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ASSESSMENT OF THE EFFECTIVENESS OF SELECTED LOGISTICS INDICATORS OF NETWORK ENTERPRISES IN THE SME SECTOR IN POLAND IN 2019-2022

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Purpose: The aim of the article is to discuss the assessment of selected logistic indicators of network enterprises in the SME sector (micro, small and medium-sized enterprises) in Poland in 2019-2022 (with particular emphasis on the Łódź Voivodeship). The first part of the article presents the characteristics of the SME sector in Poland from a statistical perspective and the effectiveness of logistics activities in enterprises from a theoretical perspective. The second part of the article presents an analysis of selected logistics indicators of the SME sector based on author's own research.

Design/Methodology/Approach: The article was based, among others, on based on: literature on the subject, reports of the Polish Agency for Enterprise Development (PARP), practical knowledge about logistics presented by logistics companies on websites and own research, which was carried out in the form of surveys among enterprises in the SME sector in the Łódź Voivodeship.

Findings: The author's own research has shown that the analysed transport and logistics quality indicators are good enough for the companies of the SME sector in the Łódzkie Voivodeship, and this is due to: the share of logistics costs in the turnover of the company, which for the SMEs reached 32%, and for the manufacturing companies and service providers (outside the TSL industry) amounted to 24% (a very good result was recorded for micro and medium-sized companies, it amounted to 11% and 10%, respectively). Favorable results for the SME sector in the Łódź voivodeship in Poland were also achieved, among others in terms of the proportion of error-free transport documents to the number of total documents issued, the figure for TSL companies in the SME sector was 85%, and for the other companies included in the survey it was 80%.

Practical Implications: The research that was carried out in the counties of the Łódź Voivodeship (of which there are 23 in the Łódź Voivodeship together with the Łódź agglomeration with county rights) may provide valuable information for city offices and county offices in terms of supporting the SME sector in these areas. This support for the development of these enterprises may include, among others: in reports on urban regeneration. **Originality/Value:** The research in the article was carried out on a sample of network enterprises from the SME sector and companies located in smaller towns and villages in the Łódź Voivodeship outside the Łódź agglomeration in Poland. which are not often analyzed in the literature on the subject.

Keywords: network enterprises, supply chain management.

JEL codes: D20, L20.

Paper type: Research paper.

1. Introduction

According to the report of the Polish Agency for Enterprise Development (Polish abbr. PARP), the number of enterprises in Poland is growing and it reached 2.3 million in 2020 (an increase of 0.1% compared to 2019). The SME sector is the most numerous group of non-financial enterprises (99.8%) operating in Poland in 2020. Size-wise the group is made up of micro enterprises (97% of all SME sector enterprises, 2.2 million, an increase of 0.1% compared to 2019), followed by small enterprises (2.2% of all enterprises from the SME sector, 49.5 thousand, an increase of 0.01% compared to 2019), and the third in this group were medium-sized enterprises (0.6% of all SMEs, 14.4 thousand, a decrease of 1% compared to 2019) (https://www.parp.gov.pl/, 2022, pp. 12-13; https://www.parp.gov.pl/, 2021, pp. 11-12).

From the point of view of the industry profile of the SME sector, the Polish SME market is dominated by companies from the service sector, accounting for 53% of companies, followed by enterprises from the construction sector (15.5%) and, coming third, manufacturing companies (10%) (Fig. 1).

Based on the above-presented statistics, we can see that micro-enterprises are the main force driving the development of the SME sector in Poland and have the largest share in GDP creation (30.6% of 2019), as well as in the total employment in this sector (6.8 million jobs in 2020, a slight increase compared to 2019 in micro-enterprises and in small enterprises, by 1.4% and 0.8% of jobs, respectively, and a decrease in medium-sized enterprises by 2.3% of jobs). Micro-enterprises also exhibit an upward trend. Between 2008 and 2020 (after a slight decrease of 0.1% in 2009), they grew by 23% compared to 2008 (https://www.parp.gov.pl/, 2022, pp. 19, 21-23, 61-62).



Figure 1. SME sector structure by industry. Source: https://www.parp.gov.pl/, 2022, p. 15.

Most enterprises that agreed to take part in the survey were also micro-enterprises. However, the main research problem tackled by the article is to examine the efficiency of the SMEs in Poland in the years 2019-2022 (with particular focus on the Łódź Voivodeship) on the basis of selected logistic indicators.

However, the specific questions are whether the smaller the company, the more often it encounters greater problems and barriers to the development of its business during crises.

