital, having difficult access to external resources and afraid of failure in the foreign markets. In a study of Trinkūnienė and Aksomitienė (2017), the 'intense competition abroad' was diagnosed as the most serious barrier to internationalisation (in the case of transport and logistics operators from the Scandinavian countries and Central Europe who operated in the Baltic states, i.e. Estonia, Latvia and Lithuania).

The intensification of freight transport arises from the international trade of goods. The potential gains from integration and internationalisation depend on a number of factors. The major are geography, transport costs and exertion of market power (Roberts et al., 2017). The demand for transport grows as the economic expansion proceeds. This demand is triggered by economic growth, but it is also the consequence of such growth (Button, 1993). Business internationalisation and globalisation also modify sources of the need for transport services. The increasing distances and freight flows in response to the personalised needs of manufacturers, coupled with growing sensitivity to the time and speed of delivery and the development of IT and communication networks are the determinants of the development of modern transport systems (Janelle, Beuthe, 1997). Furthermore, demand for transport services is also created by internationalisation process of SMEs, which is considered as one of the important element of the development of international trade (Bužavaitė et al. 2019). The growth of commodity and distribution system markets also affects the above-mentioned sources of needs and generates a demand for high quality transport and logistics services (Rudel, 2005). International freight transport, therefore, depends on international exchange and internationalisation of the manufacturing industry (Hertz, 1993). Our understanding of dependences between the growth of economies and a change in the structure of transport needs determines directions of effective action strategies. Observation of the global market is, thus, essential for the improvement of the quality of services provided by road hauliers, but also for facilitating competition processes in the acquisition of new contracts.

Entering new transport markets (active internationalisation) stimulates the need to modify management strategies, and the need for verification of their effectiveness (Pisar, Bilkova, 2019), undertake research into service quality and adjusting management styles to the expectations of foreign customers (Surugiu, Surugiu, 2015). It also seems

essential to explore the market and to make an in-depth risk analysis and observations of the marketing and economic effects of activities conducted by companies (Kovacs, 2017; Hudáková, Dvorský, 2018). Collaboration between economic entities in the form of joint ventures, or setting up branch companies abroad are two strategies implemented by large companies with large capital resources and providing high quality services that satisfy the expectations of the global market (Koźlak, 2008; Liu, Wang, 2019). Passive internationalisation affects the development of instruments employed to compete in the domestic market. Resident carriers and foreign entities compete to serve foreign trade and domestic production. Under conditions of long-term contracts, the competitiveness of carriers depends on pro-quality actions, including their ability to acquire and make use of knowledge concerning the needs, preferences and transport demands expressed by potential clients (Rucińska, 2012). Falk et al. (2018) have pointed to their variation, depending on the geographical and cultural factors.

Evolution of transportation needs forces carriers to modify their strategy by including competitiveness instruments. This new approach rests on the three main pillars (Mallard, Glaister, 2008):

- advertising and promotional campaigns (creating an image of a carrier),
- development of services (outcomes of investing into R&D to create unique services, optimally those with added value),
- patent protection (if needed).

The choice of a carrier can be based on such criteria as the price and quality of service, or on other non-price considerations (cf. Solakivi, Ojala, 2016). In the prospect of long-term cooperation, the non-price attributes of carrier services should prevail. Therefore, the continuous monitoring of the market plays a significant role due to the impact of internationalisation on the growing demand for high quality services expected from carriers (Koźlak, 2008).

The quality of transport services can be viewed from a marketing perspective (cf. Thai, 2013) or the economics of transport and ‘the value of travel time savings’ (cf. Zamparini et al., 2011). Model classifications of the factors affecting the quality of transport services are provided in Table 1. Considerations dealing with the question of quality frequently refer to its definitions formed in line with ISO standards. Quality should satisfy the requirements of customers and, optimally, surpass their expectations. This rhetoric inscribes itself into the market approach to quality.

Table 1. Classification of quality attributes in transport services

Author	Attributes of quality in transport services
Rudel (2005)	Price, time, punctuality, avoidance of damage
Coyle et al. (2005)	Transit time, reliability, accessibility, capability and security
Meidute-Kavaliauskiene et al. (2017)	Price of transportation, safety, reliability, accessibility of services and duration of delivery
Gea et al. (in press)	‘Internal aspects’ related to the transport fleet properties, infrastructure, loading and unloading, organization and management ‘External aspects’ related to road congestion and environmental aspects

Source: Rudel (2005), Coyle et al. (2005), Meidute-Kavaliauskiene et al. (2017), Gea et al. (in press).

