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LAND TERMINAL IN LOGISTIC TRANSPORT CHAIN AND COVID-19 PANDEMIC IN POLAND

**Aldona Kuśmińska-Fijałkowska¹, Zbigniew Łukasik², Jacek Kozyra³,
Sylvia Olszańska-Wesoły⁴, Daniel Krasiuk⁵**

¹ University of Technology and Humanities in Radom
Faculty of Transport Electrical Engineering and Computer Science
Malczewskiego 29, 26-600 Radom, Poland, 48 (48) 3617716
a.kusminska@uthrad.pl

² University of Technology and Humanities in Radom
Faculty of Transport Electrical Engineering and Computer Science
Malczewskiego 29, 26-600 Radom, Poland, 48 (48) 3617710
z.lukasik@uthrad.pl

³ University of Technology and Humanities in Radom
Faculty of Transport Electrical Engineering and Computer Science
Malczewskiego 29, 26-600 Radom, Poland, 48 (48) 3617751
j.kozyra@uthrad.pl

⁴ University of Information Technology and Management in Rzeszow
Chair of Logistics and Process Engineering
Sucharskiego 2, 35-225 Rzeszow, Poland
solszanska@wsiz.edu.pl

⁵ Aleja marzeń 13a, 21-550, Terespol, Poland, 502263987
daniel.krasiuk@dsa.pl

The issue of conducting transport processes in the land terminal in the light of COVID-19 pandemic was raised by the authors of this article. The goal of the research was to receive an answer for the question of whether COVID-19 pandemic had real impact on flow of cargos by land handling terminal functioning in Poland. Interview questionnaire, which was distributed among 100 employees in the real object was used during the research. The conclusions from conducted research are surprising because COVID-19 pandemic has not caused more competition between branches and lowering prices of transport services, and lockdown did not cause suspending of activity of the enterprise. It results from the research conducted in the real object and its analysis. COVID-19 pandemic had positive impact on the enterprise, which shows a list of data about the flow of cargos, which has increased during pandemic years in comparison with previous years in the segment of transport of containers, pandemic definitely had impact on interest of the clients in railway transport in the New Silk Road. New Silk Road is an alternative to maritime and air transport from China. Silk Road has also contributed to the development of the terminal. COVID-19 pandemic had positive impact on interest in the services associated with railway transport, that is, customs clearance, cargo handling, storage, last mile transport services.

Keywords: Intermodal transport, transshipment terminal, process management, civil engineering

1. Introduction

In the logistic systems, transport plays a very significant role. It is one of the basic links of logistic chain. The evolution of transport should be subordinated to the principle of sustainable development and movement of cargos. It should consider economic, ecological and social requirements, whereas, the basic challenge is effective satisfaction of market needs with the lowest possible degradation of natural environment, which is particularly important for the European Union (Di Francesco *et al.*, 2016; Kim, 2023; Vida *et al.*, 2023).

Intermodal terminals play a very important role not only in transport, but in the whole supply chain and in the systems of distribution and transport. The course of operation in the container terminals is of key importance for cargo completion time limit, lowering also the costs of transport (Medwid *et al.*, 2016). Therefore, effective handling and short-term storage of containers are required (Pesch nad Kuzmicz, 2020). They have huge impact on pace and quality of provided services. Nodal infrastructure and connection with the whole transport network and handling is a very significant element of the system of intermodal transport

(Nowaczyk *et al.*, 2021; Kuzniecowa *et al.*, 2020). Despite relatively large number of container terminals located both in Poland and European Union, there are still not enough logistic centres and centres of distribution of goods. It is one of the barriers referring to dynamic development of container transport.

In the article, the authors took action aimed at obtaining an answer to the research question "How do transport processes take place in a transshipment terminal in the light of the Covid-19 pandemic". For this purpose, an interview questionnaire was used to conduct the study. The study was conducted on a real facility – a land transshipment terminal operating in the area Polish.

2. Review of literature

In the last several years, both in Poland and in international commodity exchange, the development of market of intermodal transport can be assessed positively (Neumann, 2021). The issue of intermodal transport is important for integration of transport between various types of transport (Pyza, 2019). In recent years, there was a huge growth of investments in intermodal terminals, both port and land ones (among others, modernization and construction of new terminals, new handling devices, modernization of railway infrastructure, modern IT systems) (Neumann 2018; Kaizer and Neumann, 2021). New links, which are handled by compact intermodal trains are more and more often opened (Grucza, 2017). It happens because both operators and carriers see a huge potential for growth in the segment of intermodal transport (Nowakowski *et al.*, 2007; Klepacki, 2021; Rokicki *et al.*, 2021).

In Polish literature, unfortunately, there is no broad access to publications about the impact of intermodal transport on regional development. Most works on this subject are articles that refer to the functioning or proposed technical solutions in intermodal transport (UTH, 2022). In these works, regulations, strategic documents or commenting commonly available statistical data at national or European level, various types of barriers of its functioning are discussed (Nowakowski *et al.*, 2007; Mielcarek, 2019; Grzelakowski, 2022). The authors raised organizational, analytical and functional aspects for handling bases in their works, classifying them also in terms of specific decision-making problems and showing the options to solve them. Moreover, in specific literature, the values of particular component patterns used while designing handling terminals were also systematized, diverse depending on specific conditions (Jacyna *et al.*, 2017).

In fact, intermodal transport is a network of railway, road, water links with freight hubs – terminals, that is, the places for storing intermodal cargo units, equipped with handling devices. In available foreign literature, we can find information about the largest handling terminals in the world (Kon *et al.*, 2021; Zhang *et al.*, 2020; Mindur and Mindur, 2022). Shanghai Port takes the first place. For over a decade, it has been at the forefront when it comes to collective of the largest and most effective handling terminals in the world (Xiao *et al.*, 2023). This port has not been instantly divided into terminals, but into smaller ports, which were then divided into terminals – something amazing! The most important is a port in Jangsan, situated on an island, which is connected with the land with a bridge, which is 32,5 kilometre long. Port of Singapore takes the second place. It is regarded as the second largest seaport in the world, also the second in Asia. Only number one on our list is larger. This port is situated on southern end of Malay Peninsula, in Singapore (Mindur, 2020). In this case, efficiency is divided into two main container terminals: PSA Corporation Limited and Jurong Port and a few smaller ones. They enable to transport cargos to almost 600 other ports around the world in 123 countries. Port in Shenzhen takes the third place. Located near Hongkongu Shenzhen in Guangdong province (in China), it is increasing its potential every year when it comes to container handling. In fact, it is a collective of huge terminals such as Chiwan, Yantian and Shekou. Geographically, it is coastline, which is 260 kilometres long. Efficiency of this port amounts to 195 million tonnes a year. Rotterdam Seaport takes the fourth place. It is the largest and most important seaport in Europe. Its surface area is 105 square kilometres, for comparison, Poznań has surface area of more than 260 square kilometres. All types of cargos are reloaded there (Urząd Transportu Kolejowego, 2016). DCT Gdańsk container terminal takes the fifth place. Located in the Gdańsk Seaport, its handling potential reached 1,5 million TEU in 2014. In 2020, DCT Gdańsk handled more than 1,9 million TEU, and on April 8, 2021, it reached 15 million TEU since inauguration, which took place 14 years ago. Since 2021, it has become one of three largest ports in the Baltic Sea, Gdańsk Port is the fastest developing European port of the last decade. It is the largest and the most modern handling terminal in Poland. Transoceanic container ships flow into it (Urząd Transportu Kolejowego, 2016; Pluciński *et al.*, 2020; Kaup, *et al.*, 2023).

