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Warehouse Market in Poland and in Lublin: Conditions, Tendencies and Development Prospects

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Abstract

The aim of the analysis was to identify the features and development trends of the warehouse market in Lublin against the background of regional and domestic markets in Poland, and, subsequently, to assess the market's development prospects and its role in strengthening the economic development of the City of Lublin. Valuable data on the supply and demand side of the warehouse market in Lublin has been collected for the purpose of the article. The analysis of the data on warehouse market development, in Lublin as well as and in regional and domestic markets in Poland in 2015 and 2016, confirmed the market's solid growth. The prospects of the warehouse market in Lublin are very promising, owing to such factors as: supply of a highly qualified labor force, relatively low labor costs, the improvement of transport infrastructure, the development of the Special Economic Zone Euro-Park Mielec Lublin Subzone, and, last but not least, the effective strategy of attracting investors pursued by the Department of Strategy and Investor Relations of the City Office in Lublin.

Keywords: warehouse market, investment attractiveness, economic development

JEL: O18, O29, R33

Introduction

Warehouses are an important part of the economy of a given area and a factor of economic development. They determine the efficiency of production and distribution processes by ensuring an uninterrupted flow of materials, goods and information in the supply chain (i.e., from the manufacturer to the end user). The growing popularity of outsourcing TFL (transport, forwarding and logistics) services, along with the development of a commercial warehouse market, have frequently caused companies to relinquish building their own warehouses and turn to renting space in commercial warehouses. This is particularly true for smaller entities and new investors starting their business activity in a given area. Warehouses have become an element of market infrastructure, and the degree of development of the warehouse market affects the investment attractiveness of a city, region or country.

The article analyses the commercial property warehouse market in Lublin and in Poland—from the identification of the most significant conditions for its development, through the supply and demand side of the market, to its development prospects in the years to come. The purpose of the analysis is to identify the features and development trends of the commercial warehouse market in Lublin against the background of regional and domestic markets, which, in turn, will allow for the assessment of the market's development prospects and its role in stimulating the economic development of Lublin.

1 Warehouse functions and conditions for warehouse management

The most important functions of a warehouse and warehouse market include:

- coordination of the volume of supply and demand,
- reduction of transport costs,

- support of production processes, and
- support of marketing processes (Krzyżaniak et al. 2014, 14–15; Murphy and Wood 2011, 257).

The first of these functions results from the fact that the consumption of goods does not usually take place immediately after their production. A warehouse therefore helps to harmonize the differences in the rate and volume of the flow of goods. This, in turn, allows entities to avoid interruptions in production and sales processes, interruptions which may result, for instance, from late, inadequate or poor-quality delivery (see, for example: Jonak and Nieoczym 2014, 8). Warehousing also reduces the distance over which the products are transported. This, in turn, reduces the frequency of deliveries while increasing the size of a single delivery. Consequently, the costs of transport are lowered. What is more, warehouses allow for the reduction of costs stemming from the dispersion of suppliers and consumers on a domestic and international scale. Supporting production processes consists in keeping stocks of raw materials, semi-finished products and packaging in order to ensure the continuity of production. The function of a warehouse is also to systematically receive and store the produced goods for later sale. Supporting marketing processes, warehouses secure the adequate amount of stocks, store materials for promotional campaigns and allow for the creation of sets of goods (Krzyżaniak et al. 2014, 14–15; Murphy and Wood 2011, 257–260).

