



THE LOCATION OF AN INTERNATIONAL LOGISTICS CENTER IN POLAND AS A PART OF THE ONE BELT ONE ROAD INITIATIVE

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ABSTRACT. Background: The One Belt One Road initiative opens up many development opportunities for Central and Eastern European countries, some related to the possible construction of a logistics center in this area. For Poland, such an investment would also bring many benefits, not only due to infrastructure development, but also through acceleration of economic growth and job creation. In this context, the crucial issue becomes, what should be the role of an international logistics center and where should it be located. Due to the novelty of the subject, there is a shortcoming of scientific papers related to this issue. The scientific goal of the present paper is to fulfill the gap and to address the question of the role of logistics center and to examine the most prospective future sites for an international logistics center in Poland as well as to formulate an opinion about most favorable location.

Method: This is a review article, theoretical in character. The method used is the analysis of literature sources. As the issue of the choice and location of an international logistics center in Poland on the New Silk Road is the new one, there are very few scientific papers devoted to this subject, and in Polish language only. That is why the authors had to use besides scientific papers the website's sources.

Results: In this paper, a classification of logistics centers, and a discussion of factors that are taken into account in the choice of location for such an investment have been presented as well as the discussion of the advantages and disadvantages of various locations, and of the most likely choice.

Conclusion: Stanisławów (located between Warsaw and Łódź) is the most likely location for an international logistics center servicing the NSR in Poland. Other sites, such as Łódź, Gdańsk or Gorzyczki could provide auxiliary, regional distribution centers.

Key words: logistics center, One belt One Road, New Silk Road, location, Poland.

INTRODUCTION

Clearly, logistics centers are important components of the infrastructure of every country. They stimulate economic growth, streamline the flow of goods and improve the efficiency of supply chains. Global forecasts indicate that logistics centers, both industry-wide, local, regional and international, will decisively shape supply networks. In the context of the New Silk Road (NSR) initiative, which is bound to change the prevailing international order, the role of logistics centers in the development of Central and Eastern European countries may become even more

important. The NSR encourages the creation of a logistics platform with complete infrastructure, one that not only helps China expand, but also supports a deliberate shaping of international economic relations. This trade route will have a significant impact on the operation of global supply chains by shortening the time it takes to transport goods and by expanding interconnections of infrastructure, finance and IT. The New Silk Road opens up opportunities for Poland to play the role of an important logistics hub and distribution center for goods exported from China to EU countries. Poland's strength lies in its geographical location, allowing goods to reach their destination by crossing no more

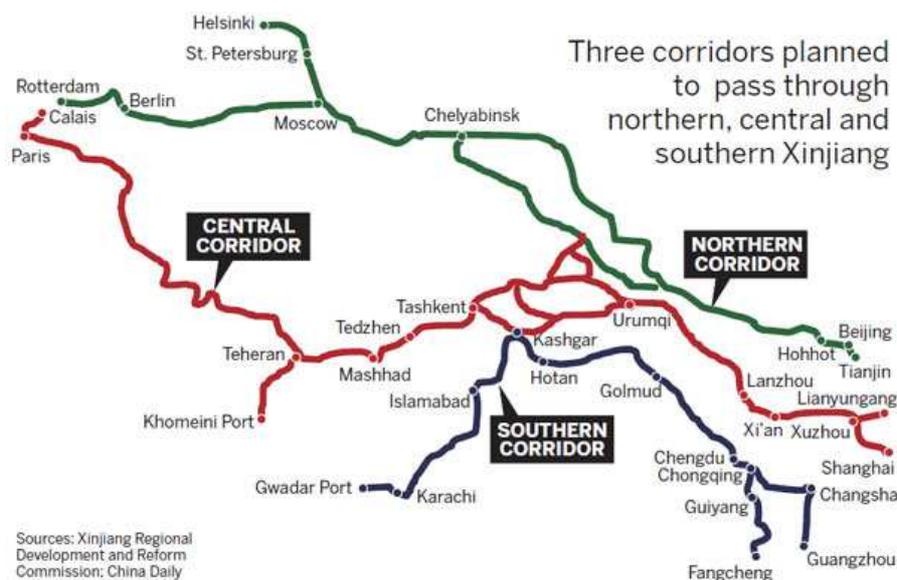
than two customs borders. This is due to the fact that Kazakhstan, Russia and Belarus form a customs union within the Eurasian Economic Union. It is important to see the NSR as a logistics corridor, in which logistics centers will play pivotal role. This is where various branches of transport will meet, ensuring continuity of the flow of freight [Kazak et. al. 2018].