In 2020, PITD carried out a verification of terminals offering intermodal transport services (NIWCRSO, 2021). According to the research results, there are 44 transshipment terminals in Poland, including 6 sea terminals. The COVID-19 pandemic very quickly influenced the growth dynamics of intermodal transport around the world. Market instability occurred already at the beginning of 2020. However, carriers, sea and land terminals around the world made every effort to ensure that disruptions

were as minimal as possible and most of the work at transshipment terminals continued in "normal" mode. When reviewing the literature in the discussed area, it can be divided thematically into:

- Safety and hygiene in the reloading process: The articles analyze what safety and hygiene measures are introduced during the process of reloading cargo and baggage in land terminals in the context of the COVID-19 pandemic. They include personal protective equipment for staff, cleaning and disinfection procedures, and ensuring adequate sanitation in loading areas (Jereb, 2024; Mishra *et al.*, 2023).

- Management of the flow of goods: In their works, the authors analyze how the pandemic influenced the organization and management of the flow of goods in transshipment terminals. Taking into account changes in the procedures for the delivery, storage and transport of goods to ensure the safety of staff and minimize the risk of virus transmission (Mishra *et al.*, 2023; European Union, 2020; NIWCRSO, 2021)

- Supporting technologies: The authors' works focus on the role of technology in the transshipment process (Di Francesco, 2016). These include, for example, automation systems, remote monitoring systems, and cargo tracking technologies that can help minimize contact between people and ensure the continuity of terminal operations during the pandemic (Weilu *et al.*, 2022; NIWCRSO, 2022; Tubis *et al.*, 2024; Mishra *et al.*, 2019)

- Impact of the pandemic on operational efficiency and costs: The conducted research assesses how the pandemic affected the operational efficiency and operating costs of transshipment terminals. They include an analysis of changes in reloading times, the number of staff, the use of personal protective equipment and possible economic consequences for terminal operators (International Union of Railways, 2020; UIC, 2020; NIWCRSO, 2021)

3. Conducting processes in a land handling terminal

With reference to the issue of intermodal transport, we can distinguish two basic infrastructures. The first one is linear infrastructure, which includes railway lines and roads for motor vehicles. The second one is nodal infrastructure, of which main elements are handling terminals. Handling terminals can be divided into port ones, which are a point of meeting of the branches of maritime, railway, road transport, and land terminals, which are a point of meeting of branches of railway and road transport.

Land handling terminal, where the research was conducted, was established in 1991, it is located in the vicinity of border crossing to Belarus, with surface area of 28 ha. Annually, the company reloads more than 1 500 000 [t] of various cargos (UTH, 2022).

The fundamental subject of activity of the terminal is complex service within the scope of handling, customs clearances and railway forwarding of goods from wide carriages to normal carriages or cars and from normal carriages to wide carriages or cars.

One of the main assumptions of activity of Agrostop terminal is provision of handling services, cargos: coal with an option of crushing and sorting, cement with an option of customizing, aggregates with an option of sorting, ferroalloys, metal sheets in rolls or wire packages, in the coils and in groups, all petroleum-derived products, packaged wood or in logs, gas, containers (Figure 1).



Figure 1. Location of land handling terminal

The enterprise allows clients to store reloaded cargos on the hardened square of surface area of 60 000 m², in 5 warehouses of total surface area of 10 000 m² and customs warehouses. Since 2007, the enterprise has added gas handling to its offer. Land terminal was equipped with 6 posts for handling in broad gauge carriage – tank truck relation. Cargo can also be stored in 4 tanks with the capacity of 57m³ each. Handling power is 7000 – 8000 [t] per month. Making an effort to meet expectations of market and clients of the enterprise has also added to its offer the storage and cargo handling of non-standard sizes, the so-called oversize. The highest possible unit weight of cargo is 150 [t]. Offer of the enterprise concerning freight forwarding activity was presented on Figure 2 (UTH, 2022).