The functioning of warehouses and the warehouse market are currently undergoing changes which are determined by the structural changes in the economy. Some of these changes deserve special attention. First of all, it is worth noting the process of demassification of the consumer markets. Consumer preferences are becoming increasingly diversified, boosting market fragmentation. Secondly, the dynamic development of e-commerce has a huge impact on trade and on the accompanying logistic processes. The increase in the popularity of the omnichannel model is the consequence of the expansion of e-commerce. The model assumes full integration of purchase channels and communication with the customer (Fechner and Szyszka 2016, 9–19). Market demassification and development of e-commerce lead to the fragmentation of order structure and to an increase in order frequency, affecting stock and warehouse management. Thirdly, modern technologies provide a qualitative change in storage services. They allow, among other things, for fast registration of goods, for control of their arrangement and batch number, for managing the assembly of goods, and improving shipment and monitoring its status (Kanicki 2011, 87–97; Krzyżaniak et al. 2014, 471–488). Equipping warehouses with more and more advanced systems of information and communication technology allows for integrating them with other elements of the supply chain (by means of WAN and LAN networks), and for integrating their internal operation, installation and immediate surroundings (by means of FAN communication network), which results in the emergence of "smart warehouses" (Korzeń 2000, 208–213). Fourthly, changes in company management postulated by lean management styles are important for the development of the warehouse market and pose a challenge for the storage service companies. Lean management in stock management manifests itself in the implementation of a just-in-time strategy for production and supply. The role of warehousing, however, has not changed due to, among other things, the introduction of new services such as labeling, grouping and sorting of the products or price tagging. Finally, the processes of enterprise concentration and the increasing complexity of logistics services make the outsourcing of part or all logistics more and more popular, which is an important factor in the growth of the commercial warehouse market. With reference to Prahalad and Hamel's concept of core competence it can be said that outsourcing of logistics services allows a company to focus on the key organizational processes that determine the acquisition and maintenance of competitive advantage (Prahalad and Hamel 1990).

2 Conditions and trends in the development of the warehouse market in Poland

The dynamic development of the warehouse market in Poland is conditioned by many factors. Poland's strategic geographical location in central Europe has favorable influence on this development as much of the transit passes here from east to west and from north to south in both directions. As a result of globalization, of increased international exchange and of relocation of production and services, a change of Poland's position in the international supply chain has taken place. Due to

Poland's cost advantage, there is a tendency to move production and logistics services from Western Europe and to open new centers attending to Central and Eastern Europe. The improvement of transport and telecommunication infrastructure is also conducive to situating logistics centers in Poland. The development of the warehouse market and of the entire TFL industry is also influenced by the favorable macroeconomic situation (fig. 1).

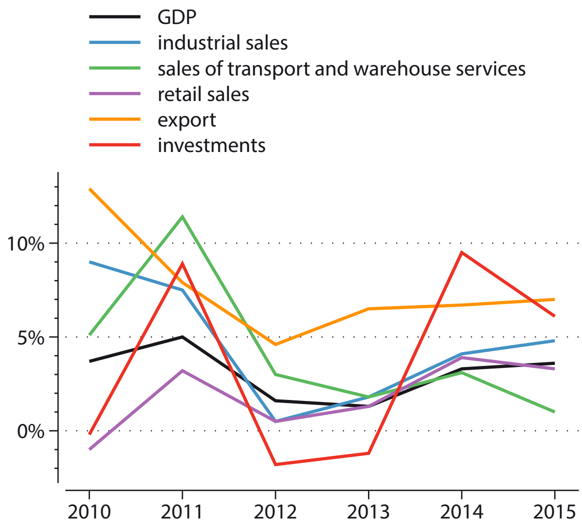

Fig. 1. Dynamics of the selected economic indicators for Poland in the years 2010–2015

Source: Own elaboration based on the data published by Central Statistical Office of Poland (GUS) in 2016, and Fechner and Szyszka (2016, 9–19)

After a slowdown in 2012–2013, the Polish economy experienced a dynamic growth of investment, industrial and retail sales, and export in the subsequent two years. The increase, mainly in domestic demand, translated into the growth of GDP which in the years 2014–2015 amounted to 3,3% and 3,6% respectively.[1] Foreign direct investment (FDI) is also an important factor in the development of the warehouse market. The growth in this respect is visible—in 2014–2015 investments worth nearly 100 billion zlotys flowed to Poland (fig. 2).

