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**Small Towns'  
Development Problems**

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## Introduction

Papers presented in this volume of *Annales Universitatis Pedagogicae Cracoviensis Studia Geographica* are all dedicated to small towns in Europe. The volume can be treated as the continuation of the deliberations and discussion presented during the session on "The place and role of small towns in complex urban systems" of the International Geographical Union Regional Conference in Kraków. The session divided into two parts took place on 20<sup>th</sup> and 21<sup>st</sup> August 2014 and met with considerable interest.

Small towns play an important role in the settlement structure of regions. In times of the globalization processes, the growth and development of world metropolises, the changing role of industry as the growth factor on one hand and the growing role of the services on the other, the development paths of the smallest urban settlement network units are differentiated. The reasons and ways for the success of many small towns and stagnation or even failure of others differ in different countries or regions but the mechanism, processes and problems seem to be similar. Identification and understanding the motives and the development paths of small towns located under different environmental, economic and even historical and political conditions became the important element of the publication.

Presented volume consists of 11 articles on demographic, social and economic development problems of small towns in Europe. Small towns of Poland, France, Germany, Hungary and Czechia are examined.

Hélène Mainet refers to sustainable polices and asks whether they can really be implemented in a small town. The author states the barriers for implementing such polices in small towns in France, emphasises the paradox between their images of sustainable places and towns where living is easy and the fact that most of them do not, and cannot, implement sustainable development policies.

The authors of the following three papers refer to the population changes in small towns emphasizing the problem of shrinkage. Gábor Pirisi, András Trócsányi and Bernadett Makkai give light to the small towns' urbanisation in Hungary. In view of shrinkage problem they ask what are the attractiveness factors of small towns in the 21<sup>st</sup> century. Manfred Kühn wonders how to overcome the disadvantages of a peripheral location and peripheralisation processes of small towns in peripheral regions of Germany. Agnieszka Kwiatek-Sołtys analyses the population changes in small towns of Poland. The author examines the population types of small towns in Webb typology and asks whether and to what extent the population changes reflect the socio-economic position of towns.

The next four papers are the valuable contribution to the studies on towns' functions. Bartosz Barosiewicz is looking for an independent tool to measure the phenomenon of economic linkages between small and medium sized towns and

their surroundings. He uses National Register of Business Entities for the delimitation of small and medium sized towns functional areas in the Łódź region. Krzysztof Wiedermann pays attention to the development of industry as the possible solution to solving the problems of labour market of small towns in Poland. Barbara Konecka-Szydłowska with Barbara Maćkiewicz study the role of the endogenous capital in the development of small towns and prove a high level of development of towns of Poznań agglomeration. Mariola Tracz analyses the condition and structure of the educational services in small towns of two provinces in Poland. The author states the barriers and opportunities of the development of educational services in small towns.

The articles written by following authors consider the role of small towns by giving the detailed case studies. Katarzyna Kulczyńska constructs models of service systems in the split towns (Słubice and Frankfurt on the Oder, Gubin and Guben, Cieszyn and Český Těšín) and notice two types of them: one geared to the service of the local population and the one geared to the transborder customer. Agnieszka Brzosko-Sermak with Monika Płaziak compare the development of border towns of Guben and Gubin, after the change of geopolitical situation, due to the EU and Schengen Area enlargement while Antonin Vaishar on the example of a small town of Kuřim examines the role of the small town in the suburban zone. The author realises that despite the growth due to the natural increase the town's future development seems unclear. According to the author the question of the sustainability of small towns in the suburban zones consists neither in coexistence with nature nor in economic and social aspects, but in their duration as an independent settlement units.

Editors and authors believe that the volume will become the fruitful contribution to the studies on small towns worldwide and hope that studied problems and methods used could be helpful for students and academics interested in studies on small towns.

Looking forward to next volumes and publications on small towns' problems.

*Agnieszka Kwiatek-Sołtys*

# Annales Universitatis Paedagogicae Cracoviensis

Studia Geographica VIII (2015)

*Hélène Mainet*

## The paradoxical place of small towns in sustainable development policies. What is beyond the images of “places where the living is easy”?

### Abstract

Sustainable development policies have become new objectives of local actions since the implementation of the notion in the 1990s. Small towns promote images of places where the living is easy and with sustainable amenities like “natural” living environment. But, beyond these perceptions, operational sustainable development policies are quite occasional. Taking a sample of French small towns in the Auvergne region as examples, it is interesting to analyse this paradox of an interesting potential leading to rare effective actions. It seems that it is quite difficult for local stakeholders to implement really transversal and not sectoral policies and the lack of capacity and budget is an important issue for them as it takes time and money to develop really participative and holistic programs.

**Key words:** development; images; policies; small towns; sustainable

Over the years the concept of sustainable development has led to various definitions, understandings and instrumentations. Basic definition of sustainable development implies interrelation of three dimensions – environment, economy and society, meaning that each of them is as important as the others. Sustainable development became a political objective of the United Nations with several important summits and the Rio Conference in 1992. Some of the key sustainable development policy frameworks include comprehensive action plan Agenda 21 (created in 1992 and reaffirmed in 2002). Sustainable development remains a powerful concept and has been used extensively in town development since 1994 when several European capital cities signed the “Aalborg Commitments”. These commitments became the foundation of sustainable development planning in cities. Municipalities that signed these Commitments vowed to establish principles of effective governance, protection and preservation of natural resources, wellbeing and health of citizens. Nowadays the issue of quality of life tends to be more and more important for the attractiveness of spaces in a context of increasing commuting and social demand for a good living environment.

Small towns are often described as places where “the living is easy” or “human sized towns” and local actors tend to underline local amenities such as a good

environment, proximity to nature or strong social ties to attract newcomers, tourists, even new investors (Knox, Mayer, 2009). Furthermore, in the sustainable development philosophy, the notion of “think global, act local” tends to favour local actions and thus small localities where such experimentations can take place. But what is beyond the promotion of fashionable criteria and whether small towns can really implement sustainable development policies, not only focusing on environmental aspects but associating environment, economy, social and cultural issues?

Taking French small towns as case studies, the paper is questioning the implementation of real and concrete policies and programs such as Local Agenda 21 or Healthy City affiliations in such towns. Apart from national data, a survey has been conducted in a sample of 12 small towns in the Auvergne Region (interviews with local authorities and inhabitants). This sample has been chosen to represent a range of situations (demographic and economic trends, geographical distance from large cities). It appears to be quite difficult (politically and financially) to plan “green and soft” transports modes, encourage local food systems or design eco-neighbourhoods, when local budgets are often limited and economies of scales not always possible. Finally, the place of small towns in sustainable development policies is quite paradoxical as few of them are really involved in sustainable development programs despite their images of places “where the living is easy”.

### Small towns: are they places “where the living is easy”?

In France, small towns are often portrayed in iconic terms as “towns in the countryside”, close to nature. They are generally seen as more sustainable places to live in because of the absence of congesting forces, such as traffic, pollution and crime. Reduced transportation costs in terms of fuel and time along with higher division of labour are regarded as main advantages of small and medium towns.

In city branding, environmental, social and heritage aspects are very much used in the promotion of small towns (Tab. 1). a study of Internet sites of a sample of more than 80 small towns shows that the living environment (described as “natural” and “preserved”) and quality of life attributes are quoted more often than economic aspects (Mainet, 2011).

**Tab. 1.** Examples of images and words used to describe small towns amenities

Words and notions used		Number	%
<b>Total sample</b>		<b>83</b>	<b>100</b>
Of which:	Living environment (« natural » and « preserved »)	20	24.1
	Quality of life	17	20.5
	History, heritage	15	18.1
	Dynamism of local economy	11	13.3

Sources: analysis of a selection of French small town websites (2010)

Those good images and the importance of environmental aspects are also noticeable in images and perceptions of inhabitants (Tab. 2). a survey conducted in Auvergne small towns, on a sample of 328 dwellers, shows that the evaluation of their quality of life is good and very good, largely linked with the characteristics of the place and prized amenities, like the living environment qualities. Social aspects are also important and outdistance economic features like the existence of job opportunities or the proximity to work. Considering the three sustainable development pillars, economy seems to be less important in residential choices and mobility.

**Tab. 2.** Perceptions of quality of life by small towns' inhabitants

<b>A- Evaluation of quality of life</b>	<b>Percentage</b>
Excellent	49.0
Good	43.2
Rather good	4.2
Bad	1.2
<b>B- Components of quality of life</b>	<b>Quotations rank</b>
Place amenities (quietness, living environment...)	1
Personal aspects (family life, well-being...)	2
Social aspects (neighbourhood, sense of security...)	3
Job / proximity to work	4

Sources: author's survey, 2012–2013

But the reality is often quite divergent from mainstream images. Like other communities, small towns are facing myriad of challenges, ranging from job and population losses in many places to development pressures and changing landscapes in others. Access to jobs, services, and transportation options can be often limited. Is the living still easy when public services are closing (this is the case in many of French small towns, where courts and tribunals, police stations, post offices, hospitals are affected by the national policy of restructuring public services), when jobs in industries are reduced and young people are leaving? Ageing in lots of small towns is also a real issue. The promoted quality of life seems to be more ambiguous than it might appear. In that context, what is the place of local policies specifically dedicated to the improvement of quality of life issues and, more generally speaking, of sustainable development?

## **A difficult commitment in operational sustainable development policies**

An interesting paradox is the difference between the will and the capacity of local stakeholders to implement sustainable development policies. Different schemes and frameworks exist to develop sustainable development policies (climate and energy plan, environmental charter...). The analysis of different transversal and holistic programs proves that the place of small towns is not obvious. It seems that implementing official sustainable development policies is quite difficult for small towns, compared to other towns, especially large and medium sized towns.

The first example is the Local Agenda 21. It has been created as a local adaptation of the Rio 1992 precepts (Dooris, 1999). In France, the national policy aims at encouraging communes and local authorities to adopt a Local Agenda 21 through a national process of branding (which has to be reevaluated regularly). In 2013, 470 Local Agendas 21 were certified by the State, when 950 others were implemented without official recognition. Looking at the total of the French Local Agendas 21, it is interesting to notice that small towns (with population between 2,000 and 20,000 inhabitants) are hardly represented (Tab. 3).

**Tab. 3.** French communes with Local Agenda 21 and Healthy City membership by size

Size of communes (number of inhabitants)	Share of local authorities with Local Agenda 21 by the type of communes %	Share of Healthy City members by the type of communes %	Share of urban units in the category in the national total %
Less than 2,000	0.1	x	x
2,000 – 20,000	1.6	13.5	89.0
20,000 – 100,000	17.0	51.8	9.4
Over 100,000	57.0	34.7	1.6

Source: a national survey (<http://encyclopedie-dd.org/encyclopedie/economie/4-3-territoires-et-amenagement/les-agendas-21-locaux-et-les.html>) and <http://www.villes-sante.com/>

Another program was the adoption of Healthy City measures. This program has been launched in 1986 with the Ottawa Charter by the World Health Organization. The objectives are to promote services and programs dedicated at a healthy living environment, taking into account social and spatial factors. Elements of sustainable development are very important in the Ottawa Charter and the local scale is chosen as the best one to develop actions through a “local health plan” (Le Goff, Séchet, 2011). In France, in 2013, 86 communes are Healthy Cities members, but only 13.5% of them are small towns (when they represent 89% of the total urban units). Medium sized towns authorities are more involved in this program<sup>1</sup>.

Looking at the sample of Auvergne small towns, it is interesting to identify how and why local actors have been implementing or not sustainable development programs. From 12 small towns, five have already entered operational actions (Tab. 4). It is worth to notice that they are part of collaborative plans with surrounding communes. Only six of them have the clear mention of sustainable development in the structure of their municipal commissions. But sustainable development is seldom considered a transversal commission, often associated with sectoral and quite different authorities (like housing, environment, planning). It seems that the definition of sustainable development, which, in theory, is supposed to associate environment, economy and society, is quite blurred.

<sup>1</sup> As comparison, in Poland, with 43 Healthy Cities in 2013, 23% are small towns, 53.4% the medium ones and 23.6% large cities.