The growing importance of the NSR prompted the authors to consider the possibilities of locating an international logistics center in Poland, and to point out its importance for the country's economic development. The scientific goal of the paper is to elaborate a content-related opinion on the optimal location of a logistic center in Poland, which would be part of New Silk Road. As a research method, literature studies were used. This review article, theoretical in character, consists of three parts. In the first, the NSR initiative is described; in the second, a number of definitions of a logistics center, their classification and factors affecting the choice of location are presented. In the third part, potential locations of an international logistics center in Poland are discussed. The article concludes with a discussion of the preferred location of the international logistics center in Poland.

ONE BELT, ONE ROAD INITIATIVE AND LOGISTICS CORRIDORS

In 2013, Xi Jinping, China's President, proposed a new initiative to its neighbors and trade partners which was named as "One Belt, One Road" (after OBOR). This program is aimed at improvement of trade connectivity among OBOR economies and also countries on the main sea routes from China. The media and public opinion have already hailed this new project as the New Silk Road of our times. In fact, the initiative attracts much attention as it will affect about 65 countries, 4.4 billion people and 63 percent of the global population [Kong 2017]. The main aims of this project, apart from China's strong desire to strengthen its position on the world arena and escape "the trap for middle-income countries", are as follows:

- investment infrastructure and new trade routes as tools to spread economic development around the world,
- global partnerships networks as the source of interdependence of China and other countries and regions, and focus on Asia as part of the new "neighborhood diplomacy".



Source: http://www.chinadaily.com.cn/business/2014-06/28/content_17621525.html

Fig. 1. Three corridors planned to pass through northern, central and southern Xinjiang

Indeed, the NSR seems to be a logistic corridor which will offer efficient and seamless transport of cargo. The New Silk Road (NSR) will fill all the existing gaps in the corridor with a help of overall coordination of various transport services and actions designed to eliminate slowdowns, e.g. due to border inspections [Nazarko et al. 2016]. To achieve this, not only “hard” (infrastructure), but also “soft” criteria have to be met, i.e. regulatory reforms in service markets, including transport, logistics, and telecommunications [LPI 2016].

There are three main alternative corridors along the NSR (Fig. 1) and Poland is part of one of them :

1. The Northern Corridor: This corridor starts in Kazakhstan, passes the Russian mainland, and reaches Belarus and Poland as a gate to Europe. It uses the Russian Trans-Siberian Railway line. It is already operational. Amongst the three alternatives, this variant involves the smallest number of border crossings.
2. The Southern Corridor: It begins Kazakhstan, passes through Turkmenistan or Kyrgyzstan and Tajikistan, Iran and Turkey. It enters Europe via Turkey. The main disadvantages of this corridor are many border crossings and political instability in the region.
3. The Middle Corridor: It starts in Kazakhstan and leads to the Kazakh Caspian port of Aktau. It continues by sea to the newly built Azeri port of Alat. It passes through the South Caucasus and connects with Europe via Turkey. The main disadvantage is transport intermodality [Nazarko et al. 2016].

International logistics corridors have many benefits. First of all, they significantly reduce transit time and costs, thus expanding access to markets and opening new opportunities for regional industries. They eliminate infrastructural bottlenecks and increase the technical and organizational interoperability of national systems. However, it should be noted that the development of these corridors requires the presence of efficiently functioning intermodal logistics centers that act as load generators and play the key role of nodes in transport systems and supply chains [ctc-

egtc.ed 2018]. Therefore, to make them feasible, new logistics centers, dry ports [Oláh et al. 2018, Oláh et al. 2018a], airports with ensured customs clearance and storage services should be built and economic zones with tax incentives along the corridor should be created [Nazarko et al. 2016].

The New Silk Road creates an opportunity for Poland to become an important logistics hub and distribution center of goods exported from China to the European Union member states. Poland’s strength is its geographic location, which allows freight to reach its destination with only two border crossings. An analysis of the possible locations for a logistics center in Poland is preceded by a discussion of the meanings of the term “logistics center” and of the main criteria influencing the choice of location for such a center.

