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Main Directions of Changes in Road Transport of Goods in Poland

Keywords: road transport; trucks; freight transport; cargo transport; Poland

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Abstract

Theoretical background: Road transport is the key type of transport in Poland in terms of servicing the domestic and international market. Since Poland entered the European Union, there has been a systematic, spatially diverse increase in the number of transport companies.
Purpose of the article: The aim of the article is to analyze the main changes that are occurring in Polish road transport based on the data of the Central Statistical Office in Warsaw from 2004–2023. Particular emphasis has been placed on the comprehensive coverage of the changes that have occurred in the recent period in the road transport sector in Poland. Attention was paid to the issue of green transformation of the road transport sector and the use of alternative fuels.
Research methods: The study used basic statistical methods to analyze the structure and dynamics of changes that occurred in the road transport sector in Poland during the period under study. Regression analysis was carried out to determine the directions of the changes taking place. The analyses were based on official databases and data published by the Central Statistical Office. The comprehensive scope of the analysis included the use of data covering trucks by load capacity, vehicle age, type of fuel used, cargo transport, number of employees and turnover. The study also used data on transportation in export and import operations.
Main findings: The results of the study demonstrate that road transport in Poland is strongly dependent on international export and import operations directed primarily towards Germany. The existing fleet of

trucks uses primarily diesel fuel, which indicates a huge potential for investment in alternative fuel sources. Mazovian and Greater Poland voivodeships (provinces) play a leading role in road transport in terms of the number of tractor units, as their territories are intersected by Pan-European Corridor II.

Introduction

Road transport is a vital mode of transport and plays a key role in global economic development. Its importance in the economy varies depending on the geographical location of the country, the terrain, as well as the access to the sea and inland waterways. The development of road transport is also influenced by the applicable transport policy and historical and geopolitical conditions related to the durability or changes of state borders (Hilal, 2008). Recently, the discourse on the ongoing changes in road transport has been brought to the fore by postulates related to reducing its negative impact on the natural environment. The diffuse nature of road transport emissions stems from its intrinsic feature of door-to-door delivery of goods (Dyczkowska, 2019). Paradoxically, this feature of road transport, although an advantage over other modes of transport, contributes to the emergence of many adverse phenomena in the environmental and social areas.

The purpose of the article is to conduct a multifaceted analysis of the changes that are taking place in road transport in Poland. Attention was paid to the main factors that determine the development of the road transport sector. These include spatial factors that affect the spatial differentiation of the sector. Another important issue that was signaled in the research in the context of the "green transformation" of the road transport sector is the use of alternative fuels. The Polish road transport sector, due to its geographic location, is heavily dependent on international operations for both exports and imports.

This article is part of the current discourse in scientific research oriented towards determining the development potential of the road transport sector. Poland, due to its huge resource potential in the form of multi-purpose tractor-trailers, plays a leading role in the European road haulage market.

Literature review

The vast changes that took place in the road transport of goods in Poland were mainly related to the restructuring of the economy and subsequent accession to the EU structures (Taylor & Ciechanski, 2008). As a consequence of Poland's entry to the European Union, road freight companies undertook many adaptation measures that were necessary to operate on the European road transport market. From the operational point of view, the adaptation activities of the enterprises consisted in the adaptation of the fleet of trucks to handle export and import cargoes located in the EU (Antonów, 2016). The technical modernization of road transport companies in

Poland was also a result of the public growing understanding of the environmental impact of this transport mode (Dembińska, 2017; Lane, 2000; Shen et al., 2011). The impact on the development of road transport of foreign logistics operators which started their operations in Poland by introducing standards for road carriers should also be noted (Górczyńska et al., 2018).

In the European context, the Polish market can be considered unique due to its position and great importance in international logistics (Poland accounts for 15% of all transport in the European Union) (Kędzior-Laskowska, 2020). In terms of tonne-kilometers (i.e. a unit of measurement corresponding to the transport of one ton of goods per kilometer), Poland is the second largest transport country in Europe, just behind Germany. Polish carriers perform well as third parties in international flows and constitute the majority in international long-haul transport.

The domestic logistics sector is to a large extent a reflection of the systemic solutions and practices implemented in the European Union by international logistics operators (Semenova et al., 2020). The network logistics structures of logistics operators enable taking measures in the area of route optimization and thus CO_2 emissions reduction. At the same time, technological innovations are non-continuous in nature and new technologies bring about significant benefits for customers. Representatives of global logistics operators which are active in the road transport sector and have a "road" division in their organizational structure, such as Geis, DHL, Dachser, Raben, Shenker, Rhenus, DSV, have their branches in Poland.