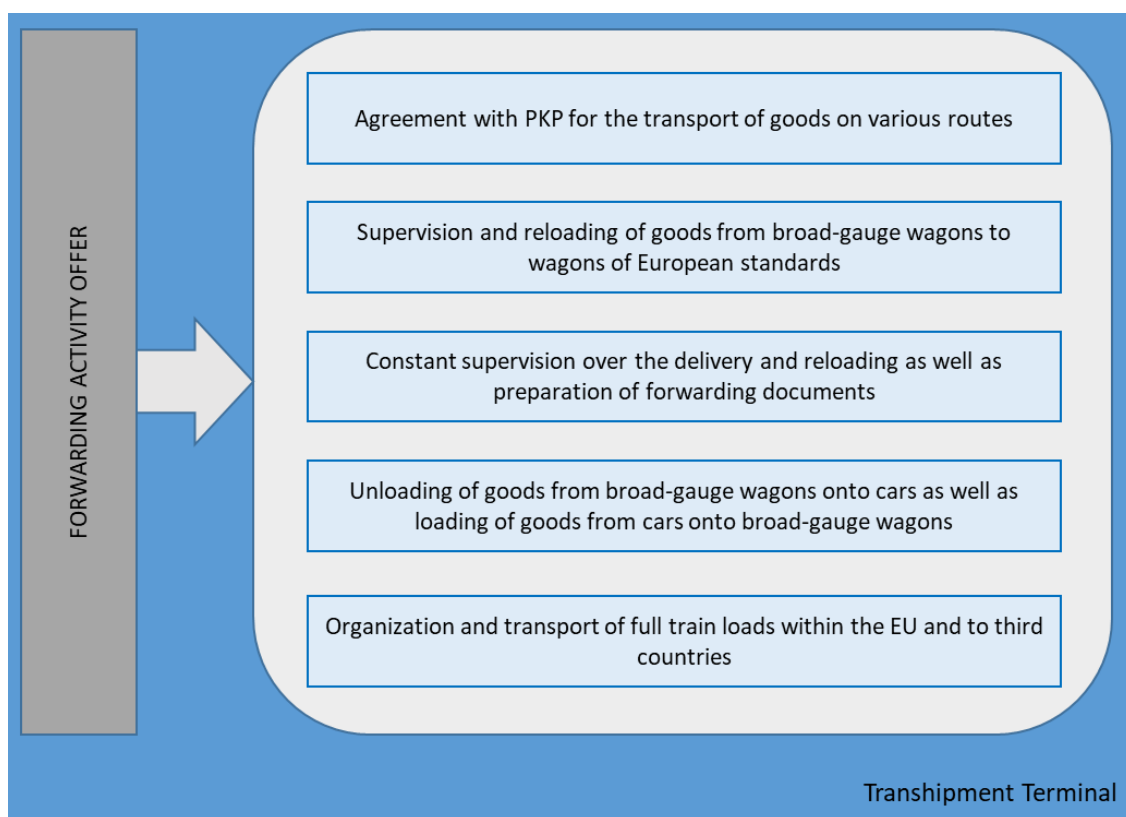


Figure 2. An offer concerning freight forwarding activity of the land terminal

In the first place, importers enter into contracts with selected terminals, forwarders, customs agencies and authorize them to handle within a specific scope. Terminal provides complex services. In the first stage, cargos from the so-called third countries arrive at terminal. It takes place with the use of a broad gauge train. Goods in carriages or containers are allocated to terminals indicated by the importers. Railway carrier registers goods in the customs system in the form of Summary Declaration and number for a specific parcel in a specific means of transport is assigned, it is the customs operation for the purposes of identification.

The second stage includes acceptance in the form of terminal order to place carriages / containers in the terminal. The third stage includes physical arrival to a specific terminal. Railway carrier provides carriages. The fourth stage includes obtaining a permit by e-mail from the Customs Office to unload cargo using numbers of carriages / containers and assigned number of Summary Declaration, indicating an importer / owner of cargo who should do it, sometimes it is a specific terminal on condition of provision of complex services. The fifth stage includes physical unloading of cargos / containers to the terminal using further shipment destination, for example, for loading and shipment by trucks or train, if by train, then close to normal tracks, if by cars, in a different place available to trucks. In the meantime, authorized customs agency performs customs clearance of indicated by an importer or cargo is stored and waits for different form of clearance or for missing documents or border controls of Sanepid, Veterinary, Wijhars, Plant Quarantine depending on the type, specification and destination of cargo. In the sixth stage, if all customs

and control formalities re complied with, cargos / containers by cars or trains are collected to specific place in a country or different countries indicated by an importer.

There is also an issue of returning empty carriages, sometimes containers (in the event that cargo was unpacked) to Małaszewicze Main Station, where trains are formulated and departure from the European Union takes place.

Moreover, in the terminal, there are rest and refreshment facilities to provide appropriate working conditions to the service staff of the terminal to make the whole process efficient. In these buildings, there are also, among others Figure 3 (UTH, 2022).

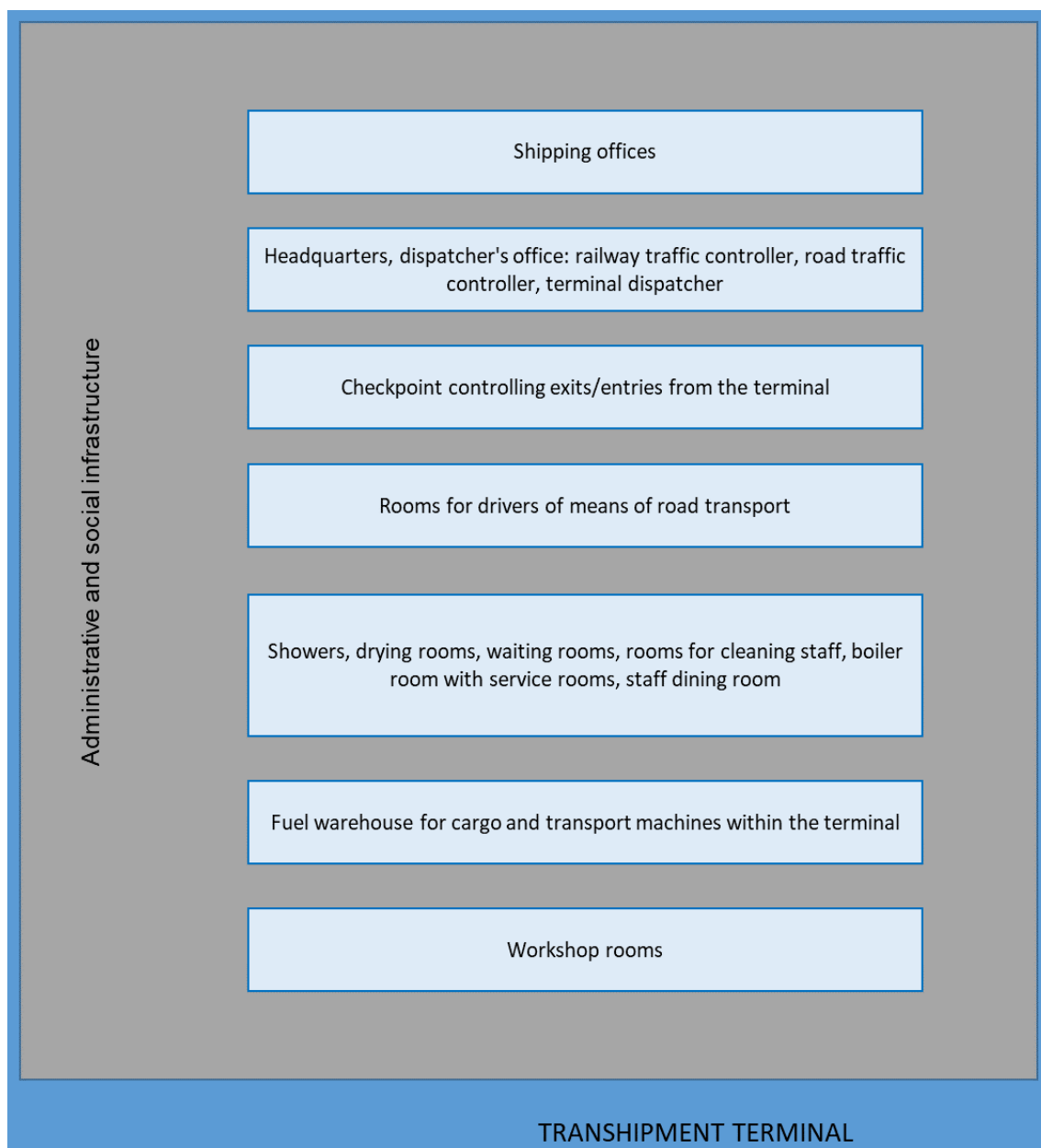


Figure 3. Administrative and social infrastructure of land handling terminal

An important issue that affects functioning of the processes in the land handling base is determination and optimization of structure of flow of cargo units handled in a container terminal, from the moment of arrival until sending. Service actions while handling the units of intermodal transport through railway and road handling base were presented on Figure 4 (Kostrzewski and Nader, 2015).

