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IMPACT OF THE PANDEMIC ON BUSINESS OPERATIONS AND THE TRANSPORT SECTOR IN POLAND

DOI: 10.21008/j.0239-9415.2023.088.07

In supply chain management, random events can occur that are difficult to predict. Once such event, the COVID-19 pandemic, affected supply chains around the world and forced companies to make sudden changes. Companies could still operate and deliver their products to customers through innovation, but also through the flexibility and innovation of transport enterprises. In the last two decades, the Polish transport industry has gained importance in the European Union. The main objective of this paper is to determine the specification of business operations under pandemic conditions, assess the impact of the pandemic on international transport SMEs in Poland, and then identify key challenges for the industry from the point of view of entrepreneurs. To this end, a literature review, desk research and snow-ball sampling were carried out towards the end of 2021 and beginning of 2022. The research results show that changes in the organisation of supply chains, diversification, changes in demand and other effects of the pandemic have had a positive impact on the operations of some transport companies in Poland, and the larger the company, the more these changes have been used in a positive way for the business operations of transport. This seems to be confirmed by statistical data. The biggest beneficiaries of the changes seemed to have been medium-sized and large companies. Micro enterprises, on the other hand, most often assessed the impact of the pandemic negatively. In addition, the challenges relating to the amount of fines in transport, indicated most often in our survey by the entrepreneurs, certainly also hit the micro-enterprises the hardest.

Keywords: challenges, SMEs, supply chains, COVID-19 pandemic, transport enterprises, business operation

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1. INTRODUCTION

The modern conditions of the global economy and intense competition have forced companies to adjust their operations to reduce the vulnerability of the supply chain to delays and other problems. Consistent efforts to minimise inventories place an emphasis on on-time delivery and fulfillment, which becomes extremely important in the production and sales process (Modak & Kelle, 2019; Lyu et al., 2020; Tomkowiak & Koliński, 2010). Countering so-called bottlenecks is closely related to the ability to manage risk and supply chains. A global supply chain is a sequence of events which involves the process of moving goods and aims to meet the demand for specific products. International logistics is directly related to it and can be understood as the process of operating material flows across national borders. The essence of international logistics involves the interconnection of companies in different countries to form economic systems. In the supply chain, which is a complex structure, random events can occur that are difficult to predict (Kuklinska, 2007). An example of such an event is the COVID-19 pandemic, which significantly affected supply chains around the world, forcing companies to make sudden changes. The coronavirus caused significant global supply chain disruptions, challenging companies worldwide. Due to factory closures and transportation disruption constraints, many companies had to adapt their operating strategies to the prevailing conditions. Companies took steps to secure their supply chains, including changing the way they operated and looking for alternative sources of supply. In the intervening time, many companies have adapted to the prevailing conditions and continue to operate, although some challenges are still associated with international logistics operations. However, companies are not only still able to operate and deliver their products and services to customers through innovation, but also thanks to the flexibility and innovation of transport enterprises (Turoń & Kubik, 2021; Dovbischuk, 2022).

In the last two decades, the Polish transport industry has gained in importance both in terms of the number of shipments within the European Union and in the context of generating GDP for the economy. Currently, Polish carriers are the dominant group on the European market. In 2020, the volume of transport expressed in tonne-kilometers amounted to 19.7% of the total transport of European Union countries, which placed Poland first among 27 European Union countries. In international transport, Poland's share was the highest and accounted for one third of the international transport of all of the countries of the European Union combined (GUS, 2022).

This was influenced by many factors, including an attractive geographical location, the transformation of the economy within the EU structures and the competitiveness of transport companies. The result is the growing position of Poland in international logistics (The World Bank, 2023). Nevertheless, the structure of the transport industry in Poland indicates a significant dominance of micro, small and medium-sized enterprises that account for 98% of the industry in quantitative terms.



