

# The Role of Logistics Centres in the Region Development

Katarzyna Barbara Witczyńska

*The International University of Logistics and Transport in Wrocław, Poland*

The article focuses on the role of logistic centers in the environment of economic regionalization. The discussion indicates that logistics centers built in a particular area, create a specific economic climate which allows to consider them as a regional product. As a result, logistic centers with appropriate infrastructure of transfer would gain extra points for the change of the means of transport. Great needs of the country create a huge demand for the development of logistic centers, which in turn contributes to the development of a region. As they constitute a driving force of a country, the location of the new centers as well as upgrading and expansion of the existing ones, is very important.

**Keywords:** ogistics centers, economic regionalization, the location of the new centers.

## 1. INTRODUCTION

The key tendency of the 20<sup>th</sup> and 21<sup>st</sup> centuries is globalisation which results in permeating of various types of links and mutual influences in numerous areas, e.g. in the field of logistics. An effective flow of goods, services and information within a supply chain can be provided by logistics centres which need to be perceived as an indispensable factor in the economic development of any region.

The condition to be met in order to participate in modern global development processes is the active creation of innovative processes, understood as activities which aim at gaining competitive edge. The integration of innovative processes happens already at the level of enterprises, but the possibility to carry out such innovations does not belong to enterprises only, but to network of cooperation which starts to act as systems, more regional than industry-related.

The main objective of this article is to point out that well organised logistics centres more and more influence the development of a given region. The region suspends the competitiveness of regional companies, and hence it results on a given region gaining competitive edge.

## 2. THE METHODOLOGY OF THE RESEARCH

This article is a summary of empirical researches carried out in 2014, and which referred to the conditioning of logistics centres development in Poland. The realisation of the research goals assumed omnidirectional empirical researches which would allow to evaluate, among others, the level of development and economical conditionings of the logistics centres to be built, as well as the need to engage public authorities into such processes. The specific used research tools included: desk method research which bases on secondary sources of information (analysing sources, information included in scientific works, both national and foreign ones; specialist magazines, reports, available mentions on realised logistics centres; press releases, Internet publications, press interviews); polls among managers of logistics centres; deepened individual interviews with managers and experts from the selected planning institutions and province and borough offices. On the basis of the carried research conclusions were drawn – the summative ones, as well as the ones referring to the involvement of the authorities in the management of logistics centres, in a wide cause-and-effect context.

### 3. FACTORS DETERMINING THE REGION DEVELOPMENT

The characteristic feature of modern innovations is their net-organized location. It means that all flows happen within a specific, net-linked space. The phenomenon of links may take various forms of regional concentration. Undoubtedly these include logistics centres which are a manifestation of logistics entering a region. These forms, which become institutionalised, may be considered as strategic due to their special role in increasing region's or city's competitiveness.

The following factors<sup>1</sup> influence the shape of modern concept of logistics and its increased importance:

- the change in the character of the market, from a producer's market into a purchase market; the increase of the degree of its differentiation,
- increased competition in standard and quality of services, and of customer service,
- high distribution costs (costs related to physical flow of goods),
- tendency to concentrate in trade, creating and development of new sales channels, and also integration of economic and decision-taking processes,
- development of new IT and communication technologies, and of automatic identification,
- increased importance of ecological aspects in market activities,
- internationalization and globalisation of markets.

While analysing the active role of authorities in realising logistics policy for a region, one must not forget the legal regulations that promote creating new industrial zones, and empowering the already existing ones, which are in line with environmental and urban prerogatives. They also group together enterprises which are able to improve production processes, as well as logistics and economical effectiveness, by placing them on one area. Thanks to some changes in the administrative and legal system<sup>2</sup>, the local governments acquired a number of powers which allow them to manage e.g. the

regional transport system in a way expected by its users and by whole local community.

Due to growing importance of logistics, it seems justified to analyse its impact on the region, and to pose a thesis that well organised logistics centres have a growing say in the region's development. Activities aiming at increasing competition of regions within the applied regional policy become of special importance especially in the situation, when in the modern world not only business units compete with one another, but countries and regions as well. Competition between regions takes place in the spheres of acquiring capital, providing specific services, acquiring qualified staff, acquiring development funds from the country's government or from other home or foreign sources (mainly from the EU aid funds).