LITERATURE REVIEW – DEFINITIONS OF A LOGISTICS CENTER

Market globalization, the development of innovative technologies and the search for new business models to make the delivery of goods through global supply chains more efficient, led to the rapid development of logistics centers. The latter offer facilities for the consolidation and distribution of goods, labelling, assembly and sometimes even processing that adds value. Though the first such facilities were built over 30 years ago, no single, universally accepted definition of a logistics center has emerged yet. On the one hand, this lack of terminological consensus is the consequence of the fact that “logistics researchers have made little effort to build a unified logistics conception” [Rimiene K., Grundey 2007], and there are shortage of standard methodologies for selection of decision criteria on the other. Regional terminological preferences are also a contributing factor [Rodrigue et. al., 2010]; e.g. in United Kingdom the term freight villages is used [Baydar, Süral, Çelik 2017, Izdebski et. al. 2017]; in France - plateformes multimodales/logistiques; in Germany – Güterverkehrszentren; and Interporti in Italy

(These centers differ not only in name, but also in the way they operate. This will be described below). The term “logistics center” is most commonly used in the USA, Japan, China and Singapore [Europlatforms EEIG 2018]. Since logistics centers are usually seen as the places where different means of transport converge, they are often referred to as intermodal centers [Erfurth, Bendul 2017]. This leads to another problem, due to differences in the interpretation of the concept of intermodal transport. A fragmented description and discrepancies in the definition of a logistics center are the inevitable outcome [Notteboom, Rodrigue, 2009]. An extensive review of the definitions of a logistics center in the current literature can also be found in Higgins, Ferguson and Kanaroglou [2012]. For the purposes of the present paper, it seems best to treat a logistics center as: (1) an element of logistics infrastructure, and (2) a business entity. Both perspectives highlight the role and importance of centers in the modern economy. The New Silk Road project, which involves the expansion of rail and maritime connections between China and countries in Eurasia and Africa, gives rise to expectations in Poland and many other countries of new investments and acceleration of economic growth.

Bearing in mind the fact that the NSR would transit through Central and Eastern European countries, including Poland, logistics centers should be considered in the context of infrastructure, as transshipment points and intermodal terminals of the highest complexity. They are the main elements of regional and international macrologistics systems, linking streams of goods flowing through global supply chains. They are an integrator of various transport modes, able to promote intermodal transport [Higgins, Ferguson., Kanaroglou 2012]. From an infrastructure-oriented perspective, logistics centers are components of an integrated transport chain. This is where the greatest number of infrastructure elements related to the services provided is located [Francik et. al. 2017]. In the context of the Silk Road, it seems useful to define a logistics centre as “[...] an area within which all activities relating to transport, logistics and the distribution of goods, both for national and international transit, are carried out by various operators” [Europlatforms

EEIG 2018, Uyanik, Tuzkaya, Oğuztimur 2018]. Winkler and Seebacher [2011] define the logistics center in a similar spirit: “logistical interconnection points within a logistics network that primarily function as an interface between local and long-distance goods transport”. Logistics centers are multifunction terminals, equipped with the necessary infrastructure and organization, providing logistics services related to the taking of deliveries, storage, distribution and dispatch of goods, as well as added value services, provided by independent businesses.

Bearing in mind the pursuit of economic growth by the respective countries and their expectations of economic benefits connected with the NSR project, it seems reasonable to treat logistics centers as business ventures. In this approach, a logistics center is an organization bringing together many businesses, which provide services to other businesses. From the business-oriented point of view, a logistics center is a group of enterprises operating in the transport, forwarding, logistics and other service industries, as well as production and trade enterprises, operating independently or as members of larger entities of various types. Such a structure is usually headed by a special organization, the so-called board, responsible for the development and proper operation of the center as a whole. Thanks to integration and cooperation, such entities can rapidly acquire new expertise, competencies and technologies to streamline logistics processes. Economic benefits are built into the very concept of the center, established in order to allow the entities comprising it to operate in favorable conditions and to ensure competitive advantage. In this context, a logistics center is “[...] a place of logistics services provision or logistics activities concentration place, through which large companies realize business service tasks of their customers” [Palsaitis, 2004]. UNESCAP [2009] defines a logistics center as “an area of land dedicated to a number of transport and logistics facilities, activities and services, which are not just co-located but also coordinated to encourage maximum synergy and efficiency. Distinguishing features include an intermodal terminal and shared access to facilities and services”. Rimiene and Grundey, on the other hand, describe a logistics center as

“a village planned and built to best manage all the activities involved in freight movement. Logistics centers are seen as promoters of local consolidation, intermodal transportation, and regional economic activity” [Higgins, Ferguson., Kanaroglou 2012]. Logistics centers understood in this way are carefully planned solutions, which allow the distance from suppliers to recipients and storage area along supply chains to be reduced. This helps businesses optimize their operations and flexibly respond to changing market needs, stimulates business activity and national/regional economic growth. In order to take full advantage of the opportunities offered by a logistics center, its location should allow access not only to local entities but also (and perhaps most importantly) to foreign ones. This increases the competitive advantage of the center and facilitates its integration with global supply chains.