Although the impact of the pandemic on the operation of large enterprises is the subject of numerous studies, small and medium-sized enterprises and in particular microenterprises in the transport sector have been investigated to a lesser extent, and therefore require further research. Taking this into account, the main objective of this paper is to determine the specification of business operations in pandemic conditions, assess the impact of the pandemic on small and medium-sized international transport enterprises in Poland, and then identify key challenges for the industry from the point of view of entrepreneurs operating in the transport industry.

The methods used in the paper include literature review, the analysis of statistical data and desk research, as well as the analysis of industry reports and expert opinions. The data obtained and the ex post results were used to prepare and conduct the presented research using the snowball method, which allowed for the collection of research material among entrepreneurs in the transport industry.

The paper consists of several parts. Firstly, there is a focus on the theoretical aspects of the disruptions in the enterprise sector caused by the pandemic, then the research methods used are presented and described. Following this, the results of the empirical research and expert opinions on the impact of the pandemic on the operations of enterprises are presented. Finally, the results of the authors' research into the impact on the operations of transport enterprises in Poland in the SME sector are presented. The work ends with conclusions regarding the results obtained.

2. OVERVIEW OF DISRUPTIONS OF ENTERPRISES' OPERATIONS CAUSED BY COVID-19 PANDEMIC

Most companies that operate internationally and work with foreign suppliers face numerous challenges to their supply chain logistics. Due to the COVID-19 pandemic, governments had to adapt shipping regulations and restrictions to the changing situation (Grida & Zaied, 2020). The situation presented differently in each country, some of which operated without significant disruptions, while in others, the situation was much worse, making it difficult to maintain uniformity in the flow of goods (Meyer et al., 2021). During the initial phase of the pandemic, road transport was hampered by mandatory checks of all drivers at border crossings. This, in turn, increased waiting time at the borders, thereby affecting the actual arrival time of goods, differing it from the time of aviation. Nine challenges that companies faced during the COVID-19 pandemic can be distinguished:

- closed factories,
- delivery delays, limited transportation,
- lack of drivers,
- problems with JIT (Just-in-time) and JIS (Just-in-sequence) systems,
- an increased struggle for resources,



- the sudden need to introduce new technologies, and among others, the Internet of Things,
- international trade restrictions,
- the diversification and shortening of supply chains,
- an increase in the prices of raw materials and products.

Supply chain management focuses on the efficient flow of goods, funds and information relating to products or services – from the purchase of raw materials to the delivery of the final product to the end customer (Waters, 2019). All activities relating to this process focus on making it happen as quickly as possible without unnecessary disruptions. The COVID-19 pandemic exposed weaknesses in supply chains that caused many problems for various industries. The sudden outbreak of the pandemic forced the closure of factories, severely affecting the manufacturing sector. Companies using JIT and JIS methods were particularly affected due to, for example, delays in deliveries. According to the Polish Economic Institute (Ambroziak et al., 2021), this was particularly evident in the automotive sector, which is dependent on a just-in-time production system, and which was neither prepared for the shortage of components in the first phase of the pandemic nor for delays in deliveries. In addition, transport problems significantly affected the operation of international logistics. They had a particular impact in the early stages of the pandemic when the number of transport units, which had been used to deliver most of the components to production facilities as well as finished goods to customers, was reduced. It became necessary for many companies to find alternative ground transport (Strom, 2021). To respond quickly to these delays, efficient communication between all partners was essential, including keeping communications open. This was particularly important as the likelihood of suppliers experiencing material shortages or production downtime during the pandemic increased dramatically. Moreover, this threat eventually became a reality. Ultimately, many companies faced this problem. Particularly affected by the shortage were corporations connected to new technologies, which rely on already very limited sources on a daily basis. The timing of the pandemic firstly caused an increased demand for electronics and then made it difficult or completely impossible to extract natural resources such as silicon. All these factors led to an increase in the price of raw materials and, ultimately, the price of finished products.

During the pandemic, demand for particular products or services decreased significantly. This situation forced companies to change their strategies and revise their supply chains. In order for companies to continue to function, they were forced to adapt to the prevailing situation (Barman & De, 2021; Butt, 2021). Depending on the type of agreement between the company and the supplier, the new plan – the contingency plan – could take various forms. The first was the possibility of reducing the number of supplies, while the second was diversification. The final plan for companies was the necessity to sell products at a lower price.

