

# TOWARD THE "NEW NORMAL" AFTER COVID-19 – A POST-TRANSITION ECONOMY PERSPECTIVE

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### 3. Goods road transport sector facing pandemic crisis



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#### Abstract

**Purpose:** The aim of the study is to indicate the scope and intensity of the COVID-19 pandemic impact on the goods road transport companies' performance and to indicate how the dedicated "support system" should work.

**Design/methodology/approach:** The research was conducted with the use of a structured electronic questionnaire, primarily via the Intranet. In order to obtain high-quality research, the respondents were guaranteed anonymity and the data was presented in a collective agreement.

**Findings:** On the basis of the conducted research, we found that as a result of the crisis situation the most destabilized became the transport carried out in the international space. The most important problems – out of the eighteen assessed – include a decrease in orders and a reduction in shipping rates, which with the low profitability of the industry, resulted in:

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serious problems in financial liquidity; retaining employees; and low levels of cooperation in the supply chain, especially concerning smaller service providers. In order to strengthen the competitiveness on the market, future strategies will focus more on the differentiation of transport services in terms of products and geography and on the regionalization of activities. We should assume that all previous predictions from month to month will be increasingly optimistic, and there will be a noticeable dynamic increase in road transport, driven by the growing demand of all sectors of the economy in need of logistics services and resulting also from the broader entry of non-European markets.

**Research limitations/implications:** The research was conducted using the survey method, i.e. based on the opinions of respondents. The responses were often emotional in nature.

**Practical implications:** The text includes proposals for the expected external support for the transport industry.

**Originality and value:** The results are one of the first studies of the transport industry in Poland during the pandemic crisis. Information may be important to industry and central government representatives.

**Keywords:** road transport, supply chains, logistics, COVID-19, crisis.

### 3.1. Introduction

Currently, the market is experiencing a difficult and, at the same time, economically interesting crisis situation that arose from the spread of the Covid-19 coronavirus. There are more and more studies in the literature on the causes of the pandemic (medical approaches), its consequences in relation to the competitiveness of economies, entities, and industries (macro-, micro-, and mesoeconomic approaches), and also for the society (sociological and psychological approaches). There is also more and more literature dealing with the Polish market.

Among others, Drozdowski et al. (2020) describe the results of empirical research on the impact of the pandemic on social behavior, Lubosz (2020) presents research on restrictions during the pandemic and its economic effects in the mining industry, McKinsey&Company (2020) presents changes in demand for products and services, Statistics Poland inform on the development of production of protective gear against Covid-19 (Statistics Poland, 2020c) and assess the decline in employment during the pandemic threat (Statistics Poland, 2020d). In the context of the pandemic, there are also studies on supply chains (Gray, 2020; Ivanov, 2020; Paché, 2020; Pinto, 2020; Trautrim, Schlepe, Cakir, & Gold, 2020), but they hardly refer to the issues of road freight transport (Loske, 2020) and Polish conditions (Włoch, 2020).

The chapter discusses the considerations that complement the previously discussed perspectives and are related to them, because they concern the transport market, perceived as the bloodstream of industries significant for the economy.

Among others, the PwC research (2020) shows that Covid-19 has significantly limited production in the commercial, industrial, and construction sectors. Based on own calculations and empirical data of the economic cycle research carried out by Statistics Poland (2020b), we may conclude that the pandemic had serious or very serious consequences for the continuity of activities in a significant group of enterprises (data from August 2020). In manufacturing, a negative impact was recorded among 35% of respondents, in construction – 34%, in wholesale – 33%, in retail – 38%, in accommodation and catering – 54%, and finally in transport and warehouse management – 44%. Besides the hospitality industry, transport was the most affected by the negative effects of the coronavirus pandemic – defined as threatening the company’s stability – and only fewer than 5% of respondents reported no negative effects.

The so-called “general economic climate indicator” (NSA) in the section “transport and warehouse management” was shaped in April at the level of minus 48.3 (Statistics Poland 2020b); the indicator was calculated based on questions about the impact of the pandemic on the company’s situation, changes in order levels, investment plans, impact of the pandemic on the availability of employees, etc. In August 2020, this indicator decreased to –12.7, and in the same period of the previous year, it was 1.9 (August 2019). Micro and small entities (up to 49 employees) assessed the economic situation most unfavorably.