The research results presented in the article are important due to the lack of research on the issue of the effectiveness of logistics and transport indicators in the SME sector from the point of view of the network nature of these enterprises. Research on the effectiveness of selected logistic indicators of the SME sector conducted in the Łódź Voivodeship did not concern mainly the Łódź agglomeration, but the SME sector in smaller towns and villages of the Łódź Voivodeship. The article was based, among others, on based on: literature on the subject, reports of the Polish Agency for Enterprise Development (PARP), practical knowledge about logistics presented by logistics companies on websites and own research, which was carried out in the form of surveys among enterprises in the SME sector in the Łódź Voivodeship.

2. Efficiency Profile of Logistics Operations of Enterprises: a Theoretical Approach

The efficiency of logistical processes is of increasing importance from the point of view of enhancing the competitive and cooperative capacity of companies (Twaróg, 2003, p. 5). The aforesaid also applies to the search for value creation and partnerships in logistics networks of the SME sector.

The strategic objectives of logistics companies and companies for which logistics is one of the links in the supply chain are to achieve a smoothly operating supply service, through appropriate metrics for its implementation, and logistics systems, which will be analysed for effectiveness and efficiency of operation in the company. In turn, the setting of the company's strategic objectives will contribute to the establishment and setting of specific objectives through logistics metrics, which may include, for example, optimal production and sales planning, reduction of the costs of transport, materials, inventories (in all links of the supply chain) and finished goods for the final recipient/customer. Based on these measures, it will be possible to modify logistics if necessary and to monitor the economic development of the company. In the literature, there is a wide variety of classifications of logistics indicators used to assess or obtain information on corporate performance. These indicators can be used to:

- evaluate a company's operating system by considering indicators such as:
 - effectiveness- measuring to what extent the system achieves what the company has planned,
 - efficiency the ratio of the planned consumption of resources to the resources actually consumed,
 - quality the degree to which customer requirements are met,
 - profitability financial standing of the company,
 - productivity the ratio of goods produced to inputs of factors of production,
 - quality of working conditions how workers respond to the socio-technical working conditions in the company,
 - innovation launching a new or upgraded product, materials, etc. (Slowinski, 2008, p. 68),
- assess the internal as well as external environment in which the company operates. The analysis of internal supply chain management addresses issues such as the evaluation of customer service levels and service quality, efficiency of capital use and logistics processes in company management. In turn, the analysis of the external metrics used to manage logistics processes will have a significant impact on, among other things, the comparison of the company's activities in comparison to the competition. (Twaróg, 2003, p. 28);
- measure business efficiency and management through logistics controlling for manufacturing enterprises to show the relationship between costs and logistics activities along the supply chain. In addition, logistics controlling should perform the following functions in this type of enterprise:
 - a) operational setting objectives to be achieved,
 - b) incentive to identify and control the solvency of the implementation of changes in the company,
 - c) advisory to identify critical logistics indicators for the company,
 - d) steering and ongoing (to identify deviations from the planned management of the company's logistics processes) (Twaróg, 2003, p. 32).

Logistics costs also play a significant role in the selection of logistics indicators and metrics for assessing the efficient functioning of a supply chain or network, because with the help of selected logistics indicators it is possible to find the so-called optimum between rational costs across the entire supply chain and the appropriate level of delivered products and service to the final customer (Twaróg, 2003, p. 106; Blaik, 2010, p. 370). The manifestations of this rational approach to logistics exhibited by companies can be found in Table 1.

Logistics costs are defined in the literature in various ways, e.g., from the point of view of the scope and the structural breakdown of logistics costs, although defining them is rather problematic due to the interpretation of the concept. P. Blaik draws attention to, inter alia: the absence of adequate reference of the concept of logistics costs to the actual functions of logistics and logistics processes, or the lack of a comprehensive approach to the definition of logistics costs (Blaik, 2010, pp. 373-374).

Table 1.

Rationalisation of logistics operations

Cost reduction strategies in logistics	Customer value maximisation strategies
 Reduction of logistics costs through internal rationalisation within a company. Cost reduction through a comprehensive adjustment (alignment) of the flows of materials and goods across the supply chain. Cost reduction achieved by using (considering) logistics in the long-term decision-making in the company. 	 Cost reduction and customer value maximisation through mutual adjustments (alignments) between partners across the supply chain in the field of the market, purchases, and sales. Developing long-term cooperation models (between systems) Increasing the flexibility of supplies (with regard to the time, type, and quantity). Improving the reliability of supplies (quality of service). Reduction of transaction costs at the customer end

Source: Blaik, 2010, p. 371.