The following potential instruments for supporting logistics centres can be named:

- elaborating a special act that would control issues related to logistics centres development, and that would specify the sources for financing development of centres,
- creating a government program for building/developing logistics centres and giving them the status of investment for public purpose; combining the program for building/developing logistics centres with specific financial instruments,
- stimulating the development of investment initiatives within the framework of public-private partnership,
- spatial developing in the country – recognizing logistics centres as public purpose investments which should result in considering it in The Concept of Spatial Development of the Country, and later in spatial development plans in provinces; the logistics network created of many logistics centres should be treated in the Concept similarly to infrastructural networks,
- local spatial planning – creating ground reserves (ground banks) for large-format investments in conditionings and development spatial plans of boroughs and in local spatial plans,
- simplifying administrative procedures related to localizing procedures,
- carrying out local own investments by local authorities, such as e.g. access roads, sewage and water supply systems, technical development of investment areas, as well as

<sup>1</sup> P. Blaik, *Logistyka – koncepcja zintegrowanego zarządzania przedsiębiorstwem*, PWN, Warszawa 1999, p. 23.

<sup>2</sup> Act of 8 March 1990 on local Government, Journal of Laws 1990 No. 16, item. 95.

running appropriate divisions, consolidations, municipalisation, expropriations, proprietary transformations of grounds; it is an important factor for encouraging outside investors,

- creating tax reliefs or/and lowering tax rates.

Summing up – the development of a region and its level of competitiveness largely depends on its economic infrastructure, including transport. It must be pointed out that there are numerous positive aspects of creating logistics centres in reference to competitiveness and region's development. The experience of developed countries shows that logistics centres (distribution and warehousing ones) which function in regional systems, at the same time function as central points for modern supply chains, that later develop into a unified, global logistics system. Oftentimes they take over from local companies the function of realizing basic logistics functions, such as transport or warehousing. As a result one can observe the process of companies becoming 'lean' (outsourcing)<sup>3</sup>.

Implementation of coordinated logistics initiatives and the development of correlated IT management instruments, are strategic methods of supporting companies' competitiveness, mainly by means of limiting logistics costs. The development of more effective supply and distribution chains by coordinating local authorities cooperation may positively influence the development of industrialised zones of a region by reduction of transport traffic heaviness, cause by better of use of loading space, and reducing the number of empty or just partly-loaded rides. Additionally, the existence of logistics centres is a kind of accelerator in attracting foreign investments, especially those that refer to production or trading which both require logistics services.

The above described method of simulating logistics development of a region by means of cooperation between regional authorities and local entrepreneurs, is an interesting model of an active attitude towards logistics transport problems. Such a model may become the reference point for planning activities by local authorities in Poland.

#### 4. THE ACTIVITIES OF PUBLIC AUTHORITIES FOR THE DEVELOPMENT OF LOGISTICS CENTRES DEVELOPMENT

According to the art. 3, chapter 1 of the Act of 6 December 2006 on the principles of development policy, by which is meant a set of interrelated activities undertaken and implemented in order to ensure sustainable development of the country and the social, economic and territorial cohesion in national, regional or local policy lead:

- in the country - the Council of Ministers,
- in the region - the provincial government,
- on a local scale - the province and municipal government.

The units show in Fig. 1 are responsible for preparing appropriate political documents, such as: development strategies, policies, programs and plans. Local authorities are the first unit responsible for the development of logistics activities in the region, and only their efforts result in attracting investors that influence the competitiveness of a given area. The activities performed by self-governing bodies in the area of development and stimulation of logistics process can be surely considered as widely understood regional policy. It is described as a conscious and purposeful activity of public authority bodies, leading to regional development, i.e. to general strengthening of a given area in total country system, or even on international scale. The course of logistics processes in the development of a region should therefore lay in realizing specific tasks by self-governing bodies. In order to avoid managerial mistakes, these aims have been put into three basic development spheres of a province<sup>4</sup>:

- 1) Social sphere, which encompasses questions of changes in society, starting from changes in human mentality, up to specialist trainings in the area of modern logistic techniques.
- 2) Economic sphere, referring not only to purely financial issues such as e.g. tax reliefs, but also the issues of promoting the region and various ways of attracting investors.