The basic attributes of quality in road freight transport include the general punctuality and safety of deliveries. These are determined by micro- and macroeconomic factors. They may be also described by transport process stages: analysis of requirements, transport planning, departure handling, transport, arrival handling and final activities (Drljača, Sesae, 2019). Road transport, to a large extent, relies on independent variables, e.g. atmospheric conditions (sudden changes in the weather), road conditions (congested traffic, road accidents), social issues (strikes of some labour groups, road blockades), as well as economic and political issues (periodically occurring difficulties in access to the Eastern markets). The involvement of entrepreneurs in designing a complex

and high quality offer, creating added value, ensuring high quality fleet, or building qualified and experienced labour resources at every step of their business are examples of their direct influence on the quality of services. However, quality development requires capital investment. Understanding cost structure, including operating costs, may also increase competitiveness based on internationalisation (Sternad, 2019).

The literature describes the relationships between quality and competition. A positive correlation between these two aspects is also confirmed in the field of freight transport (see Žvirblis, 2003). The competitiveness of carriers and the quality of the services are determined by the current transport policy, which basically aims at decarbonisation of transport and at supporting sustainable development of transport. Trends in the development of EU transport systems are enforced by the progressive degradation of the natural environment. The existing problem of pricing network infrastructure not only in UE (see Robson, 2018), forces the need of implementing standardized charging system (COM/2017/0275 final – 2017/0114 (COD)). This is one of the instruments of new European Mobility Packet which includes operational and administrative aspects of commercial road freight transport. The proposed changes will affect transport market and conditions of competition. On the one hand, it is considered as adverse for road carriers mainly from Middle and Eastern Europe. In contrast, it is considered a necessity to harmonize international competition mainly by EU-15 countries. The new rules for the road haulage sector will also affect transport in Norway and Iceland (Lindahl, 2019). They are widely discussed, also by International Road Union (IRU). In position paper, IRU argues some improvements but also supports improving instruments proposed by European Commission and developing new ones (IRU I-0364-1, 2017).

3. Research design and methodology

Preliminary interviews among top management of road freight transport companies enabled to identify the factors which could directly or indirectly affect the quality of services they provide and their competitiveness. In the context of internationalisation, these factors were as follows:

- competitive processes in the domestic market,
- competitive processes in international markets,
- the activity of international companies,
- benchmarking,
- cabotage markets,
- qualified and well-educated staff.

The respondents were asked what influence on service quality have the above factors. The second section was about the influence of these factors on competitiveness. They were given closed questions with one choice. Each factor was assessed in context of its influence on quality and competitiveness. The six-point Likert scale were used (where 1 – no influence at all, 6 – great influence of the factor). An average score of around ≥ 4 suggested that a given factor was significant, which led to the identification of quality and competitiveness attributes.

The basic research method consisted of a survey based on a structured questionnaire. The statistical analysis employed measures of location, variation, one-way analysis of variance (ANOVA), correlation coefficient (Pearson's r coefficient) and determination coefficient.

The survey was conducted in 2013 on a sample of 134 carriers from the province of Warmia and Mazury in Poland, including owners and managers of transport companies. In many cases, managers were also owners. It was common practice that the owners/managers were also the drivers, especially in small companies. Around 70% of the respondents represented micro-enterprises employing no more than 9 persons. Although most of them had a fleet of no more than 5 vehicles, they had to be considered as having market experience (nearly half had started their business before the year 2000). The research sample mirrored the subject structure of Polish carriers, with analogical employment structure. Companies occasionally providing transport services were excluded. Slightly less than 30% of the respondents operated exclusively in the freight transport sector. The majority also

confirmed their involvement in other, non-transport activities: cargo dispatch (92 answers), cargo loading (28) and small-scale warehouse operations (8). It can be presumed that offering additional services is a response to market requirements and indicates their comprehensiveness.