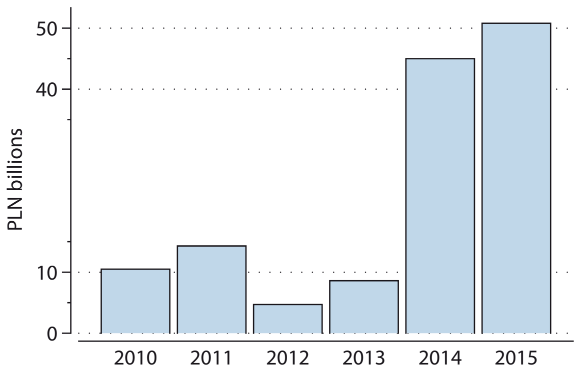

Fig. 2. Inflow of foreign direct investment to Poland

Source: Own elaboration based on data published by Narodowy Bank Polski (NBP) in 2016

Over the past two years the development of the TFL industry has been negatively impacted by oversupply of logistics services and by the resulting pressure on the decline in prices, as well as by sanctions on trade with Russia. These factors have severely affected mainly transport services, not contributing to the decline in the demand for warehousing services. As a result, the sales ratio for transport and warehousing services, and Gross Value Added (GVA) of this sector are subject to

1. [In the journal European practice of number notation is followed—for example, 36 333,33 (European style) = 36 333.33 (Canadian style) = 36,333.33 (US and British style).—Ed.]

some fluctuations. However, with the general upward trend in 2016, GVA in transport and warehouse management increased by 6,4% compared to the previous year.[2]

Stable economic development, some of the lowest rents and low interest rates have a positive impact on investment and Poland is becoming one of the most attractive locations in Europe. In 2014 Poland was ranked seventh in terms of the value of its logistics market (including contract and internal logistics) in *Top 100 in European Transport and Logistics Services* published by Fraunhofer Centre for Applied Research on SCS (Kille, Schwemmer, and Reichenauer 2015). In Logistics Performance Index (LPI) 2016, issued by the World Bank, Poland was ranked 33rd among 160 countries. Considering the value of component indexes (fig. 3), Poland came off well in international shipments, and logistics quality and competence, but relatively badly in terms of infrastructure.

According to the estimates of the Institute of Logistics and Warehousing, the total supply of closed warehouse space in Poland (commercial and private) in 2014 amounted to 84,2 million square meters (Fechner and Szyszka 2016, 113). Most of this area is for companies' private storage; however, the share of commercial space in the total warehouse space is systematically growing. By the end of 2016, modern commercial warehouse space amounted to 11,2 million square meters, which means an increase of 1,2 million square meters compared to the previous year. Moreover, at the beginning of 2017 another 50 warehouses with an area of 1,45 million square meters were under construction.[3] Thus, a further accelerated increase in supply on the warehouse market is expected, especially as the supply has increased by an annual average of 15% in the recent years.

The increased activity of developers results from the growing demand for warehouse space. In 2016 contracts were signed for over 3 million square meters of space (gross demand), while non-renegotiable contracts (net demand) concerned the volume of 2,2 million square meters. In recent years demand has grown faster than supply, which has led to a drop in vacancy rates to the record level of 6% in the third quarter of 2016 and slightly over 6% by the end of the year,[4] while in the years 2010–2013 there was 10% vacant storage space.

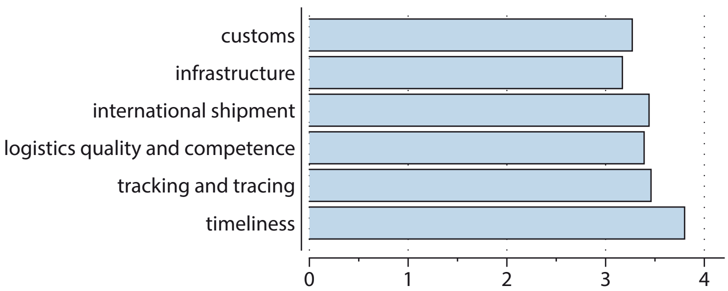

Fig. 3. The value of sub-indexes for Poland in Logistics Performance Index for 2016

Source: Own elaboration based on data published by The World Bank, [@:] https://lpi.worldbank.org/international/global