An example of units that had to reduce the prices of their products were fuel depots, which have to regularly take certain fixed amounts of fuel (according to con-



tracts signed for an extended period of time). Due to the confinement of the population at home and thus reduced traffic, the demand for fuel decreased significantly (Du et al., 2021, Mousazadeh et al., 2021), and warehouses were overcrowded. Corporations were forced to lower fuel prices to gain storage space. In the case of the second form of contingency plan - diversification - an example would be apparel companies which introduced masks as well as protective suits into their offerings while maintaining continuity of supply. Marketing efforts could also often be found to encourage the purchase of other clothing (Marel & Armour, 2020).

For many companies, the COVID-19 pandemic became the so-called black swan event. All activities involved volatility and unpredictability, making it necessary for supply chains to become much more dynamic and provide much more information than ever before. Technologies such as the Internet of Things, the Cloud, 5G, and AI, among others, were and still are crucial in the supply chain to enable the necessary changes to secure the operations of businesses around the world (Javaid & Khan, 2021; Sun et al., 2021).

Due to the coronavirus pandemic, companies had to open up the supplier market in order to be able to obtain raw materials or products from multiple sources. During this time, units had to reduce dependence on a single supplier and focus on sourcing goods as quickly as possible. Additionally, companies had to develop new inventory strategies to protect operations from supply disruptions. To get a sense of stability, companies built strong relationships with suppliers and implemented systems to ensure a good visibility of the supply network. This was needed to better understand the risks and drive specific actions based on the priorities established (Kilpatrick & Barter, 2020).

3. RESEARCH MATERIAL AND METHODS

A variety of methods were used to achieve the research goals. Based on a literature overview and identification of the disruptions in business operations caused by the pandemic, a review and analysis were undertaken of industry reports and expert opinions regarding empirical research on the pandemic impact on business operations. The ex post results were the basis for preparing the authors' own research. International transport enterprises play a special role in supply chain management and international logistics. From this group, micro, small and medium-sized enterprises were chosen which are statistically the largest group of transport enterprises in Poland. To achieve the goals of the survey, that is, to assess the impact of the pandemic on the international transport of small and medium-sized enterprises in Poland and identify key challenges for the industry, from the point of view of entrepreneurs operating in the transport industry, snowball sampling was chosen. The snowball method consists of collecting information from a specific group (Naderifal



et al., 2017) – in this case a group of entrepreneurs from transport companies in the SME sector. It is based on an approach where a small number of people with certain characteristics recruit others with those characteristics in their network or community. Thanks to this method, based on the network of connections, the results of the study can be authenticated (Valerio et al., 2016). In the snowball sampling applied here, the survey was filled in by entrepreneurs – specifically the owners who directly felt the impact of the pandemic on the activities of their enterprises, and not by people who might not have a full knowledge of this area. Finally, conclusions were drawn from the research results.

4. THE IMPACT OF THE PANDEMIC ON THE ENTERPRISES' OPERATIONS IN THE LIGHT OF EMPIRICAL RESEARCH AND EXPERT OPINIONS

The Institute for Supply Management (2021) conducted a study showing that nearly 75% of the 628 companies surveyed had experienced supply disruptions due to the COVID-19 outbreak. The impact of the coronavirus had taken its toll on the enterprises, causing fluctuations in stock prices and lowering profit forecasts. Some 80% of the companies admitted to having felt the negative impact of the pandemic on their supply chains.

A Capgemini study “Rethinking chain resilience for an after-COVID-19 world” showed that the vast majority of companies are still facing major problems in all areas of their operations. Among the leading causes of disruption cited were delivery delays, logistical problems, and international trade restrictions (Talipska, 2021).

According to a study by McKinsey (Rokicki & Pisz, 2021), many of the changes in supply chains that occurred due to the COVID-19 pandemic may be permanent. These include, in addition to those previously mentioned, the rise of remote work, the shortening of supply chains, and the increased importance of advanced technology in operations.