The year of study was considered beneficial for the transport sector. The effects of the global economic crisis were no longer felt in the country (although statistical data in Poland did implicate an economic slowdown). This state was indicated by an increasing demand for freight transport and the expected improvement of the economic situation. This growing optimism was observed to coincide with some unfavourable changes in the conditions underlying operations of the Polish carriers in international markets, including: an embargo imposed on Polish food products by the Russian Federation, problems connected with TIR carnets, as well as changes in the conditions of transport service provision in Germany, France and Netherlands.

The mobility package is one of the factors that will considerably change operating rules in European road freight market. Carriers from Poland, among others from Central and Eastern Europe countries, may have problems with free competing. The shift in formal and legal conditions for the provision of services (resulting e.g. in an increase of operating costs) may contribute to decrease in their competitiveness, operating costs may exceed the current margins. The Brexit will also have consequences on EU and transport markets functioning (see Fouskas, Gökay 2019; Deschaux-Dutard, 2019). The common transport policy is a consequence of the integration of individual EU member state economies, which enforces and accelerates the processes of business internationalisation. Nowadays, changes taking place in European transport markets determine the research area.

New international rules and changes will influence the free movement of goods, services and access to transport markets. These circumstances provide justification for conducting research into internationalisation of transport services in the nearest future. Research results presented in this paper may be a reference point for future research. The dynamics of changes and new terms for provision of transport services may change factors and their importance in shaping quality and competitiveness. This research will have an important comparative value for further exploration of importance of internationalisation in shaping the quality and competitiveness of road carriers.

4. Research results

According to the respondents, human capital turned out to be the factor having the greatest impact on service quality and competitiveness (cf. Figure 1). The education, qualifications and experience of the staff were essential for the design of a high quality offer and gaining a competitive advantage. Other attributes of quality and competitiveness included competition processes in the domestic market ($\bar{x}=4.51$ and $\bar{x}=4.24$, respectively) and the activity of international companies ($\bar{x}=4.04$ and $\bar{x}=4.40$, respectively). Furthermore, the competition processes in international markets were assessed as having no influence on the competitiveness of enterprises ($\bar{x}=3.61$), but were an attribute of their service quality ($\bar{x}=4.57$). In contrast, the access to cabotage markets affected competitiveness development ($\bar{x}=4.72$), but was not an attribute of service quality ($\bar{x}=3.88$). Unexpectedly, benchmarking had no impact on either quality ($\bar{x}=3.19$) or competitiveness ($\bar{x}=3.55$).

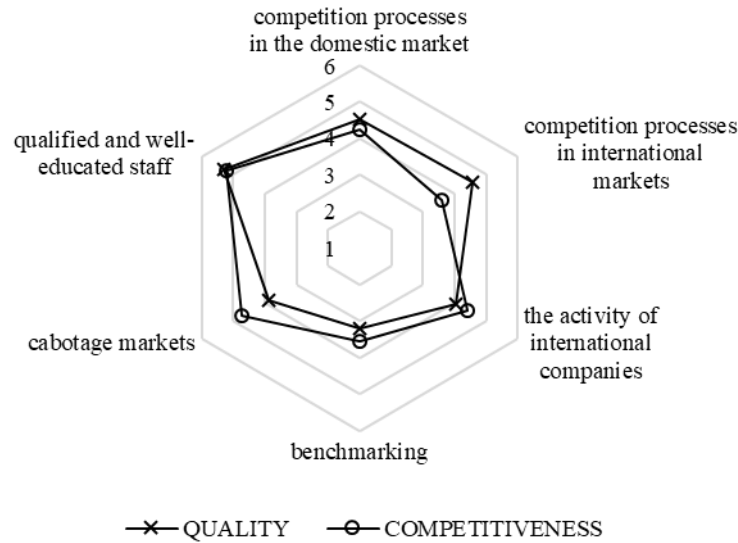


Fig.1. Mean scores given to the factors determining the quality of services and competitiveness of the carriers

Source: the author, based on results in table 3.

The mean scores given by the respondents to the factors affecting the quality and competitiveness were studied with the one-way analysis of variance (ANOVA), which allowed distinguishing homogeneous groups (a given factor had the same effect on quality and competitiveness) and non-homogeneous groups of means (a given factor had a different effect on quality and competitiveness) (see Mikołajczak, 2019; Jakubowska & Radzymińska, 2019). The following hypotheses were proposed:

- (H0), zero hypothesis assuming no effect of a factor on mean scores given to service quality and competitiveness of road transport carriers,
- (H1), alternative hypothesis assuming the effect of a factor on mean scores given to service quality and competitiveness of road transport carriers

at the assumed level of significance: $\alpha = 0.05$. Groups of homogeneous means (which did not differ statistically significantly) were determined based on a positive verification of the zero hypothesis. When this hypothesis was discarded, the alternative hypothesis was accepted, which identified the effect of a given factor on mean scores (indicating a statistically significant difference in mean scores). Respective results are presented in Table 2.