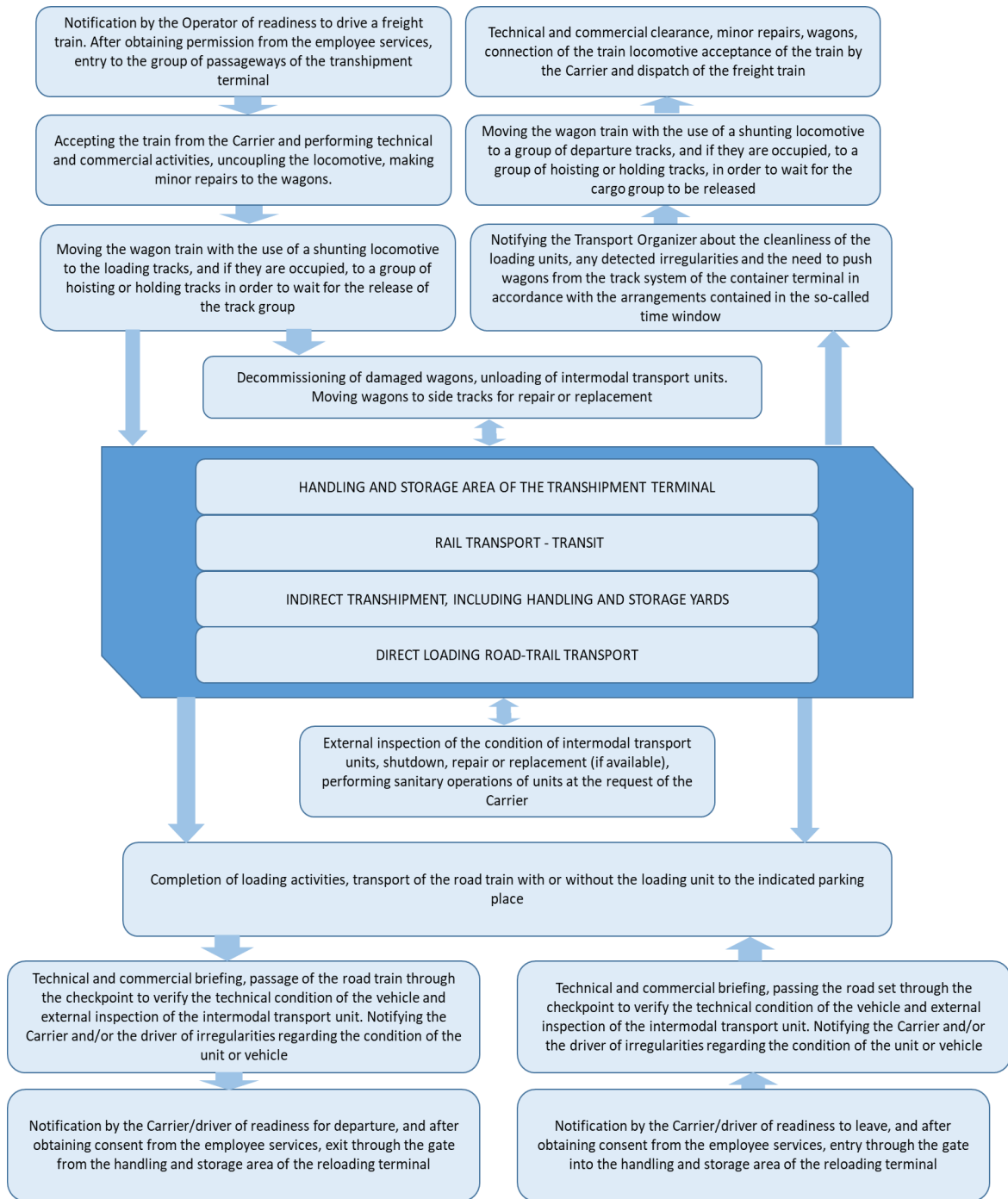


Figure 4. Organization of transport processes in the land handling terminal (Kostrzewski and Nader, 2015)

As we could see, handling terminal where the research was conducted has well-prepared infrastructure that allows to increase capacity of flow of cargos. Gradual growth could be observed in the years 2017-2022, when the number of reloaded containers has increased (Table 1).

Cargo handling in the years 2015-2022 in the terminal was presented in Table 2.

Table 1. The number of reloaded containers in the years 2015-2022

Unit Type	2015	2016	2017	2018	2019	2020	2021	2022
Containers	0	0	7120	21800	23500	73130	110206	141790

Table 2. The mass of reloaded cargos in the years 2015-2022

Mass [t]								
Type of goods	2015	2016	2017	2018	2019	2020	2021	2022
Loose	491000	507000	1116000	708000	951000	659000	787000	231848
Metals	221000	136000	120000	200000	153000	18000	87000	356000
Fuel	117000	38000	11000	3000	2000	0	0	539
Total	829000	681000	1247000	911000	1106000	677000	874000	588387

4. Conducting transport processes in the land terminal in the light of COVID-19 pandemic

The main research goal was to get an answer for the following question:

„How transport processes are conducted in the land handling terminal in the light of COVID-19 pandemic”.

The subject of the research is the impact of pandemic on transport processes, which take place in a land terminal. Research method applied by the authors was an interview questionnaire. The research was conducted between 21.03.2022 and 22.03.2022 among terminal employees. 100 respondents from various departments of the enterprise took part in the research.

4.1. Description of the research sample

In the first place, the respondents were asked to answer the questions from the survey questionnaire. The first question referred to sex (Figure 5).