**Tab. 4.** Place of sustainable development (SD) policies in municipal organization of Auvergne small towns (ranked according to the importance of SD)

Small Town	SD program	Existence of SD commission in the commune structure
Cournon	Territorial Climate plan (with Clermont-Ferrand metropolitan area)	SD and local planning
Brioude	With the community of communes	Urbanism, housing and SD
Issoire	With the community of communes	« Living together » and SD
Ambert	With the community of communes	–
Saint-Flour	With the community of communes	–
Commentry	A21 planned	Works, urbanism, housing and SD
Saint-Pourçain-sur-Sioule	A21 planned	Education, citizenship, ecology, SD and environment
Thiers	–	Water, sanitation, transports, SD and works
Yssingaux	–	–
Vic-le-Comte	–	–
Billom	–	–
Lapalisse	–	–

Source: survey, 2012–2013

The reasons to implement sustainable development policies are linked with the promotion of the town and the recognition of policies already implemented as a way to formalize them. It is also important to take advantage of being a part of a network and sharing experiences and “good practices”.

The reasons “why not” are very interesting to understand from the small town actors’ point of view. Small cities are at a distinct disadvantage when trying to enact sustainability policies due to capacity (staff time and skills, local revenue). They often have limited local government service delivery and planning capacity. In many small places the limiting factor in terms of any policymaking, including sustainability programs, is often capacity. Professional management (both in the form of a city/town manager and the specific dedication of staff time to sustainability) increased the adoption of sustainability policies. It can be an explanation of the “better” position of medium sized towns.

Furthermore, small towns depend more on citizen or political leadership. The role of local leaders is very important in the decision to apply for membership of these programs. The role of citizens is also important in small towns, and local governments that created an official citizen commission to oversee sustainability actions seem to adopted more policies. The example of Issoire is typical, “with Group 21” dealing with inhabitants and actors dialogues and “walking workshops” aiming at in situ observations of local issues.

Small towns need structures to provide technical assistance and support (at regional or national levels). For example in Auvergne, an eco-development network of small and medium towns has been created in 2013, with the support of the State for funding and engineering. Another example is the national program for eco-districts. In 2011, of a total of 394 applications submitted, 27% came from small towns (and rather the same was the share of the rural communes), that is from communes in need for funding and support.

## Conclusion

Finally, the place of small towns in sustainable development policies is quite paradoxical as few of them are really involved in operational and global programs. We observe a paradox between their images of sustainable places and the fact that most of them do not (and cannot) implement sustainable development policies. Another issue is the importance of collaborative schemes, with neighbouring communes or with regional or national partners.

The diversity of small towns should be taken into account as the possibilities are different depending on demographic and economic trends (the issue of declining economy and depopulation). Their location from greater urban centres is also a major spatial aspect as small towns integrated in metropolitan areas are facing different problems and have different opportunities than more the remote ones, assuming a role of local centres for rural surroundings.

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# Annales Universitatis Paedagogicae Cracoviensis

Studia Geographica VIII (2015)

*Gábor Pirisi, András Trócsányi, Bernadett Makkai*

## Between shrinking and blooming: the crossroad of small towns' urbanisation in Hungary

### Abstract

The authors present an overview about small towns' urbanisation in Hungary. Following the specific aspects and factors of their urbanisation in the last centuries, the authors conclude that 20 years after the political and economic transition, small towns arrived at a crossroads in their development. Suffering the effects of demographic change and an outflow of young adults, almost every typical, traditional small town has been shrinking since at least the last decade. This crisis is more intensive than the overall decrease of the population number in Hungary. Only atypical small towns have been able to increase their population. Behind the crisis of typical small towns, the paper defines some possible factors, including the delayed effects of transition, the re-evaluation of small towns in the globalising, network-based economy and the actual reduction of the state's spatial functions and presence. Although some niche-based strategies are open for success, for the majority of small towns the question still remains open: what new functions and attributes could make them attractive and successful in the 21<sup>st</sup> century?

**Key words:** differentiation; Hungary; shrinking; small towns

### Introduction

Small towns have become more interesting for researchers recently – so far we could believe in our subjective impressions about the trends of some international journals and other papers. Especially in Eastern and Central Europe this question has seemed to be a bit more important recently than before. It could be an effect of some more general trends in human geography, which gives more emphasis on human issues themselves, for example on the research of locality. Nevertheless, there are at least two major directions to be observed related to the small town topic. In the Anglo-Saxon World, and in other Western European countries, the questions of life quality, small towns' society and community, and local sustainability seem to be the most significant questions (Kwiatek-Sołtys, Mainet, 2014; Knox, Mayer, 2009; Besser, 2009; Woodhouse, 2006). In Central and Eastern Europe the problems of development, the small towns' role in the settlement system and the local success perspectives stay in the foreground of investigations (Burdack, Knappe, 2007;

Ježek, 2011; Kwiatek-Sołtys, 2011; Molnár, 2006; Slavík, 2002; Vaishar, 2004; Zuzanska-Żyśko, 2005). This different scope of research could be rooted in the features of the urbanisation in our region. Due to the historical delay, and some functional deviation, urban network has always preserved some weaknesses in Eastern-Central Europe, containing relatively few and smaller elements. Therefore, small towns have played more significant roles in the urbanisation east of Rhine, moreover of the Oder: lack of cities made small towns the only urban places available in often thousands of km<sup>2</sup>.

Larger scope of spatial interaction does not inclusively mean a positive attitude. Joachim Burdack for example divides the small town related research into two groups, of positive narratives ("small town romanticism"), and negative ones ("small town scepticism"; Burdack, 2013). These two different perspectives could be relevant parallels in contemporary Eastern and Central Europe. During the post-socialist development, the elements of the settlement-system have been intensively differentiated (Andrusz et al., 2008; Kovács, 1999; Pirisi, Trócsányi, 2012), and the examples of the successful transition are concentrated more or less in some well-urbanised regions, those of national capitals. Therefore in extended areas of rural spaces, wherever traditionally the small towns served as local providers of central services and functions, urban values and innovation, success or development is rather an exception than an everyday phenomenon.

The authors give an overview on the scenario of urbanisation of Hungarian small towns, focusing on the effects of the post-socialist transition. Summarising the results of former statistical and empirical surveys, they intend to highlight the most typical development paths and finally tries to answer the question in a Hungarian context: do small towns have enough potential for modernisation and joining the globalised networks? Are the traditional small town values and functions currently enough to avoid the massive outflow of mobile and active groups of local society?

### **Some methodological questions – what kind of small towns do we speak about?**

Although there are several papers about the specific problems of small towns, only a minority of them use explicit criteria to define them at all. While investigating only a single town or a selected group of them, researchers do not require dealing with the problems of delimitation of small towns within the urban system, but those who deal with wider spectrum, have to face this challenge. The most common categorisation is based on the simple demographic figures, often used also by national statistic offices. Heinz Heineberg (2014) for example defines the lower and upper population limits for small towns as 5,000 and 20,000. Another possibility, wherever the differences between villages and towns are also defined by public law, is the possession of town rank as the minimum-criteria, and a population figure below 20,000 (Zuzanska-Żyśko, 2005) or even 15,000 (Vaishar, 2004). Different approaches try to define small towns from a functional point of view. One of the most cited German researchers in this topic, Erwin Grötzbach (1963) in his classical work puts the emphasis on the fact, that small towns despite their limited size are able to show all the important urban marks and functions, so could be regarded as real urban place, with

compact and monocentric, but divided inner structures. According to Hans Elsasser (1998), small towns are smaller population hubs inside the networking settlement system, with dominant functions of residence and services. Martin Niedermeyer (2000) lists a sort of various criteria appearing in small towns' definitions, from the formal and structural approaches to the functional ones. On the one hand, the general urban appearance and structured inner spaces, on the other hand the central functions are the basic elements (Niedermeyer, 2000). In Hungary, Pál Beluszky (1999) in his great synthesis about the Hungarian settlement system defines functional classes, where "traditional small towns" (with some industry) and "former agricultural towns" are the major categories of these settlements. He emphasised the role of the second-level, non-basic central functions, and avoided the classification of small towns neither by their size or by any administrative criteria (town rank).

In our former researches (Pirisi, 2009a; Pirisi, Trócsányi, 2009b) we concluded to the point, that the last decades' urbanisation in Hungary changed the character and role of small towns. With the overall spread of urban functions, values and lifestyle among the whole settlement system we regard the clear functional approach rather obsolete. Therefore a new definition from theoretical point of view was created, where *the small town is a settlement that excels from its environment through the density of social, and/or economic and infrastructural elements, offers an urban way of living and defines itself as a town, but it is the locality, which dominates its spatial relations*. We found that this definition matches more or less the following classification in Hungary: settlements having town rank but less than 30,000 inhabitants. By the time of the last census, in 2011, 291 of such small towns could be listed: these are the subjects of our present investigations.

## Historical background of small town urbanisation

As we analyse even very shortly the history of Hungarian urbanisation, we need to keep two important factors in mind. First of all, urbanisation – as it is usual in this region – is significantly delayed related to the Western European one. The medieval Hungarian Kingdom was first organised at 1000 AD, while the Western-type towns appeared only sporadically before the 14<sup>th</sup> century. Secondly, the urbanisation process was almost totally intermitted by the 150 year Ottoman occupation. During the 16<sup>th</sup> and 17<sup>th</sup> centuries, wars and their additional destruction, like starvation and epidemics, not only ate up the potential demographic surplus, but destroyed the basics of the settlement system. At the beginning of the 18<sup>th</sup> century large areas were simply deserted, former blooming market towns disappeared and many of the present small towns only existed as tiny villages of 50–60 people.

The slow rehabilitation (sometimes even re-settlement or re-colonisation) of the former Ottoman occupied lands resulted in the emerging of some small towns, too. Agriculture was a main function of these small central places; many of them were only centres of large latifundia, agro-towns with only partially free citizens. Commercial and industrial functions of such towns served only the local rural settlements, and many of them were urbanised through acting as lower level representatives of administrative functions. Courthouse or the office of the local administrator were mainly the only larger buildings, the architectural character of these towns was

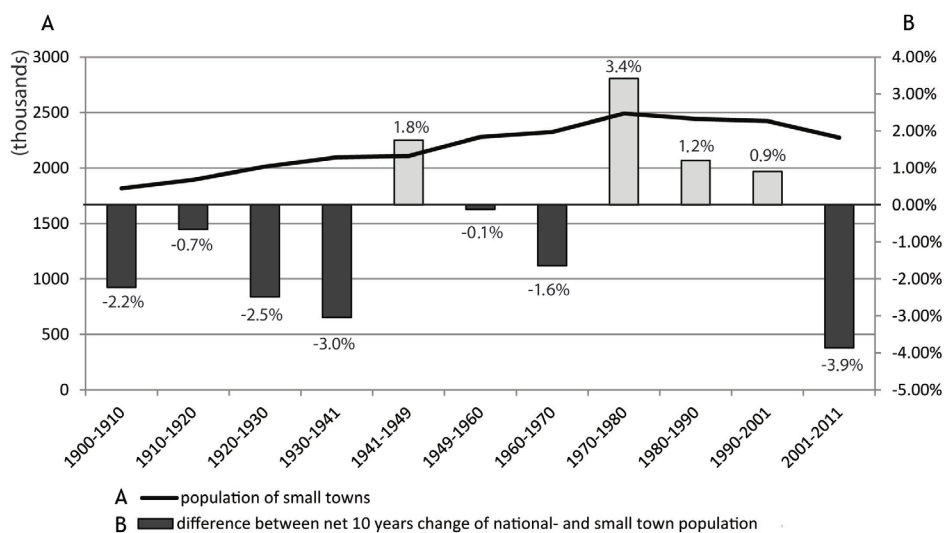
still dominated by rurality – the type of baroque heritage towns, so typical for the Czech Republic, hardly appeared in Hungary.