Table 2. Results of the one-way analysis of variance of mean scores given by respondents to factors determining quality and competitiveness

Factors	SS Effect	df Effect	MS Effect	SS Error	df Error	MS error	F Test	p* value
Processes of competition in the domestic market	4.8358	1	4.8358	289.8507	266	1.089664	4.43790	0.036086
Processes of competition in the international markets	61.1343	1	61.1343	356.7164	266	1.341039	45.58728	0.000000
Activity of international companies	8.5970	1	8.5970	277.9701	266	1.045001	8.22680	0.004458
Benchmarking	8.5970	1	8.5970	210.0896	266	0.789810	10.88491	0.001102
Cabotage markets	46.8060	1	46.8060	349.3134	266	1.313208	35.64245	0.000000
Qualified and educated staff	0.5373	1	0.5373	228.1194	266	0.857592	0.62654	0.429333

Source: the author, based on own research results

The homogeneous mean scores were indicated by the highest classified quality and competitiveness attribute, i.e. qualified and well-educated staff. For the remaining factors, statistically significant differences were observed in the scores given by the respondents. This pertains both to the factors which were evaluated as attributes of quality and competitiveness (competition in the domestic market – its role in the shaping quality was scored significantly higher; activity of international companies – a significantly stronger effect on competitiveness), and to the factors which had contrary effects on quality and competitiveness (competition in international markets – attribute of quality and having no effect on competitiveness; access to cabotage markets – significantly greater importance for competitiveness and no influence on quality).

Descriptive statistics showed non-homogeneity of the research sample (cf. Table 3). The greatest differences in mean scores given to quality attributes appeared in the case of cabotage transport (V=32%, R=5). Simultaneously, most of the respondents (31%) considered cabotage transport as significant for the development of the quality of services (D=5). In turn, competition in international markets (V=33%, R=5) turned out to be the factor that caused the greatest variation in the scores given to competitiveness attributes. The highest degree of agreement among the respondents was achieved in their evaluation of educated and qualified staff (V=13%, R=3), as 46% of the respondents gave the highest scores to this factor. In addition, this attribute caused the lowest variation in the assessment of the impact of the analysed factors on competitiveness (V=21%, R=3); it received the highest possible score from over half of the respondents (57%).

Table 3. Descriptive statistics of factors determining quality (Q) and competitiveness (C)

Variables		Number	Average	Median (M)	Mode (D)	Mode size	Minimum	Maximum	Range (R)	Standard deviation (SD)	Coefficient of variation (V) (in %)
Competition processes in the domestic market	Q	134	4.51	5	5	62	2	6	4	1.088189	24
	C	134	4.24	5	5	68	2	6	4	0.997584	23
Competition processes in international markets	Q	134	4.57	5	5	54	2	6	4	1.099882	24
	C	134	3.61	3	3	64	1	6	5	1.213399	33
Activity of international companies	Q	134	4.04	4	4	44	1	6	5	1.142913	28
	C	134	4.40	4	5	54	3	6	3	0.885297	20
Benchmarking	Q	134	3.19	3	3	68	2	5	3	0.853807	26
	C	134	3.55	4	4	60	2	5	3	0.922298	26
Cabotage markets	Q	134	3.88	4	5	42	1	6	5	1.280535	32
	C	134	4.72	5	5	46	3	6	3	0.993300	21
Qualified and educated staff	Q	134	5.31	5	6	62	3	6	3	0.740026	13
	C	134	5.22	6	6	76	3	6	3	1.080530	21

Source: the author, based on own research results

The analysis of relationships between quality and competitiveness demonstrated that the highest fit of the model was achieved for the competition processes in the domestic market (Table 4). It is interesting that there was a moderate, positive correlation observed between quality and competitiveness as affected by the factor: qualified and well-educated staff. This factor was the highest classified attribute of quality and also had the greatest importance in building the competitiveness of the road carriers. Quality determined 30% of the variation of competitiveness.