In their paper, Marel and Armour (2020) analysed the impact of the pandemic on an appliance company. The first observation was a significant decrease in the number of shipments received when comparing 2019 to 2020 – a difference of more than 30% – all due to the shortage of raw materials and parts, and the general chaos associated with the pandemic outbreak. According to the authors, the worst months in this regard were March through May 2020. Moreover, coronavirus influenced the occurrence of disorders in the process of supply avigation. Large discrepancies were observed in 2020 compared to the values for 2019. The values for delays in 2020 reached an average of approximately 40%, while in 2019 they only amounted up to 4%. These inconsistencies resulted in the formation of queues waiting for the unloading process and consequently translated into disruptions not only for warehouse workers, but also for the entire plant.



As can be seen from the above example, problems occurring at the top of the supply chain directly affect the minor links in the chain, thus causing a loss of the previous stability and liquidity or making it impossible to carry out activities as planned.

The past years have completely shaken the stability of supply chains. The two main problems mentioned earlier were an inadequate supply of products that had grown in popularity during this time and a lack of sufficient truck drivers as well as contractors. In this respect, transport companies played a key role.

Despite the many problems companies faced, the COVID-19 pandemic accelerated many changes that seemed a long way off. Thus, the question now is what people can expect from supply chain management in 5 to 10 years, given that what was initially predicted has already occurred. According to experts, among the changes already taking place and which will be improved over the years, are:

- the Internet of Things – Enterprises in the future will need to expand solutions such as the Internet of Things (a network of physical objects equipped with sensors, software, and other technologies that allow them to connect and exchange data with other devices) (Ben-Daya et al., 2021; Rejeb et al., 2020);
- Big Data – In order to improve and streamline the management of enterprises in the future, there are plans to make greater use of Big Data (this includes large data variables, the processing as well as analysis of which is valuable, since new and valuable information can be obtained through these processes) (Maheshwari et al., 2021; Bag et al., 2020);
- Industry 4.0 – It is important to take care of boost the further development of Industry 4.0 processes in companies. This will make it possible for companies to function smoothly in emergency situations. Industry 4.0 is a concept that describes the complex process of an enterprise's technological and organisational transformation. This system can anticipate the integration of new values, digitisation, and the creation of new business models (Qader et al., 2022);
- Globalisation – A global approach to supply chain management is a reality today. Consulting firm Roland Berger has forecast export growth of 5.3% per year until at least 2030. Globalisation means that more goods will be transported over long distances in the future. This will expand outsourcing, and new collaborations between companies will result (Roland Berger, 2018);
- Regionalisation – This is a seemingly contradictory trend to globalisation, but they are inherently binding. Today and in the years to come, there will be a visible emphasis on buying regional products. This is related to society's awareness of the costs of importing and exporting. The second reason is society's desire to support local entrepreneurs (Cappelli & Cini, 2020);
- Delivery time – A few years ago, a customer ordering a product required delivery within five business days. In 2022, the consumer expects delivery no later than the next day. A trend can therefore be observed which is focused on reducing delivery times as much as possible (Modak & Kelle, 2019). In this case, it



can be assumed that in the near future the customer will require delivery in a few hours or even in a few minutes;

- WMS and ERP – An important aspect will be digitalisation, which is excellent for supporting businesses during a crisis. It involves the implementation of IT systems aimed at streamlining work in the company. In terms of supply chains, the following can be distinguished: a WMS – a Warehouse Management System (this supports warehouse management, tracks operations performed on goods, and is used to optimise warehouse processes) (Andiyappillai, 2020); ERP – Enterprise Resource Planning (an enterprise resource planning tool); Transportation Management Systems (TMS) and Supply Chain Management systems (SCM) (Nettsträter et al., 2015).

In the following section, the results are presented of the authors' own study conducted in Poland among small and medium-sized enterprises of the transport industry, which play an important role in supply chains.