Considering the route of the Silk Road, it is clear that, due to their geographic location, Central and Eastern European countries, including Poland, are well-positioned to build and expand competitive international logistics centers, linking Eurasian transport networks.

CLASSIFICATION OF LOGISTICS CENTERS AND THE FACTORS THAT DETERMINE THEIR LOCATION

The construction of logistics centers along the Silk Road to service freight streams and direct them from China to destination markets should be in the interest of every Central and Eastern European country. The choice of location for a center brings very large investments and economic benefits, not only to the state – in the form of budget revenue – but also to many enterprises in the construction, IT and production sectors. The question arises where such a center should be located and what criteria the Chinese investors will take into consideration in their choice of its location. Indeed, this is the classic problem of choosing a location.

The problem of location is connected with the determination of the spatial distribution of

infrastructure elements in a given area, taking into account investor preferences. The problem has been extensively discussed in the literature [including: Özcan, Celebi, Esnaf 2011; Żak, Węgliński 2014], mainly due to its strategic significance and the often irreversible nature of such a decision. Location decisions are made in the context of a certain economic and spatial system, which creates specific conditions for actions designed to optimize the placement of the newly planned facilities.

Choosing the right location for a logistics center is not easy. Usually, many criteria are taken into account, such as:

- technical (usability) – including road density, efficient telecommunications networks, the number of potential contractors, storage infrastructure, intellectual resources;
- economic – capital expenditure, annual operating costs, the measures of cost (e.g. the cost of moving a unit of cargo), development trends indicators, share in international turnover,
- hard to measure, including reliability, flexibility, scalability.

Usually, however, the choice of location for a logistics center boils down to finding the lowest costs, while taking into account multiple sources of raw materials and distribution of finished products [Wiśniewski 2015, Wichmann et al. 2015]. This means that economic factors are given priority. They are three key economic factors determining location choice: land, labour and capital. The construction of the center in an urban area is more expensive, due to higher real estate prices. Labour costs are closely related to income levels in a given area, and the importance of capital increases with economic incentives (e.g. economic zones) for potential investors [Cheba, Kiba-Janiak 2017]. The extent of involvement is not without significance. If it is relatively large (as it will be in the case of a center built to meet the needs of the Silk Road), to the above-mentioned factors, others must be added, such as macroeconomic, environmental and urban; a regional/national development strategy is also important.

The choice of location should always be carefully thought out and based on detailed studies. This is particularly important if the center is to occupy a large area or needs well-equipped facilities and communication infrastructure. The center serving freight movement along the NSR will have to meet such criteria. Therefore, the decision concerning its location could be based on the criterion of intermodal transportation, and result in the choice of a site near the transportation corridors comprising the Silk Road. Another solution would be to locate such a center in sea port or near an airport. In this case, the main criterion is the easy accessibility of the ports involved in international trade. Van Thai and Grewal [2005] listed eight factors they believed to have the greatest impact on the choice of a seaport or airport: availability of suitable handling equipment, the percentage of lost or damaged consignments, convenience and reliability of pickups and deliveries, frequency of port calls or landings, efficiency of seaport or airport operations, strategic location, competitive fees and taxes, speed of response to customer needs and expectations. The proposed list of factors is an example of a comprehensive approach to the problem of choosing the best location for a logistics center. Nevertheless, the choice of any option must be based on many parameters, which determine or at least affect the final location decision.

NSR AND LOCATION OF AN INTERNATIONAL LOGISTICS CENTER IN POLAND

It is in Poland's interest that an international intermodal logistics center should be built within its borders, serving freight streams and directing them to their destination countries. The radius of the area served by such an international logistics hub is estimated at 500 to 800 km. It must be equipped with a full-featured, advanced infrastructure and a comprehensive IT system, and must offer the full range of logistics services. Such a project offers the unique opportunity for investment and modernization of transport infrastructure, mainly railways. A center located in Poland would bring very large investments and

contracts, from which many companies in the construction, IT and production industries would benefit. It would also create many jobs. The construction of such a center would strongly stimulate the growth of road and rail carriers and forwarders, intermodal transport and Polish trading companies. It would also bring significant state budget revenues.