Because stagnation in various industries affects the flows in supply chains and, above all, the transport market, the aim of the study is to indicate what effects in transport companies result directly from Covid-19 and how the dedicated “support system” should work.

### **3.2. The road transport industry characteristics**

In addition to shipping and logistics, transport is the main source of income for the largest economic entities on the TSL market (Figure 1), but also for thousands of smaller enterprises. Among the entities included in the ranking of the sixty largest enterprises in terms of revenues (24th edition of the TSL ranking, 2019), 30% form companies for which transport is the basis of their activity; including two in the area of rail transport and the rest in road transport. Among the entities listed in the ranking, none provides only transport services, as most combine them with shipping services, while a large part also performs a certain range of logistics services. Therefore, we may notice that among the leaders of the TSL market, transport activity is the core that supporting other products. The ranking includes various categories of the main activity, such as logistics services, transport, road forwarding, sea forwarding, air forwarding and the dynamics of revenues from

TSL. Table 1 lists the largest players in the road transport category with their characteristics. Of course, there are also companies on the market that indicate logistics as the basis for their activities. They also play a dominant role in the transport market, regardless of whether they carry them out through their own fleet or through subcontracts. According to the amount of revenues, this group includes the Raben Group, DPD Poland Ltd, Schenker Ltd, Grupa DSV, FM Logistic, HEGELMANN TRANSPORTE Ltd, ROHLIG SUUS Logistics, GEFECO Poland, PEKAES Group, and KUEHNE + NAGEL Ltd (25th edition of the TSL companies ranking; 2020).

**Table 1. Transport companies with the highest revenues in the category of declared main activity: road transport**

No.	Company name	Position in the ranking of all TSL activities	Presentation in the ranking as:	Revenues in 2019 [PLN]	The main source of income from the activity	
					type of cargo	geographic area
1.	HEGELMANN TRANSPORTE Ltd.	6.	single company	1,095,721,239	full truck loads	Europe
2.	GEFECO Poland	8.	single company	874,265,174	full truck loads	Poland
3.	LINK Ltd.	17.	single company	532,643,559	full truck loads	Europe
4.	SKAT Transport Ltd. Sp. k.	20.	single company	493,478,000	full truck loads	Europe
5.	Fresh Logistics Poland	23.	single company	416,014,281	general cargo	Poland
6.	CAT LC Poland Ltd.	24.	single company	370,858,471	full truck loads	Poland
7.	TPG / Trans Polonia Group	31.	group of companies	261,612,000	dangerous goods	Poland
8.	REGESTA S.A.	34.	single company	282,593,737	full truck loads	Europe
9.	Krotrans Logistics Ltd.	39.	single company	159,268,000	full truck loads	Europe
10.	Trans Logistyka Ltd. Sp. k.	44.	single company	106,737,779	full truck loads	Europe

Source: Own elaboration of (the 25th edition of TSL companies ranking, 2020, p. D9).

The situation is different among smaller entities. We may conclude that with the transfer of analyses to smaller entities, the share of enterprises that only carry out transport activity increases, while the scope of services provided and the level of profitability decrease.

The increase in revenues does not automatically guarantee an increase in profitability, as the margins in the basic services business are low and amount to 1–3%, which makes it difficult to accumulate capital (23rd edition of the TSL 2018 ranking). Moreover, the average value of income from activity in the case of foreign companies and companies with mixed capital is higher than in the case of Polish companies. There is a similar difference in profitability. The highest increase in revenues from TFL activity is observed in the group of companies employing over 49 employees.

The transport services market and the entire TSL market are very fragmented despite the observed concentration processes. This affects its competitiveness (expenditure on digitalization processes, offer breadth), but also reactions of entities in crisis situations (bankruptcy dynamics).

In recent decades, a dynamic increase in the transport activity of carriers registered in Poland can be observed. Among others, the PwC research (2019), analyses conducted by the Warsaw School of Economics (23rd edition of the TSL companies ranking, 2018), and the materials of Statistics Poland (2019) indicate the good condition of the car transport market and its good development prospects in the future. These works also emphasize that the Polish road transport industry is at the peak of its growth (with higher dynamics of international transport than domestic transport) and that in terms of tonnage of transported goods in the road transport industry, there was a total increase in volumes by nearly 23% in 2018–2022 (23rd edition of the ranking of TSL companies, 2018). The report also considers the negative impact of legislative changes on the cost competitiveness of Polish carriers. This is related to the obligations resulting from the mobility package, e.g. forced return of the driver and the vehicle to the base, the issue of the minimum wage, the issue of weekly rests outside the vehicle, consequences of changes in the regulations regarding posted workers, growing environmental requirements, the increase in toll costs, and the shortage of drivers (Klaus, 2019). Cabotage and cross trade are covered by the foreign minimum wage in the mobility package (excluding transit and bilateral transport) and therefore entrepreneurs who carried out a major part of their orders as part of transport among EU countries or in the transport of goods from one place to another within the borders of a given country may have a problem with achieving the current level of profitability.