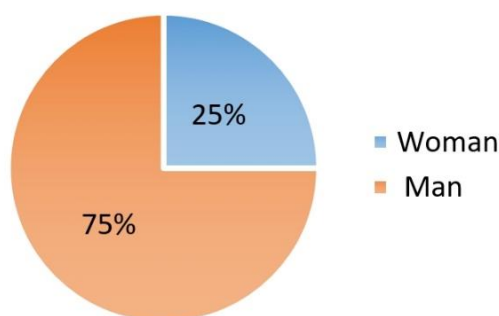


Figure 5. Sex of the research sample

75% s of the research sample were men and 25% were women.

Another question referring to description of the research sample concerned the age. The results were presented on Figure 6.

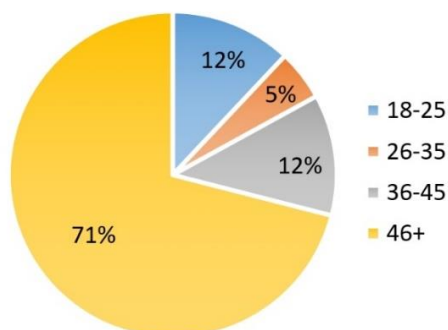


Figure 6. Age of the research sample

71% of the respondents declared that they are 46 years old or older, 12% at the age between 36 and 45, 12% at the age between 18 and 25 and 5% at the age between 26 and 35.

Another question referred to seniority of the respondents. The results were presented on Figure 7.

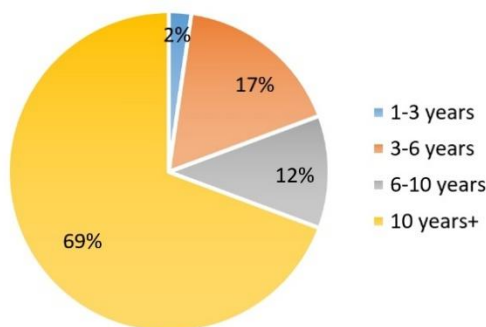


Figure 7. Seniority of the research sample in the land terminal

69% of the research sample declared that they have worked in the terminal for more than 10 years, 17% declared that they have worked for 3-6 years, 12% for 6-10 years and 2% for more than 1-3 years.

To sum up, the research sample, when it comes to sex, are mostly men, most of respondents are at the age of 46 or older, and their most frequent seniority is more than 10 years.

The use of data allows for a better understanding of the survey results and enables the analysis of data in the context of demographic characteristics such as age, gender, and length of service at the land transshipment terminal.

4.2. Experiment

The questionnaire consisted of 16 one-choice questions. The first question was the following: Was there a problem with finding new employees during COVID-19 pandemic in the enterprise. The results were presented on Figure 8.

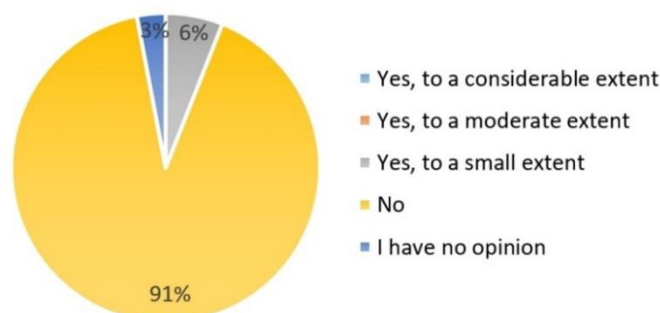


Figure 8. The impact of COVID-19 pandemic on the problems with employing new employees in the terminal

91% of the respondents claimed that in the enterprise, there were no problems with employing new employees during COVID-19 pandemic.

Another question was the following: Has COVID-19 epidemic changed the volume in the terminal of handling / transport on national routes. The results were presented on Figure 9.

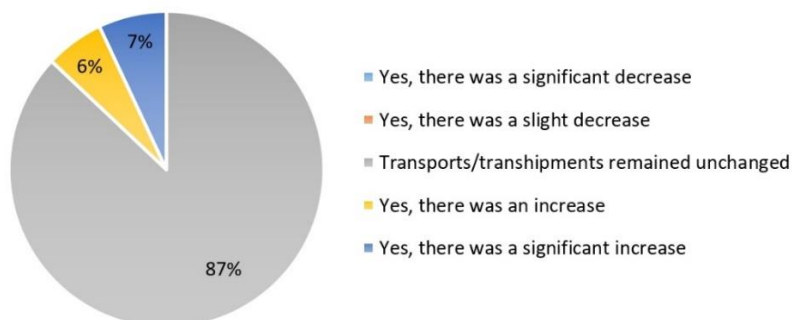


Figure 9. The impact of COVID-19 pandemic on volume of handling / transport on national routes in the terminal

87% of the respondents claimed that transport/ cargo handling on the routes in national traffic remained unchanged, 7% of the respondents claimed that there was a significant growth of transport / handling on national routes and 6% claimed that there was a growth of handling / transport on national routes.

Another question was the following: Has COVID-19 epidemic changed the volume in in the land terminal of handling / transport on international routes. The results were presented on Figure 10.

A total of 13% of respondents had a different opinion regarding the increase in transport/transshipment on domestic transports; an important factor in this case was the seniority of employees declaring such an answer in the questionnaire.

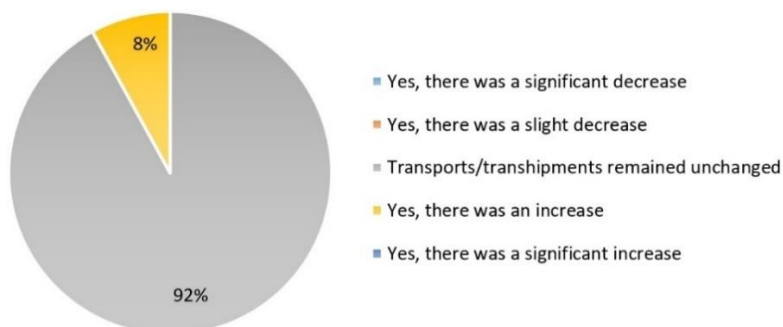


Figure 10. The impact of COVID-19 pandemic on volume of handling / transport on international routes in the terminal

According to the respondents, 92% claimed that handling /transport of cargos in international traffic during COVID-19 pandemic remained unchanged, 8% claimed that there was a growth of handling / transport of cargos in international traffic during COVID-19 pandemic.

Another question was the following: Did COVID-19 epidemic reduce the use any of the means of transport below in the terminal. The results were presented on Figure 11.