Of course, other countries, including Poland's immediate neighbours, are also aware of the opportunities such an investment would bring. Therefore, while it is important to exercise caution in making such decisions – concerning, for instance, the principles on which Chinese capital would participate in Polish investments, so as to erasure a controlling stake for the Polish side – it is also important that such decisions should be made without unnecessary delay. Otherwise, Germany, the Czech Republic or Hungary – countries more advanced than Poland in economic cooperation with China – will reap the benefits of building a European logistics center. It will be crucial to prevent the loss of such a project due to inaction, political conflicts or disputes over location.

Poland has a number of advantages, for example, in infrastructure. Significant progress has been made over the last couple of years. The Polish road network has been improved. It has been expanding since 2007, when the first 100 km of new highways were built. A further 200 km of highways were added in 2012, and in 2013 another 330 km of expressways and 300 km of highways. The National Road Construction Program for the years 2014-2023 (with a possible extension to 2025) adopted by the government assumes the construction of approximately 3,900 km of highways and expressways.

Poland's flagship project is the modernization and expansion of the Gdańsk port, which is gaining in importance as a container port in the Baltic. The port is growing rapidly and keeps investing in container transshipment, which was rewarded by the inclusion of the port in the prestigious World Top Container Ports 2017 list. Gdańsk also has regular container connections with Asia. In May 2017, Ocean Alliance, the largest such organization in the world, began

cooperating with the Gdańsk port on a permanent basis. The alliance includes the leading container shipowners: OOCL, Cosco Shipping, CMA CGM and Evergreen. The alliance's ships will call to the Gdańsk port once a week, connecting such ports as Shanghai, Ningbo, Xiamen, Yantian, Singapore, Felixtowe, Rotterdam, Gdańsk and Wilhelmshaven.

The successes of the Gdańsk port and the improvements in road transport infrastructure notwithstanding, Poland is currently ranked 33rd according to the Logistics Performance Index, behind many countries in the region (such as Austria, Hungary, the Czech Republic and Lithuania), where competing logistics centers could also be built.

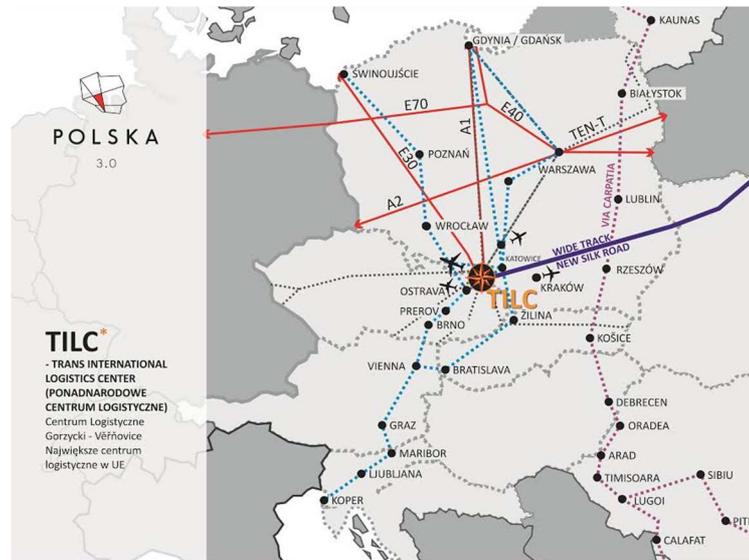
Another difficulty faced by Poland arises from the fact that the New Silk Road consists mainly of rail connections. The density and capacity of railways in Poland leaves much to be desired. According to PKP (the leading Polish railway carrier), goods trains currently move through the network with an average speed of about 20 km/h.

POTENTIAL LOCATIONS OF AN INTERMODAL LOGISTICS CENTER IN POLAND, SERVICING THE NSR

There are several potential locations for the international logistics center on the New Silk Road in Poland (Fig. 2 and 3). One of them is Łódź, located in central Poland, approximately 136 km from Warsaw. Its advantage is the central location near the intersection of north-south and east-west highways. Łódź is already on the New Silk Road. Since 2014, a regular cargo rail connection with the Chinese province of Sichuan has been operational. Trains enter Poland across its eastern border at Małaszewicze and continue to Łódź. It takes 12 days for a train from China to reach its destination, while the maritime route via the Suez Canal to the port of Piraeus requires a month. Hence China's interest in this solution. The Łódź lobby and PKP support the idea of routing the New Silk Road from China to Western Europe via Łódź. PKP declared its readiness to contribute its own real estate with

an area of 55 hectares to the construction of a logistics center. Another point in favour of Łódź is the fact that the Łódź Special Economic Zone signed an agreement with the international railway hub in Chengdu (China) in September 2017. This means that Łódź has officially become part of the OBOR project – a network of rail connections linking China with Europe, which is supported by the Chinese government. The two parties have convergent objectives: expand the terminal and build a logistics and industrial center. The signing of the agreement means that Łódź has now been accepted as part of the OBOR network, with the likely outcome of “an increase in the number of trains running in both directions between Poland and China” [polandinenglish.info, 2018].