Initiatives and ongoing projects aimed at reducing CO_2 emission by using electric vehicles are worthy of attention (Bednarski et al., 2020). One such initiative is the Vehicle to Building (V2B) concept. It is an intermediate stage between the Vehicle to Home (V2H) and Vehicle to Grid (V2G) concepts. The idea behind it is to reduce the energy costs associated with charging electric cars on the basis of known arrival and departure times of vehicles. The project is aimed at reducing the critical load on buildings as part of the Building Energy Management System (BEMS). This is especially important in the context of replacing the traditional fleet of trucks with new electric vehicles in heavy transport (Letkiewicz et al., 2023). The pursuit of road logistics operators and road transport companies to implement a zero-emission strategy in Poland in the future will result in a significant increase in demand for electricity in road terminals, storage facilities, parking lots, and other supply chain points.

In addition to the above-mentioned initiatives focused on researching the transformation of the road transport sector towards zero emissions, it is worth highlighting the activities of the Federal Statistical Office in Wiesbaden (German: *Statistisches Bundesamt*) which provided experimental statistical data based on the toll collection system (German: *Lkv-Maut*). Thanks to these data, it is possible to assess not only the road transport sector, but also individual companies in terms of their emissions based on EURO emission standards and the number of kilometers traveled in national and international transport. They also show the dynamics of economic activity of road transport companies in spatial terms, indicating the balanced orientation of road

carriers. In Poland, the basis for such analyses is data from the E-toll system which is a valuable source of information on the emissions of the road transport sector.

Due to the use of various types of fuel, road transport is one of the largest sources of greenhouse gas emissions (GHGs) (Pulles & Yang, 2011; Szczepański et al., 2022). At the same time, the trend towards introducing legislative solutions promoting sustainable alternative fuel sources has recently become increasingly visible in the EU political debate (Marchi et al., 2023). Such types of fuels include Bio LNG, H2, HVO100, HVO75, Biodiesel, CNG, and LNG (Liang et al., 2019; Sreeharsha et al., 2023).

Its strategic location on the New Silk Road (Belt and Road) in the geopolitical context means that Poland is treated as a "hub" and a "gateway" to Europe for goods coming from China (Chen et al., 2022; Jakubowski et al., 2020; Pendrakowska, 2018). This convenient location, allowing for combinations of projects and initiatives in the field of rail, sea, and air transportation, has greatly influenced the dynamic development of inter- and multimodal transport, in which road transport plays a vital role (Radzikowski, 2019). Four intermodal transport corridors: two vertical and two horizontal, cut through Poland, affecting the regional diversity of the figures and activities of road transport operators (Czerewacz-Filipowicz, 2022; Hilal, 2008). Taxonomic and econometric analyses show that the voivodeships with the greatest potential for the development of road transport are the Mazovian and Greater Poland which are intersected by Pan-European Corridor II (Czech & Lewczuk, 2016). On the other hand, in terms of opportunities and challenges related to the development of the Belt and Road Initiative (BRI), Mazovian, Silesian, Pomeranian, Greater Poland, and Lower Silesian voivodeships hold the top spots (Wilczewska et al., 2022).

Poland's high position on the EU road transport market in the context of ongoing changes in legislation, environmental policy, and access to employees implies an intensification of competitive activities (Białowąs & Wojtas, 2015). Road carriers from the "old European Union" countries benefit from various instruments to protect the internal road transport market. Therefore, the aim of the article is to analyze the main directions of changes occurring in road transport in Poland. This is important in terms of both trade in the European Union and road transport companies in Poland. The analysis employed quantitative methods which adequately illustrate the changes taking place in the road transport sector.

The remaining part of the article is organized as follows. Part two presents the materials and methods used in the research. Part three discusses the results, whereas the final section contains the conclusions.

Research methods

Research on the ongoing changes in road transport includes numerous methodologies and spatial approaches. They include: scenario-based strategic modeling (Asgarpour et al., 2023), transport-environmental Kuznets curve (Zhang et al., 2023),

data envelopment analysis (Baran & Górecka, 2019), regional market potential (Rokicki & Cieślik, 2023), and the decomposition analysis (Tsemekidi Tzeiranaki et al., 2023). Structure, dynamics, and regression analyses were used to determine the directions and pace of changes in road transport in Poland. The study was based on official data published in databases of the Central Statistical Office in Warsaw (GUS, 2023b, 2023a). The scope of data used in the study included trucks by load capacity, vehicle age, type of fuel used, cargo transport, number of employees and turnover, as well as transport in export and import operations.