The phase of the modernisation, including industrialisation and the take-off phase of demographic and urban development could be divided in two segments in Hungary. The first, capitalist stage has started after the constitutional reform of the Austrian-Hungarian Monarchy (in the 1860s), but soon was interrupted by the Great War and the turbulent decades of the first half of the 20<sup>th</sup> century. After 1945 a second phase of modernisation started by adapting the central planning system and other innovations of the Soviet politics, economy and society.

In the first stage, many of the key elements of modern urbanisation appeared only limitedly in small towns. Industrialisation achieved only marginal results: even in 1935 only 20% of the small towns had an industrial plant with more than 100 employees (Pirisi, 2009a). The accumulation of local capital was painfully slow, and larger direct investments appeared only in mining. While the economic power of local citizens and entrepreneurs remained so weak, the state generated supplementary impulses for these settlements. First of all, the establishment of modern public services provided institutions in small towns, like state-owned and controlled secondary schools, local and district administrations from tax offices to prisons, military garrisons and later hospitals. All of these achievements had a significant role in creating well-paid employment possibilities and therefore establishing or strengthening the middle classes of local societies (Beluszky, 2012). Even the greatest innovation of the late 19<sup>th</sup> century in the Hungarian spatial development: the thick railway network, was built by indirect financial support of the state government. Although the built environment significantly improved, and at least the downtowns had achieved an urban character, this development did not expand to the residential areas, which preserved their rural character. More interestingly, the local society had a “golden age” with the establishment of numerous associations, clubs and conventions, but it still remained very closed, wherever the significant social capital was accumulated, but it was used rather to distribute the local positions and wealth than to create innovative solutions and reach wider dimensions with small-town based businesses. On the whole, small towns' societies remained rigid, with very limited possibilities for upheaval for the “outsiders” (Mohos, 2003).

The second wave of modernisation arrived with the building of state-socialism. The vision of the communists was far away from the local realities of small towns, and those values did not count too much for this new, “revolutionary” plan and modernisation. With the wish of strengthening the working classes, larger cities and newly created “socialist” towns and cities became the winners of the capital flow. Due to the disappearance of the bottom-up organised civil societies, small towns gradually lost important parts of their identities, however, limited and rare elements of these “old school” networks survived the vulgar intervention of politics. The large social and geographical mobility of the 1950s mainly avoided small towns with lack of new industrialisation, and affected much more the outflow of young and active groups of rural population from villages to larger cities and industrial regions. The erosion of the natural demographic reserves of small towns had started here, but it resulted in the serious problems only later. However, some strong traditional agricultural small towns of the Great Hungarian Plain started to decline soon after the Second World War, with losing their “out-dated” roots and functions.

However, the recovery of small towns occurred just two decades later, from the early 1970s. With the new (regional) development policy, which underlined the significance of the industrialisation of former rural, dominantly agriculture based areas, small towns gained importance as natural centres and targets of this policy. In the National Conception of the Settlement-System Development (1971), strong inputs were given to the urbanisation of small towns. This centralised act of spatial planning, based on the concept of Christaller's Central Place Theory, and therefore scrupulously defined the sort and level of public services and even the volume of industrial employment in different types and levels of central places. Having a classification named "full or partial intermediate centres", or even "advanced lower level centres", small towns gained the political background and therefore the financial sources to establish and expand institutions and the state-owned companies started to invest into small-town production sites as well (Beluszky, 1996). The period of 1970–1990 can be undoubtedly identified as the "golden age" of small towns in Hungary. As it can be seen in Fig. 1, ignoring the years of the Second World War, these were the first and only decades in the 20<sup>th</sup> century, when the population increase in small towns was quicker than the national growth. The relative weight of small towns had increased in the settlement system, including both this quantitative, and the earlier cited qualitative measures.



**Fig. 1.** Small towns' population and its change in Hungary within the national ones change during the 20<sup>th</sup> century

Source: authors' own design and calculation, based on public data of the Hungarian Central Statistical Office (HCSO)

### Small towns since the political transition of 1989/90

As showed in Fig. 1, this political transition was not a great crush/change for the small towns. Despite all economic difficulties, many of them have remained on

a growing path. Unlike the settlement network at large, these towns were characterised between 1990 and 2001 by a weak immigration surplus. *This indicates that for a significant portion of small towns urbanisation continued to be also quantitatively in the 1990s.* The quantitative urbanisation has also been underlined by the increasing number of small urban places possessing officially the town rank. The urban reclassification (Kulcsár, Brown, 2011) or according to our understanding “formal”, or “administrative” urbanisation emerged 180 settlements in the period between 1990 and 2013. We evaluated previously (Pirisi, Trócsányi, 2009b) this process being more (positive) than a simple administrative transformation or a struggle for new development sources. We regard the formal urbanisation on the one hand as the indicator, on the other hand as the catalyst of the functional urbanisation, with strengthening of the non-basic functions, building up the frameworks of urban way of life and renewing the built environment.

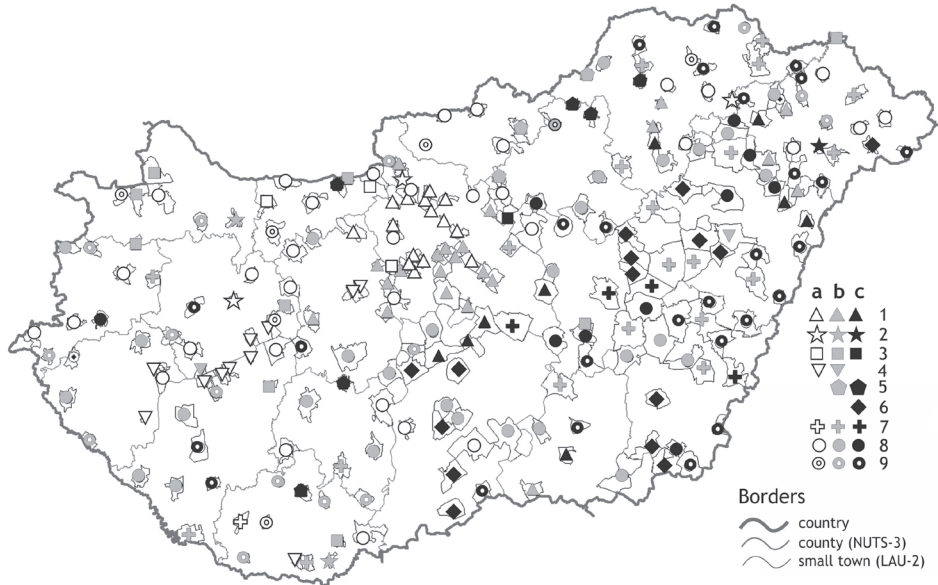
Both in their number and population, the greatest winners of the transition period were the small towns in the Budapest agglomeration. The suburbanisation was one of the most spectacular processes of the post-socialist urban development (Kok and Kovács, 1999; Timár and Váradi, 2001), and the emigration from Budapest to the suburbs was especially intensive at the turn of the 20<sup>th</sup> and 21<sup>st</sup> century, focusing on more than 50 surrounding settlements. Many of them were simple villages in the early 1980s, and their functional development was lagged behind the rapid growth of population. Some others were real, traditional small towns, being incorporated in the capital's agglomeration.

The main tendency in the first decade of the market economy was the sharp differentiation of small towns. Their uniform character, forced by the state socialism, rapidly disappeared, and the decreasing level of spatial redistribution resulted large differences among the possibilities of settlements. Geographical location became the most important factor of success (Nemes-Nagy, 1995). However, our detailed surveys (conducted among small towns, based on various statistical data of demographic, social and economic activities) showed that between 1990 and 2001 many of these towns were able to avoid the decline even in regions of permanent structural crises after the collapse of centrally planned economy. These “local islands of stability” were partly successful because of their transforming industry, and they could keep their functions and employment possibilities in public services still relatively attractive for living in a quickly declining rural microregional environment (Pirisi, 2009a).

We found the pattern of researched small towns based dominantly on the data of the 2001 census in a three-faulted structure (Fig. 2). Borders between the areas of dominantly best-, middle- and least-dynamic small towns are located from Southwest to Northeast, similarly to the large structures of the Hungarian macroregional development (Nemes-Nagy, 2000).

Despite of dynamism, the functional disparities became explicit among small towns in the 1990s. With the tide of formal urbanisation (see above), the general concept of small town needed to be supervised. From a very homogenous description of “central places with lower level administrative functions” we concluded to a more diverse approach. “Old” and “new” small towns have moved along so different vectors, that it has been hardly possible to create a common idea suitable for the entire scenario. The market economy's selection led to wide specialisation of small





**Fig. 2.** Complex dynamic functional types of small towns (2009)

a-b-c indicates the dynamism of small towns based on different (1–9) functional types. 1: residential towns, 2: image towns, 3: “single-company towns”, 4: spa resorts, 5: rust towns, 6: giant villages, 7: public service towns, 8: typical small towns, 9: micro-regional centres

Source: (Pirisi, 2009b)

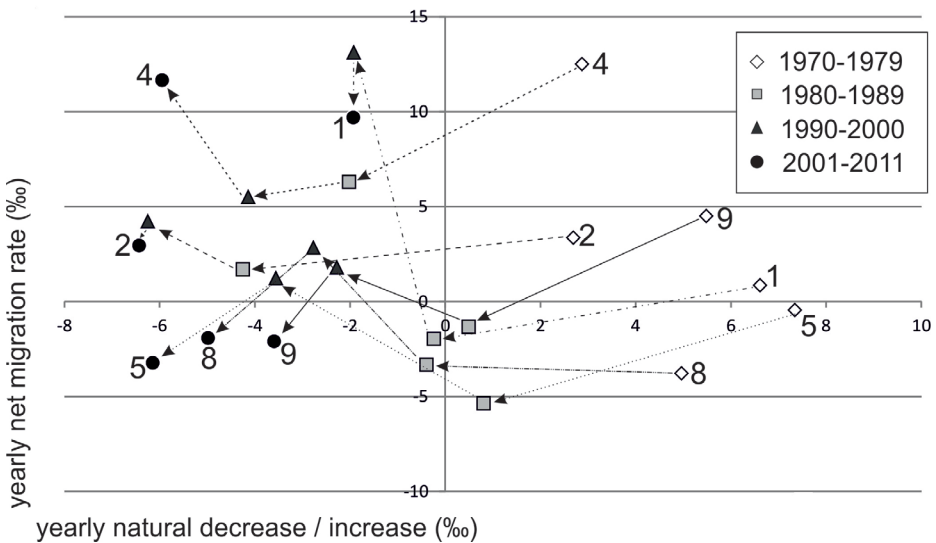
towns; some of them lost old and important functions, and others gained the new ones. Former industrial sites (we called them literally “rust-towns”) for example are in the first group, rapidly industrialised in socialism and later left behind by the new market stakeholders. The same, but less dramatic fate concerned for *towns of public services*: slowly declining economic functions, the remaining very strong public sector still keeps them alive and serving presently as central places for their local hinterlands. Another route of specialisation is the one of “single-company towns”: these are locations of new green or brown field investments (especially in electronic industry), or successfully transformed elements of more traditional industry. Their economic impact or importance is in some cases much wider than a small town normally has. *Spa resort sites* are also the fortunate winners of transformation: some of them were able to enter the international tourism market by their exclusive hotels, attracting well-paying guests and even residents (Aubert et al., 2012). a new group of *image towns* (Pirisi, Trócsányi, 2009a) has also appeared, where the town’s identity and functions are built upon one leading “product or brand” (for example the vine of Villány, or historical and cultural heritage elements of Visegrád and Pannonhalma). Finally, a significant group of *residential towns* can be classified, having different characters all over the country. The suburban type can be found in a wide band around the capital and in a limited scale around the regional centres, all of them have experienced recently a rapid growth. However, many of the former agricultural towns in the Great Hungarian Plain presently serve their own residents only because of their weak central functions in a relatively loose network of settlements. Only



functional types 8–9 (typical small towns and microregional centres) of figure 2. have the complexity of functions desired from “real” small towns. Success and failure appears in almost every functional type, but some of them are definitely more dynamic than others.