<sup>3</sup> J. Kaźmierski, *Zarządzanie logistyczne w rozwoju miasta i regionu – strategiczna rola centrów logistycznych*, Zeszyty Naukowe Uniwersytetu Szczecińskiego, Ekonomiczne Problemy Usług nr 8, US, Szczecin 2007, p. 99.

<sup>4</sup> The development strategy of Lodz Region for the years 2007-2020, Regional Policy Department of the Marshal's Office in Lodz, Łódź 2006, p. 17.

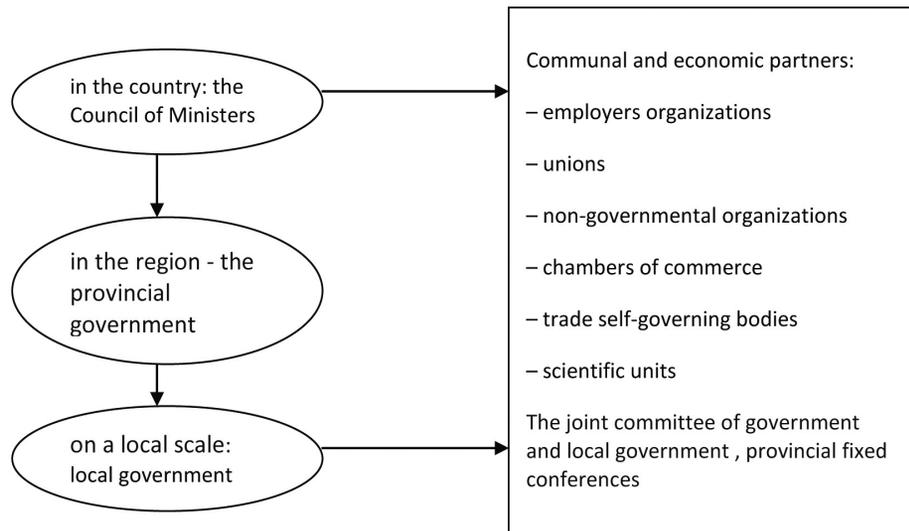


Fig. 1. Policy running units.

The source: G. Gęsicka, *Partnerstwo jako jedna z głównych zasad polityki strukturalnej w Polsce w latach 2007–2015*, Ministerstwo Rozwoju Regionalnego, Legnica 2007, p. 55.

- 3) Functional and spatial sphere, which mainly deals with spatial development of a province, which stays in line with regional development and issues of cooperation of self-governments with other authorities.

The tasks of local governments in the context of social issues should concern primarily preparing people for changes posed by the introduction of and dissemination of logistics. There is a need to move from the pattern of industrial society to the idea of an information society.

Activities within the economic sphere in the field of logistics should primarily involve a variety of ways to attract investors and entrepreneurs in the area of the region. The basis for such action is to establish and appropriately prepare areas designated for logistic. It consists of activities such as: determining land ownership, providing infrastructure for lots (electricity, sewage), and determining their appropriation in the relevant planning documents. It is very important to support the creation and development of industrial clusters and special economic zone - as clusters of cooperating companies in various industries, which previously discussed elements of the network structure. An example of positive effects is the occurrence of a so called Dell effect<sup>5</sup> in the city of Łódź.

<sup>5</sup> Associated with the location of the concern in the area of Lodz. Associated with the need to provide employees with Dell and its subcontractors and associates attractive places to live, education and entertainment. Leads to

The next factor is the revitalization which favours the creation of spatial order. It assumes the revitalization of post-industrial areas through the elimination of the previous cumbersome, usually industrial activity and the place to introduce a new - less burdensome, e.g. a logistics services centre. This concept of development of centres bases on developing degraded, post-industrial or other areas<sup>6</sup>.

The practical application of modern techniques of logistics management aims at consequently increasing development efficiency and competitiveness at the regional level, where there are nodes of wide flows implemented in logistic centres.