Table 4. Correlation and determination coefficients of factors affecting quality and competitiveness

Factors affecting quality and competitiveness	Pearson's correlation r coefficient	Determination coefficient R ²
Competition processes in the domestic market	0.68	46%
Competition processes in international markets	0.51	26%
Activity of international companies	0.65	42%
Benchmarking	0.61	37%
Cabotage markets	0.37	14%
Qualified and educated staff	0.55	30%

Source: the author, based on own research results

The processes of competition in international markets yielded a moderate, positive correlation between the quality of services and competitiveness of enterprises. Similar results were achieved from the analysis of the effects of the activity of international companies and benchmarking. An increase in their importance was shown to moderately affect the growth of competitiveness. Benchmarking, which according to the respondents had no effect on the quality and competitiveness of transport companies, caused a moderate, positive correlation between them.

At the next stage of the statistical analysis, the process of business activity internationalisation was defined and its importance to the service quality and competitiveness of carriers was analysed. The internationalisation process was defined as the set of all of the discussed factors, whereas in the analysis of variance use was made of the mean computed based on the ratio of all mean scores given to the analysed factors to the number of factors (n=6). This mean value allowed establishing the significance of the internationalisation process in quality and competitiveness development. Results of the statistical analysis proved that this process was an attribute of both quality ($\bar{x}=4.25$) and competitiveness ($\bar{x}=4.29$), and that there were no statistically significant differences between mean scores (Table 5).

Table 5. Results of the one-way analysis of variance of the mean scores of quality and competitiveness in the context of the internationalisation of business activity

Source of variance	SS	df	MS	F	Value of -p*	F Test
Between groups	0.106136	1	0.106136	0.294864467	0.587574714	3.876655
Within groups	95.74627	266	0.359948	-	-	-
In total	95.8524	267	-	-	-	-

*p < 0.05000 denotes a statistically significant difference in mean scores of variables

Source: the author, based on own research results

Internationalisation of business activity determined a moderate, positive correlation between quality and competitiveness (r=0.59). The increasing importance of the internationalisation processes to the quality of services will only moderately stimulate their increasing role in the process of competing for contracts. The quality of services explained 34% of the variation of competitiveness of freight road carriers.

Conclusions and discussion

This study demonstrated a positive correlation between quality and competitiveness in transport business internationalisation. It identified the significant role of internationalisation on the quality of services and competitiveness of road transport companies from Poland. Most of the analysed factors were perceived as having a significant effect on quality (4 out of 6 factors) and competitiveness (4 out of 6 factors), which should be viewed as a positive finding. The greatest importance in affecting quality and competitiveness was attributed to the factor: well-educated and qualified staff (respectively $\bar{x}=5.31$, $\bar{x}=5.22$). As far as quality is concerned, competition in international markets ($\bar{x}=4.57$) and in the domestic market ($\bar{x}=4.51$) were the next two highest evaluated factors. Considering competitiveness, the next highest ranked factors were cabotage markets ($\bar{x}=4.72$) and competition in the domestic market ($\bar{x}=4.24$). The absence of benchmarking among the attributes of quality and/or competitiveness was an unexpected finding. An opportunity to observe practices of large and experienced transport carriers might set desirable directions in the development of smaller enterprises.

Liberalisation of markets had a positive effect on the development potential of Polish road transport companies. This is confirmed by the EUROSTAT statistics (Road Freight Statistics – cabotage, 2018), which show a high share of Polish companies in the EU transport market. The subject structure of the sample is consistent with the structure of all Polish road transport carriers, although it should be noted that the survey included enterprises from only one of the 16 Polish provinces. The sample was predominated by micro- and small enterprises. Inclusion of large enterprises into the sample could affect the results of the survey. Therefore, it would be interesting to conduct studies including large companies and to compare the results. In addition, there is a shortage of empirical studies pertaining to the attributes of quality conducted among both customers and contractors. This delineates a new area of research. However, the current research results bring us closer to the possibility of outlining a certain regularity which describes the relationships between quality and competitiveness.