Another potential location is the Central Communication Port (CCP), located near the town of Stanisławów (between Warsaw and Łódź), in the immediate vicinity of the A2 motorway, the Warsaw-Łódź railway line and the planned track of the High-Speed Railway [Darasz J. 2017]. The Economics Committee of the Council of Ministers adopted the construction recommendation on 4 March 2017; the project's aims are to “build and operate a profitable, innovative transport hub, which will rank as one the world's top ten airports, and at the same time will become an important component of the national rail passenger transport system and an attractive alternative to road transport.” The construction of Central Communication Port project consists of the following main parts: the construction of an international airport, located 45 km west of Warsaw; the construction of a railway hub, whose functions will go beyond those of an airport railway station; the construction of railway lines within the borders of Poland, with a total length of over 900 km; the construction of a logistics center, 100 hectares in area; the construction of 65 km to 250 km (depending on the option chosen) of roads in Poland; rapid growth of PLL LOT, with the Polish airlines to become the main carrier in Central Europe; integration of the Warsaw and Łódź agglomerations; the development of the “Airport City”, with hotels, exhibition and congress facilities, and company headquarters.



Source: <http://polska-3-0.pl/o-projekcie/>

Fig. 2. Location of Trans International Logistics Center Gorzyczki

Source: <https://www.trojmiasto.pl/wiadomosci/Nowa-linia-kolejowa-polaczy-Trojmiasto-i-Centralny-Port-Komunikacyjny-pod-Warszawa-n118721.html#>

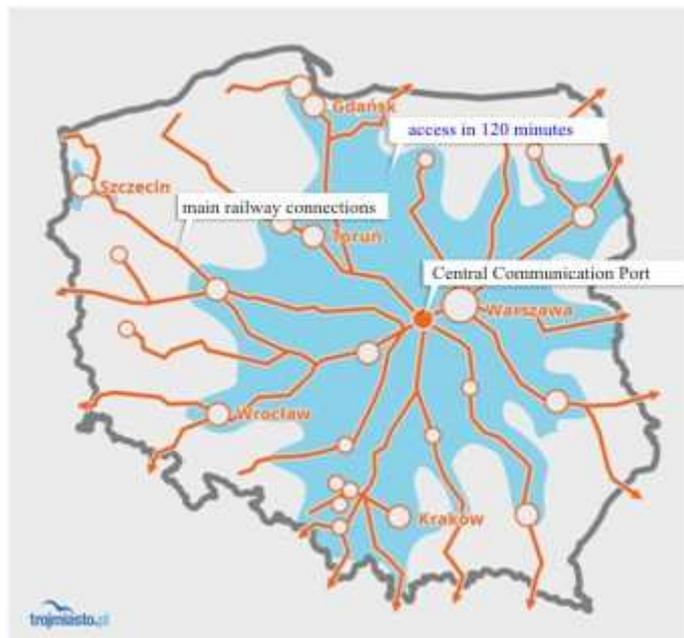


Fig. 3. Map of Poland, with Gdańsk, Warsaw, Centralny Port Komunikacyjny and the main railways connections

CCP will provide services for 500 inter-regional trains a day. Commercial speed on railway lines leading to the CKP is to be at least 140 km/h, and the expansion of the railway network will be carried out in two stages:

- stage 1 (2018-2027) – elimination of the major gaps in the current rail network in

Poland, as well as modernization of existing lines to utilize their maximum potential for domestic transport

- stage 2 (2025-2035) – improvement of the quality of the domestic infrastructure through the construction of new sections of high-speed rail, to meet both domestic needs and those of international transport

networks, linking Poland and other countries in the Three Seas (the Baltic, Adriatic, Black Sea) region.