5. STUDY ON THE IMPACT OF THE PANDEMIC ON TRANSPORT ENTERPRISES IN POLAND

The survey was conducted during Q4 2021 and Q1 2022, a time when companies could reliably assess the impact of the pandemic on the operation of their business. The survey focused on a specific group of companies. The use of a random survey among SMEs could make it difficult to draw the right conclusions. The methodology used ensured that the questionnaire was completed by TSL entrepreneurs who knew the most about the condition of their business and how the pandemic had affected it. It was important to reach the entrepreneurs directly and to avoid the possibility of the questionnaire being completed by people who may not have had full knowledge of the business.

As it was relevant for the research to see how the COVID-19 pandemic affected companies of different sizes, the EU definition of small and medium-sized enterprises was adopted in the study (Table 1). The study used the staff headcount as a determinant to classify enterprises into micro, small, and medium-sized enterprises.

Among the enterprises surveyed, small enterprises accounted for the largest share (50%). The enterprises were mainly active in markets within the European Union (63%) and international markets outside the EU (34%). The enterprises were located in less populated areas as well as in larger cities. The largest share (39.4%) of enterprises was in towns of up to 100,000 inhabitants. The enterprises that participated in the survey were mostly mature enterprises that had been operating for more than ten years (43.6%), enterprises that had been in the market for 5-10 years (41.5%), and a minority of enterprises that had been in the market for less than five years (14.9%) (Table 2).



Table 1. Definition of micro, small and medium-sized enterprises

Company category	Staff headcount	Turnover or	Balance sheet total
Medium-sized	< 250	≤ € 50 m	≤ € 43 m
Small	< 50	≤ € 10 m	≤ € 10 m
Micro	< 10	≤ € 2 m	≤ € 2 m

Source: Commission Recommendation of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises (notified under document number C(2003) 1422).

Table 2. Characteristics of the companies surveyed

Number of Employees		< 10	10-49	50-249	Total
Number of enterprises		29	47	18	94
Number of enterprises (%)		30.9	50	19.1	100
Market	Mainly the domestic market, as well as the European Union market	3			3
	Mainly the European Union market	24	31	4	59
	International market and also outside the European Union	2	16	14	32
Business Location	Village	6	2		8
	City up to 100 thousand. Residents	10	24	3	37
	City up to 250 thousand. Residents	2	12	5	19
	City over 250 thousand. Residents	11	9	10	30
Years of Operation	from 1 to 5 years	9	5		14
	from 5 to 10 years	9	28	2	39
	over 10 years	11	14	16	41

Source: author's study.



For the entire population of surveyed enterprises, the impact of the pandemic was often positive (36.2%). Few companies rated the impact of the pandemic as very positive (4.3%). For 23.4% of the companies, the pandemic had had neither a positive nor a negative impact. In contrast, 12.8% of the companies surveyed indicated that the pandemic had had a definite negative effect on their business (Fig. 1).

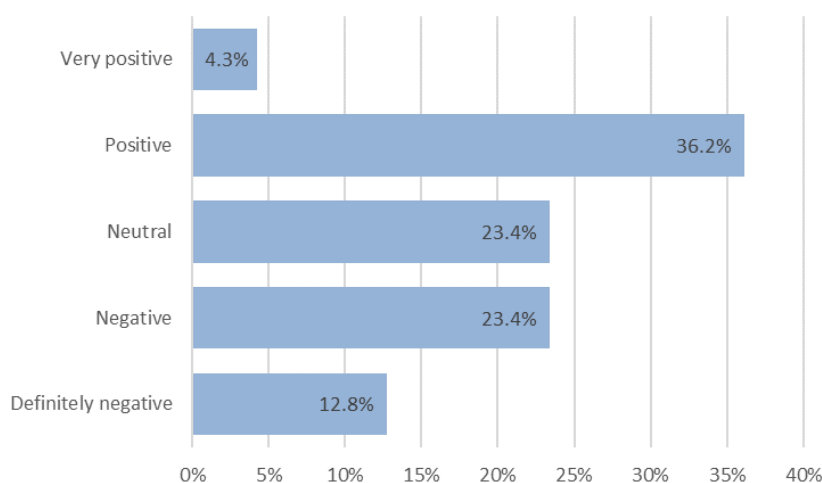


Fig. 1. Assessment of the impact of the COVID-19 pandemic on company operations according to the surveyed companies (n = 94)