### Crisis of small towns after 2000

Analysing the demographic development we found that a positive balance of migration – among gradually decreasing national figures (from -0.39 to -0.21% annually between 1990 and 2011) can be recorded as a success. However, at the eve of the new Millennium clear signs of the crisis have appeared among small towns: they were no more able to increase their demographical weight within the shrinking country (see Fig. 1 as well), but started to reduce their population, more intensively than the national average. Compared with the decade of 1990–2000, the differentiated development was still present, but with an important difference: differentiation (or rather polarisation) took place not among, but within the categories defined above (see Fig. 3).



**Fig. 3.** The change of basic demographic factors in some specific functional types of small towns between 1970 and 2011

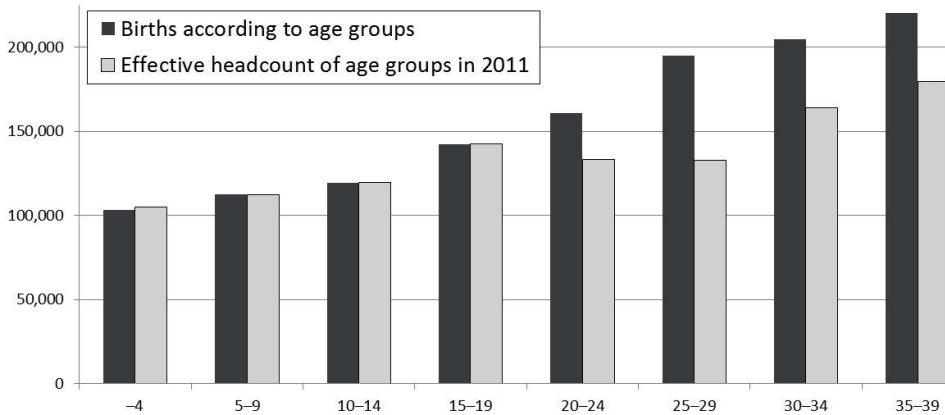
Functional types – see Fig. 2

Source: authors' own design and calculation, based on public data of HCSO

Of the 291 small towns investigated, 224 (77%!) had a population number smaller in 2011 than in 2001. The two major groups of “typical” small towns can be defined; the larger ones having about 8,000 to 30,000 inhabitants and well-equipped institutional sphere with central functions showed a similar character to

the second one. In the case of the smaller towns with limited catchment area and population from around 2,000 to 8,000 people, the decline is almost universal. We calculated that 93% and 82% of the towns of those two groups have been shrunk in this period. They are barely different from the disappointing group of former industrial towns. The residential and recreational type of towns still have very significant surplus from migration, although their dynamism also seems to decline.

The experienced general demographic decline is firstly mainly caused by natural decrease with a ratio of 65–45%. However, the outflow is the more dangerous factor, because it is selective, and affects primarily the young adults' age groups. In figure 4, we tried to depict emigration as a potential main risk factor of decline. The difference between the local births connected to the specific age group and the real number of people in the definite cohorts in 2011 is the net migration balance of these groups. The gap appears at the age of 20, and between 25–29 years, it reaches the maximum shortage of 32%. The leaving and the forecast of the lack of young well-educated generations in small towns project a serious qualitative and quantitative erosion of their population.



**Fig. 4.** Casualties by migration in some age groups in typical small towns population

Source: authors' own design and calculation, based on public data of HCSO

There are other indicators reflecting the crisis of small towns beyond demography. Although small towns could increase their employment ratio between 2001 and 2011 (according to national tendencies), the structure of their economy, and the economic role of those towns changed into an unfavourable direction. Although they were generally able to increase the number of workplaces with 7% (average) between 2001 and 2011, and it was considerably over the national average (5.8%) it was not a general success. Almost half of this surplus was created in the residential towns, showing that suburbanisation is getting into a non-residential phase, where economic activity also spreads to the edge of the agglomerations, causing a 29% growth of workplaces in this type of settlements. Recreational towns are still among the winners, with a massive growth of 11%, but the typical small towns (especially the smaller ones) were less successful, and hardly managed to keep the number of workplaces they had had before 2000. No wonder that the supply of job

opportunities significantly decreased in towns of rust belts (-3.0%), but those based on one huge industrial plant (single company towns) are also among the losers, with their -1.0% setback.

At that point, we reached another element of continuing economic transformation. The structure that had been built up after the system change in the 1990s was not stable. Small towns suffered a significant decrease of their large and medium sized enterprises. Between 2001 and 2011 they lost 10% of their companies with more than 50 employees, and 5% of those having more than 250. Tendencies had started before the economic crises hit Hungary; moreover, the period of 2001–2006 was characterised by the fastest economic growth in the last 40 years. Again, also in this respect, the differences among the small towns are significant. In the two main categories, the typical small towns lost 15% of their medium sized employers, while residential towns gained 10%. Although the number of smallest companies has increased significantly, this reorganisation could be problematic, because losing the largest and strongest companies could decrease the small towns' capability for innovations and give space to the dominance of activities with less added value. A variety of micro- and small enterprises could have a huge importance in flexible employment, but generally, they offer lower incomes and lower taxes for local governments.

The weaknesses of local enterprises draw our attention to a specific feature of small towns' labour market: the significant role of the public sector. Between 1990 and 2001, the weight of public services (governmental organisations, education, health care etc.) has been increased from 20 to 25% in the total number of all employees. Typical small towns were able to keep on offering public services and central functions, while these working places were less exposed to crisis. The role of public sector in these towns could reach 35–40%, but the tendencies of reorganisation continued after 2001. That means in other words, that a typical small town has a strong dependency of state redistribution functions, due to the financing of these public services. The main groups of atypical small towns, however, are based on private services in their employment structure, and therefore they are much less state influenced, but market-based.

Why exactly now? That was one of our most troublesome questions while revealing the details of the small towns' crisis. Settlements which did not collapse after the cataclysm of political and economic transformation seem to have very serious difficulty with keeping their functions and positions in the years of relative welfare and recovery. Christine Hannemann (2003) highlighted – based on analysis selected small towns of former GDR – that the parallel processes of de-industrialisation, de-militarisation and de-administration might be a very dangerous “cocktail” for small towns. Do we have similar factors behind the decline in Hungary?

The *de-industrialisation* surely played a decisive role. Unlike the “socialist cities” with strong heavy industrial character, the deindustrialisation of small towns (with dominantly light and food industry plants) was slower. Most of the production sites had survived the great shock of transformation and were gradually privatised, just to close the gates a few years later. In leading local branches, such as textile and food processing industry, the change of economic environment by the integration to the European Union and due to the global restructuring were too much for small town company sites. 11 Hungarian sugar factories have been closed and liquidated out of the 12 active in 1990, 10 from the closed ones had operated in small towns.

The traditional industry was mainly alive in the mid-1990s, but largely disappeared by the end of the 2000s; the global economic crisis was only the last drop in the glass. Re-industrialisation, the inflow of new foreign investors was highly selective and occurred only in Central and Northwestern Hungary, and in some areas along the new motorways. During the last years, the number and volume of foreign direct investment have decreased significantly in Hungary, and naturally, Budapest and the larger cities have better positions in this struggle for capital in a shrinking market.

*De-militarisation* did not have such a significant role in Hungary than in the former GDR, simply because the state was not as heavily militarised during the era of Cold War as Eastern Germany. However, after the withdrawal of the Soviet Southern Army Group and the gradual reduction of the Hungarian Armed Forces, from almost 150,000 to about 30,000 troops, several small towns lost their military functions. According to our own surveys (Orosz and Pirisi, 2010), there were about 120 military bases closed in small towns. It did not mean cut of jobs only in the defence sector, but it had also a significant impact on other supporting activities, and actually there are about 15–20 former garrison towns suffering significant losses because of demilitarisation.

*De-administration*, however, played a very complex role. The formal administrative functions of small towns disappeared in the early 1980s by the abolition of the LAU-2 level spatial administrative units (“járás”). However, there was an effort to re-establish this level in a somewhat modernised form in 2004, but the final step was made in 2012. Effects of the earlier de-administration processes resulted in the weakening influence of small towns on spatial politics and spatial redistribution processes, but the important institutions, functions and working places remained there, and it was more decisive and (as we showed above) helped to survive the transformations. With the thorough reform of administration system introduced by 2013, the small towns that had had enough political influence to be appointed to the centres of the newly organised districts (LAU-2 unit), have been able to (further) strengthen their spatial roles and concentrate more resources.

We experienced that beyond these, there are some other, important, but “soft” indicators of the small town crisis, related to the capability to keep the population, especially young people in small towns. Economic situation could not be the single issue of the crisis, because even the traditional small towns in Western Hungary with good overall economic indicators loose people, especially young and educated people by permanent outflow.

Education and its changing role could be one of the key issues. Small towns could profit from the expansion of secondary education in the late 1990s and early 2000s (Császár and Tóth, 2006), when new schools were established and some of the larger small towns were even able to attract tertiary education institutions. But this expansion, accompanied by the boom of higher education, also meant the increasing enrolment of cohorts to universities and colleges. The more young adults in small towns decided to study at higher education institutions, the more of them are finally lost for small towns. There is almost no way back from cities to small towns for graduated people – the data depicted on figure 4 also show this problem. This phenomena need to have some cultural reason as well: traditional small towns are simply not attractive enough for young people – not only for those who leave them, but also for people who avoid them, and move directly to larger urban areas

from rural spaces. The world and perspectives have rapidly become wider even in tiny villages, and the mobility horizon significantly expanded: people believe much more to find their future in Budapest or even in London, than in any of small towns. However the expansion of the international emigration has started intensively since 2010, and its effect still not showed in census data of 2011, we found during our field surveys in small towns projecting that this phenomena will also have a significant impact in the coming years.

As even the relatively successful, typical towns seem to be highly affected by the negative tendencies of migration, we might as well conclude to the statement that traditionalism, the historical cultural closeness can also act as factors of the above problems. The traditional values and stability helped the small towns to preserve their community, structure and functions throughout centuries, while it seems to be one of the greatest obstacles for the present renewal needed.

## Conclusion and prognosis

Typical small towns are in a crisis and successful small towns are atypical – this could be the main conclusion of the researches we conducted in the last years and tried to synthesise in this paper. There are some known similar results from other countries, Kadri Leetma and her co-authors (Leetma et al., 2013) underline that outside the agglomerations, to avoid shrinking for small towns is only possible, if they find a possible niche for the local economy, like tourism, or conscious development of the town for recreation functions, including second homes. Other authors highlight the possible role of sustainable development of towns for their break out from the vicious circle of shrinking (Visvaldis et al., 2013), while the higher possible quality of life is the most important message of small towns in the well-known book of Paul Knox and Heike Mayer (Knox, Mayer, 2009). Other empirical surveys once again emphasise the need for specialisation and building the unique image of the towns (Kaczmarek and Konecka-Szydłowska, 2013), or strengthening a kind of “social resilience” by improving social capital, restructuring and re-organising local communities (Woodhouse, 2006; Besser, 2009; McManus et al., 2012).

What about these potential niches in Hungary? First of all, we agree that tourism could be a way for success. The most visited touristic attractions in Hungary beside Budapest are mainly small towns, all of them are resorts with famous thermal spas or located at the lakeside of Balaton. Places like Hévíz, Zalakaros, Harkány or Bük are rather (tiny) towns around the spas than towns with a spa, their urbanisation has always been dependent to the development of tourism sector, and their economy is in this meaning monosectoral. Other places like Sárvár, Balatonfüred, Siófok are much more “real” small towns with higher population number and well-developed central functions. The 20 most important touristic resorts give 75% of all guest nights registered in the investigated 291 small towns, which shows a high rate of concentration in this matter. Small towns without internationally reputed spas hardly have a chance to earn success via tourism. The lack of picturesque historical downtowns, unique attractions or products does not allow them to base their development on tourism.

All other cited factors are based somehow on the common belief that small towns could provide better life, a higher quality of living, mainly in its non-commercial, slower meaning. This could be realised via better environment conditions, more intensive social networks or even very simple, with the lower average costs of living. This is partly the character of the suburbanised small (new) towns. Their story is a real success until 2009, when the economic crisis caused a general decrease of incomes, fall of property prices, increase of interest rates and fuel prices in parallel resulted in a basic threat for the suburban way of life. Migration to these settlements has become much slower, however, the financial conditions of these municipalities has remained favourable compared to other small towns.