For transport companies, the internationalisation of their operations earmarks some motives for development and, at the same time, it sets the conditions in which they need to compete for contracts. Once a company has implemented an adequate course of action, tangible economic and market-related outcomes can be expected. It should be mentioned that inter-branch competition will play an increasingly important role in the struggle to acquire customers. The sustainable transport development that the EU promotes, as well as the assumptions of the White Book (2011), supporting ecological means of transport, will influence the structure of the freight transport. The potential development of the One Belt One Road (the new silk trail) should also not be ignored. Its planned geographical route will affect the transport system in Poland. If it crosses Polish territory, new conditions could emerge for the transport systems in Poland. The structure of the freight transport inclining towards rail transport (and to a lesser extent towards inland waterways transport) would force road carriers to change their strategic directions. Considering the above, future studies ought to take into consideration the influence of internationalisation and globalisation on changes in the branch structure of transport. Should the role of road transport be reduced to shuttle deliveries, average distances covered by road vehicles could be shortened drastically, which would affect both the competition processes and the quality of services. Greater competitiveness of rail transport (modernisation of point and linear infrastructure as well as trains, in response to the internationalisation in the context of contemporary transport policy) and the pressure to develop intermodal transport will significantly influence the operations of international road carriers.

In the nearest future, two factors (processes) will significantly influence road freight transport in EU: Brexit and Mobility Packet (MB). They are very closely related to the process of internationalisation. They will bring new competing conditions which may affect price competitiveness of carriers from Middle and Eastern Europe. This research may be a platform for discussion on contemporary road freight market, the role of internationalisation in developing service quality and building competitiveness in the European context. The research result may be still

actual. However, in 2020 the new terms of operating in international markets may change carriers' experience of internationalisation. The added value of this research is giving the basis for comparative studies. Implementing administrative and legal instruments in EU (MB) will force road carriers to change market strategies, adopt to the new rules, search for non-price competitive advantage and improve quality of services in order to satisfy expectations of customers in international markets.

References

- Bužavaitė, M., Ščeułovs, D., Korsakienė, R. 2019. Theoretical approach to the internationalization of SMEs: future research prospects based on bibliometric analysis. *Entrepreneurship and Sustainability Issues*, 6(3), 1497-1511. [https://doi.org/10.9770/jesi.2019.6.3\(31\)](https://doi.org/10.9770/jesi.2019.6.3(31))
- Button, K. 1993. *Transport, the environment and economic policy*. Edward Elgar, Vermont (USA).
- Ciešlik, A., Michałek, J. J., & Szczygielski, K. 2019. What matters for firms' participation in Global Value Chains in Central and East European countries? *Equilibrium. Quarterly Journal of Economics and Economic Policy* 14(3), 481-502. <https://doi.org/10.24136/eq.2019.023>
- Ciešlik, A., & Michałek, J. J. 2018. Process and product innovations, multi-product status and export performance: firm-level evidence from V-4 countries, *Equilibrium. Quarterly Journal of Economics and Economic Policy* 13(2): 233-250. <https://doi.org/10.24136/eq.2018.012>
- Ciešlik, A., & Michalek, J. J. 2017. Innovation Forms and Firm Export Performance: Empirical Evidence from ECA Countries. *Entrepreneurial Business and Economic Review*, 5(2), 85-99. <https://doi.org/10.15678/EBER.2017.050205>
- COM/2017/0275 final – 2017/0114 (COD). 2017. Proposal for a Directive of the European Parliament and the Council amending Directive 1999/62/EC on the charging of heavy goods vehicles for the use of certain infrastructures. Retrieved from <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A52017PC0275>
- Coyle, J. C., Bardi, E. J. & Novack, R. A. 2005. *Transportation*. United States: Thomson South-Western.
- Deschaux-Dutard, D. 2019. The French-German Military Cooperation and the Revival of European Defence After Brexit: Between Reality and Political Myth. In: Baciú CA., Doyle J. (eds) *Peace, Security and Defence Cooperation in Post-Brexit Europe* (pp. 53-77). Springer, Cham https://doi.org/10.1007/978-3-030-12418-2_3
- Drljača, M., Sesar, V. 2019. Quality factors of transport process. *Transportation Research Procedia*, 40, 1030-1036. <https://doi.org/10.1016/j.trpro.2019.07.144>
- Falk, A., Becker, A., Dohmen, T., Enke, B., Huffman, D., & Sunde, U. 2018. Global evidence on economic preferences. *Quarterly Journal of Economics*, 133(4), 1645-1692. <https://doi.org/10.1093/qje/qjy013>
- Fouskas, V.K., Gökay, B. (2019) *The Road to Brexit*. In: *The Disintegration of Euro-Atlanticism and New Authoritarianism* (pp.77-106). Palgrave Macmillan, Cham https://doi.org/10.1007/978-3-319-96818-6_4
- Gea, A., Larrode E & Millan, C. in press. Analysis about quality in the freight transportation and direct effect in the management of a transportation organization. Retrieved from www.iasi.cnr.it/ewgt/16conference/ID44.pdf
- Haug, S. T., Bulut, E., Duru, O. 2019. Service quality evaluation of international freight forwarders: an empirical research in East Asia. *Journal of Shipping and Trade*, 4(1), 1-16. <https://doi.org/10.1186/s41072-019-0053-6>
- Hudáková, M., & Dvorský, J. 2018. Assessing the risks and their sources in dependence on the rate of implementing the risk management process in the SMEs, *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 13(3), 543-567. <https://doi.org/10.24136/eq.2018.027>
- Hertz, S. 1993. *The internationalization processes of freight transport companies. Towards a Dynamic Network Model of Internationalization*. Retrieved from <https://ex.hhs.se/dissertations/221991-FULLTEXT01.pdf>