Certainly, an important element in the definition of logistics costs is the inclusion of monetary consumption of company assets, which, according to M. Kufel's definition, is caused by *...planning, implementation and control of non-technological (non-production) movements of material goods, goods and information* (Nowak, Piechota, Wierzbinski, 2004, pp. 199-200; Stępień, Łegowik-Świącik, Skibińska, Turek, 2016, p. 491). In contrast, the logistic cost function is characterised by complexity, as logistics costs, e.g., costs of transport are not only dependent on the quantity of goods and the length of the route, but also on the type of means of transport, the way the drivers drive, etc. (Pfohl, 1998, pp. 217-218).

An important element in assessing the effectiveness of a company is also the use of an appropriate breakdown of indicators to measure and assess the effectiveness of the logistics subsystems engaged in logistics operations along the supply chain, which include: (customer) order handling, warehouse management or logistics management. Therefore, the article analyses selected logistics indicators for SMEs related to supply chain management. The logistics indicators selected for analysis in this paper are those that are applicable to both TSL and non-TSL companies¹.

The main research question in the article is: what is the assessment of the effectiveness of the SME sector's business performance on the basis of selected logistics indicators in the Łódź Voivodeship in the years 2019-2022. In turn, the specific research question reads as follows: does the size of the surveyed enterprises matter for achieving good results in times of crisis?

¹ Logistics indicators used in the paper are presented in the next section.

Based on these research questions, two research hypotheses were formulated. The first one argues that the analysed indicators of transport and logistics quality for companies in the SME sector in the Łódzkie Voivodeship are very positive. The second research hypothesis reads: the smaller the size of the company, the more likely it is to achieve good results in times of crisis.

3. Methodology

The surveys used in the article to examine the effectiveness of logistics indicators in the SME sector were conducted online between 2019 and 2022, with most of the surveys analysed conducted during the COVID-19 pandemic. The research technique was an original proprietary questionnaire, which was distributed to 56 companies, of which 55 were qualified for the study. Most of the surveyed companies were not located in the Łódź agglomeration, but had their headquarters in other smaller towns and villages located in the Łódź Voivodeship, due to the existing numerous studies on the effectiveness of selected logistics indicators of Łódź enterprises. The selection of the sample for the survey research was carried out using a non-random technique in a convenient and random manner and was determined in accordance with the definition of SME sector companies applicable in the EU.

4. Analysis of Own Research Based on Surveys Concerning the Effectiveness of Logistics Indicators of Companies from the SME Sector in Poland with Particular Emphasis on the Łódzkie Voivodeship

Most of the companies participating in the study (84%) were based in the Łódzkie Voivodeship, with the remaining ones originating from the Mazowieckie, Śląskie, Opolskie and Dolnośląskie Voivodeships.

Tables 2 and 3 present the characteristics of the SME enterprises surveyed, which include information on:

industry analysed. In order to carry out a proper analysis of the selected logistics indicators, different areas of activity of the SME sector were included in the research, (LOG.Mail No. 36). Half of the SMEs participating in the study (28 companies) belong to the TSL industry, while the other half (28 companies) are related with the manufacturing and service sector (outside the TSL industry);

- the division of companies from the SME sector. The majority of companies participating
 in the survey are micro-enterprises (with < 10 employees), both on the side of TSL
 companies (17 companies) and manufacturing and service companies (outside the TSL
 industry), (13 companies) (http://publications.europa.eu/, 2015). The second largest
 group among surveyed companies are small enterprises rendering TSL services and
 medium-sized manufacturing and service companies (non-TSL). The groups of
 medium-sized enterprises representing TSL service providers, as well as manufacturing
 and service companies (non-TSL) consisted of three companies each;
- date when SMEs participating in the study were established. The majority of the surveyed companies have been active in the market for a long time, (they were established between 2010 and 2020) and this can be said about 18 TSL companies and 18 non-TSL manufacturing and service companies;
- the majority of the companies surveyed are network companies.

The selection of transport and logistics quality indicators for assessing the efficiency of SME enterprises in the survey was based on subject-matter literature and an interview with full-time and part-time students of Management, Major in Logistics over the period 2019-2022.

An important element of the class discussion was the experience of part-time students who work in TSL service companies or in companies where logistics plays a significant role. Accordingly, the students presented those logistics indicators to which companies pay particular attention when they assess their logistics performance.