Results

Road transport of cargo is a significant part of the transport system in Poland and the entire European Union. Revenues from cargo transport are steadily increasing. In 2019, they amounted to PLN 146,928.7 million in Poland, while in 2020, they rose to PLN 147,397.9 million. It is worth noting that revenues from the carriage of cargo by road transport accounted for as much as 91% of total revenues. In 2020, 2.331 billion tonnes of goods were transported by road transport in Poland and 4.615 billion tonne-kilometres were made. The average transport distance of 1 tonne of cargo in 2020 was as much as 198 km. In 2020, road freight transport in international transport amounted to 327 million tonnes and 231 billion tonne-kilometres. The average transport distance of 1 tonne of cargo in international transport in 2020 was as much as 706 km, while the transport of cargo in large containers by road transport was 15.329 million tonnes. Transport performance by road transport that year reached 3.583 billion tonne-kilometers.

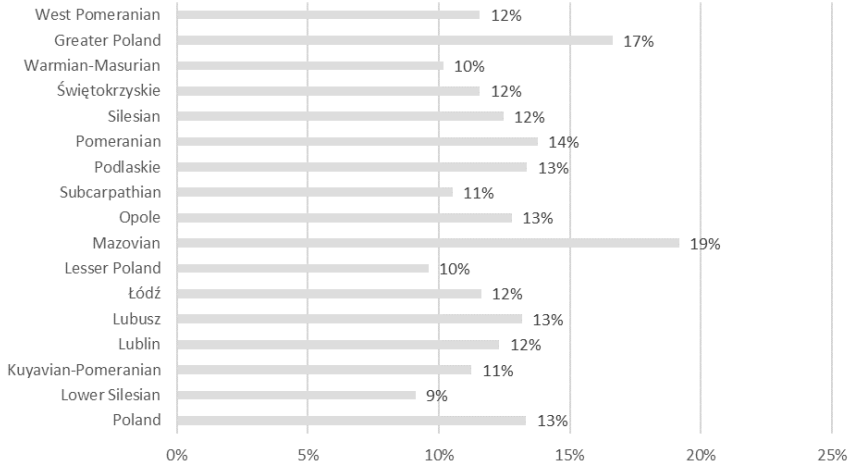

Figure 1. Share of tractors among trucks by voivodeship in Poland in 2020

Source: Author's own study.

The share of tractors among trucks in Poland is also constantly increasing. Data for 2020 in Poland and individual voivodeships are presented in Figure 1. It is worth highlighting that in the Mazovian, Greater Poland, and Pomeranian voivodeships, this percentage exceeded the national average, which in 2020 was 13%. The analysis of the number of cars used in transport also demonstrates its steady growth. Compared with 2004, in 2020, the number of trucks with a load capacity of more than 15 tonnes increased more than fivefold, the number of trucks with a load capacity of 10 to 15 tonnes, more than doubled, and the number of trucks with a load capacity of 7 to 10 tonnes increased by 46% (cf. Table 1).

Table 1. Trucks by load capacity group in Poland in 2004–2020

Years	Load capacity				
	3,500–4,999 kg	5,000–6,999 kg	7,000–9,999 kg	10,000–14,999 kg	15,000 and more
2004	44,604	132,030	66,218	42,297	8,903
2005	46,491	134,915	69,188	46,533	11,544
2006	48,274	137,567	71,850	51,114	14,841
2007	49,935	140,565	75,136	56,803	19,825
2008	52,763	147,136	80,040	63,629	24,736
2009	53,089	149,650	80,947	66,656	26,843
2010	53,715	150,041	81,978	69,298	29,028
2011	54,461	150,794	83,463	72,865	32,330
2012	54,529	148,371	83,508	73,445	33,289
2013	55,021	149,072	84,314	75,723	34,365
2014	55,398	149,806	85,516	78,049	35,731
2015	56,027	150,813	86,943	80,406	37,271
2016	56,553	151,612	88,725	83,060	38,908
2017	57,134	151,134	90,375	85,869	40,785
2018	57,828	151,852	92,404	90,079	43,653
2019	58,498	152,760	94,543	93,889	46,229
2020	59,221	153,459	96,373	97,192	48,342
index (2004=100)	133%	116%	146%	230%	543%

Source: Author's own study.

