



## Development centres of the territory in polycentric system management aspect. The case of Latvia.

### KEYWORDS

Planning Models, Polycentric Development

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**ABSTRACT** *The aim of the article is to characterize the development centres of territory of Latvia within the context of polycentric system management. The article represents the structure of Latvia's habitation, historical aspects and development trends of polycentric development centres, as well as characteristics of city weight areas considering the opinions, which are declared in scientific literature. The article represents classification of the created polycentric city system typology, which shows its traits from morphological, functional and management aspects. For the article the author used methods of logical analysis and synthesis, monographic and analytic method for research of theoretical and empirical study of resources, logically-constructive method, data processing statistical method, and descriptive statistics.*

### Introduction

Due to transition to free-market economy and normative and economic issues for establishment of free Latvian country, within the period from 1990 to 2007 the guidelines for polycentric system management were not updated. Nowadays the management of polycentric spatial structure has been updated together with normative guidelines and availability of financial resources for the improvement and development of city environment. Management of polycentric regional development in Latvia is a very complex question, which is based on relationship among subjects of national, regional and local management during the implementation of integrated territorial policy. The legislative base, established in Latvia, is a significant pre-condition towards polycentric development process. The distribution of polycentric development centres (cities) in Latvia is as following: development centres of international, national, regional and county significance. Since 2007 Latvia implements new concept of territory development, which is directed towards creation of pre-conditions for the competitiveness increase. The processing of development planning documentation for the lowest level, purposeful planning and performing action process is been started in all administrative levels basing on the created legislative basis and taking into the consideration the guidelines of polycentric development (*normative dimension of the polycentricity*). Approach of polycentricity in the development of region territories in Latvia is one of the ways how to channel financial resources of the EU to investments for infrastructure of centres of national and regional significance.

### General description of habitation structure in Latvia

Nowadays Latvia represents relatively weak urban structure; habitation net regarding development and growth experiences high inequality. According to sustainable development strategy in Latvia until 2030 Latvia has linearly concentric infrastructure of habitation, as well as centripetal structure, directed towards the capital city, and concentration of different activities in urban are of Riga (LIAS, 2008). In total there are 76 cities and towns of different sizes in Latvia, which is the place of residence for ~ 68 % residents and only one third has chosen rural territories as their place of living:

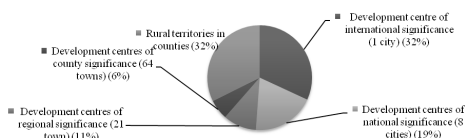


Figure 1. Distribution of Latvian residents according to their place of living in the end of 2012, %.

### The summary of the author (LR CSP ISG15, 2013; LR CSP ISG12, 2013)

In the end of 2012 there are 2.04 million residents living in Latvia, 32% or 650 thousand of which live in Riga (development centre of international significance), 19% or 394 thousand of which live in development centres of national significance, 11% or 211 thousand of which live in 21 development centres of regional significance; 6% residents live in the rest 46 development centres of county significance (total number of residents is 126 thousand), and 31% or 659 thousand residents live in rural territories (LR CSP, 2013). The total number of residents in Latvia since 1989 Census until 2012 has decreased for 624 804 residents or 23%:

**Table 1**  
Number of residents in Latvia and 30 cities (in international, national, and regional significance) in period of 1989 to 2012 (residents and %).

Year	The number of residents in the country, in total (residents)	The number of residents in 30 cities and towns of Latvian regions (residents)	The number of residents in 30 cities and towns of Latvian regions (% from the total number of residents)
1989	2 666 567	1 708 572	64
2000	2 381 715	1 476 311	62
2010	2 120 504	1 306 866	61,6
2012	2 041 763	1 255 740	61,5

Table provided by the author basing on (Latvijas PSR Valsts statistikas komiteja, 1990; LR CSP ISG12, 2013)

Due to total decrease of residents in the country, also the number of residents, living in cities of Latvia is gradually decreasing. Since 1989 the number of residents living in 30 cities of Latvian regions has decreased for 452 832 residents or 26%. According to information, represented in Table 1 on dynamic of residents' number since 1989, approximately 60% of total number of residents live in thirty development centres of international, national and regional significance, i.e., these settlements concentrate significant part of all residents; these centres have become as the foundation for promotion of polycentric development in Latvia.