## 5. LOGISTICS CENTRES IN THE LIGHT OF TASKS FOR REGIONAL DEVELOPMENT

Measures aimed at increasing the competitiveness of the regions under the regional policy are of particular importance especially when in the modern world not only operators, but also countries or regions compete with each other as well. Competition between regions is performed through capital raising, providing certain services, obtaining qualified personnel, raising funds for the development of the state budget and from other

increased demand for high-quality hotels, business centers and conference facilities, but also to the warehouse and logistics facilities.

<sup>6</sup> J. Kaźmierski, *Logistyka a rozwój regionu*, Wyd. Uniwersytetu Łódzkiego, Łódź 2009, p. 321.

domestic and foreign sources ( mainly from EU aid funds )<sup>7</sup>.

The appearing logistics centres allow to shorten the duration of transport services, reduce inventories and numerous deliveries, and as a result significantly reduce costs. They serve primarily the businesses in the region that calculated that outsourcing logistics is profitable for them. Logistics centers usually take over from enterprises the implementation of the basic functions of logistics: shipping, transport and storage. An important feature of logistics centers already operating in the region, contributing to sustainable development, is the reduction and elimination of the need for the associated operators for their own energy, transport and utilities. Logistics centers reduce the region's load with transportation work. This limits the potential level of congestion of transport in the interurban traffic and inside the agglomeration, reduces the level of destruction of roads and road infrastructure. Location of logistics centres on the outskirts of cities in the region prevents the formation of traffic jams in the city centre, reduces clutter and the destruction of roads, reduces emissions and pollution. Logistics centres also attract other investments, especially for the manufacturing and sales activities and investments related to services. These in turn cause an increase in demand for workers, wind up boom in the construction industry, stimulate the development of road infrastructure, development of services<sup>8</sup>.

Logistics centres<sup>9</sup> are an element extremely important to the economy of each country. They

<sup>7</sup> The Ministry of Economy, Preliminary system objectives and priorities of the National Development Plan for 2004-2006 on the basis of the government's economic program with the proposal of the operational programs and the indicative distribution of financial resources, the document adopted by the Council of Ministers on March 26, 2002

<sup>8</sup> ibidem, p. 300.

<sup>9</sup>The beginnings of logistics centres in Europe are varied. They have been shaped over the years. They were mostly the way to solve local problems generated by economic growth and the implementation of plans of spatial order. They were associated with the transfer of business to a separate area of the agglomeration. An example of such a solution is Barcelona, where already in 1916 it was decided to establish an industrial zone and a free zone. Another case is the Veneto region in Italy, where in 1948 the city of Verona and the city's chamber of commerce, in order to promote the economic and regional development, formed a agro-industrial consortium. Both of these cases have initiated

are also an important factor of economic development, affect the orderly flow of goods and help to increase the efficiency of logistics channels. They result in the fact that organizing the process of movement of goods can be carried out in all conditions, regardless of the type of market that shows the various supply chains, information and products flows, and through appropriate measures costs are reduced, resources are saved and the harmful impact of economic activities on environment is limited<sup>10</sup>.

Competitiveness is understood as the ability to achieve success in economic competition. At the same time, competitiveness of a region (a city) is oftentimes defined as the ability to attract capital and aid measures, and as the ability to maintain the possessed production in the region. Logistics centres have an enormous influence on the development of a given area, and by increasing competitiveness of companies operating on this area it results in achieving competitive edge by the said region.

Among the tasks set ahead of logistics centres, the following can be distinguished<sup>11</sup>:

- 1) The increase of intermodality of cargo transport.

Good location of intermodal transport terminals may result in an increase of rail and water shipments, which should decrease the arduousness of excessive services related to road transport.

- 2) Organizing trading activities and better possibilities for shaping investments and planning.

Logistics centres can focus investments in logistics infrastructure, as well as investments related to production and distribution. This allow to avoid chaos in investment and spatial planning and helps to control the development of economic activity zones.

- 3) The development of activities around logistics centres and the inflow of investments.