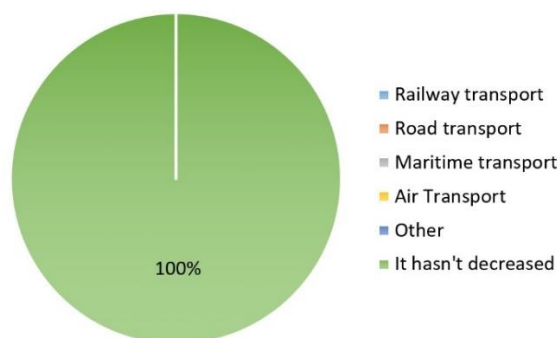


Figure 11. The impact of COVID-19 pandemic on reduction of the use of means of transport

100% of the research sample claimed that the use of the means of transport (various branches) during COVID-19 pandemic was not reduced in the terminal.

Another question was the following: Was there a problem with finding subcontractors of services due to COVID-19 epidemic in the terminal. The results were presented on Figure 12.

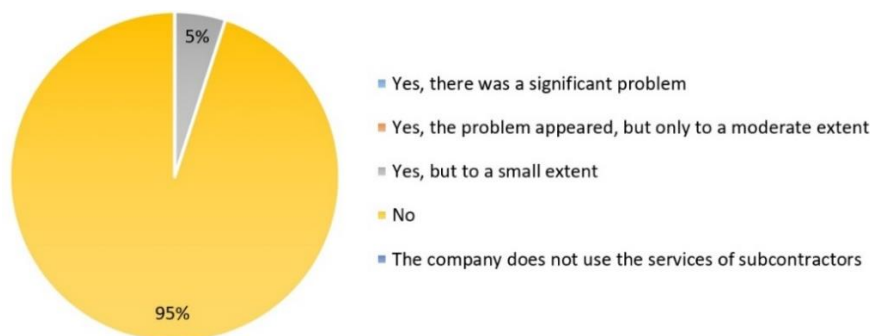


Figure 12. The impact of COVID-19 pandemic on the problem with finding subcontractors of services in the terminal

95% of the respondents claimed that during COVID-19 pandemic, there was no problem with finding subcontractors for the terminal, whereas 5% claimed that it was a small problem.

Another question for the employees of the terminal referred to anti-crisis actions taken by the enterprise during COVID-19 pandemic. The results were presented on Figure 13.

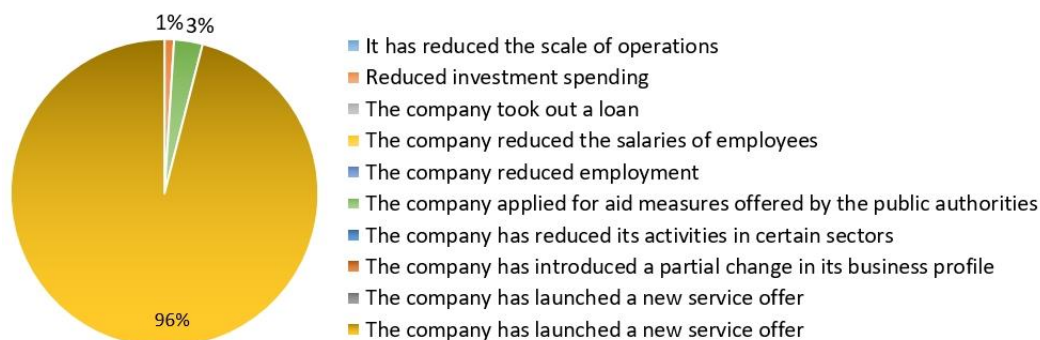


Figure 13. Anti-crisis actions during COVID-19 pandemic in the terminal

96% of the respondents claimed that the enterprise during COVID-19 pandemic did not take any anti-crisis actions, 3% claimed that the enterprise applied for aid funds offered by public authorities and 1% that reduced investment expenditure.

Another question was the following: Taking various aspects of functioning of the terminal into account, how much COVID-19 epidemic affected activity of the enterprise. The results were presented on Figure 14.

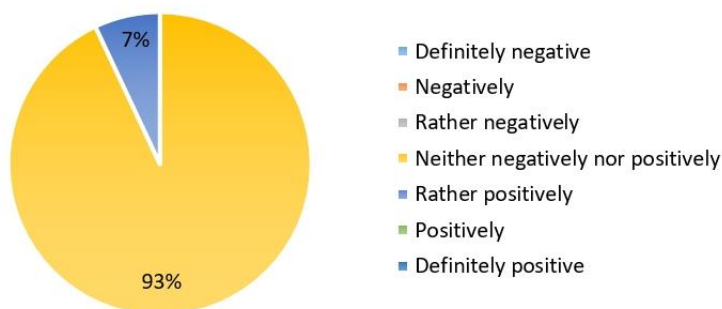


Figure 14. The impact of COVID-19 pandemic on functioning of the terminal during COVID-19 epidemic

The research sample, taking into account various aspects of activity of the enterprise claimed in 93% that COVID-19 pandemic had neither positive nor negative impact on the enterprise, 7% claimed that the impact was rather positive.

Another question was the following: Was there a growth of interest of domestic and foreign clients in railway transport in the New Silk Road during COVID-19 pandemic in the terminal. The results were presented on Figure 15.

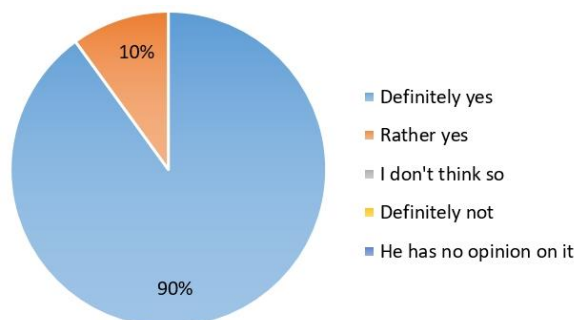


Figure 15. The impact of COVID-19 pandemic on the growth of interest of the clients in railway transport in the Silk Road

90% of the respondents claimed that COVID-19 pandemic definitely had impact on interest of the clients in railway transport in the New Silk Road, 10% claimed that pandemic rather had impact on interest of the clients in railway transport in the New Silk Road.

Another question was the following: Is New Silk Road by railway more and more competitive alternative to maritime and air transport from China. The results were presented on Figure 16.

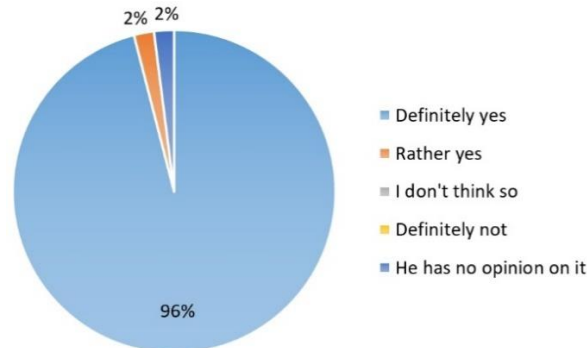


Figure 16. New Silk Road as an alternative to maritime and air transport from China

96% of the respondents claimed that New Silk Road is definitely an alternative to maritime and air transport from China 2% had no opinion on this subject and 2% claimed that New Silk Road is rather an alternative to maritime and air transport from China.