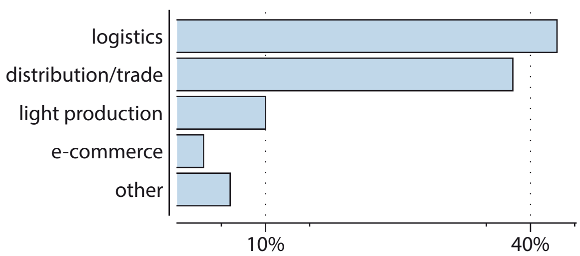

Fig. 4. Demand for commercial warehouse space in Poland by industry in 2015

Source: Data from Fechner and Szyszka (2016, 120)

2. See: Produkt krajowy brutto w 2016 roku — Szacunek wstępny. Report published by GUS 31 January 2017, [@:] http://stat.gov.pl/obszary-tematyczne/rachunki-narodowe/roczne-rachunki-narodowe/produkt-krajowy-brutto-w-2016-roku-szacunek-wstepny,2,6.html.

3. See: Rynek nieruchomości magazynowych w 2016 r. Luty 2017. page 7, [@:] https://magazyny.pl/media/plugins/report_file/Rynek_nieruchomosci_magazynowych_w_Polsce_-_2016_JLL.pdf

4. Ibid., pages 3–6.

Logistics and distribution/trading companies constitute the majority of renters (fig. 4). In recent years there has been a relatively larger increase in demand on the part of logistics companies, with some logistics companies providing services to distribution and trade sectors (service outsourcing). Effective rents remain stable — in 2016 they almost did not change. Warehouse space in Warszawa is the most expensive (EUR 3,5–4,8 per square meter), while in smaller cities in the central part of the country the prices are the lowest (monthly EUR 2,0–2,9 per square meter). Similar to other warehouse market indicators, rents show strong regional diversification.

3 Regional diversification of the commercial warehouse market in Poland

The resources of commercial warehouse space have so far concentrated in the most well-invested and economically developed voivodships, in the vicinity of the largest urban and industrial agglomerations such as Warszawa, the Upper Silesia conurbation, Poznań, Łódź, Wrocław, and to a lesser extent also Trójmiasto and Kraków. They constitute the largest economic and academic centers as well as transport nodes not only of regional importance, but primarily of national and international significance. In the last decade, the development of traditional trade was reflected in the expansion of retail chains and the construction of large warehouses near the city limits. The proximity of agglomerations has been crucial and will continue to be significant, for instance, for e-commerce warehouses.[5] The costs of acquiring real estate, availability of workers, further development of transport and telecommunication infrastructure, and economic incentives for investment in Special Economic Zones contribute to the growing attractiveness of new locations.

As shown in table 1, the Warszawa market, which comprises three zones distinguished by the distance from the city center, offers the largest warehouse space in Poland (in 2016 almost 3,2 million square meters in total). In terms of supply and demand for warehouse space, Warszawa II and III remain at the top of the list with 9% increase in supply and 23% increase in gross demand in 2016 (in comparison with the previous year.) Warszawa I, on the other hand, has a less than 10%