Between 2004 and 2020, the number of vehicles with a load capacity of more than 15 tonnes increased by an average of 3,159 units per year, vehicles with a load capacity of 10 to 15 tonnes – by 2,302 units per year, and those with a load capacity of 7 to 10 tonnes – by 1,664 units per year (cf. Figure 2).

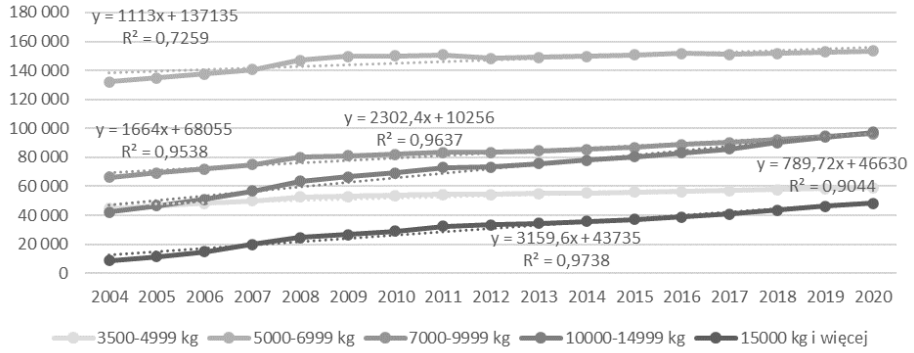

Figure 2. Linear trend functions of the number of trucks by load capacity group in Poland in the years 2004–2020

Source: Author's own study.

In Poland, in 2020, temperature-controlled box vehicles accounted for only 2.72% of the total share, while container and swap-body transporters accounted for 0.39%. The truck fleet in Poland is still dominated by old cars (cf. Figure 3). In 2020, over 30-year-old vehicles accounted for 21.9% of all trucks (of which as much as 35.4% were trucks with a load capacity of more than 15 tonnes). Among new trucks (up to five 5 years old), tractor units accounted for the largest group.

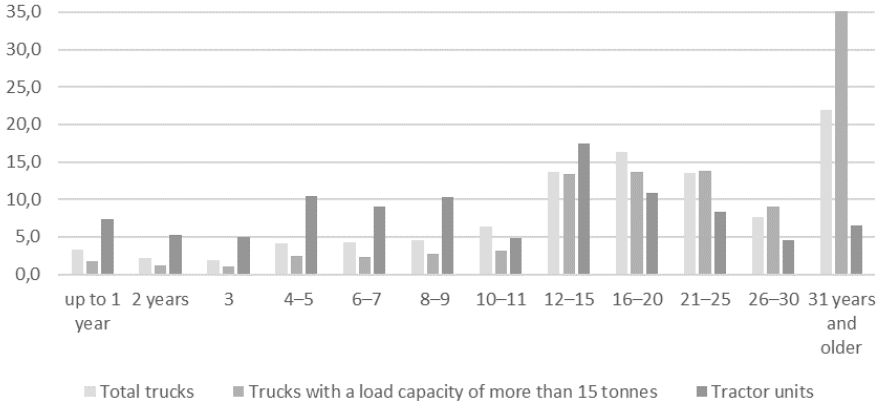

Figure 3. Structure of trucks and tractor units by age in Poland in 2020

Source: Author's own study.

In 2020, tractor units in Poland mainly ran on diesel (98%). Other types of fuel used accounted for a negligible share in this respect (cf. Figure 4).