- IRU I-0364-1. 2017. Policy observations on the revision of the EU road transport legislative framework. Retrieved from https://www.iru.org/sites/default/files?2017-03/IRU_consolidated_observations_EN.pdf
- Jakubowska, D., & Radzymińska, M. 2019. Health and environmental attitudes and values in food choices: a comparative study for Poland and Czech Republic. *Oeconomia Copernicana*, 10(3), 433-452. <https://doi.org/10.24136/oc.2019.021>
- Janelle, D. G.; & Beuthe, M. 1997. Globalization and research issues in transportation. *Journal of Transport Geography*, 5(3), 199-206. [https://doi.org/10.1016/S0966-6923\(97\)00017-3](https://doi.org/10.1016/S0966-6923(97)00017-3)
- Kovacs, G. Y. 2017. Development of performance evaluation software for road freight transportation activity, *Polish Journal of Managements Studies*, 15(1), 121-134. <https://doi.org/10.17512/pjms.2017.15.1.12>
- Kozłak, A. 2008. Transport as a factor and subject of globalization, in Gorgolova, M. & Kral, P. (Ed.). *Globalizacja a jej socjalno-ekonomiczne dosledky*. Zilinska Univerzita w Zylinie, Żylina, 273-278. Retrived from <http://logistickymonitor.sk/images/prispevky/kozlak-aleksandra.pdf>
- Kubičková, L. & Toulová M. 2013. Risk Factors in the internationalization process of SMES. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, 61(7), 2385-2392. <http://dx.doi.org/10.11118/actaun201361072385>
- Lindahl, B. 2019. EU agreement on mobility package, *Nordic Labour Journal*, Retrieved from <http://www.nordiclbourjournal.org/nyheter/news-2019/article.2019-12-12.5078447113>
- Liu, J., Wang, J. 2019. Carrier alianse incentive analysis and coordination in a maritime transport chain based on service competition, *Transport Research Part E: Logistics and Transportation Review*, 128, 333-355. <https://doi.org/10.1016/j.tre.2019.06.009>
- Mačerinskienė, I., & Survilaitė, S. 2019. Company's intellectual capital impact on market value of Baltic countries listed enterprises. *Oeconomia Copernicana*, 10(2), 309-339. <https://doi.org/10.24136/oc.2019.016>
- Mallard, G.; & Glaister, S. 2008. *Transport Economics. Theory Application and Policy*. London: Published by Palgrave Macmillan Ltd.
- Meidute-Kavaliauskiene, I., Stanujkic, D., Vasiliauskas, A. V., & Vasilienė-Vasiliauskiene, V. 2017. Significance of criteria and resulting significance of factors affecting quality of services provided by Lithuanian road freight carriers, *Procedia Engineering* 187. <http://doi.org/10.1016/j.proeng.2017.04.408>
- Mikołajczak, P. 2019. Becoming business-like: the determinants of NGOs' marketization turning into social enterprises in Poland. *Oeconomia Copernicana*, 10(3), 537-559. <https://doi.org/10.24136/oc.2019.026>
- Nijkamp, P. 2003. Globalization, international transport and the global environment: A research and policy challenge. *Transportation Planning and Technology*, 26(1), 1-8. <http://doi.org/10.1080/03081060309912>
- Pisar, P., & Bilkova, D. 2019. Controlling as a tool for SME management with an emphasis on innovations in the context of Industry 4.0. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, 14(4), 763-785. <https://doi.org/10.24136/eq.2019.035>
- Poliak, M., Tomicova, J., Cheu, K., Fedorko, G., Poliakov, A. 2019. The impact of the CMR Protocol on carrier competitiveness. *Journal of Competitiveness*, 11(4), 132-143. <http://doi.org/10.7441/joc.2019.04.09>
- Road freight transport statistics – cabotage. 2018. https://ec.europa.eu/eurostat/statistics-explained/index.php/Road_freight_transport_statistics_-_cabotage
- Roberts, S., Vilakazi, T., & Simbanegavi, W. (2017). Competition, regional integration and inclusive growth in Africa: A research agenda, in Roberts S., Klaaren J., & Valodia I. (Eds.), *Competition Law and Economic Regulation in Southern Africa: Addressing Market Power in Southern Africa* (pp. 263-287). Johannesburg: Wits University Press. Retrieved from www.jstor.org/stable/10.18772/22017070909.17
- Robson, A. 2018. Is pricing road transport significantly different to pricing other network infrastructure?, in Percy, M., Wanna, J. (Ed.). *Road pricing and provision: changed traffic conditions ahead*, Acton ACT, Australia: ANU Press, 89-102. Retrieved from www.jstor.org/stable/j.ctv5cg9mn.14
- Rucińska, D. 2012. *Polski rynek usług transportowych. Funkcjonowanie-przemiany-rozwój*. Warszawa: Published by Polskie Wydawnictwo Ekonomiczne.