Tab. 1. Comparison of warehouse market indicators by region

	Warehouse space (m^2 thousand)		Vacancy rate (%)		Rented space (m^2 thousand)		Effective rent (EUR/m^2 per month)	
City/Zone	**2015**	**2016**	**2015**	**2016**	**2015**	**2016**	**2015**	**2016**
Warszawa I	559,0	653,0	8,2	9,4	64,7	72,0	3,5–4,8	3,5–4,6
Warszawa II	1 840,0		5,9				2,0–2,9	
Warszawa III	464,1	2 511,0[a]	7,8	5,5[a]	605,8[a]	746,0[a]	2,0–2,9	2,0–2,8[a]
Upper Silesia con.	1 750,0	1 955,0	5,5	7,2	494,0	491,0	2,0–3,0	1,9–3,1
Poznań	1 380,0	1 806,0	2,0	7,2	248,6	426,0	2,2–3,0	2,1–2,9
Wrocław	1 290,0	1 394,0	5,5	5,1	253,6	301,0	2,5–3,2	2,2–2,8
Łódź	1 160,0	1 156,0	2,7	4,1	369,7	219,0	2,0–2,9	2,6–3,2
Trójmiasto	314,3	393,0	5,8	14,1	78,1	93,0	2,5–3,5	2,5–2,9
Kraków	212,6	268,0	2,0	9,0	92,2	100,5	3,3–4,5	2,8–3,4
Szczecin	143,5	187,0	5,8	3,0	116,1	333,0	2,4–3,5	2,6–3,4
Toruń-Bydgoszcz	123,4	161,0	1,3	1,0	68,0	127,0	2,2–2,8	2,5–2,7
Rzeszów	128,0	153,0	0,0	2,1	52,5	19,0	2,6–3,1	2,6–3,1
Lublin[b]	72,0	93,0	4,7	9,6	26,0	19,6	2,6–3,2	2,6–3,2

Source: Own study based on JLL Reports for years 2017 and 2016 (https://magazyny.pl/blog/raporty/), and Colliers International Report: Market Insights for 2016 (http://www.colliers.com/en–pl/poland/research/premium–reports/industrial–2016).

[a] Combined data for Warszawa II and III

[b] It must be noted that not all warehouses in Lublin offering commercial warehouse space are listed in JLL Reports

5. See: Raport JARTOM Real Estate — Trendy w latach 2016–2017 na rynku magazynowym z komentarzem Kamili Braneckiej, Dyrektora JARTOM Real Estate. [@:] http://www.jartom.com/Raport-rynku-powierzchni-maga zynowych-2017.

share in the Warszawa market and has the lowest increase in the warehouse space with one of the lowest vacancy rates and one of the highest rents. It has, however, a large number of BTS projects, and the signed contracts are relatively small.[6]

The second largest regional warehouse market is located in the Śląskie Voivodship, including in particular Gliwice, Sosnowiec, Tychy, Katowice, Dąbrowa Górnicza, as well as Bielsko-Biała, Będzin and other cities. The supply at the end of 2016 amounted there to 1,955 million square meters of warehouse space and increased by 11,7% in comparison with the previous year. Upper Silesia is the most industrialized and urbanized region where traditional industry is replaced by new investments (in automotive sector and logistics services), attracted by Katowice Special Economic Zone and the availability of post-industrial land at an attractive price. Thanks to the highest concentration of population and the improvement of the population's educational structure, Silesia is an attractive labor market and market in general. Moreover, one of the best developed networks of road transport (A4 and A1 motorways), railway (freight terminals in most cities) and air transport (cargo airport near Katowice) provides convenient communication with the rest of the country and with Central Europe. The further development of the transport network and of Katowice Economic Zone as well as the influx of new investments constitute competition for the much less developed Kraków warehouse market. Progressing road investments (S5 expressway towards Wrocław and Bydgoszcz) and new investments in production and services (Volkswagen, Amazon) have contributed to the revival of the Poznań warehouse market. Poznań is third in terms of supply for warehouse space (1,8 million square meters in 2016, compared to 1,38 million square meters in 2015). Both Poznań and Wrocław, however, face the problem of an insufficient labor force. A favorable location in central Poland — at the intersection of transport routes (including A1 and A2 motorways, air transport and railway cargo terminals near Łódź) have contributed to the concentration of warehouses in the vicinity of Stryków, Łódź-Widzew, Piotrków Trybunalski and others. The Łódź region attracts investors with its diversified economic structure, attractive labor market or the dynamically developing Łódź Special Economic Zone and ICT clusters.

In a situation where demand is significantly higher than the new supply of warehouses there has been not only a decrease in the vacancy rates but also restriction of space availability on all major markets. As a result, interest in new locations, such as Szczecin, Toruń-Bydgoszcz, Lublin and Rzeszów, is growing.