In April 2020, a simulation of the potential impact of the pandemic crisis on the results of the road transport sector was carried out (Banaszyk, Konecka, Maryniak, & Paprocki, 2020). It established that the quantitative break-even point in the sector is 126,218 million t-km. In the scale of the entire road transport sector,

this means that a decrease in transport performance by more than 28.2% will lead to the collapse of this sector. Therefore, it is not surprising that owners and managers of transport companies expect support from state or local government bodies. The more so that the decrease in transport performance in excess of these 28.2% should be treated as a catastrophic threat to the existence of a significant number of carriers. We should remember that road transport plays a dominant role in the transport of goods (cargo) on the territory of Europe and individual countries, including Poland. On the domestic market, Polish carriers employing several hundred thousand drivers and couriers fully satisfy the needs of cargo transportation. All producers, trade organizations, and other entities conducting economic and non-economic activity, but also consumers using the logistics services of electronic commerce (e-commerce), are served to an increasing extent. On the international market, Polish carriers occupy a key position both in bilateral transport (handling export and import), along with in cross-trade (between third countries) and cabotage (internal in another country). Since 1989, a huge success of this group of entrepreneurs was gaining the position of an important exporter of services in Europe, which provides jobs to several hundred thousand drivers employed in Poland and driving abroad (Statistics Poland, 2020a). The revenues of these carriers constitute a significant stream of supplying the Polish economy with foreign currencies. The lack of aid programs or their insufficient scope may threaten the liquidation of the transport potential to such an extent that after the economic recovery, transport will become a bottleneck of the Polish and even European economy. In this situation, maintaining liquidity and, consequently, jobs and the transport potential of the industry should be the overriding value of economic policy, even if the aid was to be repayable.

### 3.3. Methodology

The subjects of the research were road transport companies operating on foreign and Polish markets, registered in Poland, and that primarily offer transport services, then shipping, storage, and logistics services. Half of the surveyed entities support Less-than-Truck-Load and Full Truck Load transport (56% of responses). Some offers refer to loose, liquid, or gaseous bulk materials (10% of indications in total). In the field of specialized services, one-fifth of entities offer transport at a controlled temperature, 16% provide services in the field of transporting hazardous materials, and only 3% deal with oversized loads. The time scope of the research is April-June 2020 and the local scope is Poland.

In total, 83 units of various sizes were examined, with enterprises employing less than 49 people (65% of respondents). The research was carried out with the use

of a structured electronic questionnaire, primarily via the Intranet of the Association of International Road Carriers. In order to obtain high-quality research, the respondents were guaranteed anonymity, and the data was presented in a collective agreement.

The structure of the chapter in the empirical plane consists of three main threads. The first part presents the effects of the pandemic in the service and location dimension, while the second part shows the financial, information-strategic, and operational-commercial dimensions. The last part identified from whom the examined entities received support and what support system is appropriate in relation to the crisis situation.

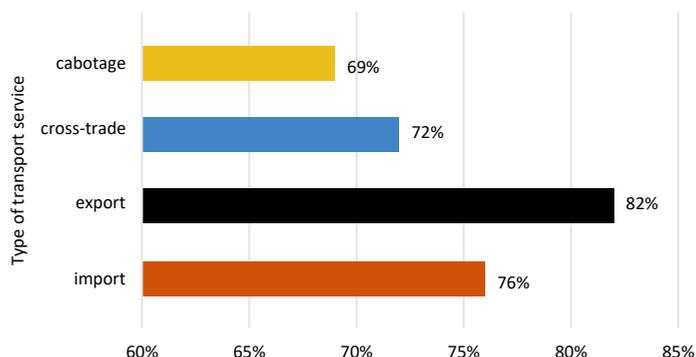
Because the marked area of research is very poorly explored, the presented results may constitute the foundations for benchmarking analyzes and theoretical contribution to the discipline of management and quality sciences. Since empirical research has not been carried out in the adopted thematic structure so far, the presented content cannot be related to already existing studies, let alone peer-reviewed analyses. The results presented in this chapter are only part of a larger study. Among others, the broader context of the research covered the level and structure of transport, profitability of enterprises, legislative, and economic conditions, including profitability and the structure of operating costs.