Rudel, R. 2005. Evaluation of quality attributes in the freight transport market. Stated preference experiments in Switzerland. *European Transport*, 25-26, 52-60. Retrived from https://www.openstarts.units.it/bitstream/10077/5783/1/Rudel_ET25_26.pdf

Solakivi, T., & Ojala, L. 2017. Determinants of carrier selection: updating the survey methodology into the 21st century. *Transportation Research Procedia*, 25, 511-530. <https://doi.org/10.1016/j.trpro.2017.05.433>

Sternad, M. 2019. Cost calculation in road freight transport, *Business Logistics in Modern Management* 19: 215-225. Retrieved from <http://www.efos.unios.hr/repec/osi/bulimm/PDF/BusinessLogisticsinModernManagement19/blimm1913.pdf>

Surugiu, M. R.; & Surugiu, C. 2015. International Trade, Globalization and Economic Interdependence between European Countries: Implications for Businesses and Marketing Framework, *Procedia Economics and Finance*, 32, 131-138. [https://doi.org/10.1016/S2212-5671\(15\)01374-X](https://doi.org/10.1016/S2212-5671(15)01374-X)

Thai, W. 2013. Logistics service quality: conceptual model and empirical evidence. *International journal of logistics – research and applications*, 16(2), 114-131. <https://doi.org/10.1080/13675567.2013.804907>

Trinkūnienė, S., & Aksomtienė, J. 2017. International transport companies in the Baltic countries: internationalization motives and barriers, *Society. Integration. Education. Proceedings of the International Scientific Conference* 414-426. <http://dx.doi.org/10.17770/sie2017vol4.2373>

Zamparini, L., Layaa, J., & Dullaert, W. 2011. Monetary values of freight transport quality attributes: A sample of Tanzanian firms. *Journal of Transport Geography*, 19(6), 1222-1234. <https://doi.org/10.1016/j.jtrangeo.2011.01.002>

Žvirblis, A. 2003. The principles of analysis of competitiveness and control schemes in transport services. *Transport*, 18(2), 57-60. Retrieved from <http://elibrary.lt/resursai/Mokslai/VGTU/Transport/2003/2/1.pdf>

Zygmunt, A. 2019. External linkages and intellectual assets as indicators of firms' innovation activities: results from the Czech Republic and Poland. *Oeconomia Copernicana*, 10(2), 291-308. <https://doi.org/10.24136/oc.2019.015>

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