Beyond the edges of the agglomerations either along the national capital or the regional centres, the chances of these life-quality based strategies are really limited. We analysed the strategic planning practice of small town municipalities, and concluded that one cannot find consciously built strategies based on this possible niche (Pirisi, Máté, 2014). Beyond the overall conservative approach of local stakeholders, an objective obstacle of such strategies is the lack of potential immigrants to small towns. Many of the strategies highlight the importance of avoiding the emigration of young adults, but almost none of them focus on direct actions to be taken to attract potential immigrants.

Because of the lack of well-paid employment possibilities, the inactive, elder cohorts have better chance to choose a small town for living. Unfortunately, the overall poverty of these age groups (based on the lack of the possibilities of savings during in the era of planned economy and after), and the low level of their mobility considerably limits their involvement into these strategies. The result is that if any kind of senior migration takes place in Hungary, the destinations are generally well to do resort places, small towns. There are other obstacles as well: local healthcare institutions (especially hospitals) nowadays are not able to provide safe alternatives for large medical centres of cities, however, some (private) retirement homes are determined to offer high standard services in this matter. Regrettably, in this case elderly people are isolated from the small town communities and generally the small towns' civic or cultural milieu is hardly attractive for someone who spent decades in larger cities. The importance of sustainability seems to be a priority for some special and very narrow social group, and they prefer the smaller (rural) settlements, if available. It is quite symbolic, that the only certified member of the famous Citta Slow movement from Hungary is Hódmezővásárhely, which is rather a mid-size city than a town with its almost 50,000 inhabitants. Sustainability only appears in the EU and government supported projects to foster the use of renewable (mainly geothermal) energy to decrease the utilities and maintenance costs of local institutions.

According to our point of view, Hungarian small towns, except the ones with very strong advantages of geographical location or resources, generally do not aspire for specialisation and niche strategies. Nevertheless, we are uncertain to what extent it is a planned strategy, but it seems that municipalities at least have decided to extend and strengthen their functions generally. They seem to focus on the reorganisation of classical central functions; a huge part of the EU-funds was used for the renewal of public institutions to provide better quality services for the local public. In addition, small towns still find large scale direct investments as the most important goal of their development. They are still dreaming the dream of the early



1970s, when urbanisation meant a factory with a variety of secure jobs, establishing or developing purchasing power and need for non-basic public services.

Perhaps, this malicious comment above is a bit unfair with small towns. The development possibilities are highly resource-driven in Hungary, the financial independence of small towns is very limited, large-scale projects are undoubtedly unreal without the political and financial support of the central government. This leads to the (above) uniformed policy and practice, with weak chances of individual innovations. In a paradoxical way, this centrality-based overall strategy fits very well for atypical towns, which are highly motivated to improve their public services beside the demographic and economic power they have.

This centrality-based strategy could give “spectacular” results, at least in its mediatised meaning. New or refurbished institutions are popular targets of local and regional politicians in the seasons of election campaigns. Of course, we do not want to relativize the efforts of these investments for local citizens, whose life quality is doubtlessly improved by them. But these investments seem to be inadequate tools to solve the basic issue of small towns' vicious circle: the negative feedbacks of decreasing jobs and melting human capital linked to one another. With even more weight given to public services inside the structure of small towns' economy, the system increases the dependency from the central government and state's redistribution policy.

This dependency is more threatening, if we focus on the mid-term demographic prognoses. The further shrinking, caused by the double effect of natural decrease and emigration is unavoidable. According to our own calculations, typical small towns will lose almost 10% of their population in the coming decade, and the majority of these casualties will be missed from the age groups between 16 and 30. In 2021, 25% of the cohort of 25–29, and 27% of the cohort of 30–34 will disappear based on the 2011 population. An almost 20% decrease of children in secondary school age is also forecast. Shrinking population projects less normative support for institutions and may lead to the closure of secondary schools – institutions, which are very important in the self-image of small towns.

One can find increasing population and blooming economy on the one hand, while shrinking, emigration and economic stagnation on the other. While atypical small towns are successful, because they have been able to integrate themselves into larger systems of economy and society, the closed local networks of typical small towns have not been and seem to be not even presently able to function well enough to avoid long-term crisis. The final question for small towns remains open: based on the still very important social capital and human resources, are they strong and innovative enough to find their proper functions in the 21<sup>st</sup> century, or small towns, as we have known them for centuries are obsolete settlement categories?

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## Small towns in peripheral regions of Germany

### Abstract

The paper summarizes the main findings of a study on small towns in peripheral locations in Germany. In its first part, the results of the data analysis are presented and the spatial distribution of shrinking and growing small towns in Germany is described. The majority of them in peripheral areas are currently shrinking, which includes an assemblage of demographic, economic, infrastructural and fiscal problems, leading to a danger of a negative downward spiral. The second part deals with specific challenges and problems of the shrinking towns. In qualitative case studies, main disadvantages of peripheral location and peripheralisation processes of four selected towns are outlined, which narrow the scope of action for local politics. Part 3 provides a short analysis of the main strategies of those four towns coping with peripheralisation. In the last part, an outlook is given in a more general matter, which shows possibilities to turn the ascribed deficits of peripherality into strengths.

**Key words:** Germany; local politics; peripheral location; peripheralisation; small towns

Small towns in peripheral regions represent a specific type of cities in Germany, which face an assemblage of common problems. The peripheral location has a clear impact on these cities development dynamics: the more peripherally the town is located, the more its population shrinks. Even with regard to the employment development, the peripheral small towns are prevalently disadvantaged in comparison to those more centrally located (BBSR 2012: 65). Coming to terms with these complex problems and the consequences of shrinking is a huge challenge for urban policies in many peripheral small towns. The decrease of population and employment, structurally weak economies, social impoverishment and low tax revenues are the first aspects that constrain the scope of action in most such municipalities. Furthermore, functional loss of centres, teardown of social and technical infrastructures, and communal financial cutbacks reduce space for decision-making. The downward spirals can result from this development leading to a further peripheralisation of such small towns.

## Research approach, methodology and questions

The paper is basing on a pre-study “Potentials of Rural Small Towns in Peripheral Areas”, which has been undertaken in 2014 for the Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR), within the Experimental Housing and Urban Development Programme (ExWoSt). The Contractor of the pre-study was the IRS – Leibniz-Institute for Regional Development and Structural Planning e.V., Erkner, in association with B.B.S.M – Brandenburg Consulting Firm for Urban Regeneration and Modernisation mhH, Potsdam. This pre-study has served as a basis for the conception of a new ExWoSt-research field. Its main goals have been: 1. to give insights in main demographic, economic, social and infrastructural problems of small towns in peripheral areas in Germany, 2. to analyse local administrative and political challenges and responses in selected cases, 3. to analyse manifold potentials of small towns as well as the diverse capabilities for the perception of their stabilising function in rural regions. Last but not least, the study served to identify the requirements and recommendations for a new ExWoSt-research field, as well as the needs for action in the national subsidies policy.

On the basis of a classification of small cities in Germany by a quantitative data analysis, four small towns, which are particularly affected by demographic and economic structural changes, have been selected for qualitative case studies. On the basis of guided telephone interviews with significant local actors and document analysis, a differentiated qualitative overview could be obtained, which includes the evaluation of crucial challenges and problems for the cases and approaches to cope with it. The findings have been discussed within an expert workshop, which took place in the town of Havelberg in January 2014. This workshop included a discussion with 20 researchers, local mayors and heads of administration as well as representatives of federal states and national state ministries.

This paper summarises the main results of the pre-study. The guiding questions are:

- Which types of small towns in peripheral locations in Germany can be identified with consideration to their demographic and economic shrinkage or growth? (part 1)
- What are the specific challenges and problems that small towns in peripheral areas in Germany face? (part 2)
- Which approaches do local policies in selected small towns apply in dealing with peripheralisation? (part 3)

It is necessary to explain the difference between the terms “peripheral” and “peripheralisation”. According to a spatial planning perspective, a “peripheral” location is defined by its position in a sparsely populated area, remote from great cities and outside of metropolitan areas (BBSR, 2012). As a consequence, a peripheral location refers to far-off rural spaces. Such a definition of accessibility also implies that cities over a certain size cannot be regarded as peripheral. By contrast, “peripheralisation” is seen as a socio-spatial process and thus renders this term applicable to both urban and rural spaces. Accordingly, this term is used to describe relational processes of decline of spaces in comparison with other spaces (Kuehn, 2015). Such understanding of “peripheralisation” is very close to the geographical notion of “margin-alization” (Jones et al., 2007). Peripheralisation therefore embraces processes like

an outflow of residents, an abandonment of infrastructures, the dependency on decision headquarters, and stigmatization in the media.

### Shrinkage and growth of peripheral small towns in Germany

Out of an aggregate of quantitative indicators, a classification raster was created on the data basis of the BBSR-municipality classification. With the help of a classification, groups of small towns particularly affected by the demographic and economic change were identified. The main indicators are: population at the end of 2011 between 5,000 to 20,000 inhabitants, the BBSR-type 2010 "location" on the basis of the maximum daytime population on the level of municipalities defining peripheral and very peripheral location, the population development index and that of the employment development both for the 2006–2011 period.

According to this classification, there are 1,303 small towns in peripheral location. Of them, 62%, or 830, are "little small towns" with 5,000 and 10,000 inhabitants, 38% (473) are "big small towns" between 10,000 and 20,000 inhabitants. Approximately 81% (1,050 small towns) are characterised as "peripheral", 19% (253) are seen as "very peripheral". But there are also explicit differences between peripheral and very peripheral small towns in rural regions with regard to their development dynamics. The majority of the peripheral and in particular the very peripheral small towns are coined by shrinking of the population.

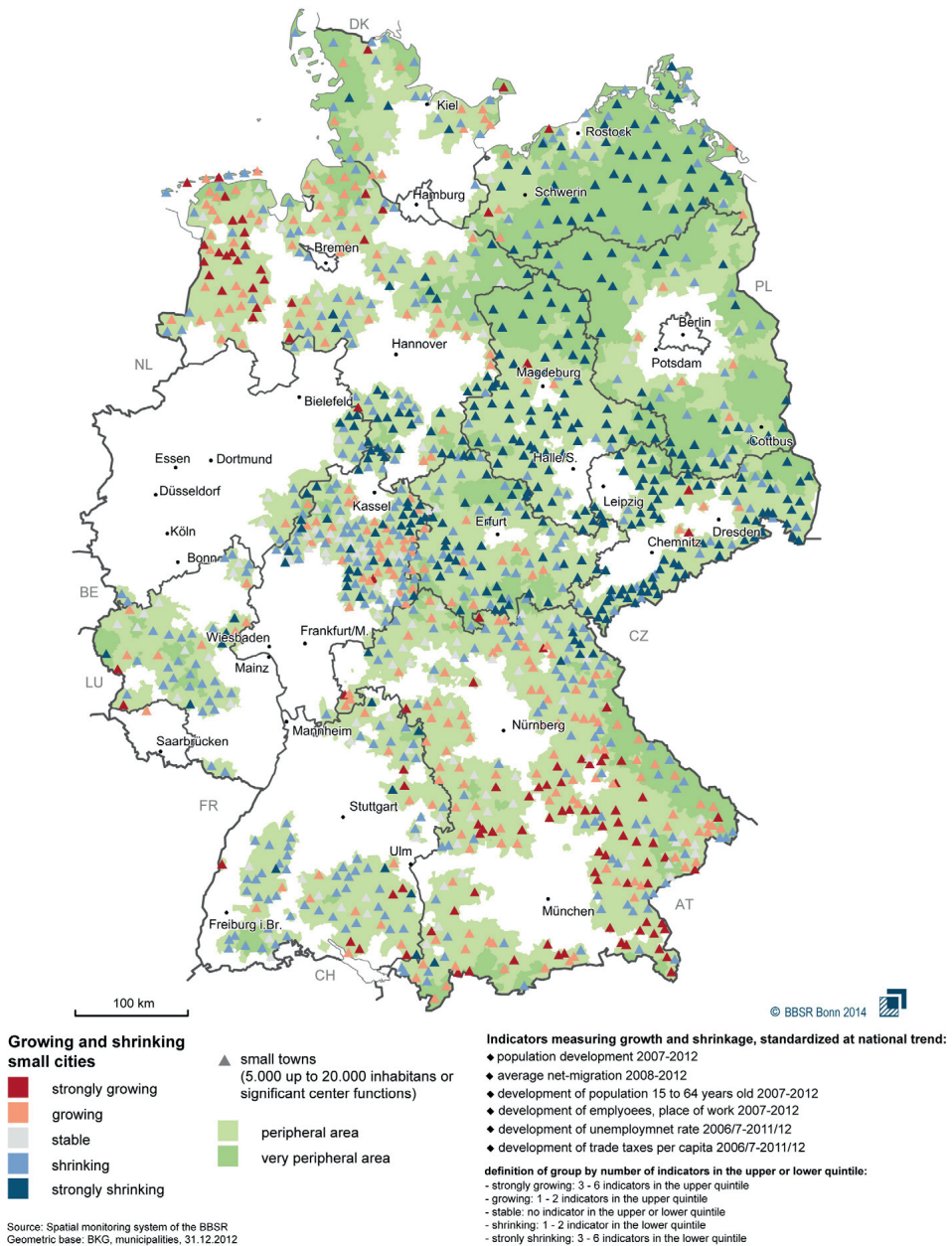
**Tab. 1.** Population and employment development in peripheral towns