The results are interesting from the point of view of company size, which in this research is expressed in terms of the number of employees. As the results indicate, there are significant differences in the assessment of the impact of the pandemic depending on the size of the enterprise. Medium-sized enterprises were much more likely to see a positive impact (56%). In particular, 22% of these companies rated the impact of the pandemic as being very positive. No company in this group indicated a definitely negative impact.

Among the small companies surveyed, 45% rated the impact of the COVID-19 pandemic as positive, while 30% rated the impact on business operations as neutral. One fifth of the small companies surveyed indicated the negative impact of the pandemic. The results indicated that the most severe impact of COVID-19 was on businesses with fewer than 10 employees. In this group of respondents, 31% reported a definitely negative impact, while 34% reported a negative impact of the pandemic on business operations. The results showed that this negative impact of the pandemic affected more than 60% of the micro companies surveyed. It is worth noting that in this surveyed group, only one tenth of the companies indicated the positive nature of the pandemic's impact on their operations (Fig. 2).

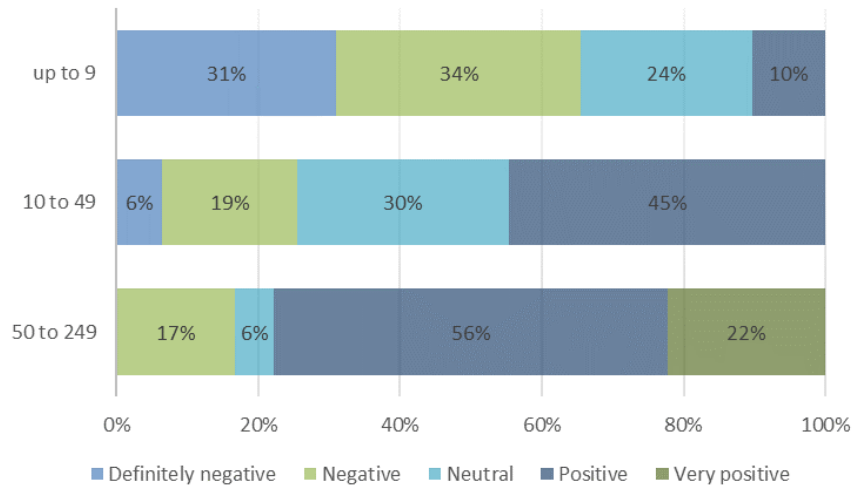


Fig. 2. Assessment of the impact of the COVID-19 pandemic on company operations in relation to company size (n = 94)