Logistics facilities attract other investments related to the activities of production and trade which require considerable logistic

the process of construction of logistics centres; on the basis of: I. Fechner, *Centra logistyczne. Cel-Realizacja-Przyszłość*, Biblioteka Logistyka, Poznań 2004, p. 55.

<sup>10</sup> A. Jeziński, *Trendy rozwojowe centrów logistycznych w Polsce*, „Transport. Spedycja. Logistyka” 2004, no 1, p. 55.

<sup>11</sup> J. Kaźmierski, *Logistyka...*, p. 315.

services, as well as investments related to the widely understood sphere of services.

4) Regional development.

Investments related to logistic centres improve the economic situation in the building industry, stimulate the development of road and communication infrastructure and the development of services, and also contribute to a decline in unemployment, which is directly connected with the increase in demand for labour and hence - regional development.

5) Development of logistics services in the area of city logistics.

Focusing distribution resources in a logistics centre may facilitate managing deliveries that provide supplies for residents and companies inside an agglomeration, by means of optimal planning of shipments, routes, selection of appropriate means of transport, supporting transport and distribution activities with optimizing tools and decision-supporting systems.

6) Regaining inner-city grounds taken for trading activities.

Thanks to appropriate location, logistics centres enable gradual regaining of inner-city grounds taken for other activities. The process is long, but possible is it is combined with an attractive location offer and with spatial planning, as well as with changes in spatial planning projects.

A number of positive aspects in the implementation should be noted: the creation of logistics centers and the competitiveness and development of the region. The experience of developed countries shows that logistics centers (distribution and storage), operating in regional systems, are the focal points of modern supply chains, which later embryos, a single, global logistics system. Very often they take over from companies located in the region the realization of basic logistics functions, such as transport or storage, and as a result one can observe the process of "slimming" of companies (outsourcing). Positive aspects of logistics centres also stem from the fact that their existence in the region contributes to attracting new investments, especially those concerning the activities of production and trade, which require logistics services. At the same time, they induce progress in the infrastructure system of the region. The creation of logistics centres affects so favourably

the creation of regional economic development and increases its competitiveness.

## 6. CONCLUSIONS

Logistics centres are an important part of the economy of each country. They are also an important factor of economic development, affecting the arrangement of the flow of goods and helping to increase the efficiency of logistics channels. They make the organization of processes of movement of goods possible to be carried out in all conditions, regardless of the type of market. Supply chains intersect in them, as well as flows of information and products, and through appropriate measures they reduce costs, saving resources and reducing the harmful effects of economic activities on the environment<sup>12</sup>.

The existence of logistic centres is a kind of accelerator in attracting foreign direct investments, especially those concerning the activities of production and trade which require a high degree of logistics services.

The economic and social consequences for a region or a city where a logistics centre is developed are of great importance. They can be of a variety of characters (positive and negative ones). The positive aspect of creating logistics centres stems mainly from the fact that their existence in a given region attracts new investments, especially those related to trade and production, which both require logistics services. Their presence usually results in the necessity to carry out changes in infrastructure, in roads, telecommunication, computing, networks for fast transfer of people and goods at significant distances.

The presence of logistics centres may also:

- Act as a factor that regulates transport processes in a city/agglomeration/region. It is in the interest of the active logistics centres to create conditions fit for development of ringroads, highways and other elements of infrastructure,
- Maintain infrastructural system elements, which means a stable number of workplaces,
- Facilitate the development of cooperative transport systems located at the city outskirts,
- Lower costs of logistics operations, especially of warehousing and transport; diversify the range of provided logistics services; improve the standard of services offered,

<sup>12</sup> A. Jezierski, op. cit., p. 55.

- Act as a growth factor which will help to develop new structures for goods distribution.

Deficiencies in infrastructure facilities may be one of the causes for development thresholds of larger spatial areas. Overcoming them requires incurring much larger investment than it would with even distribution of these investments over time.

The problem of the development of logistics centres in Poland should be considered as an important field of public intervention, aiming at creating their development by public authorities.