### **3.4. Changes in services: Empirical research results**

According to the respondents, the pandemic negatively affected the sale of all basic transport-related services. On average, three-fourths of the respondents indicated that import, export, cross-trade, and cabotage services were affected by the effects of the pandemic (“definitely yes” or “rather yes” answers), with the largest number of such indications in the field of export services (82% indications; Figure 1).

The reduction of the level of transport between and within foreign countries carried out by Polish transport companies was already anticipated in previous publications and industry meetings, in connection with the mobility package adopted by the European Parliament. It was believed that it would also reduce the competitiveness of Polish market entities, as transport companies registered in Central and Eastern European countries carry out a significant part of cross-trade transport between European Union countries (especially on the France and Germany line) and cabotage transport (in France, Germany, Italy, Sweden). However, it was not expected that this effect would be significantly amplified by the pandemic. The same can be said about transports to and from Poland.

The already quoted PwC report (2019) emphasizes that a significant shift in demand toward domestic services can be expected due to the country’s economic



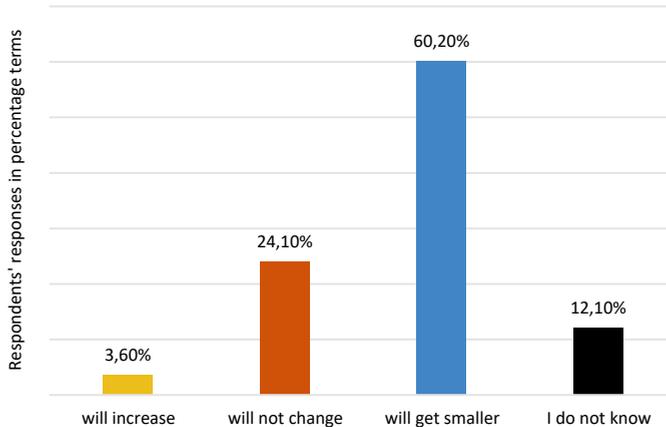
**Figure 1. International transport services most affected by the pandemic according to respondents**

Source: Own elaboration.

growth and the economic slowdown in Western Europe. The conducted research also confirms these forecasts, but they have a completely different background. In the future, we should expect that the geographic shift vectors will change even more. According to the respondents, in order to protect against the possible negative effects of the pandemic, companies accepting the contract of carriage will in the future first apply strategies of geographical differentiation of the target group of served customers (46% of responses “definitely yes” or “rather yes”). The relocation of supply chains due to Covid-19 (Ambroziak, Chojna, Gniadek, Kępka, & Strzelecki, 2020) and their regionalization (Hoek, 2020) will also affect the changes in geographic services.

The respondents indicated that due to Covid-19 they will extend their offer to include other services such as forwarding or warehousing (36% of responses “definitely yes” or “rather yes”). It is a process that has been going on for many years and is now likely to intensify. On the other hand, one should not expect a dynamic expansion of activities consisting of entering new industries/services that are not directly related to the core business. The respondents also commented on the changes in the scale of outsourced transport tasks to external companies by production and trade companies (Figure 2).

In the short term, the development of outsourcing of transport services may be limited. This is evidenced by the obtained data, according to which 84.3% of the respondents believe that the scope of outsourced tasks will not change or will decrease. The same tendency can be observed regarding the limitation of external transport services by logistics companies in the research carried out by DGC on behalf of the Eurologistics publishing house (DGC, 2020).