### Development trends of the capital of Latvia – Riga metropolis

Concentrated resource mass (human resources, infrastructure of entrepreneurship and public services, finance capital etc.) in Riga exceeds the critical mass of other regions for several times. Territory is characterized by great internal differences. The common thing, which unites the outer metropolis, is increased income level for residents, increased concentration

of residents, and the most important thing – greater commuting of workforce to Riga if compared to the rest Latvia. Due to its location, size and economically dominant role the capital forms agglomeration around itself, where ~ 650 thousand lives in internal metropolis, bet more than 1.183 million residents in all agglomeration in total (LR CSP ISG12, 2013; VRAA 2012). Internal metropolis is connected with Riga city and forms closely integrated functional area. Historically the internal metropolis has significantly increased over the time, attaching more and more new settlements and territories to the administrative territory of the city - in the 13th century territory of the city was only 16 hectares while in the end of the 19th century 282 thousand residents lived there (LR CSP, 2011) and it engaged 5200 hectares big territory (including waters), but in 1976 the territory of the city extended to 30716 ha (Celmiņa, 2000); after the administrative reform in 2010 the territory of Riga has been updated and stated in area of 307km<sup>2</sup> (LR CSP, 2013). Regarding the researcher Champion who described historical ways of polycentric evolution of settlement (Champion, 2001), the internal metropolis of Riga can be characterized as polycentric region of urban environment, which has established in the result of centrifugal force since the decisions on extension of city borders during the time were established and legally strengthened because the city needed the extension. A significant period of development can be seen in the second half of the XX century, when due to intensification of industrialization policy of Soviet Union the number of working places and resident concentration in the capital city increased, which was limited only due to realization of "central places system" plan. Nowadays the adjacent territories of Riga city experience centrifugal process since the external metropolis form aspiration area, which in daily routes communicates with Riga. External metropolis forms a circle around internal metropolis, including 20 county municipalities and cities of different sizes:



Figure 2. Area of Riga metropolis, 01.01.2012 (VRAA, 2012)

The urban area of Riga (in radius to 90 km) includes cities and towns of different distribution from Riga planning region – big cities, medium cities and small towns. The impact area of Riga exceeds the administrative borders of Riga planning process since it also includes the greatest city of Zemgale planning region Jelgava, small-sized towns, as well as small-sized towns from Vidzeme planning region. Additionally to that the centrifugal structure of Riga urban area is formed not only from cities and towns of different sizes, but also existent administrative counties, which since 2002 experience significant increase of resident and economic activity, therefore confirming concentric extension of capital city region, creating new sub-category centres and attaching new settlements. City-to-city connections exist among Riga impact zones (place of living-working place). In 2004 Z.Krisjane provided a research during which the agglomeration border for Riga functional region was defined; this measurement is

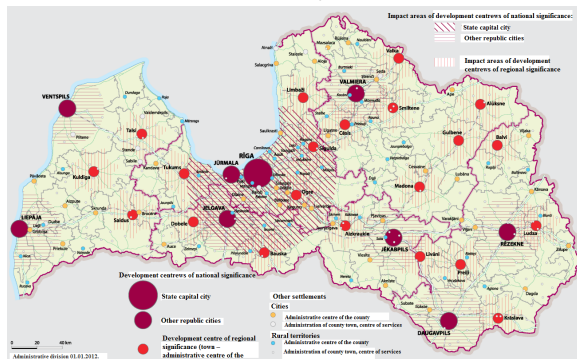
mainly based on daily migration of workflow, but in 2006, working out the territory planning for Riga region, the agglomeration border was updated taking into consideration new basic criterion – calculations about specific weight of income tax from residents working in Riga in revenues from income tax of residents in budgets of other municipalities.