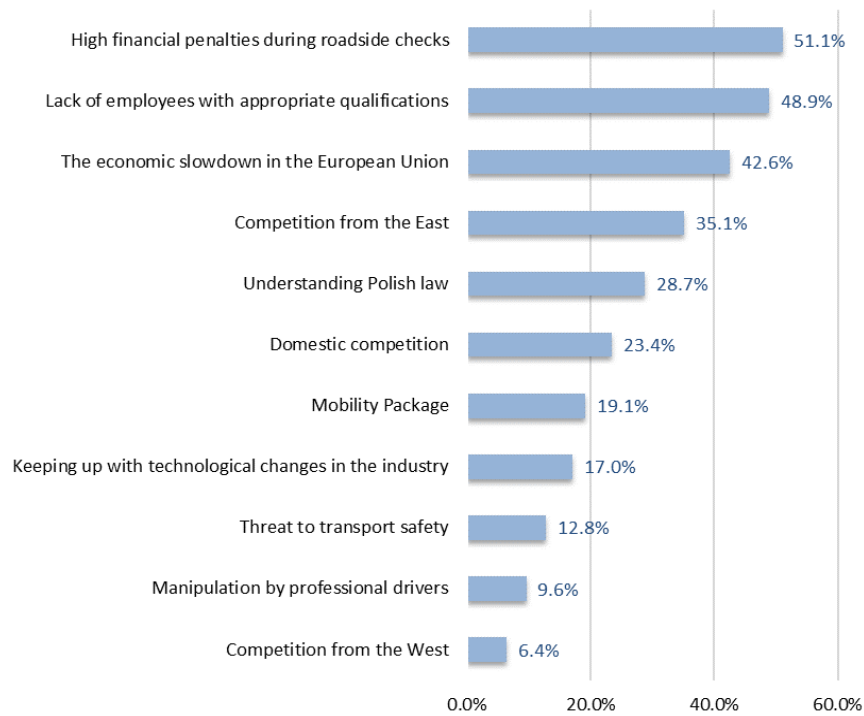


Fig. 3. Key challenges for the TSL industry in the coming years according to the companies surveyed (n = 94)

The companies surveyed identified the most important challenges for the TSL industry in the coming years. Among the most frequently mentioned were: 1) high financial penalties during roadside checks, 2) lack of employees with appropriate qualifications, 3) economic slowdown in the European Union, 4) competition from the East, and 5) understanding Polish law (Fig. 3).

As the research results showed, assessment of the impact of the pandemic on the activities of the transport companies changed with the size of the company. The most negative impact was felt by micro-enterprises (over 60%), while medium-sized enterprises mostly assessed this impact positively. Entrepreneurs considered high fines and a lack of drivers to be the most important challenges for the future.

They also feared an economic slowdown across the European Union. The competition of transport companies from Eastern Europe was also of great importance. Interestingly, the mobility package introduced in stages in the European market considered by experts to significantly change the rules in this market, was assessed as a significant challenge by less than 20% of entrepreneurs. In turn, following technological changes remained a significant challenge in the opinion of 17% of the entrepreneurs.

6. CONCLUSIONS

The coronavirus pandemic obliged enterprises to recognise the strategic importance of supply chain management. It became necessary to update supply chain strategies to ensure that operations would not be interrupted in the event of another outage due to a lack of inventory. Many companies quickly realised that a lack of supply diversification negatively impacted their business. As a result, diversification of supply sources and the need to become independent of a single supplier became crucial for the future. Safety stock has also proved to be necessary. Moreover, this crisis revealed weaknesses in demand planning. Unfortunately, all the negative developments also resulted in constraints relating to the number of ships and containers arriving in each country, slowing down supply and causing difficulties in meeting demand. However, the pandemic had the opposite effect in the e-commerce industry as during the quarantine there was a significant increase in the sales of some products, which is why it was so important to skillfully balance supply and demand through proper planning.

COVID-19 had a significant impact on international logistics. Between 2020 and 2021, there were many transformations that have now become commonplace. The importance of communication in supply chains and the need to continuously improve processes relating to international logistics have begun to be recognised. Digitisation and IT solutions, such as the popularisation of WMS and ERP programs or the Internet of Things, have played a major role in the related flows of goods. The pandemic forced companies to make changes in processes directly related to inter-



national logistics, such as diversifying supply chains to minimise the risks associated with negative factors. Moreover, companies realised the essence of the need to change and adapt to the environment. According to experts, these changes will continue in the future. Unpredictability has become a daily reality, therefore companies must learn to quickly read the signs coming from the market and efficiently analyse them to avoid disruptions or losses. To make this possible, supply chains must become more resilient to disruption by being more dynamic, smarter, and better supplied with information than ever before.

The resilience of transport enterprises has become particularly important in terms of the functioning of international logistics. As the vast majority of these enterprises in Poland are micro, small and medium-sized enterprises, the study attempted to show their views on the impact of the pandemic and how they assessed challenges in the future. The results of this research showed that the smallest enterprises in Poland, employing up to 9 employees, viewed to the greatest extent the impact of the pandemic negatively. It is worth emphasising that statistically-speaking, micro-enterprises account for about 96% of the entire population of transport companies in Poland. On the other hand, small enterprises employing up to 49 employees viewed the impact of the pandemic positively in almost half, and neutrally in one-third. The vast majority of the medium-sized enterprises with up to 249 employees assessed the impact of the pandemic positively. This may mean that changes in the organisation of supply chains, diversification, changes in demand and other effects of the pandemic demonstrated in part one and three of this work have had a positive impact on the operations of some transport companies in Poland. Indeed, the larger the company, the more these changes are viewed in a positive way for the business operations of transport enterprises.