The proximity of the western border, airports and progressing road investments (S3 towards the Czech border partly completed though still under construction, and S6 towards Koszalin) determine the growing attractiveness of Szczecin. Existing warehouse parks are mainly located on the outskirts of the city and the roads mentioned. Due to the signing of two major contracts with international e-commerce companies in 2016 (Amazon and Zalando), Szczecin's share in demand increased considerably to 11% of the warehouse market. This has also led to the decrease of the vacancy rate to 3% in 2016. Szczecin is becoming a serious competitor for Trójmiasto, and German and Scandinavian investment will translate into further market development in the western and northern regions of Poland.

In the Kujawsko-Pomorskie Voivodship, warehouse space is concentrated by the borders of Bydgoszcz and Toruń (which are only 50 km away) and by the main transport routes (A1 motorway linking Toruń with Gdańsk and Łódź, the planned 150 km of express roads, airport with a cargo terminal and PKP Cargo railway station near Bydgoszcz, and Toruń freight terminal). So far, modern warehouses in Toruń (96 000 m^2) have exceeded the volume in Bydgoszcz (64 000 m^2). However, after the completion of investments in Bydgoszcz the situation will be reversed.[7] High demand in this region has affected the visible decrease in the vacancy rate which was the lowest in Poland at the end of 2016. The development of industry and services within the Pomeranian Special Economic Zone and Bydgosz-Toruń industrial region is conducive to the development of the warehouse market.

6. See: Rynek nieruchomości magazynowych w 2016 r. op. cit.
7. See: Ibid.

The increase in attractiveness of Lublin and Rzeszów can be attributed to the improvement of transport accessibility — i.e., the extension of road infrastructure (S17 expressway from Lublin to Warszawa and S19 from Lublin to Rzeszów, A4 motorway and city ring roads), and the opening of regional airports with cargo terminals in their vicinity. The proximity of Lublin and Rzeszów to large markets across the eastern border (Belarus, Ukraine, Russia), as well as proximity to Warszawa or Kraków, and lack of competition from other cities of eastern Poland (Białystok, Kielce) are also their assets. These markets, however, are much smaller than the mature markets in central and western Poland.

4 Commercial warehouse market in Lublin

Since 2014, Lublin has gained popularity among developers offering modern warehouse space. At present, 6 logistics centers offer over 111,8 thousands square meters of modern A-class storage space (tab. 2). Warehouse areas are concentrated in the eastern part of the city where the Lublin Subzone of Special Economic Zone Euro-Park Mielec is located. The area is well communicated by the S17 expressway, city ring road and the airport. In three of the existing centers new rental warehouses are being built. Centrum Logiczne Mełgiewska (CLM) in Tokarskiego street should be completed at the turn of 2016 and 2017, and the modernization of the warehouse at Mełgiewska 9F by a local investor will finish in 2017. Another 123,7 thousands square meters of warehouse space are currently under construction. By the end of 2016 the vacancy rate was 9,6%, although at the end of the third quarter it was less than 3%. It should be noted, however, that for small markets this indicator is very volatile as even a small change in rental structure results in considerable changes in the vacancy rate.

In the case of Lublin, there is no noticeable difference in rent rates against other regions (tab. 1). Effective rents range EUR 2,6–3,2 per square meter per month and are 10%–20% lower than asking rents. It is worth stressing that it is a favorable offer for the highest standard of the A-class warehouse space which can be adapted for light production and high storage. Warehouse centers also offer office space and car parks, and can be adapted for cold storage and freezers. Location within the administrative boundaries of the city is also their advantage.