Employment development in 2006–2011, in %	Population development in 2006–2011, in %				
	under – 5%	– 5% to under – 1.5%	– 1.5% to 1.5%	over 1.5%	Total
under – 10%	2.4	0.8	0.5	0.0	<b>3.7</b>
- 10% to under – 1.5%	5.7	4.8	1.2	0.1	<b>11.7</b>
- 1.5% to under 1.5%	3.9	4.6	1.3	0.2	<b>10.1</b>
over 1.5%	18.2	32.9	19.5	3.9	<b>74.5</b>
Total	<b>30.2%</b>	<b>43.1%</b>	<b>22.5%</b>	<b>4.2%</b>	<b>100.0%</b>

Source: own calculation on BBSR data 2014

The major part of the discussed towns combines moderate population shrinkage with a positive employment development (according to a general trend in Germany since 2005). It becomes obvious that with approximately 14% (or 178 towns), only a minor part of them included in the whole sample shows both a negative population and a negative employment development.

The distribution of peripheral small towns varies greatly between the federal states – Fig. 1. Bavaria is characterised by the highest share, with 27% of all peripheral small towns in Germany (353). Lower Saxony follows, with about 13% (173) next to Thuringia (8.6% and 112). Saarland and North Rhine-Westphalia are underrepresented. This distribution shows that the towns showing an extreme shrinkage of the population and a negative employment development are mostly located within



**Fig. 1.** Growing and shrinking small towns in peripheral areas of Germany  
Source: spatial monitoring system of the BBSR Geometric base: BKG, municipalities, 31.12.2012

the states of Thuringia, Saxony, Saxony-Anhalt, Mecklenburg Western-Pomerania, Brandenburg, and Bavaria. The highest share of growing cities can be found in Bavaria and Lower Saxony. Nevertheless, of the peripheral and very peripheral small towns only 4% (51) grow.

The geographical distribution of growth and shrinkage of small towns in peripheral areas of Germany is shown in Fig. 1. Divergent to the classification above, in this map demographic and economic indicators are combined. The classes of growth and shrinkage show development patterns in relation to the national trends. Most strongly shrinking towns are located in the federal states of Eastern Germany and also in Northern Hesse. a number of strongly growing small towns are located in a few regions of Western Germany. In peripheral areas, a number of growing small towns are visible, i.e. in the rural areas of Bavaria, in the Lake Constance/Upper Swabia region, in the Black Forest, the Emsland and in Northern Frisia, too.

Both classifications show that the majority of small towns is affected by negative trends of demographic shrinkage, but a small number is able to grow – in spite of its peripheral location. Small towns in peripheral areas do not form a homogeneous group of cities with generally negative developments and perspectives. Alongside structural factors of peripherality – as distances to urban centres and population densities – which are difficult to influence by local actors, urban policy may have an impact on these different urban trajectories.

## Challenges and problems of shrinking small towns in peripheral areas

Out of a pre-selection, four peripheral small towns have been chosen for additional qualitative analysis in case studies. The criteria for selection have been:

- negative development of population (shrinking towns)
- negative development of employment (economic weak towns)
- low level of local tax income (poor towns)
- distribution over different federal states in Western and Eastern Germany.

Main demographic and socio-economic indicators of these cases are shown in Tab. 2.

**Tab. 2.** Demographic and socio-economic indicators of the case studies

Small towns	Braunlage	Havelberg	Ueckermünde	Waldmünchen
Federal states	Lower Saxony	Saxony-Anhalt	Mecklenburg-Western Pomerania	Bavaria
Inhabitants 2011	6,280	6,793	9,872	6,958
Population development in %	-11.3	-9.2	-5.1	-2.8
Employment development 2006–2011 in %	-12.8	-9.5	-3.7	-2.9
Unemployment rate 2011	12.4	14.6	22.5	5.0
Local tax income 2011 (€ per inhab.)	639	357	349	602
Local business tax (€ per inhab.)	115	100	116	181

Source: BBSR 2014



Disadvantages due to the peripheral location as well as to peripheralisation processes of the four selected towns are as follows:

- Braunlage (Lower Saxony, West Germany) is characterized by its peripheral location at the former German-German-Border in the Harz Mts. The loss of state support for the former border area has led to economic disadvantages after German reunification. Tourism as a main income source of the town is also decreasing.
- The Hanseatic town of Havelberg (Saxony-Anhalt, East Germany) is characterized by its peripheral location in a thinly populated rural region and with large distances to the German motorway net. This town is weakened by the lowest level of local businesses taxes. One of the greatest employers is military.
- Ueckermünde (Mecklenburg Western-Pomerania, East Germany) is characterized by its peripheral location in the Northeast of Germany near the Polish border at the Szczecin lagoon. The town is a centre of an economically weak region with one of the highest unemployment rates in Germany. In 1994, the town has lost its former function as a seat of the county.
- Waldmünchen (Bavaria, West Germany) is characterized by its peripheral location at the German-Czech-border within the Bavarian Forest. a bad accessibility to the next motorway and railway station weakens the attractiveness of the town for the settling of firms and investors.

The following qualitative results of the case studies and the expert workshop can be summarized (without being able to generalize):

- 1) Small towns in peripheral locations are marginalized in scientific research and federal policies, because they are situated in between the classic fields of “urban” and “rural” and therefore are missing a political lobby.
- 2) In many peripheral small towns, a double disadvantage is visible: first, the small size exacerbates the supra-regional visibility; second, the peripheral location outside of respectively metropolitan city regions restricts the economic development chances in the knowledge society. The insufficient visibility as well as the peripheral location of such small towns can lead to a negative downward spiral.
- 3) In many small towns in peripheral areas, shrinkage and ageing are shaping the reality and will continue in the future in a greater extent than in urban agglomerations.
- 4) In many small towns the weak economy leads to an outflow of higher educated and skilled groups, resulting in a dequalification of human labour.
- 5) The demographic shrinkage and economic weakness leads to a closure of public infrastructures, e.g. schools, railway stations and private shops.
- 6) Many small towns in peripheral regions are faced with physical vacancies of houses, flats, shops and former industrial estates.
- 7) Some small towns are suffering under a stigmatisation in media, which create negative images (e.g. as a “dying”, “provincial” or “backward” town).
- 8) As a consequence, small towns in peripheral areas only have limited financial resources at their disposal. Restricted scopes leads to a less frequently or render voluntary services and to a restrain to the fulfilment of communal obligations.



- 9) In peripheral rural regions many small towns take in the function of a central place, even though they do not necessarily have this status in state and regional planning.

To summarize: small towns in peripheral regions are faced with many problems and the danger of a downward spiral due to a trend towards public and private dis-investments. At the same time, the local policy and administration have not enough resources to cope with these problems. Constraints, which limit the scope for local actors are: a) declining municipal finances (due to the decreasing number of inhabitants), b) a shortage of qualified staff in administration, and c) a shortage of private firms and entrepreneurs, which engage themselves in local development.

### **Local politics dealing with peripheralisation**

Local studies in Central-Eastern Europe show that small towns are steered in a strong degree by public governmental actors. Therefore it is concluded, that „leadership“ plays a more important role than governance-coalitions between public and private actors in local policies (Kriszan, 2013: 101). Our preliminary study confirms the importance of the factor „leadership“ in local politics. In many cases, the mayors, in their dual role as political and administrative heads, are key actors, who have a strong influence on the activities of small towns in dealing with problems of peripheralisation. Differences between more active and more passive towns can be observed in particular in the acquisition of state funding for urban development, the involvement of private actors into local strategies, or inter-municipal co-operations at the regional scale. In addition to the high relevance of „leadership“ in local politics, small towns in peripheral regions are marked also by a high level of civic engagement of citizens in social associations. These associations secure the cultural and social life in small towns. But because most peripheral regions are poor, private actors do not have many resources to build powerful governance-coalitions for the development of small towns.

What are main local approaches to cope with peripheralisation in the four towns?

A local approach in Braunlage is to strengthen the main economic base of the town: tourism, especially the winter one. Therefore the town is engaged in a public-private tourism company, which has invested in the infrastructure of a ski resort. This approach implies high financial risks and a climatic dependency on snowfall.

A main local approach of Havelberg is to realize the Federal Garden Exhibition of Germany in 2015. Based on an inter-communal cooperation with the three cities Brandenburg/Havel, Premnitz and Rathenow, parks and cycle paths along the Havel river will be improved to develop the Havel region. Local actors in Havelberg expect to strengthen the image of the town and its importance for tourism and recreation.

A main local approach of Ueckermünde is also to develop tourism. Main attractions of the town are a zoo and a seaside resort. The local politics plan to found a municipal tourism company and to enhance the marketing of the town. Former local

plans to build thermal baths failed, because of a lack of investors. Ueckermünde also tries to intensify the relationships with the Polish city of Szczecin.

A main approach to cope with peripheralisation in Waldmünchen is the cross-border action alliance Cerchov. This alliance of Bavarian and Bohemian communities was founded within an InterREG-Project and tries to develop a cross-border region of renewable energy. a main focus of the alliance is to develop the rural branches of agriculture and forestry as producers of bio-energies. Some villages also have developed to self-sufficient bio-energy villages.

This little study on local politics is far from being representative for small towns in Germany and going in-depth. Nevertheless, it indicates that all four towns try to use the surrounding rural landscapes as a potential for future development. Tourism is seen in most cases as a chance for the regrowth of local economy. By that, local politics orientate on a highly competitive branch. a second insight is that because of a lack of private investors in peripheral regions, some of the towns are forced to engage themselves as public entrepreneurs.

### **Outlook: turning peripherality from disadvantages to advantages**

To overcome the disadvantages of a peripheral location and peripheralisation processes of small towns, it is a particular challenge to turn ascribed deficits of peripherality into strengths. This means to change the role of a periphery within the socio-spatial system. For example: the disadvantage of long distances to the motorway net is at the same time an advantage for calm and unfragmented landscapes; the disadvantage of a weak economy is at the same time an advantage for lower costs of living, better possibilities for housing and house ownership; the disadvantage of a small size is at the same time an advantage for close social contacts, spatial proximity, a high quality of living and for slower lifestyles. Indeed, for turning the ascribed deficits into strengths it seems necessary to emphasize the specific qualities of peripherality as a contrast to urbanity. This requires the intensification of urban-rural-relationships. For such a re-interpretation of peripherality the following ideas may provide as a first guide for further research:

- Connecting towns and rural landscapes  
Small towns and their surrounding landscapes are often perceived as a spatial entity. The case studies have shown that the natural environment and landscape qualities of the hinterland present an important development potential for small towns. Development potentials of landscapes for small towns in peripheral regions thus lie in the fields of tourism, recreation, leisure and sports, agriculture and forestry. This requires the attraction of urban tourists, recreation seekers, bike riders, skiers, horsemen, sportsmen, climbers, dragon risers and mushroom searchers into rural regions.
- Bypassing the region through connections to higher centres  
The peripheral location of small towns is defined within a socio-spatial system in relation to a regional centre. To leave the role of a periphery, small towns may “bypass” the next regional centre in connecting with those on a higher hierarchical level. Such a “scale jumping” of connections may be possible to a national

scale (e.g. through national-wide events) or the international one (e.g. through European-wide events).