Table 2.

Industry	Transport-shipment-logistics				
Size of firms from the SME sector	Micro-enterprises	Small-enterprises	Medium-sized enterprises		
Based in	Krośnica, Żarnów, Smardzewice, Wola Moszczenicka, Łódź, Opoczno, Zalesie, Teodozjów, Brudzewice- Kolonie, Tomaszów Mazowiecki (4), Opole, Świerczów, Budków, Guzów	Piotrków Trybunalski, Łazisko, Zaosie, Lubochnia, Tomaszów Mazowiecki (3)	Ujazd, Wolbórz, Tomaszów Mazowiecki		
Date of launching operations:					
1990-2000	2	2	1		
2001-2010	7	4	2		
2010-2019	8	1			
Business	transport (10), retail and wholesale	transport (3), transport-	International		
profile	trade-transport, transport-tourism	forwarding services,	transport, contractual		
	(Travel agency), passenger transport,	transport-retail and	logistics, transport		
	forwarding services-transport, road	wholesale trade, transport-			
	transport, logistics, logistics-transport	forwarding services			
Total	17	7	3		

Characteristics of SMEs involved in questionnaire-based studies for TSL

* One micro-enterprise included in the survey did not give the date of its establishment.

Tables 4 and 5 present selected transport and logistics quality indicators for companies in the TSL sector and manufacturers and service providers (non-TSL) (Table 5).

The author's own research has shown that the analysed transport and logistics quality indicators are good enough for the companies of the SME sector in the Łódzkie Voivodeship, and this is due to: the share of logistics costs in the turnover of the company, which for the SMEs reached 32%, and for the manufacturing companies and service providers (outside the TSL industry) amounted to 24% (a very good result was recorded for micro and medium-sized companies, it amounted to 11% and 10%, respectively). This assessment is based on the opinion of selected authors of publications, who claim that logistics costs in relation to company turnover should be in the range of 10-40%, (Kowalska, Rubik, Skibińska, 2020, p. 23; Englon, Salakivi, Töyli, Ojala, 2022, pp. 29-35).

Higher logistics costs in relation to company turnover for companies in the TSL sector compared to logistics costs in relation to company turnover of companies for the manufacturing industry and service providers (outside the TSL industry) are due to the specificities of companies in the TSL sector and include:

 high operating costs (mainly fuel costs - 40 %), vehicle maintenance (costs related to regular technical inspections, purchase of high-quality spare parts), tolls, taxes, insurance, increasing staff salaries (mainly truck drivers' salaries);

Table 3.

Industry	Other industries that consider logistics in their strategies			
Size of firms from	Micro-enterprises	Small-enterprises	Medium-sized enterprises	
the SME sector				
Based in	Tomaszów Mazowiecki	Inowłódz, Łódź,	Tomaszów Mazowiecki, Ujazd,	
	(4), Wolbórz, Koluszki,	Skierniewice	Łódź, Dąbrowa Górnicza (2),	
	Złoczew, Łódź (2),		Warszawa Opoczno, Teresin	
	Inowłódz, Borowa,		Aleksandrów Łódzki, Poznań	
	Żyrardów, Huta		Warszawa	
	Błędowska			
Date of launching				
operations:				
1990-2000	6	2	6	
2001-2010	2		3	
2010-2019	5	1	2	
Business profile	beauty sector (2),	manufacturing,	construction-manufacturing-trade	
	recycling, Xerox-	curtains, steel	sector, trade-construction-	
	copying services,	framework structures	agriculture sector, housing	
	clothes-toys, sawmill	for construction;	construction, recycling, tools	
	services, wholesaler of	personal hygiene	manufacturing, ceramic tiles	
	cosmetics, medicine,	products wholesaler of	wholesale and retail, packaging-	
	carpentry, electronic	persons; marketing-	manufacturing, textile fibre	
	services, wholesaler of	advertising	wholesale and retail, office	
	bicycles, manufacturing		supplies manufacturing,	
	and sales, fruit and		wholesale and retail of beauty	
	vegetable wholesaler		accessories	
Total	13	3	11	

Characteristics of SMEs involved in questionnaire-based studies for other industries that consider logistics in their strategies

- and a number of miscellaneous difficulties related to the efficiency of TSL companies caused by the delayed collection of receivables (according to the BIG InfoMonitor debtor register, at the end of May 2023, the overdue debt of transport companies amounted to PLN 2.79 billion) and the lack of clarity in the terms of commercial contracts (https://www.logistyka.net.pl/).