Another question was the following: Has New Silk Road contributed to the development of the terminal. The results were presented on Figure 17.

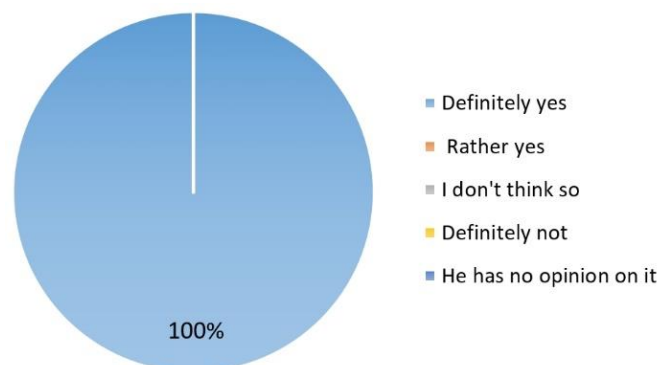


Figure 17. New Silk Road as a cause of the development of the terminal

100% of the respondents claimed that New Silk Road has contributed to the development of the terminal.

Another question referred to demand on interest in services associated with railway transport, that is, customs clearance, cargo handling, storage, last mile transport services during COVID-19 in the terminal. The results were presented on Figure 18.

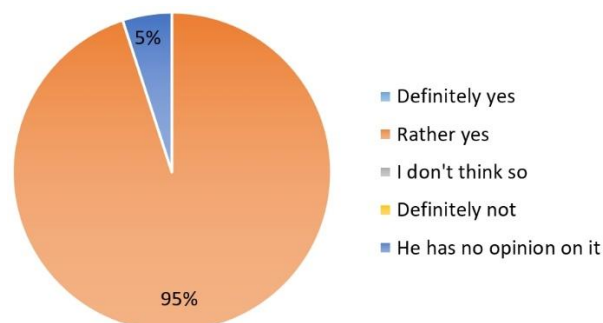


Figure 18. The impact of COVID-19 pandemic on the interest in the services associated with railway transport, that is, customs clearance, cargo handling, storage, last mile transport services

95% of the respondents claimed that there was rather impact of COVID-19 pandemic on interest in the services associated with railway transport, that is, customs clearance, cargo handling, storage, last mile transport services, 5% had no opinion on this subject.

Another question was the following: Can enterprise work in the off-site form during COVID-19 pandemic? (both employees and electronic circulation of documents). The results were presented on Figure 19.

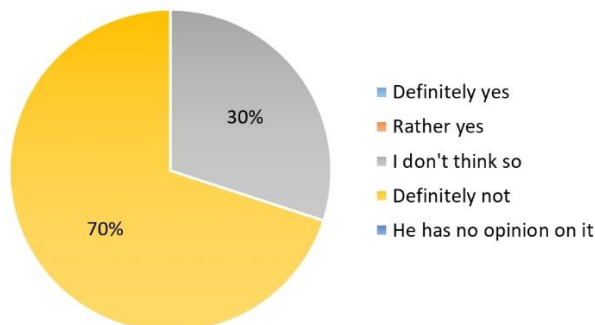


Figure 19. Off-site work in the enterprise

70% of the research sample claimed that the enterprise could definitely not work in the off-site form during COVID-19 pandemic (both employees and electronic circulation of documents), 30% claimed that they rather could not.

Another question was the following: Have maintaining current transport orders and acquiring new clients for the terminal required to lower the prices of services and margin. The results were presented on Figure 20.

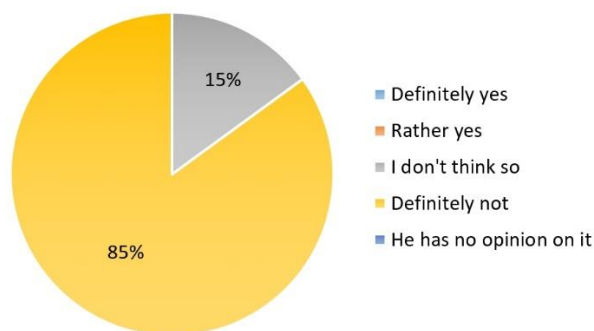


Figure 20. The impact of COVID-19 pandemic on prices and margin

85% of the respondents claimed that maintaining current transport orders and acquiring new clients for the terminal definitely did not require to lower the prices of services and margin, 15% claimed that it rather didn't.

Another question was the following: Will COVID-19 pandemic cause more competition between branches and lowering prices of transport services. The results were presented on Figure 21.

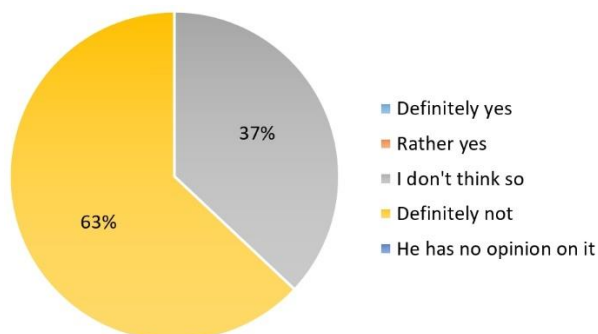


Figure 21. The impact of pandemic on competition and lowering prices of transport services

63% of the respondents claimed that COVID-19 pandemic will definitely not cause more competition between branches and lowering prices of transport services, 37% claimed that it will rather not happen.

The next question was about whether another lockdown would cause suspending of activity of the enterprise. The results were presented on Figure 22.

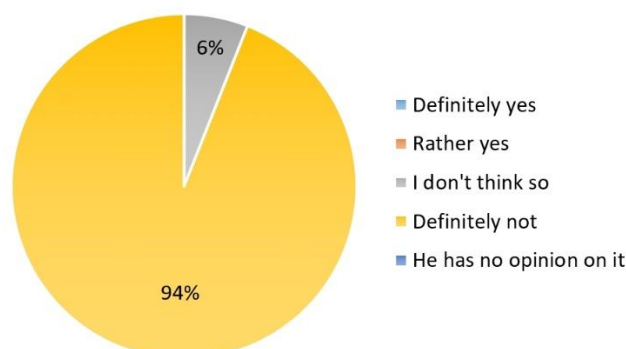


Figure 22. The impact of another lockdown on activity of the enterprise

94% of the respondents claimed that another lockdown could definitely not cause suspending of activity of the enterprise, 6% claimed that it rather couldn't.