The total cost of the expansion of the domestic railway network through the addition of new segments in connection with the construction of infrastructure for the CCP-based transport system, scheduled for 2020-2030(35) is estimated at PLN 35-40 billion. It is assumed that 37,000 additional jobs (including 14,500 as a result of direct employment) will be created by the CCP. In view of the fact that one job in the aviation sector generates on average three jobs in other sectors, one should expect employment to grow by approximately 110,000 jobs. Next to Port Solidarność, the Airport City with an area of 800-1200 hectares is to be built, with hotels and a trade and exhibition center.

CCP is also expected to lead to the integration of Łódź and Warsaw, and to stimulate economic growth and revitalization of Łódź.

As is apparent from the above, the construction of the CCP would involve not only the creation of a logistics hub, but also the supporting rail and road infrastructure, to ensure smooth operation of the center [Wikipedia, 2018].

Yet another project combines the Gorzyczki transnational logistics center investment and Poland 3.0 program. According to its creators, it is the largest cluster project in Europe, a grassroots economic program for Poland. The aim of Poland 3.0 is to connect the networks of Polish rivers, highways and railways and to construct in Gorzyczki the largest intermodal transnational logistics center in Europe. The envisaged Gorzyczki-Wierzniowce logistics center on the Polish-Czech border lies at the intersection of all the main transport corridors which comprise the 6th Multimodal North-South Corridor. The planned logistics center is located at the intersection of the main trans-European transport routes: the A1 Highway, the E-30 Waterway, the broad gauge railway from the Far East and the 2nd trans-European rail corridor. Three airports are in close proximity: in Katowice, in Ostrava and in Kraków.

According to UN experts, this is the most promising area in all of Europe as regards development prospects.

As emphasized by the initiators of the Poland 3.0 program, it is an integral part of the Baltic-Adriatic and the Baltic-Black Sea corridors. The program will include multimodal transport projects, infrastructure projects, the New Silk Road, but also cross-border cooperation projects, energy security, new technologies, exchange of knowledge and technology transfer projects. The ultimate goal is to increase the region's competitive advantage in new ways [Jarosławska 2018].

The port of Gdańsk, located in the central part of the southern Baltic coast, one of the fastest growing regions of Europe, also has great potential. Gdańsk is a major international transport hub. According to current European Union strategy, it plays a significant role as a link in the Trans-European Transport Corridor No. 6, connecting Scandinavian countries with South-Eastern Europe. Within the Port of Gdańsk, two areas with distinct operational parameters can be distinguished: the Inner Port and the Northern Port, with direct access to the Gulf of Gdańsk. The Northern Port includes a modern deepwater container terminal (DCT) .

In 2017, 40.613 million tons of cargo were transshipped in the Port of Gdańsk. This makes it the 6th largest port in the Baltic Sea.

However, as far as container transshipment is concerned, Gdańsk is the leader among Baltic ports. Its DCT (Deep Container Terminal) can service the largest commercial vessels (Triple-E class), which puts it in the elite group of only 14 such ports in the world. The DCT in Gdańsk is the only Baltic Sea deepwater port of call for ships from the Far East. In 2016, 1.28 million TEU were transshipped at the DCT. Only the port in Saint-Petersburg, which consists of six terminals, reported the higher figure of 1.7 million TEU.

Cooperation with the 2M Alliance – formed by the two largest container lines in the world: Maersk Line (ML) and Mediterranean

Shipping Company (MSC) – began in 2015. The first ship carrying containers of both lines called to the Gdańsk port on 19 February 2015. Connections from Shanghai to Gdańsk (32 days) and from Busan (South Korea) to Gdańsk (36 days) were launched. Gdańsk has also reached an agreement with another association of the largest carriers in the world – the G6 Alliance of six container shipowners: APL, Hyundai Merchant Marine, Mitsui O.S.K. Lines (MOL), Hapag-Lloyd, Nippon Yusen Kaisha (NYK) and Orient Overseas Container Line (OOCL). The routes of G6 ships carrying goods from Asia to Europe, the so-called Loop 7, were extended to Gdańsk. The first ship called to the Gdańsk port in August 2015. Currently, ships with a total capacity of 13,000 TEU call regularly every week. A container ship from Qingdao in China takes about 40 days to arrive in Gdańsk, and one from Singapore about 28 days. The DCT was expanded in 2016, while the planned investments in railway lines, connecting Polish ports with the rest of the country, will further increase its attractiveness [Weedy S., 2017].

RESULTS

As the result of literature research, the authors may formulate the following conclusions. The business and academic communities, and recently also government circles, are well aware of the benefits that the construction of an international logistics center would bring to Poland. However, practically to this day no consensus as to the location of such a center has been reached.