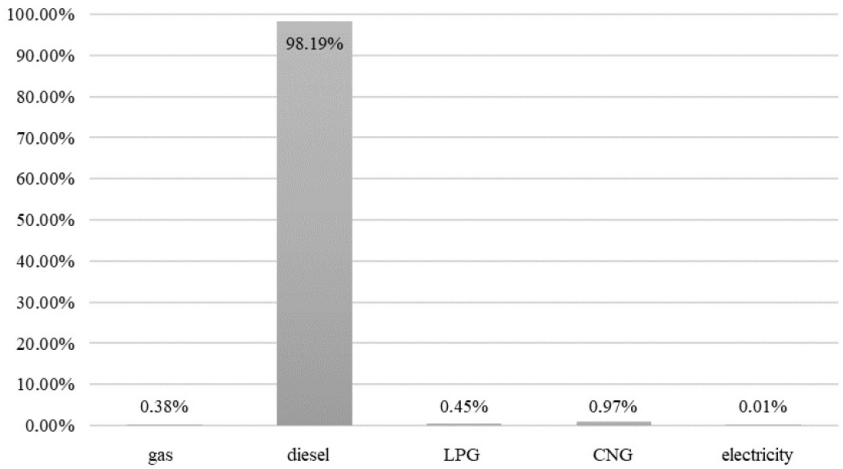

Figure 4. Tractor units by type of fuel in Poland in 2020

Source: Author's own study.

In 2020, compared with 2019, the number of total truck trailers and total truck semi-trailers in Poland increased by 2% and 5%, respectively. It is worth noting that in the analyzed period, the number of container and swap-body transporters grew by as much as 10%, and the number of temperature-controlled box semi-trailers, by 8% (see Table 2).

Table 2. Truck trailers and semi-trailers in Poland in 2019–2020

Specification		Year 2019	Year 2020	Structure in 2020	Dynamics 2020/2019
Truck trailers	total	578,893	592,498	100	102%
	with a load capacity of more than 15 tonnes	16,168	16,795	2.8%	104%
	temperature-controlled box	2,425	2,510	0.4%	104%
	container and swap-body transporters	11,527	11,888	2.0%	103%
Truck	semi-trailers total	440,990	461,598	100	105%
	with a load capacity of more than 15 tonnes	424,710	445,343	96%	105%
	temperature-controlled box	52,858	57,047	12%	108%
	container and swap-body transporters	10,973	12,102	2%	110%

Source: Author's own study.

In 2020, freight transport by hire or reward road transport amounted to 1,379,282,000 tonnes and 414,782 million tonne-kilometres, and the average transport distance of 1 tonne of cargo was 301 km. Freight transport and distance travelled by hire or reward road transport vehicles broken down by transport direction in 2019–2020 in Poland is illustrated in Table 3.

Table 3. Freight transport and distance travelled by hire or reward road transport vehicles by transport direction in 2019–2020 in Poland

Transport direction	Years	Cargo transport by hire or reward road transport in million tonne-kilometres	Cargo transport by hire or reward road transport in %	Distance travelled by hire or reward road transport vehicles in million vehicle-kilometers	
				loaded	empty
Total	2019	313,118	100.0	19,613	4,731
	2020	319,383	100.0	19,993	4,923
Domestic transport	2019	91,893	29.3	5,960	2,925
	2020	97,073	30.4	6,332	2,946
International transport	2019	221,225	70.7	13,653	1,806
	2020	222,310	69.6	13,661	1,978
Export	2019	71,294	22.8	4,607	153
	2020	66,766	20.9	4,353	162
Import	2019	63,073	20.1	3,782	592
	2020	60,059	18.8	3,553	602
Cross-trade	2019	66,224	21.1	3,905	371
	2020	72,552	22.7	4,284	521
Cabotage	2019	20,634	6.6	x	x
	2020	22,933	7.2	x	x

Source: Author's own study.

In the years under study, the share of international transport accounted for as much as 70% of cargo transport by hire or reward road transport. It is also worth pointing out that these transports are better organized than domestic transports, in which empty runs account for up to half of the trips. In international transport, empty runs account for only 13% of total distance travelled. Road transport of cargo refers to both the export and import of goods, with a slight predominance of export. We should also notice that in 2020, compared with 2019, the volume of cross-trade and cabotage increased by nearly 10%.

Table 4. Export of goods by road transport a by countries in 2020

Countries	Tonnes			Tonne-kilometres			Average transport distance of 1 tonne of cargo in km
	in thousands	2019=100	in percentage	in millions	2019=100	in percentage	
Total	87,623	97.6	100.0	70,841	93.3	100.0	808
of which EU countries	83,230	97.1	95.0	66,502	93.4	93.9	799
Austria	1,990	102.4	2.3	1,369	102.2	1.9	688
Belgium	2,746	110.1	3.1	3,211	104.0	4.5	1,170
Belarus	458	66.6	0.5	219	54.3	0.3	478
Czech Republic	8,281	103.6	9.5	2,799	88.8	4.0	338
Denmark	1,969	111.6	2.2	1,785	105.5	2.5	907
Finland	400	91.6	0.5	512	97.9	0.7	1,280
France	4,814	100.9	5.5	7,283	101.4	10.3	1,513
Spain	836	65.7	1.0	1,885	61.4	2.7	2,255