**Figure 2. Change in the scope of outsourcing of transport services**

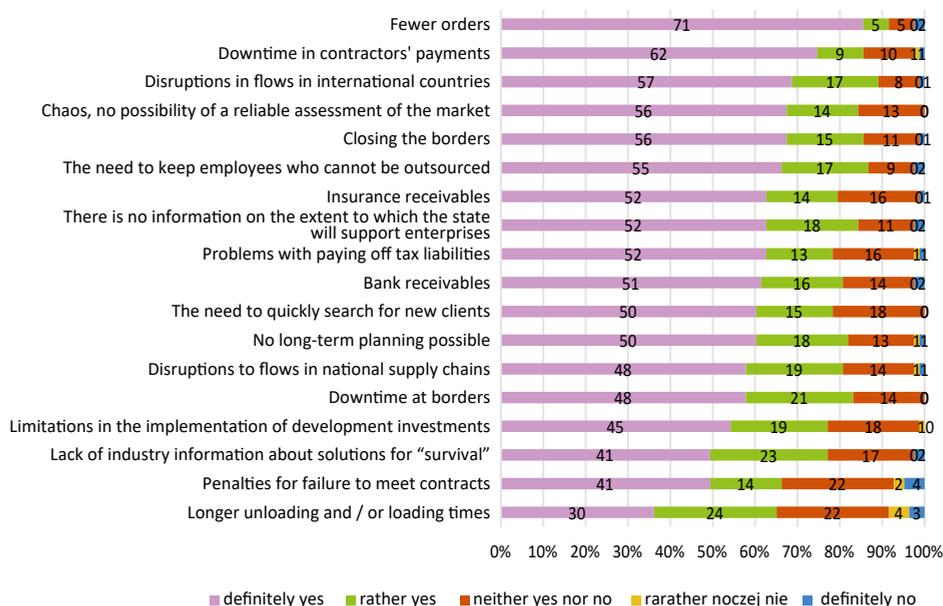
Source: Own elaboration.

### 3.5. The multi-dimensional negative effects of Covid-19 on road transport

The respondents were also asked to specify (first in the form of an open-ended question, and then a closed question) the most significant negative impact of the Covid-19 pandemic on transport activities. The respondents pointed to a general decline in revenues and profitability resulting from a decline in demand for orders, a decline in the volume of transported loads in contractual and occasional exchange relationships, and difficulties in obtaining return loads. In addition, the following have become a big problem: prolonged payments over 60/90 days and more, long debt collection procedures due to a weak judicial apparatus, unfair practices related to alleged bankruptcies, general stagnation caused by small amounts of cargo. Similar problems were also identified in Resolution No. 87 of the employees' and employers' websites of the Social Dialog Council of September 30, 2020, on the provision by the state of necessary assistance to transport companies. Resolution 87 also notes that there was little chance of using any element of any of the anti-crisis shields. Moreover, the Resolution emphasizes that a major obstacle is the fall in prices for transport services, including a drastic lowering of even contract prices, lowering rates for transport services by forwarders and other intermediaries, the use of dumping prices by carriers who have so far served industries most affected by Covid-19, such as the automotive, wedding, event, and gastronomic industries. Among the answers, a problematic issue was also the reduction of employees'

wages in order to limit layoffs, the inability to use the existing rolling stock potential, reluctance to perform tasks by the older generation's staff, uncertainty, and even fear. The described factors reinforce each other. For example, as a result of too few loads, prices fall below the break-even point. Disturbances in the liquidity of enterprises prevent the repayment of current receivables and undertaking investments aimed at increasing the competitiveness of enterprises.

The most frequent remarks concerned the lack of orders and the reduction of freight rates. Questions about problematic issues were clarified and expanded by specifying 18 scaled factors. First, the surveyed entities pointed to a lower number of orders, disruptions in flows in international supply chains, and the need to retain employees who cannot be outsourced (Figure 3).



**Figure 3. Issues important during a pandemic**

Source: Own elaboration.

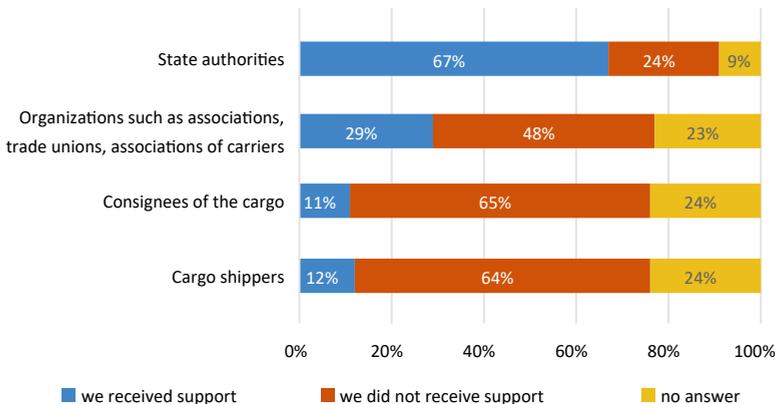
Considering the financial consequences, the respondents first pointed to the above need to keep employees who cannot be commissioned, delays in paying contractors, but also the need to pay insurance and tax liabilities. In the group of operational and commercial factors, the first mentioned (already marked) lower number of orders and disruptions to flows in international supply chains, as well as border closure and downtime at borders. On the other hand, the information and strategic aspects included, first, the lack of information on the extent to which