#### Historical formation aspects of nowadays development centres of national and regional significance in Latvia

Development centres of national importance – Liepāja, Ventspils, Jelgava, Jūrmala, Daugavpils, Valmiera, Rezekne, and Jekabpils (8 cities), as well as development centres of regional significance, which are equally distributed in all territory of Latvia (21 town), which additionally to institutional, culture, social, medicine and education services provide also a significant concentration of economic activities and human resources are important to the country. The development of cities and towns of national and regional significance is connected with historical planning process of urban environment since the guidelines of polycentricity management in Latvia was created already before gaining independence in 1990. The urban environment system in Latvia has experienced implementation of purposeful development policy, which created the foundation for the disposition and functionality of modern towns and cities. In 1960's/1970's in Latvia promoted district planning and started implementation of unified city net as „central places” system plan with an aim to develop efficient industrialization policy and prevent strengthening impact of the capital city Riga. In the system of „central places” the emphasis was not put on balancing economic development, but on provision of provided services for the all territory of the country (VRAA, 2008). The establishment of city system of different levels, which included establishment of daily, periodically and episodically attended service institutions in the stated settlements was planned (Eglīte, 2009). Planning approach anticipated the establishment of the lowest-level centres for daily attendance where residents could receive the following services within half an hour: (primary) schools, shop, doctor, culture centres, sports hall. Centres of the highest level had to additionally provide services, the necessity of which were not so urgent (hospital, notary, cinema, mall, market, saving bank, court and policy institutions) within 1.5 hours time. Settlements of episodic attendance had to provide availability of high arts (opera, ballet), institutions of higher education, and traffic (airport). In all centres, additionally to establishment of attendance infrastructure it was planned also the employment policy (industry) with the necessary construction of infrastructure, as well as providing living space for the residents. According to this approach the centres for development, which were located around 1.5 hours away from other settlements, were chosen in the undeveloped urban system of Latvia. In 1976 the district planning scheme in Latvian USSR for 1976-2000 was worked out; Riga was located in the category of centres for episodic attendance, but Liepāja, Ventspils, Jelgava, Daugavpils, Rezekne, Jekabpils, Valmiera and Gulbene was approved as (district) centres for periodic attendance (Kūle, 2007). Scheme of district plan looked at territory development problems from economical, social, architectonic planning and ecological aspect. In the result of the implemented policy the supported cities and towns received significant financial resources; urban environment infrastructure developed, city territories increased, which caused the increase in number of residents. Seven created region centres still perform functions, defined in the 1970's and have become as a base for development centres of national significance in nowadays planning system for polycentric development. Nowadays the defined cities of national significance have formed from daily visiting centres of the lowest levels. Many of the defined towns of county significance are relatively new since they had town-parish rights in the period of Soviet Union, but town status they received only in the beginning of 1990 after Latvia gained its independence.

Characterisation of influence areas of Latvian development centres of national and regional significance

So far the researches on the direct urban influence areas have not been conducted in Latvia. State Regional Development Agency in the characterisation of urban influences uses population distribution morphology and uses administrative areas – urban influence areas, showing their relative positioning, as reflected in the following picture:



Picture 3. Development centres of national and regional significance and their direct influence areas (VRAA, 2012)

In its study defines urban influence areas in order to gain insight into the relation between development of cities and suburban areas, which is why urban influence areas do not match with administrative areas. In order to determine area functional characteristics are used – distance to the city that provides availability of specific functions from the surrounding area. It is assumed that the distance to the national development centres, if using motor highway, is 50 km, which depending on the mode of transportation provides availability within 40 minutes to one hour. The study notes that sometimes 50 km availability area does not coincide with the urban influence area – in some cases area territories do not reach 50 km line, in other cases – exceeds (VRAA, 2012). In addition, urban influence areas are compared on the level of average demographic (population, population change %, demographic load) and socio-economic indicators (unemployment, income tax payments, number of economically active business units). Data of analysis are summarized in Table 2:

Table 3 Characteristics of typologies of urban systems in the context of Latvia. Author's summary