Other measures of transport and logistics quality for the TSL sector and manufacturing and service companies (non-TSL) are as follows:

• The share of transport and cargo handling costs in relation to company turnover for companies in the TSL sector is also higher than for companies involved in manufacturing and the provision of services (non-TSL) and in the surveys it amounted to 37% and 26% respectively. Transport costs are related to the delivery, distribution and movement of goods. An important component of transport costs is, inter alia, transport time (i.e., the shorter the transport time, the higher the transport cost), the size and type of cargo, the distance from the place of loading to the place of unloading (cost of 1 km travelled). Such costs are most often contractual between the principal and the contractor;

Table 4.

Definition of an indicator of transport and	SMEs from the TSL sector			
logistics quality and its formula (in %)	Micro	Small	Medium-sized	Total
	enterprises	enterprises	enterprises	
1. Share of logistics costs in the turnover	27%	35%*	35%	32%
Total costs of logistics x 100%				
Turnover				
2. Share of transport and handling costs to total	47%	35%	30%	37%
turnover				
Transport and handling costs x 100%				
Turnover				
3. Share of storage cost (cost of own storage or	8%	13%	42%	21%
warehouse services) to company turnover				
Cost of storage x 100%				
Turnover				
4. Share of inventory cost to company turnover	8%	4%	5%**	6%
Cost of inventory x 100%				
Turnover				
5. Share of administrative costs of Logistics to	11%	16%	27%	18%
company turnover				
Administrative costs x100%				
Turnover				
6. Share of error-free transport documents	78%	91%	86%	85%
No. of error-free transport documents x 100%				
No. of issued transport documents				

Effectiveness assessment for selected measures of transport and logistics quality for TSL companies

*one company failed to provide data,

** one of the companies decided that a question from the survey did not apply to them.

The higher share of storage costs (costs of in-house warehouse or warehouse services) • in relation to company turnover for TSL companies (21%) compared to these costs for manufacturing and service companies (outside the TSL sector), (11%), is a result, among other things, of the activities of TSL companies within contract logistics services. The level of costs is also related to infrastructure, equipment and personnel costs. On the other hand, the relatively low ratio of the cost of storage in relation to company turnover for manufacturing and service companies (outside the TSL sector) testifies to proper warehouse management by maximising the use of resources, while minimising costs and applying an appropriate logistics strategy for the SME sector, which (depending on financial and organisational possibilities) does not execute more than 50 orders per day. This strategy also includes: an appropriate layout of the company's warehouse, the introduction of logistics management methods, such as crossdocking or lean management (saving on stock management, increasing quality), multitasking of employees (involved in various warehouse operations: cargo collection, packaging, etc.), and picking carried out in stages (https://www.mecalux.pl/).

Table 5.

Effectiveness assessment for selected measures	of transport	and logistics	quality for	manufacturing
and service companies outside of TSL sector				

Definition of an indicator of transport and logistics quality and its formula (in %)	Non-TSL manufacturing companies and service providers from the SME sector			
	Microenter prises	Small enterprises	Medium- sized enterprises	Total
1. Share of logistics costs in the turnover <u>Total costs of logistics x</u> 100% Turnover	11%	50%	10%	24%
2. Share of transport and handling costs to total turnover <u>Transport and handling costs x 100%</u> Turnover	11%*	55%	12%	26%
3. Share of storage cost (cost of own storage or warehouse services) to company turnover <u>Cost of storage x 100%</u> Turnover	3%**	20%	11%	11%
4. Share of inventory cost to company turnover <u>Cost of inventory</u> x 100% Turnover	12%*	23%	5%	15%
5. Share of administrative costs of Logistics to company turnover <u>Administrative costs</u> x100% Turnover	17%**	18%	3%	13%
6. Share of error-free transport documents <u>No. of error-free transport documents</u> x 100% <u>No. of issued transport documents</u>	58%	93%	89%	80%