the state will support enterprises, chaos and the inability to reliably assess the situation on the market, and the inability to plan long-term. The analysis shows that the highest percentage of responses was attributed to operational and commercial effects, which have their consequences in terms of the economy of operations, but in all basic groups the percentage of responses was high.

Operational problems related to supply chain disruptions are highlighted in the PwC report (2020). The research concludes that “disruptions in the supply chains are the greatest challenge in the trade and industrial sectors... Industry has also been most affected by the effects of border closure, which corresponds to the opinion that the current pandemic is a big challenge for globalization” (PwC, 2020). It is significant that the given factors include those that are independent of the crisis, but of systemic solutions in the field of reliable information about possible activities dedicated to the transport industry.

### 3.6. Support from third parties and expected sources of support

So far, state authorities have primarily reacted to arising problems. Little support was received from participants in the supply chain (Figure 4). It is significant that some entities did not respond to this question. Probably the support they received was insufficient.



**Figure 4. Sources of support for transport operators during the Covid-19 pandemic**

Source: Own elaboration.

By asking the respondents about the sources and scope of the support received, we decided to examine the relationship between the size of the enterprise and the source of the support received. For this purpose, an analysis was made by creating cross tables (tab. 2). They show that the state aid was granted mainly to small enterprises, often they declared that the aid was too small, but it was small enterprises that were mainly beneficiaries of state aid. On the other hand, the aid from the suppliers and recipients of cargo was used mainly by large enterprises. This may indicate better cooperation within the supply chain between large entities, which in a crisis are aware of the need to maintain continuity of flows in the supply chain.

At the same time, participants of the transport market outlined the expected support model in terms of dimensions and sources. In a pandemic situation, transport companies need support on several levels, and in their opinion, the financial dimension is crucial (Figure 5).

Companies expect support from the state, EU funds, banking, and insurance organizations (Figure 6). What follows is that enterprises expect system solutions at higher levels. On the other hand, they count less on the help of closer environment such as industry organizations, the strongest market players, or contractors who are parties to cargo transportation.

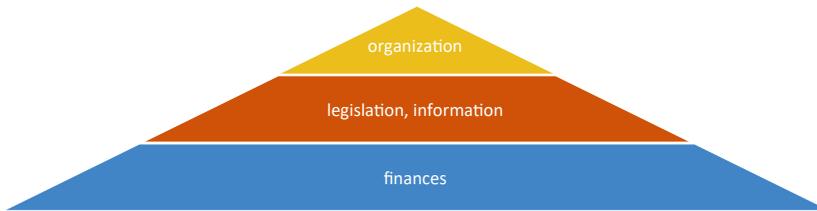
**Table 2. Relationship between the size of the enterprise and the source of the aid received**

			What is the employment level in your company?					
			1–9 employees	10–49 employees	50–249 employees	over 250 employees	in total	
From which entities did your enterprise receive or could receive support ... in relation to the negative effects of the Covid-19 pandemic?	from the state authorities (SA)	N	8	6	1	1	16	
		%	25.81	27.27	6.67	14.29	21.33	
	from the SA, but too small	N	20	12	5	3	40	
		%	64.52	54.55	33.33	42.86	53.33	
	we did not receive it from the SA, although we could	N	0	1	2	0	3	
		%	0.00	4.55	13.33	0.00	4.00	
	we did not receive it from the SA	N	3	3	7	3	16	
		%	9.68	13.64	46.67	42.86	21.33	
	in total		N	31	22	15	7	75
			%	100%	100%	100%	100%	100%

Table 2 cont.