– Cross-border regions

A peripheral location is in many cases defined as a border of a political territory, that of the federal state, the State or a supra-national association as the EU. To overcome the peripherality within a territorial context, it is possible to build cross-border regions between two or more peripheries. An example for this is the Cerchov action alliance at the German-Czech-border.

– International networks of small towns

Another opportunity to enhance the political voice and weight of small towns is to create international networks between them. The Cittaslow-movement is a prominent example for this. 170 small towns across the world have joined this movement and are now organised within one international network. Unused potentials of personnel qualification in small towns lie particularly in the exchange of experience with small towns within international networks.

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## Population changes as litmus paper of the socio-economic development level of small towns in Poland

### Abstract

The main aim of the author was to analyse the population changes of small towns in Poland between 2002 and 2012. Small towns' reaction to the global and regional demographic trends confirms their position between the rural areas and the urban municipalities. The differences between separate towns are significant, however those located within the metropolitan areas in Poland show a positive population dynamics, natural growth and migration balance net indexes. The image of small towns in terms of demographic changes is for that reason adequate to their socio-economic situation. However the question of the development of small satellite towns is asked as the functions are often leached to the core areas of the metropolis. The emerging problem of the depopulation of the vast majority of towns is also stressed in the paper. The depopulation types (in Webb typology) concern nearly 72% of all Polish small towns.

**Key words:** small towns; socio-economic development; population changes; Webb typology

### Introduction

The present global and regional socio-economic changes influence the situation of small towns very clearly and visibly. Small towns changes reflect on the one hand rural patterns of development and on the other, their situation is adequate to urban municipalities.

The demographic situation of small towns of Poland confirms the one of the historical regions with different demography patterns, the border and peripheral regions and the metropolitan areas (Dzieciuchowicz, Janiszewska, 2014; Kurek, 2008). On the one hand, the diversification is more and more visible due to the situation of small towns developing under the influence of the great cities and on the other, the unfavourable demographic trends could be seen in the growing small towns number. Demography is not only a factor which influences the small towns growth, but it becomes a visible consequence of their development (Konecka-Szydłowska, 2014).

As shrinking becomes the common problem for many cities (Zborowski et al., 2012) there are new questions to be asked. The question of the proper urban policy towards the development of smaller settlements should be asked together with

the problem of the reaction of the local authorities and stakeholders. The distinct reaction for the depopulation of small towns can be seen by the implementation of various new programmes both promoting them as places where “life is good”, in many West European countries. The idea of “Cittaslow” developing quickly can be given here (Mayer, Knox, 2006), as well as the examples of French towns introducing many social programmes to attract and to gain active population (Mainet, Edouard, 2014). It should be asked whether Polish local actors are aware of shrinking and if yes – what action is undertaken. The problem is both of a social and spatial nature. If a fast depopulation is seen as a problem, some action should be done at least to attract potential new inhabitants. The promotion targeted at specific groups could be developed, showing the positive aspects of life in a small town. The green, easy-to-reach countryside, possibility to avoid the big cities’ problems, high quality of life environment or combining the advantages of a city with the opportunities given by the countryside are among the positive characteristics of the small town. In Poland such active promotion can already be seen in small towns with the high level of development, e.g. that of Niepołomice (Jarczewski, Huculak, eds., 2011). On the web page of the town, phrases as “...thanks to the good localisation, infrastructure and local government activity ... Niepołomice is also a place for active rest not only for its’ inhabitants...” could be found. It is difficult to say to what extent it is the promotion of the town responsible for the high values of immigration but it is obvious that the well economic development of the town and commune is a straightforward factor. The spatial aspects are correlated to the urban sprawl issues and the ways it can be stopped.

The paper attempts to show the scale and regional differentiation of the problem of depopulation of small towns in Poland, examines the direct factors (changes in natural growth and migration) influencing the changes and reveals the correlation between the population changes and the socio-economic growth of small towns.

Researches’ attention paid to small towns in Poland does not answer the significance of this group of municipalities in the settlement system. The scope of the investigation on small towns problems can be divided into a few thematic groups (Kwiatek-Sołtys, 2011a). The detailed Polish geography literature of the subject was analysed by few authors in Poland, often as chapters on literature of the subject in books dedicated to small towns (Konecka-Szydłowska 2003, Kwiatek-Sołtys, 2004, Zuzńska-Żyśko, 2006; Jażewicz. 2009) but also as separate papers (Szymańska, Grzelak-Kostulska, 2005, and earlier mentioned Kwiatek-Sołtys, 2011a). Recently, the role of Łódź University in research on small towns was studied by Koboжек and Marszał (2014).

### **Small towns in the urban settlement system of Poland**

Small towns with the population lower than 20 thousand made in 2012 75.4% of all municipalities in Poland and were inhabited by 21.3% of urban population. The statistical role of small towns in the urban settlement system of the country has recently increased. In 2002 they made 74.9% of all and were inhabited by 20.8% of urban population. On the one hand it is caused by the new urban settlements and on the other, the demographic changes in the majority of cases leading to the

population decrease. For these reason the group of small towns in Poland is not stable. Almost every year there are new settlement gaining the city rights. There were 25 small settlement units which gained their city rights between 2002 and 2012. Among the 25 “new towns” there is a group of 19 settlements which regained their city rights lost for different reasons: after the January Insurrection (1863), later due to the administrative reform of 1934 or also after the First and Second World Wars. The small towns group is being enlarged also by medium sized towns loosing population. There were two small towns (Pionki and Strzelce Opolskie), which belonged to the medium sized class in 2002 and are currently in the small towns group. On the contrary, four other small towns (Kobyłka, Reda, Wieliczka and Trzebinia) increased their population to over 20 thousand and became medium in the analyzed period.

The group of 685 small towns as per 2012 is analyzed in the paper. For new towns in the dynamic approach including 2002–2012 period the year of achieving city rights became the base.

The reform of collecting the data by Central Statistical Office is an important factor influencing the statistical data in the analyzed period. Until 2009 these data had been collected for people registered for permanent residence and calculated on the 2002 Census base while beginning with 2010 the data include the number of people actually living in a given place and are calculated on the 2011 Population Census base.

Demographic changes observed in small towns of Poland follow the rural-urban pattern. In almost all demographic aspects they are placed in between rural areas and the medium-sized and great cities, which confirms their place on the rural-urban continuum line (Szymańska, 1992).

## Population size and dynamics

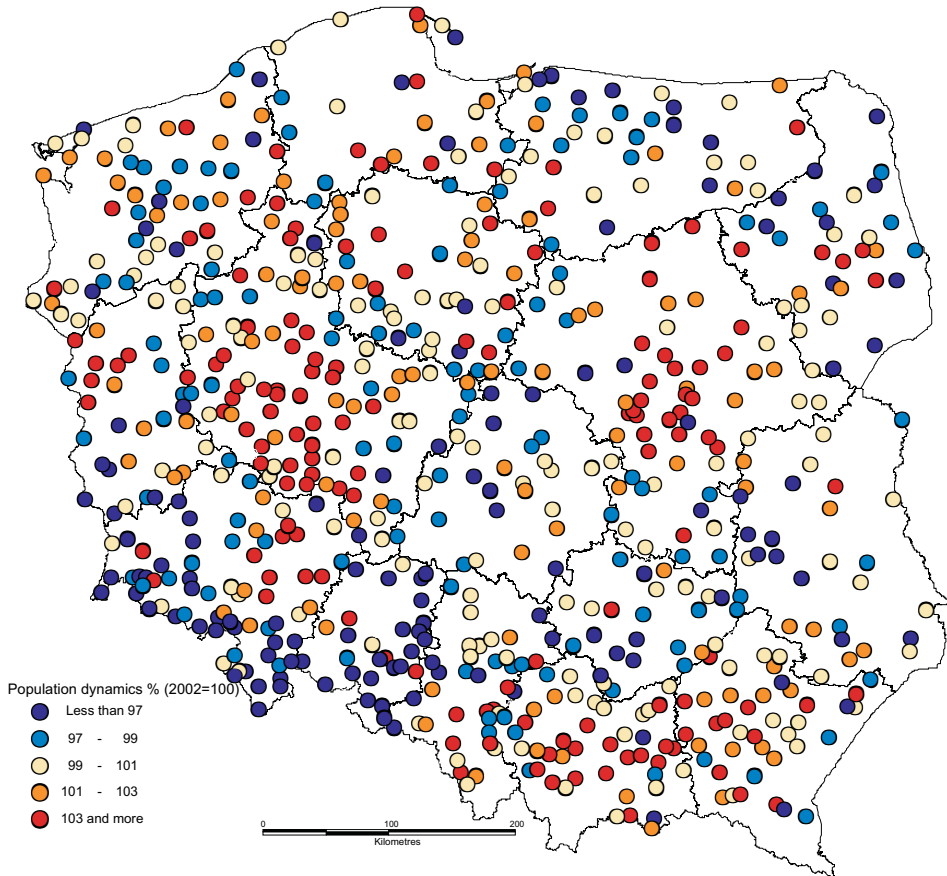
The small towns make up a very differentiated group of towns. The statistical border of a small town, which is 20 thousand, is not always adequate (Kwiatk-Sołtys, Runge, 2011). The greatest of them reach almost 20 thousand, what makes them similar to medium sized towns. It can be said that the bigger the town, the more important role it plays in its hinterland and the greater the development chances are. Józefów, neighbouring Warszawa is populated by 19947 inhabitants, which makes it the biggest small town in Poland in 2012. This town is promoted in the towns' development strategy as “The town on the Świder river – the town of pine trees, microclimate and three rivers” (Strategia Rozwoju Miasta). This motto emphasizes the good environment for living and attracts new inhabitants.

The population number between 15 and 20 thousand is characteristic for 83 towns (12%). Many of them are independent urban communes and district towns. Furthermore, for 30% of those greatest small towns additional factor of demographical growth is the location within the urban agglomerations. For those reasons the development of those towns seems to be stable.

The smallest town in Poland does not reach one thousand inhabitants. Wyśmierzyce in the Mazowieckie Voivodeship (województwo mazowieckie) is inhabited by only 908 inhabitants. It should be stressed that the population dynamic for this towns was 98% (in the 2002–2012 period), which means that Wyśmierzyce

is losing population constantly. Surprisingly, this town seems to be proud of being the smallest in Poland, which is stressed at the official Internet site of rural-urban commune. The promotion as the town and commune with the lovely nature, forested area and lack of industry is dedicated to tourists rather than to potential inhabitants. Two other towns have the population number around 1000, these are Suraż (pop. 1012) at Narew in Podlaskie Voivodeship and these of Działoszyce (pop. 1009) in Świętokrzyskie Voivodeship, with a permanent depopulation.

The group of smallest towns with the population number lower than 5 thousand consists of 318 towns, what means that almost half of all small towns (46.4%) do not exceed 5 thousand. These smallest towns are usually service centres of the rural character (Rajman, 2006). Apart from few industrial towns (e.g. Alwernia, Kalwaria Zebrzydowska, Miłosław) in this category together with towns of specialised functions, like health resorts (e.g. Duszniki-Zdrój, Uniejów, Iwonicz-Zdrój) the smallest towns' role as service and employment centres is limited to their own commune or close surroundings.