The observations indicate that logistics centres built in a specific region constitute a specific economic climate, allowing to look at them as a regional product. The paper also showed that logistics centres, performing specific roles and functions, contribute to the socio-economic development of the country, and in the wake of this - that their operation reveals more benefits and development opportunities than limitations and barriers. The thesis placed at the beginning of it proves that a well organize logistic centres increasingly determine the significance of the region.

## REFERENCES

- [1] Blaik P., *Logistyka – koncepcja zintegrowanego zarządzania przedsiębiorstwem*, PWN, Warszawa 1999.
- [2] Ciesielski M., *Rynek usług logistycznych*, Difin, Warszawa 2005.
- [3] Fechner I., *Centra logistyczne. Cel-Realizacja-Przyszłość*, Biblioteka Logistyka, Poznań 2004.
- [4] Fechner I., *Modele inicjowania centrów logistycznych*, cz. I, „Logistyka” 2004, nr 4.
- [5] Gęsicka G., *Partnerstwo jako jedna z głównych zasad polityki strukturalnej w Polsce w latach 2007–2015*, Ministerstwo Rozwoju Regionalnego, Legnica 2007.
- [6] Gołębska E., *Przestrzenne warunki lokalizacji i eksploatacji centrów logistycznych*, [w:] *Rola centrów logistycznych w rozwoju gospodarczym i przestrzennym kraju*, red. T. Markowski, KPZK PAN, Warszawa 2006
- [7] Jedliński M., *Przesłanki tworzenia CUL*, „Gospodarka Materiałowa i Logistyka” 2006, nr 6.
- [8] <http://www.klastry.pl> (19.03.2014).
- [9] Jezierski A., *Trendy rozwojowe centrów logistycznych w Polsce*, „Transport, Spedycja. Logistyka” 2004, nr 1.
- [10] Kauf S., *Logistyka miasta i regionu. Metody ilościowe w decyzjach przestrzennych*, Difin, Warszawa 2014.
- [11] Kaźmierski J., *Centra logistyczne jako element infrastruktury i czynnik rozwoju*, Wydawnictwo Uniwersytetu Łódzkiego, Łódź 2006.
- [12] Kaźmierski J., *Zarządzanie logistyczne w rozwoju miasta i regionu – strategiczna rola centrów logistycznych*, Zeszyty Naukowe Uniwersytetu Szczecińskiego, Ekonomiczne Problemy Usług nr 8, US, Szczecin 2007.
- [13] Kaźmierski, *Logistyka a rozwój regionu*, Wydawnictwo Uniwersytetu Łódzkiego, Łódź 2009.
- [14] Kaźmierski J., *Władze samorządowe a zarządzanie logistyczne w mieście i regionie*, Łódź 2010.
- [15] Krasucki Z. (red.), *Transport i spedycja w handlu zagranicznym*, Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk 1994.
- [16] Królak Z., *Polska wobec wyzwań XXI wieku. Zarys strategii na I dekadę*, Wyd. „Alfa 2”, Warszawa 2000.
- [17] Poredl Z., *Infrastruktura logistyczna w Polsce*, Wyd. Uniwersytetu Gdańskiego, Gdańsk 2001.
- [18] Skowron-Grabowska, *Centra logistyczne w łańcuchach dostaw*, PWE, Warszawa 2010.
- [19] Stachowiak A., *Centra logistyczne jako produkt regionalny*, [w:] *Logistyka a przedsiębiorczość i innowacyjność przedsiębiorstw w warunkach „nowej gospodarki”*, red. Z. Stachowiak, Wyższa Szkoła Zarządzania i Finansów w Siedlcach, Siedlce 2007.
- [20] The Act of 28 July 2005 on public-private partnership, Journal of Laws no 169, pos. 1420.
- [21] Act of 8 March 1990 on Local Government, Journal of Laws from 1990, no 16, pos. 95.
- [22] The Act of 6 December 2006 on the principles of development policy, Journal of Laws from 2006, no 227, pos. 1658.

Date submitted: 2015-06-01

Date accepted for publishing: 2016-09-06

---

**Katarzyna Barbara Witczyńska**  
**The International University of Logistics and**  
**Transport in Wrocław, Poland**  
**k.witczyńska@wp.pl**