Countries	Tonnes			Tonne-kilometres			Average transport distance of 1 tonne of cargo in km
	in thousands	2019=100	in percentage	in millions	2019=100	in percentage	
Netherlands	3,337	86.5	3.8	3,589	86.0	5.1	1,076
Lithuania	3,077	116.6	3.5	1,309	98.6	1.8	426
Latvia	782	190.8	0.9	550	162.2	0.8	703
Germany	34,213	91.9	39.0	21,758	89.9	30.7	636
Norway	406	152.7	0.5	521	204.2	0.7	1,281
Russia	1,596	93.9	1.8	2,051	86.4	2.9	1,285
Romania	975	68.8	1.1	1039	62.1	1.5	1,065
Slovakia	5,099	100.9	5.8	1,902	98.3	2.7	373
Switzerland	543	237.3	0.6	630	225.7	0.9	1,159
Sweden	2,302	99.3	2.6	1,682	90.4	2.4	731
Ukraine	1,133	146.0	1.3	585	114.3	0.8	517
Hungary	2,669	87.0	3.0	1,720	81.3	2.4	644
United Kingdom	3,220	108.6	3.7	5,073	104.1	7.2	1,575
Italy	4,123	96.7	4.7	5,987	97.6	8.5	1,452
Other	2,652	120.3	3.0	3,383	99.4	4.8	1,276

Source: www.stat.gov.pl as of May 20, 2022.

An analysis of freight exported by road transport and by country in 2020 (cf. Table 4) indicates that 95% of tonnes of goods were transported from the European Union countries, of which Germany was the undisputed leader in this respect (39%). Other countries from which we also exported goods by road transport were France (10% tonne-kilometres), the United Kingdom (7.2% tonne-kilometres), and the Netherlands (5.2% tonne-kilometres).

Table 5. Import of goods by road transport a by country in 2020

Countries	Tonnes			Tonne-kilometres			Average transport distance of 1 tonne of cargo in km
	in thousands	2019=100	in percentage	in millions	2019=100	in percentage	
Total	74,270	98.8	100.0	63,385	96.2	100.0	853
of which EU countries	71,961	102.3	96.9	60,895	96.6	96.1	846
Austria	2,019	97.9	2.7	1,441	96.7	2.3	713
Belgium	3,132	86.6	4.2	3,693	83.5	5.8	1,179
Belarus	595	97.4	0.8	320	96.0	0.5	538
Czech Republic	7,838	123.6	10.6	3,111	130.7	4.9	397
Denmark	1,170	116.1	1.6	1,139	116.4	1.8	974
Finland	778	127.7	1.0	989	132.8	1.6	1,272
France	3,081	85.4	4.1	4,633	85.5	7.3	1,504
Spain	1,332	75.3	1.8	3,411	78.0	5.4	2,560
Netherlands	4,255	98.6	5.7	4,913	101.7	7.8	1,155
Lithuania	1,487	69.9	2.0	694	65.4	1.1	466
Latvia	648	147.2	0.9	471	140.3	0.7	727
Germany	29,307	94.2	39.5	19,434	92.5	30.7	663

Countries	Tonnes			Tonne-kilometres			Average transport distance of 1 tonne of cargo in km
	in thousands	2019=100	in percentage	in millions	2019=100	in percentage	
Norway	309	72.2	0.4	382	80.8	0.6	1,237
Russia	551	75.3	0.7	892	75.0	1.4	1,619
Romania	402	81.5	0.5	512	98.5	0.8	1,273
Slovakia	3,768	107.5	5.1	1,558	116.0	2.5	413
Switzerland	159	91.9	0.2	201	102.5	0.3	1,268
Sweden	2,159	133.5	2.9	1,563	121.4	2.5	724
Ukraine	445	106.8	0.6	300	113.9	0.5	674
Hungary	2,596	106.2	3.5	1,710	100.5	2.7	659
United Kingdom	1,468	89.6	2.0	2,300	85.6	3.6	1,567
Italy	4,748	108.2	6.4	6,746	106.1	10.6	1,421
Other	2,023	120.6	2.7	2,973	118.1	4.7	1,468

Source: www.stat.gov.pl as of May 20, 2022.