The structure of warehouse renters is dominated by manufacturing (66% of the rented space). It is followed by trade and distribution with an almost 32% share, whereas the logistics sector takes

Tab. 2. Commercial warehouses in Lublin (as in November 2016)

Location	Year of commission	Existing space (m^2) Total	Existing space (m^2) For rent	Area under construction (m^2)
Centrum Logistyczne Mełgiewska ul. Mełgiewska 30F	2011	15 000	3 360	0
Goodman Lublin Logistic Centre ul. Metalurgiczna 62	2015	32 700	0	17 000
Lubelskie Centrum Logistyczne GO EAST ul. Do Dysa 5	2015	6 500	0	0
Centrum Logistyczne Vetterów[a] ul. Vetterów 24 A i B	2016	6 500	0	0
MLP Lublin[a] ul. E Plewińskiego 18	2016	16 000	0	40 000
Panattoni Park Lublin[a] ul. Droga Męczenników Majdanka 90	2016	35 100	7 500	35 900
Centrum Logistyczna Mełgiewska ul. Tokarskiego	2016/2017	0	14 800	28 000
Mełgiewska 9F	2017	0	no data	2 800

Source: Data from the City Office in Lublin
[a] Location in Special Economic Zone Euro-Park Mielec (Lublin Subzone)

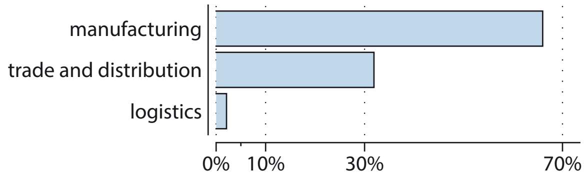

Fig. 5. Demand for commercial warehouse space in Lublin by industry in 2016

Source: Own elaboration based on data from the City Office in Lublin

up only 2,1% (fig. 5). It can be observed that in sectoral cross-section the demand for commercial warehouse space in Lublin clearly differs from the domestic demand (fig. 4) as Lublin is dominated by manufacturing companies. It seems that there are two explanations for this situation. Firstly, the largest logistic companies located in Lublin have their own warehouses (e.g., Raben, Schenker, Poczta Polska). Secondly, such a situation may indicate that outsourcing of logistics services among manufacturing companies is less popular in Lublin than in the rest of the country.

5 Development prospects for the warehouse market in Lublin

Many factors in the development of the commercial warehouse market, such as a favorable macroeconomic situation, influx of direct foreign investments or change of Poland's position in the international supply chain, also have influence on the development of this market in Lublin. European funds play an important role as their absorption fills the gap in infrastructure and influences the development of Eastern Poland, enhancing the region's attractiveness for warehouse investment. It is worth noting some specific factors that have regional and local character and which have a positive influence on Lublin's attractiveness for warehouse investors.

Against the background of other locations in Poland, availability of a qualified labor force and low labor costs are Lublin's advantages. Among other cities, Lublin is distinguished by the high proportion of the working age population, as well as the high proportion of people with completed higher education. Not only relatively low salaries (97,8% of the country's average; 13th position among 18 voivodship capital cities), but, above all, the access to qualified staff is attractive for investors. The availability of the labor force results from a demographic structure which is young in comparison to other cities; from high supply of higher education graduates and from the possibility to improve qualifications thanks to the rich educational offer of higher education and training institutions. Compared to other cities, in Lublin there is still a relatively high unemployment rate which amounted to 7,2% at the end of December 2016. Moreover, Lublin has a high unemployment rate among people below 35 years of age—38,3%.[8] The size and the structure of unemployment translate into a relatively high availability of candidates for positions related to production, trade, distribution and warehouse management. Another advantage of the region is the lowest employee turnover in Poland, indicated by the lowest admission and dismissal rates (*Rocznik Statystyczny Pracy* 2016, 155). Lower turnover reduces employment costs resulting from the necessity to comply with the requirements of labor law; the costs of losing an employee with accumulated specific capital (related to the particular workplace); the costs of searching for and recruiting new employees, as well as the costs of lower efficiency while training the new employee in a given workplace (Maleszyk 2016, 29–30).