	Latvian context	Base	Weights
Middle-sized city region	<p><b>Morphological:</b> This urban typology is the most common in Latvia. Centre groups develop on the basis of small- and medium-sized cities and inter-connections. They have different origins, evolved out of small nucleuses, which are close to each other. In Latvia these are development centres of national, regional and county importance.</p> <p><b>The relationship between urban areas:</b> These nucleuses are related to functional activities.</p> <p><b>Management:</b> Collaboration of participants is weaker at the political level, as the typology cooperates with various municipalities. Management guidelines are being initiated.</p>	Fusion Mode and/or Incorporation Mode (Champion, 2001)	Polynucleated urban field (Champion, 2001); Mezo scale (EC, 1999)
Metropolitan region	<p><b>Morphological:</b> This urban typology is derived from the main centre that was expanding concentrically creating new sub-centres and/or adding other smaller towns. In Latvia exists only one such region – Riga.</p> <p><b>The relationship between urban areas:</b> There are commuter services between areas (residence-work). In respect of scale, there are functional activities, yet they are not as important as in medium-sized city region.</p> <p><b>Management:</b> The relationship between the participants is stronger than in medium-size city region relationship, because it is officially recognized by the government. However the cooperation is not perfect in spite of existence of integrated plan and policy.</p>	Centrifugal Mode and/or Incorporation Mode (Champion, 2001)	Individual metropolitan area (Champion, 2001); Micro scale (EC, 1999)

Table 2 Geographic and demographic indicators of urban influence areas in 2011. Author's summary (VRAA, 2012)

Title of territory	Title of indicator	
	Territory area km <sup>2</sup>	Number of residents thousand
Latvia	64 562	2 217,10
Area of Riga metropolis	10 287	1 182,9
Impact area of seven cities, in total, including:	19 824:	608,20:
Impact area of Liepaja	3 652	124,3
Impact area of Ventspils	2515	55,2
Impact area of Daugavpils	2 595	137,4
Impact area of Rezekne	3 457	78,8
Impact area of Jelgava	1 663	100,8
Impact area of Jekabpils	2 995	50,0
Impact area of Valmiera	2 946	61,7

In addition to these indicators other socio-economic data have been analysed, yet the author is of the opinion that area of territory and population estimates provide basic information on the sizes of urban influence areas; using these data it is possible to perform monitoring of processes.

Classification of typology of Latvian polycentric urban system

In order to create a useful urban polycentrism definition in the context of Latvia and create classification of typology of polycentric urban system, which reflects the characteristics in morphological, functional and management aspects, Latvian cities and towns have been grouped into three categories: a medium-sized city region, metropolitan region and sub-metropolitan region. These categories are described in Table 3 based on the Latvian context, historical background (Champion, 2001) and spatial weight (Champion, 2001; Dühr, 2005). Borderless (Soja, 2000; Moura, 2005) and gradation (Champion, 2001) features are not mentioned, because these processes occur in all three categories. This polycentric classification of urban system in Latvia is necessary to understand its characteristics, because morphological, functional (inter-dependent) and management aspects change in accordance with each typology:

Sub-metropolitan region	<p><b>Morphological:</b> Urban system consists of two or more metropolitan areas or medium-sized urban areas.</p> <p><b>The relationship between urban areas:</b> These nucleuses are interrelated to functional activities.</p> <p><b>Management:</b> co-operation between the participants is lower at the political level, because this typology is related to various municipalities, sometimes even in different countries. In addition, this urban structure is not officially recognized by the government.</p> <p><b>There is no such typology in Latvia.</b></p>	Fusion Mode and/or Incorporation Mode (Champion, 2001)	Polynucleated urban field (Champion, 2001); Macro scale (EC, 1999)
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Compared to the rest of the world and the EU, Latvian population is numerically small, historically it has affected the formation of urban network – small and medium towns have developed by fusion or merging, but the capital formation is based on the centrifugal type. It determines the division of urban typology – in the country exist medium-sized city regions (Mezo scale) and one Metropolitan region (Riga) (Micro scale), but sub-metropolitan regions are not represented. Two represented typologies of urban systems have different properties in the morphological, functional and management aspects.

### Summary

The article is presented established a polycentric urban system type classification that reflects the characteristics of morphological, functional and management aspects. Dependent on the EU settings while implementing regional policy of Latvia, it is necessary to reduce regional disparities and to avert the potential regional imbalances or development processes. In order to perform appropriate regional policy activities it is necessary to evaluate the existing polycentric development trends. In Latvia the majority of population live in urban areas, only one third of population lives in rural areas. Over the years resources (including population) concentrated in Riga has grown. Around the internal metropolitan of Riga has

developed external metropolitan forming closely integrated functional space. In the agglomeration of Riga and its vicinity can be seen significant growth of population; in 2012 58% of countries population lives in or near Riga, but population in the rest urban network gradually decreases. These Latvian population trends should be taken into account in the planning and implementation of future polycentric development policy. Development of Latvian cities of national and regional importance is related to historical process of urban planning; they perform service functions set in 70-ies, nowadays becoming the elements of planning system of polycentric development. Latvia definitely has urban influence areas, which provide into development relations of cities and surrounding areas. The article presents established classification of typology of polycentric urban system, which reflects their characteristics in morphological, functional and management aspects.