The analysis of cargo imported by road from Poland in 2020 also concerned 97% of EU member states (cf. Table 5). The largest number of tonnes of cargo was transported by road to Germany (nearly 40%), the Czech Republic (10.6%), Italy (6.4%), the Netherlands (5.7%), and Slovakia (5.1%). The situation was slightly different in the case of the volume of cargo transported by road from Poland in 2020 in terms of tonne-kilometres. The largest number of tonne-kilometres of cargo was transported by road to Germany (nearly 31%), Italy (10.6%), the Netherlands (7.8%), and France (7.3%). An average transport distance of 1 tonne of cargo in kilometers among imported goods was recorded in Spain, Russia, and the United Kingdom. As compared with 2019, in 2020, Latvia, Finland, and the Czech Republic registered the largest increase in the volume of imported goods in tonne-kilometres by road transport with 40%, 33%, and 30%, respectively. The largest decrease in this respect was observed in Lithuania (nearly 35%), Russia (25%), and Spain (22%). Freight transport by road in hire or reward transport in million tonne-kilometres by distance classes in domestic transport in 2020 clearly indicated that 60% of routes were between 150 and 500 km, 20% of routes – between 50 and 150 km, and 14% of the routes – over 500 km.

Table 6. Number of cars at the disposal of SMEs in hire or reward road transport in 2019–2020 in Poland

Specification	2019	2020	Structure in 2020 in %	Dynamics 2020/2019 in %
Total	6,990	7,069	100%	101%
of which: 5 and under	496	488	7%	98%
6–9	1,157	1,139	16%	98%
10–19	2,954	2,937	42%	99%
20–49	1,676	1,750	25%	104%
50–99	424	469	7%	111%
100 and more	283	286	4%	101%

Source: www.stat.gov.pl as of May 20, 2022.

In Poland, among operators (excluding micro-enterprises) in hire or reward road transport, enterprises with 10 to 20 cars dominated. They accounted for 42% of enterprises assigned according to the Polish Classification of Business Activities 2007 to section H "Transport and warehouse management"; vehicle fleet at disposal. A quarter of transport companies had between 20 and 50 cars. The smallest percentage (4%) were companies with over 100 vehicles. Compared with 2019, in 2020, the number of enterprises with at least 20 cars increased, while the number of enterprises with less than 20 cars dropped. The average volume of road freight transport in the European Union in 2019 was 73,338 km (cf. Table 6). It is worth noting that Poland was the European Union member state with the highest volume of road freight transport. The countries that significantly exceeded the EU average in this respect were: Poland, Germany, Spain, France, the United Kingdom, and Italy. On the other hand, the countries with the lowest volume of cargo transport by road were: Cyprus, Luxembourg, and Estonia. The structure of cargo road transport within the territory of the country (based on tonne-kilometres) as a percentage of total transport indicated that road transport dominated in most European Union countries.

Discussion and conclusions

The analysis of changes taking place in road transport in Poland demonstrated that companies operating in this sector mainly used traditional fuel sources, such as diesel. There was also a trend towards specialization of road transport handling containerized cargo. It is associated with the position of Poland on the New Silk Road, as well as dynamically developing maritime logistics and access to ports. Studies show that, compared with domestic transport, the share of empty trips in international transport is significantly lower. This indicates limitations in the possibility of obtaining domestic orders, which is due to the low weight of cargo available on the transport market in Poland.

The countries that generated the highest value of turnover of road transport companies in the European Union were: France, Germany, and Italy (over PLN 44 billion in 2017). With a turnover of PLN 27 billion, Poland performed similarly in this respect to the United Kingdom, the Netherlands, or Spain. It should be noted that these countries were just behind the three leaders. They also had the largest number of people working in road transport companies among the EU member states.

On the other hand, the countries with the highest number of trucks and tractor units in the European Union were: France, Spain, the United Kingdom, Italy, Poland, and Germany. The above data indicate that Poland is one of the five EU countries that are leading the way in the development of hire or reward road transport. In order to maintain their competitive position on the European Union market, road transport companies operating in Poland undertake activities aimed at improving business models that employ modern technologies available on the market.

Our research also has limitations. First of all, it is based solely on the data provided by the Central Statistical Office in Warsaw. The use of data collected by other institutions, such as Customs Offices or the Ministry of Finance, would allow for a more detailed analysis of changes in the Polish road transport sector in the future.

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