This seems to be confirmed by statistical data. In 2021, revenues from the sale of transport services in the private sector were higher by 14.8% compared to 2020, and the share of enterprises employing more than 49 people accounted for 48.1% of total revenues. The gross financial result generated by entities employing more than 49 people was 210.0% higher than in the previous year, the turnover profitability ratio increased from 2.1% to 5.2%, and the net turnover profitability ratio increased from 1.4% to 4.1%. Average employment based on an employment relationship in the private transport sector in 2021 was 4.4% higher compared to 2020. Average monthly gross remuneration of workers employed on the basis of an employment contract in the sector was higher by 7.1% in 2021 compared to 2020. In 2021, compared to the previous year, an increase was recorded both in domestic transport (by 7.3%) and international (by 12.2%). Within international freight, both transport increased imported and exported (by 8.6% and 22.0%, respectively). The number of trucks at the end of 2021 amounted to 3.6 million units, 3.0% more than the year before. The number of road tractor units at the end of 2021 amounted to 505.6 thousand units and was 7.7% higher than the previous year (GUS, 2022).

To sum up, despite a probably difficult 2020 for the industry, 2021 was a year of growth, which is shown by the statistical data and which is also reflected in the



results of this research. Nevertheless, the biggest beneficiaries of the changes also caused by the pandemic seem to be medium-sized and large companies. Micro enterprises in this study most often viewed the impact of the pandemic negatively. In addition, the challenges relating to the amount of fines in transport, indicated by entrepreneurs most often in the survey, certainly also hit micro-enterprises the hardest.

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WPLYW PANDEMII NA DZIAŁALNOŚĆ GOSPODARCZĄ I SEKTOR TRANSPORTOWY W POLSCE

Streszczenie

W zarządzaniu łańcuchem dostaw mogą wystąpić zdarzenia losowe, które trudno przewidzieć. Pandemia dotknęła łańcuchy dostaw na całym świecie i zmusiła firmy do nagłych zmian. Firmy nadal mogą działać i dostarczać swoje produkty klientom dzięki innowacyjności, ale także elastyczności i innowacyjności przedsiębiorstw transportowych. W ciągu ostatnich dwóch dekad polska branża transportowa zyskała na znaczeniu w Unii Europejskiej. Głównym celem niniejszego artykułu jest określenie specyfiki funkcjonowania przedsiębiorstw w warunkach pandemii, ocena wpływu pandemii na MŚP transportu międzynarodowego w Polsce, a następnie identyfikacja kluczowych wyzwań dla branży z punktu widzenia przedsiębiorców. Korzystano z przeglądu literatury, *desk research* i badania metodą kuli śniegowej przeprowadzonego na przełomie 2021 i 2022 r. Wyniki badań pokazują, że zmiany w organizacji łańcuchów dostaw, dywersyfikacja, zmiany popytu i inne skutki pandemii pozytywnie wpływają na działalności niektórych firm transportowych w Polsce, a im większa firma, tym bardziej te zmiany są wykorzystywane w pozytywny sposób w działalności firm transportowych. Wydaje się, że potwierdzają to także dane statystyczne. Największymi beneficjentami zmian wydają się być firmy średnie i duże. Mikroprzedsiębiorstwa najczęściej negatywnie oceniają wpływ pandemii. Najczęściej wskazywane przez przedsiębiorców wyzwania związane z wysokością kar w transporcie z pewnością również są bardzo odczuwane przez mikroprzedsiębiorstwa.

Słowa kluczowe: wyzwania, pandemia COVID-19, łańcuchy dostaw, MŚP, firmy transportowe, działalność biznesowa