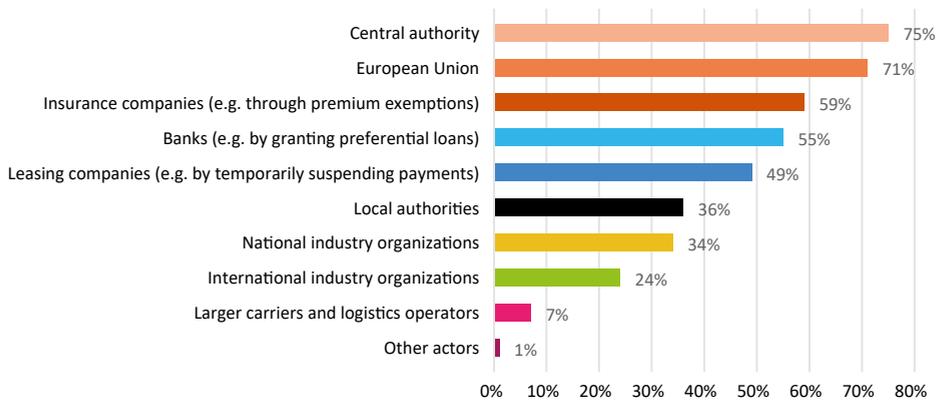
			What is the employment level in your company?					
			1–9 employees	10–49 employees	50–249 employees	over 250 employees	in total	
From which entities did your enterprise receive or could receive support ... in relation to the negative effects of the Covid-19 pandemic?	from the sender of the cargo (SC)	N	1	1	0	3	5	
		%	4.17	5.56	0.00	42.86	8.06	
	from the SC, but too small	N	2	0	2	0	4	
		%	8.33	0.00	15.38	0.00	6.45	
	we did not receive it from the SC, although we could	N	5	2	3	0	10	
		%	20.83	11.11	23.08	0.00	16.13	
	we did not receive it from the SC	N	16	15	8	4	43	
		%	66.67	83.33	61.54	57.14	69.35	
	in total		N	24	18	13	7	62
			%	100%	100%	100%	100%	100%
			What is the employment level in your company?					
			1–9 employees	10–49 employees	50–249 employees	over 250 employees	in total	
From which entities did your enterprise receive or could receive support ... in relation to the negative effects of the Covid-19 pandemic?	from the consignees of the cargo (CC)	N	0	0	2	2	4	
		%	0.00	0.00	15.38	28.57	6.35	
	from the CC, but too small	N	1	1	1	2	5	
		%	4.00	5.56	7.69	28.57	7.94	
	we did not receive it from the CC, although we could	N	3	1	1	0	5	
		%	12.00	5.56	7.69	0.00	7.94	
	we did not receive it from the CC	N	21	16	9	3	49	
		%	84.00	88.89	69.23	42.86	77.78	
	in total		N	25	18	13	7	63
			%	100%	100%	100%	100%	100%

Source: Own elaboration.



**Figure 5. Hierarchy of importance of the needs of transport companies during Covid-19**

Source: Own elaboration.



**Figure 6. Sources of expected financial help for carriers in a pandemic situation**

Source: Own elaboration.

On the other hand, responsibility for guaranteed wages for employees (according to the respondents) should be primarily borne by employers. Information on aid for transport was also collected by Statistics Poland. These are general data in the “Transport and warehouse management” section. Forms of help and facilitation were examined under the so-called Anti-Crisis Shield: payroll fees, loans or subsidies, exemptions and deferrals for the payment of taxes and social security contributions, parking services for people running a business, facilitating and simplifying administrative procedures, facilitating and simplifying management within the enterprise (Statistics Poland, 2020b). These data show that companies benefited to the greatest extent from tax exemptions and deferrals due to payment of taxes and social security contributions (38%) and to the least extent from stand-still benefits for people running a business (1.6%).

### 3.7. Limitations and future research directions

Transport tasks are characterized by the fact that they are often entered in the register alongside other types of activities, especially in a situation where the transport service is carried out on one's own. Therefore, in the Statistics Poland registry, transport activity is also assigned to entities in which transport is not the primary sphere of activity. In the presented research, this type of enterprise was not considered, but their market perspective and feelings related to its competitiveness may bring new, interesting insights and knowledge. Because the research was carried out at a very difficult time in the operations of enterprises, during the development of the pandemic, and immediately after numerous restrictions imposed by Polish authorities and other countries, many of the open responses were marked by a high degree of emotions, therefore some could not be quoted. The answers provided show the difficult and sometimes even dramatic situation of many entities.