The opportunity to further develop the warehouse market lies in the improvement of Lublin's transport accessibility, among other things by including the Via Carpatia route running through the city in the European TEN-T network, completing the S17 expressway or modernizing the railway line to Warszawa. In December 2016, the western part of the city ring road was completed as part of the S19 road to Rzeszów, which will provide a convenient connection with the A4 motorway. In May 2016, the cargo zone at Lublin Airport was completed and put into operation, which allows companies to dispatch about 1,2 thousand tons of goods per year. Ultimately, in the subsequent years it will be possible to dispatch up to 3,5 thousand tons. Thanks to investments, Lublin can

8. Own calculations based on data published by GUS at Local Data Bank.

become an important transport node for intermodal freight transport which, due to the potentially highest efficiency and strategic meaning in the EU transport policy, constitutes the segment of transport market with the highest growth potential in the long run.

In accordance with the concept of multi-specialization, the TFL industry was indicated in the Development Strategy for Lublin 2013–2020 as one of the sectors supporting the economic growth of the city. In addition, other industries synergistically connected with the TFL industry, such as the food, automotive and machine industries, play a significant role in the dynamics of Lublin's economic development (Sagan 2014, 183–186). Industries based on local deposits (coal, limestone, chalk, marl, sand), wood, energy crops, and, above all, on field crops, orcharding (fruit, vegetables, hops, tobacco) and organic food processing are also important for the region's economy. Storage of groceries may become a direction of development for warehouse market in Lublin, especially in the context of the development of e-commerce trade in organic food.

State aid takes the form of allowances for investors undertaking their activity in the Lublin Subzone of Special Economic Zone Euro-Park Mielec, where three logistics centers have already been established. Lublin Subzone has been in operation since 2007 and occupies the area of 128 hectares. Thanks to the city's investments and financing from the EU funds, the subzone has developed infrastructure and is planned to be further enlarged. Investors in Lublin Subzone acquire the right to a personal income tax exemption (PIT) or corporate income tax exemption (CIT) due to the incurred capital expenditure and job creation valid until the end of 2026. Despite the changes in the structure of regional help in force since 1 July 2014 which lead to lowering the limits of state aid in the majority of voivodships, in Lubelskie Voivodship the highest level of maximum state aid has been maintained. It still amounts to 50% of eligible costs and can be increased by 10% and 20% for medium and small businesses respectively. The exemption from property tax for the period of three years is an additional privilege for investors.

Against the background of better developed regional warehouse markets in central and western Poland, in Lublin there are relatively fewer large transactions which could create a stronger impulse for further warehouse investments. Opportunities for market development are created by activities that promote Lublin as an attractive investment destination undertaken by the Department of Strategy and Investor Relations of the City Office in Lublin. The Department provides information about warehouse space to the interested investors and promotes logistics centers as an element of the city's business infrastructure. In 2015–2016 the city gained 17 investors from the manufacturing sector and 5 investors specializing in logistics and distribution.[9] It is worth noting that in the ranking "European Cities and Regions of the Future 2016/2017" published annually by "fDi Magazine" belonging to the Financial Times group, Lublin took 3rd place in the category "Small European cities of the Future 2016/2017 — FDI Strategy."[10]

Conclusions

The years 2015 and 2016 were a period of extremely dynamic development of commercial warehouse markets in Poland and in Lublin. The development of the domestic warehouse market was fostered in part by Poland's geographical location, progress in building transport infrastructure and a favorable macroeconomic situation. Logistics centers in Lublin currently offer 111,8 thousands square meters of modern A-class warehouse space and another 123,7 thousands square meters are in the implementation stage. Growing supply is accompanied by great interest of renters, especially ones representing the manufacturing, trade and distribution sectors. The vacancy rate is low, and further investments are to a great extent already secured by rental contracts. Local rent rates do not differ significantly from domestic, though warehouses in Lublin offer the highest standard of space and attractive location inside the city limits. Although the warehouse market in Lublin is visibly smaller than mature markets in central and western Poland, development prospects for the market are very good owing to the access to a qualified labor force and competitive labor costs,

9. Some of these investments are new projects of companies already functioning in Lublin.
10. The list included 481 locations in total, 5 of which were Polish cities.

the improved transport infrastructure, the development of the Lublin Subzone of Special Economic Zone Euro-Park Mielec and the effective strategy of acquiring investments implemented by the Department of Strategy and Investor Relations of the City Office in Lublin.

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