The last question was: Did COVID-19 have positive impact on activity of the terminal? The results were presented on Figure 23.

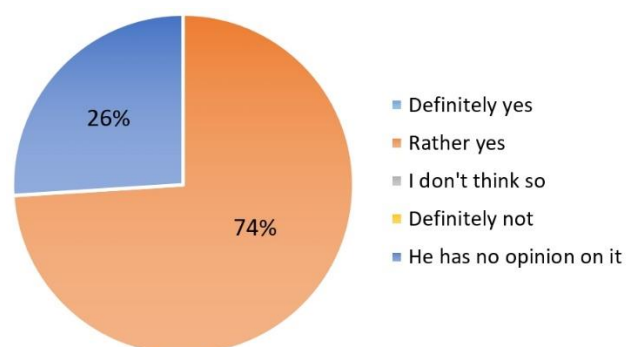


Figure 23. Positive impact of COVID-19

74% of the respondents claimed that COVID-19 had rather positive impact on activity of the terminal, 26% had no opinion on this subject.

4.3. Result

Based on conducted research, in the form of an interview questionnaire, the following conclusions can be drawn:

1. 91% of the respondents claimed that the enterprise had no problems with employing new employees during COVID-19 pandemic.
2. 87% of the respondents claimed that transport / cargo handling on the routes in national traffic remained unchanged, 7% of the respondents claimed that there was a significant growth of transport/ handling on national routes and 6% that there was a growth of handling /transport on national routes.
3. 92% of the respondents claimed that handling / transport of cargos in international traffic during COVID-19 pandemic remained unchanged, 8% claimed that there was a growth of handling / transport of cargos in international traffic during COVID-19 pandemic.
4. 100% of the research sample, claimed that the use of the means of transport (various branches) during COVID-19 pandemic was not reduced in the terminal.
5. 95% of the respondents claimed that during COVID-19 pandemic, there was no problem with finding subcontractors for the terminal, whereas 5% claimed that it was a small problem.

6. 96% of the respondents claimed that the enterprise during COVID-19 pandemic did not take any anti-crisis actions, 3% claimed that the enterprise applied for aid funds offered by public authorities and 1% that reduced investment expenditure.
7. The research sample, taking into account various aspects of activity of the enterprise claimed in 93% that COVID-19 pandemic had neither positive nor negative impact on the enterprise, 7% claimed that the impact was rather positive.
8. 90% of the respondents claimed that COVID-19 pandemic definitely had impact on interest of the clients in railway transport in the New Silk Road, 10% claimed that pandemic rather had impact on interest of the clients in railway transport in the New Silk Road.
9. 96% of the respondents claimed that New Silk Road is definitely an alternative to maritime and air transport from China 2% had no opinion on this subject and 2% claimed that New Silk Road is rather an alternative to maritime and air transport from China.
10. 100% of the respondents claimed that New Silk Road has contributed to the development of the terminal.
11. 95% of the respondents claimed that COVID-19 pandemic rather had impact on the interest in the services associated with railway transport, that is, customs clearance, cargo handling, storage, last mile transport services, 5% had no opinion on this subject.
12. 70% of the research sample claimed that the enterprise could definitely not work in the off-site form during COVID-19 pandemic (both employees and electronic circulation of documents), 30% claimed that they rather could not.
13. 85% of the respondents claimed that maintaining current transport orders and acquiring new clients for the terminal definitely did not require to lower the prices of services and margin, 15% claimed that it rather didn't.
14. 63% of the respondents claimed that COVID-19 pandemic will definitely not cause more competition between branches and lowering prices of transport services, 37% claimed that it will rather not happen.
15. 94% of the respondents claimed that another lockdown could definitely not cause suspending of activity of the enterprise, 6% claimed that it rather couldn't.
16. 74% of the respondents claimed that COVID-19 had rather positive impact on activity of the terminal, 26% had no opinion on this subject.

To sum up, according to the respondents, COVID-19 pandemic had very positive impact on the terminal. Silk Road has contributed to the development of the enterprise. The enterprise had no problems with finding new employees, transport/ cargo handling on the routes in national and international traffic remained unchanged, the use of the means of transport (various branches) during COVID-19 pandemic was also not reduced in the terminal. The terminal had no problems with finding subcontractors and did not take any anti-crisis actions. COVID-19 pandemic had positive impact on the enterprise, which shows a list of data about the flow of cargos, which has increased during pandemic years in comparison with previous years in the segment of transport of containers, pandemic definitely had impact on interest of the clients in railway transport in the New Silk Road. New Silk Road is an alternative to maritime and air transport from China. Most goods from China to Europe are currently transported by sea - cheap but very slow. Air transport, however, is expensive and economically viable only for valuable goods. An intermediate link that allows for faster than sea transport, and at the same time cheaper than air transport, is rail transport. Silk Road has also contributed to the development of the terminal. COVID-19 pandemic had positive impact on interest in the services associated with railway transport, that is, customs clearance, cargo handling, storage, last mile transport services. The enterprise during COVID-19 pandemic can't work in the off-site form (both employees and electronic circulation of documents). Maintaining current transport orders and acquiring new clients for the terminal did not require to lower the prices of services and margin. COVID-19 pandemic will not cause more competition between branches and lowering the prices of transport services, and another lockdown would not cause suspending of activity of the enterprise. COVID-19 had positive impact on activity of the terminal.

5. Conclusions

Based on conducted research and answers of the respondents, the authors received an answer for the following question „*How transport processes are conducted in the land terminal in the light of COVID-19 pandemic*”. Conducting transport processes in the land terminal in the light of COVID-19 pandemic was undisturbed. The respondents claimed that the enterprise had no problems with finding new employees and

had no redundancy programme during the pandemic. Both the course of transport processes in national and international traffic have not changed in terms of amount of reloaded cargo. COVID-19 pandemic has considerably contributed to the number of reloaded cargo in comparison with previous years, the most significant growth was in the segment of container transport, which shows that the pandemic in no way negatively affected the flow of cargos, it was rather the opposite. China's Silk Road has contributed to and had very positive impact on the number of transported cargos even during the pandemic.

Maintaining current orders acquired by the land terminal and acquiring new clients for the terminal did not require to lower the prices of services and margin. COVID-19 pandemic has not caused more competition between branches and lowering the prices of transport services, and lockdown did not cause suspending of activity of the enterprise. It results from the research conducted in the real object and its analysis. COVID-19 had positive impact on activity of the examined land terminal.

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