Another important aspect influencing the behavior of transport companies during the Covid-19 pandemic is the assessment of the extent to which modern technologies will help build their resilience and thus the resilience of supply chains. Hence, extending research on the potential of IoT, cloud computing, Blockchain, 5G, and AI in crises is an urgent and needed research direction (Deloitte, 2020; Končar, Grubor, Marić, Vučenović, & Vukmirović, 2020; Konecka & Maryniak, 2020). In addition, we should remember that transport in individual industries not only has different effects in terms of volume but also different standards in terms of product protection and sanitary requirements (Rizou, Galanakis, Aldawoud, & Galanakis, 2020) during transshipment, consolidation, deconsolidation, or packaging; hence, there is a need to expand empirical work in this direction.

The rhetoric encountered in the literature on the pandemic has clearly negative connotations. In the conducted research process, in addition to these negatives, positive aspects related to Covid-19 were also noticed, such as a drop in fuel prices, more effective cost analysis, the reduction of leasing installments, smooth entry into online work, the acceptance of invoices and delivery documents in electronic form. All these elements will remain on the market of modernly managed companies that will successfully compete in the coming years. We also paid attention to relations in the supply chain and relations with employees. According to the respondents, the crisis verified the reliability of contractors (equipment suppliers, service technicians, etc.) and increased the level of respect for work by employees who faced the threat of losing their jobs. In addition, drivers were relieved of the loading and unloading processes, in which they were previously involved to a greater extent.

In-depth research to capture these types of insights in the transport industry could help actors see more opportunities to grow and treat the situation as a need for management training. All the more so that the road transport sector will probably face a considerable investment effort. It is because the growing costs of transport caused by the sanitary regime and changes in formal and legal regulations, the growing shortage of drivers and the increasing requirements of customers. The answer to these challenges may be the digitalization of transport processes, in particular the need for ongoing tracking of transport units and means of transport, transparency of freight rates and the use of digital platforms coordinating transport, and even environmentally friendly autonomous vehicles. On the other hand, it is an opportunity to renew transport fleets due to the zero-emission criterion and to adjust transport potential to forecasted demand. Although the financial condition of transport companies is not the best, optimism may be built both by the possibility of using government assistance, but also as the monetary policy of central banks to keep interest rates low.

### 3.8. Conclusions

On the basis of the conducted research, we found that as a result of the crisis situation, the transport carried out in the international space was the most destabilized. In order to strengthen the competitiveness on the market, future strategies will focus to a greater extent on the differentiation of transport services in terms of products and geography and on the regionalization of activities. The observed forecasts regarding the reduction of the scope of outsourcing of transport services can be considered as temporary and unlikely in the long run. In a crisis caused by a pandemic, the surveyed entities expect systemic solutions at the central and EU levels. It seems that in the future, solutions should be developed to a greater extent at the levels of specific supply chains and industries.

The disruptions in transport so far were mainly of a regional nature and resulted from a natural disaster, political unrest, and economic situation. The pandemic is not limited to a specific region or time (Ivanov & Das, 2020). Supply markets can simultaneously become paralyzed with overlapping time windows in procurement, shipments to distribution centers, and ship-to-unit shipments. The scale of emerging problems requires re-engineering of existing emergency plans, analytical modeling of supply chain resilience (Queiroz, Ivanov, Dolgui, & Wamba, 2020), and building disruption scenarios (Golan, Jernegan, & Linkov, 2020). So far, the existing adaptation plans for threats in supply chains have failed in the pandemic (Hoek, 2020), mismatch in demand and supply, technology, and the development of a resilient supply chain (Sharma, Adhikaryb, & Borah, 2020)

have an impact on the chaotic behavior of transport companies. The Covid-19 pandemic has disrupted or broken transport links and distribution mechanisms between suppliers, manufacturing facilities, and customers (Kumar, Luthra, Mangla, & Kazançoğlu, 2020).

Nevertheless, despite the often-emotional statements about the condition of the industry, we should assume that all previous predictions from month to month will be more and more optimistic, and there will be a noticeable dynamic increase in road transport driven by the growing demand of all sectors of the economy requiring logistics services, resulting also from a broader entry of non-European markets. We should note that in the pandemic it is difficult to apply for funds, as the situation changes dynamically and already in the second half of 2020, the sentiment among entrepreneurs may be more optimistic. In addition, profitability and other indicators may remain at the same level, but it would be necessary to examine what effort the managers of transport companies had to put in to achieve this, e.g. by changing the structure of transported cargo, changing the scope of services provided, changing the directions of transport, and seeking new partners. Of course, these are all questions for further research.

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