* two companies did not answer the question,

** one company did not answer the question.

- The low cost of inventories, particularly for companies in the TSL sector (6%) and slightly higher for manufacturing and service enterprises (outside the TSL sector), (15%), is the result, among other things, of proper inventory management, inventory monitoring to compare actual figures (with the balance of inventory), in theoretical terms, and the adaptation of inventories to the needs and specificities of the company at a minimum cost (generated by frozen capital) and acceptable risk (related, for example, to the inability to meet demand or the instability of production due to lack of materials) (https://entra-group.eu/);
- the ratio of logistic administrative costs to company turnover is favourable both for companies in the TSL sector (18%) and for manufacturing and service companies (outside the TSL sector), (13%). Company's administrative costs most often consist of personnel costs, office operating costs and advertising activities. Reducing costs in a company is an extremely difficult task, as, for example, abandoning training or courses for employees, or reducing costs for advertising, can contribute to lower quality of restrictions services and on reaching out to new customers, (https://dziennikbankowy.pl/);
- in terms of the proportion of error-free transport documents to the number of total documents issued, the figure for TSL companies in the SME sector was 85%, and for the other companies included in the survey it was 80%.

In the research analys attention should also be drawn to the rather high ratios for small manufacturing and service companies (outside the TSL industry) of logistics costs and transport costs in relation to the company's turnover, which amounted to 50% and 55% respectively in the period under study. An index above 40% was also recorded for micro-firms in the TSL sector. This was caused by the Covid-19 pandemic crisis, the growing energy problem the negative impact of the war in Ukraine on business in and Poland. (https://www.europarl.europa.eu/RegData/etudes/). Despite being two separate crises, the pandemic and the war have global impacts, including disruptions to foreign trade and global supply chains. According to the report of the Polish Economic Institute released in June 2022, small companies suffered from deteriorating financial liquidity. Only 43% of the representatives of these companies declared that they had sufficient financial resources to run their business for more than 3 months. Manufacturing companies had the biggest liquidity problems. In contrast, the situation was better for TSL companies. Only 49% of manufacturing companies claimed that they had the resources to run their business for longer than 3 months, while in the case of TSL companies, it was just over 50% (https://pie.net.pl/, https://gtlaw.com/en-gb/).

5. Conclusion

Transport and logistics indicators should serve as a basis for company decisions, and as sources of relevant data that allow SMEs to improve their competitiveness. Higher competitiveness can be achieved by, e.g.: shortening the distance between the goods (across the entire supply chain) and the final customer, reduction of stocks in warehouse management, maintaining a high level of customer service and quality of logistic services for efficient transfer of goods to the final customer (Twaróg, 2003, p. 35).

Our research confirmed the hypothesis according to which, the analysed indicators of transport and logistics quality for SMEs in the Łódzkie Voivodeship are satisfactory. And that occurred despite the fact that in 2022 only 19% of enterprises were positive about the economic situation, compared to 2019, when the percentage of positive opinions among surveyed companies increased to 27%. The average assessment of the current Polish economic situation depends on the size of the company. Micro businesses saw the economic situation the least positive (score 2.30), while small companies (2.41) and medium-sized companies (2.57) were slightly more positive (https://www.parp.gov.pl., 2023, pp.73-74). On the other hand, despite the Covid-19 pandemic, the decline in Poland's GDP was relatively small at -1.7 per cent and -2.7 per cent in Q3 and Q4 2020, respectively, compared to the same quarters of 2019. In view of the crisis caused by the Covid-19 pandemic in 2020, the government launched a number of tools to support businesses including, among others, a crisis shield (https://www.oecd-ilibrary.org/, https://www.worldbank.org/, https://comsision.europa.eu/). The second hypothesis arguing that the smaller the company, the more often it encounters greater problems and barriers to the development of its business during crises, was confirmed only in the case of slightly higher indicators for the manufacturing and trade (non-TSL) industries, for the share of, e.g., logistics and transport costs in company turnover, which were 50% and 55% respectively.

The increase in business efficiency will depend on various indicators related to marketing, customer service or business profitability, as well as motives (e.g., innovative concepts and solutions for logistics development) and barriers to the development of logistics in the SME sector (including, among others, lack of adequate IT support for logistics activities, lack of qualified staff, etc.) (https://www.manpowergroup.pl/). Therefore, managers in the framework of improving the functioning of their SME sector enterprises should focus and pay attention to the digitalization of their processes in the SME sector. However, the barriers to the development of logistics in the SME sector should be solved through, among others: resources from European funds (such as eurogrants implemented under the European Funds for a Modern Economy program). The selection of appropriate indicators to assess the performance of a company will contribute to the assessment of the achievement of both strategic and

operational goals of companies. A reliable analysis conducted in companies will certainly provide answers.

At the moment the research carried out in the article cannot be reduced to research on this topic, both regarding the networking of enterprises in the SME sector in Łódź and in other voivodeships, due to limitations in the literature on the subject.

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