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### REFERENCE

- 1) EC (1999). European Spatial Development Perspective. Towards Balanced and Sustainable Development of the Territory of the European Union. Luxembourg: Office for Official Publications of the European Communities, pp.20. | 2) Celmina, I. (2000). Rīgas pārvalde atstājos gadsimtos, Rīga : SIA Rīgas nami : Rīgas vēstures un kuģniecības muzejs, ISBN 9984-9116-3-2, 352 lpp. | 3) Champion, A.G.A. (2001). Changing Demographic Regime and Evolving Polycentric Urban Regions: Consequences for the Size, Composition and Distribution of City Populations. Urban Studies, 38(4), pp. 663-665. | 4) Dühr, S. (2005). Potentials for Polycentric Development in Europe: The ESPON 1.1.1 Project Report. Planning Practice and Research, 20:2, pp.235-239. | 5) Eglīte P. (2009). Policentriskās attīstības plāni Latvijai. LU 67. Zinātniskās konferences „Geogrāfija. Geoloģija. Vides zinātne” referātu tēzes. Rīga: LU akadēmiskais apgāds, ISBN 978-9984-45-112-1, 44 lpp. | 6) Kūle, L. (2007). Teritorijas plānošana Latvijā. Latvijas Universitāte un Baltijas jūras reģiona Eiropas Savienības INTERREG III B projekts "Telpiskās attīstības veicināšana, veidojot kopīgu izpratnes telpu (COMMIN)", 15 lpp., [http://commin.org/upload/Latvia/LV\\_Planning\\_System\\_in\\_Latvian.pdf](http://commin.org/upload/Latvia/LV_Planning_System_in_Latvian.pdf) | 7) Latvijas PSR Valsts statistikas komiteja (1990). Statistiskais biļetens "1989. gada tautas skaitīšanas rezultāti Latvijā PSR", Rīga, 64-69 lpp. | 8) LIAS (2008). Latvijas ilgtspējīgas attīstības stratēģija līdz 2030. gadam, Pilnveidotā 1. redakcija. SIA „Analītisko pētījumu un stratēģiju laboratorija”, 60 lpp. | 9) LR CSP (2011). LR Centrālā statistikas pārvalde, tabula „Pilsētu iedzīvotāju skaits, 1897; 1920; 1925; 1935” pieejams: <http://data.csb.gov.lv> | 10) LR CSP (2013). Latvijas statistikas gada grāmata 2012, Rīga: LR Centrālā statistikas pārvalde, ISBN 978-9984-06-420-4, 90 lpp. | 11) LR CSP ISG12 (2013). LR Centrālā statistikas pārvalde, tabula ISG12 "Pastāvīgo iedzīvotāju skaits statistiskajos reģionos, republikas pilsētās un novados gada sākumā." pieejams: <http://data.csb.gov.lv> | 12) LR CSP ISG15 (2013). LR Centrālā statistikas pārvalde, tabula ISG15 "Pastāvīgo iedzīvotāju skaits novadu pilsētās gada sākumā." pieejams: <http://data.csb.gov.lv> | 13) Moura, R. (2005). Morfoloģias de Concentração no Brasil: O que se Configura além da Metropolização?, Revista Paranaense de Desenvolvimento, 107, pp. 89. | 14) Soja, E.W. (2000). Postmetropolis: Critical Studies of Cities and Regions. Oxford: Wiley-Blackwell, pp.235. | 15) VRAA (2008). Pētījums „Latvijas pilsētu sociāli ekonomiskās attīstības tendences”. SIA „Analītisko pētījumu un stratēģiju laboratorija”, Rīga, 27 lpp. | 16) VRAA (2012). Izdevums „Reģionu attīstība Latvijā 2011”, ISBN 978-9934-8126-2-0, Rīga, 74-82 lpp.