The lobby advocating the construction of a logistics center in Łódź has been particularly vocal over the last few years. The geographic location of the city and its existing railway connection with China are important advantages. However, despite negotiations with China and PKP's interest in this project, no agreement between the Polish and Chinese governments has been reached.

The choice of Gorzyczki as the location of a transnational logistics center is very attractive, due to its intermodal and transnational character. However, its weakness is the fact that it is supported mainly by

grassroots initiatives, without government involvement. Furthermore, there is no definite investment plan, with a clear timetable and funding schedule. Like the former, this initiative never advanced beyond the planning stage.

The advantages of Gdańsk as the location for a logistics center are indubitable. Gdańsk has been the port of call for container ships from the Far East for several years now. The expansion of the railway network to improve Gdańsk's connections with the rest of the country will also help. However, so far Gdańsk has not been taken into consideration as a potential location for an international logistics center. It is a disadvantage that the Gdańsk area is highly urbanized, and therefore real estate prices in close proximity to the city are relatively high.

In this context, the government's initiative to build Central Communication Port in Stanisławów (45 km from Warsaw), may yet prove to be the dark horse of the race. This project is to be co-financed by the EU. It has been planned on a grand scale and would meet the criterion of intermodal transport. It is also integrated with extensive investments in the railway network. It would include the construction of a logistics center with an area of 100 hectares, offering complete infrastructure and IT system, as required of an international logistics center. This location would also provide access to existing road and rail networks. Its emplacement outside metropolitan areas would ensure relatively low costs. Another advantage of Stanisławów is its location in central Poland. Government support is also crucial, as it would guarantee the availability of funds.

The above considerations suggest that Stanisławów is the most likely location for an international logistics center servicing the NSR in Poland. Other sites, such as Łódź, Gdańsk or Gorzyczki could provide auxiliary, regional distribution centers.

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LOKALIZACJA MIĘDZYNARODOWEGO CENTRUM LOGISTYCZNEGO W POLSCE JAKO CZĘŚĆ INICJATYWY JEDEN PAS JEDNA DROGA

STRESZCZENIE. Wstęp: Inicjatywa Jednego Pasa i Drogi otwiera wiele możliwości rozwoju dla krajów Europy Środkowo-Wschodniej. Niektóre z nich są związane z możliwością budowy centrum logistycznego w tym rejonie. Dla Polski taka inwestycja przyniosłaby wiele korzyści, nie tylko z powodu rozwoju infrastruktury, ale także z tytułu przyspieszenia wzrostu gospodarczego i tworzenia nowych miejsc pracy. W tym kontekście kluczowa staje się rola i lokalizacja takiego centrum logistycznego. Ze względu na nowość zagadnienia, zauważa się znaczny niedobór artykułów naukowych związanych z tą kwestią. Celem naukowym niniejszego artykułu jest wypełnienie istniejącej luki, określenie roli jaką powinno spełniać polskie centrum logistyczne na Nowym Jedwabnym Szlaku, przedstawienie najbardziej perspektywicznych przyszłych lokalizacji, a także sformułowanie opinii na temat jego najkorzystniejszej lokalizacji.

Metody: Jest to artykuł poglądowy o charakterze teoretycznym. Zastosowana metoda polega na analizie źródeł literaturowych. Ponieważ kwestia budowy i lokalizacji w Polsce międzynarodowego centrum logistycznego na Nowym Jedwabnym Szlaku jest nowa, istnieje ograniczona liczba artykułów naukowych i tylko w języku polskim, poświęconych temu zagadnieniu. Z tego względu autorki oprócz prac naukowych wykorzystały także źródła internetowe.

Wyniki: W niniejszym artykule zaprezentowano klasyfikację centrów logistycznych oraz omówiono czynniki brane pod uwagę przy wyborze lokalizacji dla takiej inwestycji. Omówiono zalety i wady potencjalnych lokalizacji oraz tę najbardziej prawdopodobną.

Wnioski: Stanisławów (zlokalizowany między Warszawą a Łodzią) jest najbardziej prawdopodobną lokalizacją dla międzynarodowego centrum logistycznego obsługującego NSR w Polsce. Inne obiekty, takie jak Łódź, Gdańsk czy Gorzyczki, mogłyby pełnić rolę pomocniczych, regionalnych centrów dystrybucyjnych.

Słowa kluczowe: centrum logistyczne, Jeden Pas Jedna droga, Nowy Jedwabny Szlak, lokalizacja, Polska

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