**Fig. 1.** Population dynamics in small towns in Poland in the 2002–2012 period

Source: own work based on Bank Danych Lokalnych, GUS, Warszawa



The population dynamics is negative in all types of urban municipalities, however for small towns is much slower. The average population dynamics between 2002–2012 is only 100.3, however the differences between towns are significant. For new towns, which gained their city rights after 2002 this dynamics is counted back to the year of establishment and the number of population changed due to administrative corrections was taken into account.

The number of inhabitants was reduced in half of all small towns between 2002–2012. The signal decrease (population dynamics below 97) concerns 20% of all small towns of the country, 46% make the smallest towns with the number of inhabitants below 5000.

In the spatial distribution, the rapid population decrease is observed in the majority of small towns in the Sudety Mts – the Dolnośląskie Voivodeship as well as Opolskie and Śląskie ones. This depopulating belt goes eastward through the Świętokrzyskie Voivodeship. The other area of significant decline contains the Warmińsko-Mazurskie Voivodeship, generally its Lake District (Fig.1). On the contrary, the population increase is registered in small towns located in the Southeastern Poland, in Wielkopolskie Voivodeship and in small towns under the influence of the great urban agglomerations of Wrocław, Kraków, Białystok and the country capital.

Similarly to the decrease group, this demographical growth can be noticed for over 20% of the small towns. The dominance of any size group can be shown, nevertheless the influence of the big agglomerations can be noticed, due to the suburbanization going, confirmed by the commuting. The number of commuters to great cities doubled in the analyzed period. The high values (even 146%) of the population dynamics for towns in the metropolitan zones are the very strong factor influencing any typologies and socio-economical ranks of small towns in the country (Kwiatkiewicz-Sołtys, 2014).

### **Straightforward factors of influence – natural growth index and migration balance net**

The image of the spatial distribution of the natural growth ratio in small towns is much similar to the one of the population dynamics while the groups of towns showing both the negative and the positive ratio seem to be even more clear. The average natural growth ratio for small towns in 2002–2012 is 0.19‰ but the highest values reached 7.6‰ (for Bobowa town, which regained its city rights lost in 1934 only in 2009 and performs still more like a rural settlement) and the lowest values are nearly -11‰ (for Działoszyce, a small town located in the Świętokrzyskie Voivodeship in the area of a very low natural growth ratio). For 44% of all small towns of Poland the average natural growth index in 2002–2012 is negative, but the comparison of three years averages for 2002–2004 and 2010–2012 shows a very slight increase for all small towns (at 0.33 percentage points) observed in 6 of 16 Voivodeships (Tab. 1), which is adequate to the changes in the natural growth in Poland. In 2002–2005, a natural decrease was recorded and since 2006 the natural growth ratio has been positive again (Dzieciuchowicz, Janiszewska, 2014). The highest increase and its highest values are seen for small towns of the Wielkopolskie Voivodeship, what confirms their good demographic and socio-economic situation (Konecka-Szydłowska, 2014).

The traditionally high values are also seen in the Podkarpackie Voivodeship as well as in the Małopolskie and Pomorskie ones (Rajman, 2000–2001).

**Tab. 1.** Natural increase/decrease of population in small towns in the 2002–2012 period

Voivodeship (capital)	Natural increase/decrease per 1000 inhabitants	
	2002–2004	2010–2012
Dolnośląskie (Wrocław)	−1.65	−1.17
Kujawsko-pomorskie (Bydgoszcz, Toruń)	−0.05	0.09
Lubelskie (Lublin)	0.16	0.07
Lubuskie (Gorzów Wlkp., Zielona Góra)	0.82	0.89
łódzkie (łódź)	−1.59	−0.77
Małopolskie (Kraków)	0.98	1.48
Mazowieckie (Warszawa)	0.77	1.35
Opolskie (Opole)	−0.36	−0.63
Podkarpackie (Rzeszów)	1.77	2.12
Podlaskie (Białystok)	0.00	0.05
Pomorskie (Gdańsk)	2.29	1.96
Śląskie (Katowice)	−0.78	−0.19
Świętokrzyskie (Kielce)	−0.49	−0.93
Warmińsko-mazurskie (Olsztyn)	0.62	0.35
Wielkopolskie (Poznań)	0.57	2.12
Zachodniopomorskie (Szczecin)	0.22	−0.54
Total	0.18	0.51

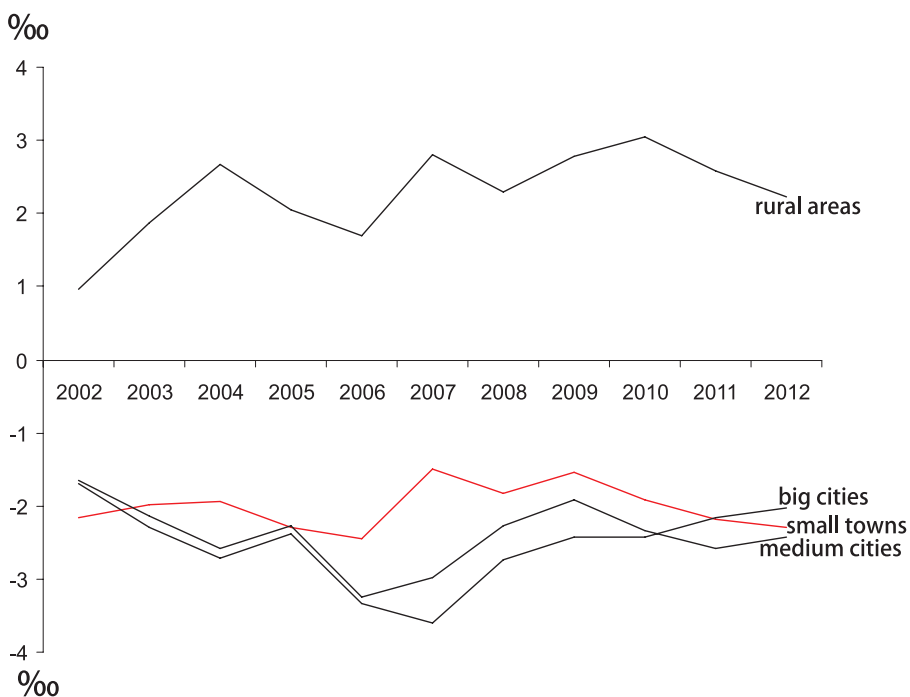
Source: own work based on Bank Danych Lokalnych, GUS, Warszawa

Migration balance ratio is an important element, showing not only the demographic situation of towns but also reflecting often the socio-economic position and growth. The vast majority of towns are losing population. The migration balance net in 2002–2012 is negative in every urban group, however small towns behave somewhere in the middle between urban municipalities and rural areas (Fig. 2).

The positive migration balance net is characteristic for small towns in metropolitan areas. The positive situation is seen in small towns developing in the metropolitan areas, especially in the suburban zones of Warszawa, Krakow, Wrocław, Poznań and Three Cities Agglomeration (Gdańsk, Gdynia and Sopot). The lower indices are seen for small towns in the metropolitan areas but located farther from their core areas. The average migration balance net for all small towns in 2002–2012 is  $-2.34\%$ , however the differences between the voivodeships average and separate towns are significant (Tab. 2).

The only voivodeship with the positive migration balance rate is the Mazowieckie Voivodeship, with the visible influence of Warszawa and relatively high share of towns with the positive migration balance net. For 14 towns with the highest rates, while the 11 years average was taken into consideration, seven exceeding  $10\%$  are located in the Mazowieckie Voivodeship. Apart from Warszawa satellites an interesting case is the town of Borne Sulinowo located in Zachodniopomorskie Voivodeship. This town was established and “opened” in 1993, because formerly it

had been a Wehrmacht's garrison Gross Born and after the Second World War – the military base of the Red Army Soviet troops for 25 thousand soldiers – the biggest in Poland and secret to public. The army left Borne Sulinowo in October 1992 and the empty town was given its city rights a year later. The settlement process started. In the years 1997–1999 the average migration balance net for this “new” town was still very high (111‰) and in 2002–2012 it amounted 26.8‰.



**Fig. 2.** Migration balance net in Polish municipalities in the 2002–2012 period

Source: own work based on Bank Danych Lokalnych, GUS, Warszawa

**Tab. 2.** Migration balance net of population in small towns in the 2002–2012 period

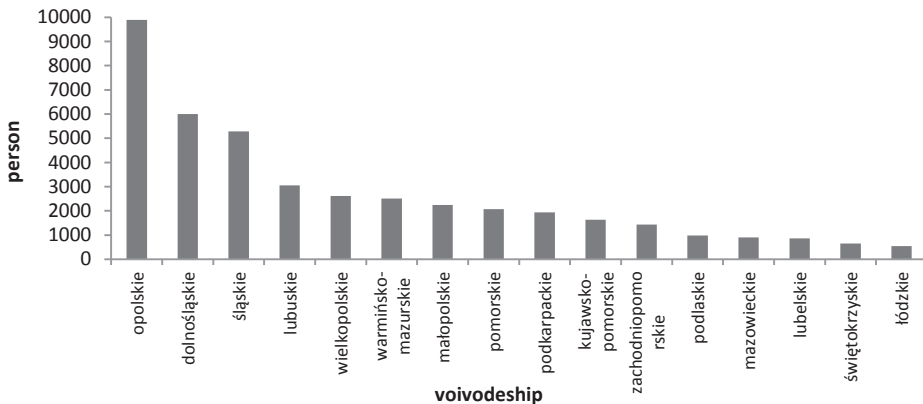
Voivodeship	number of small towns	Migration balance net per 1000 inhabitants			External migration balance net**	Emigrants number (person)
		2002–2012	2002*	2012*		
Dolnośląskie	71	-2.35	-2.41	-1.93	-6.73	6,005
Kujawsko-pomorskie	44	-2.08	-1.68	-3.01	-2.66	1,636
Lubelskie	30	-5.15	-4.21	-5.24	-1.52	865
Lubuskie	36	-3.45	-3.44	-3.38	-5.52	3,057
Łódzkie	28	-2.15	-1.84	-2.59	-0.67	545
Małopolskie	47	-1.65	-1.97	-1.54	-2.04	2,242
Mazowieckie	61	1.10	1.50	0.68	0.28	903
Opolskie	29	-5.91	-7.96	-4.27	-32.93	9,894
Podkarpackie	40	-2.39	-2.47	-2.36	-2.59	1,942

Podlaskie	32	-2.18	-2.10	-2.53	-2.47	985
Pomorskie	27	-4.39	-3.80	-4.51	-5.06	2,071
Śląskie	35	-0.51	-1.41	0.20	-11.77	5,283
Świętokrzyskie	25	-5.46	-5.30	-6.05	-1.80	650
Warmińsko-mazurskie	38	-3.96	-3.33	-4.28	-4.52	2,513
Wielkopolskie	89	-1.29	-0.39	-2.12	-2.58	2,614
Zachodniopomorskie	53	-3.14	-4.04	-2.96	-0.74	1,427
Total	685	-2.34	-2.30	-2.42	-4.72	42,632

\*three years averages 2002–2004, 2010–2012, \*\*per 10,000 inhabitants

Source: own work based on Bank Danych Lokalnych, GUS, Warszawa

On the contrary, the lowest migration balance nets are characteristic for small towns of the Opolskie Voivodeship. There are towns of Zawadzkie, Baborów or Praszka, with this rate oscillating around  $-10\%$ . While in the whole country the role of external migration is not so important the high numbers of emigrants leaving small towns of the Opolskie Voivodeship can still be seen (Rajman, 1990). During the last decades emigration to Germany was permanent and had a mass character. This emigration commenced during the early fifties, called the “reunification of families” or later “breaking up of families”. The process of broadening family and non-family relations with inhabitants of Germany was strengthened in the eighties as a result of mass emigration (Heffner, Solga, 2004). The network of permanent links was established that way. Between 2002 and 2012, 42,632 inhabitants left small towns in Poland for the permanent emigration and nearly one fourth of that only from 29 small towns of the Opole Voivodeship (Fig. 3)



**Fig. 3.** External emigrants from small towns in Poland by voivodeship in the 2002–2012 period

Source: own work based on Bank Danych Lokalnych, GUS, Warszawa

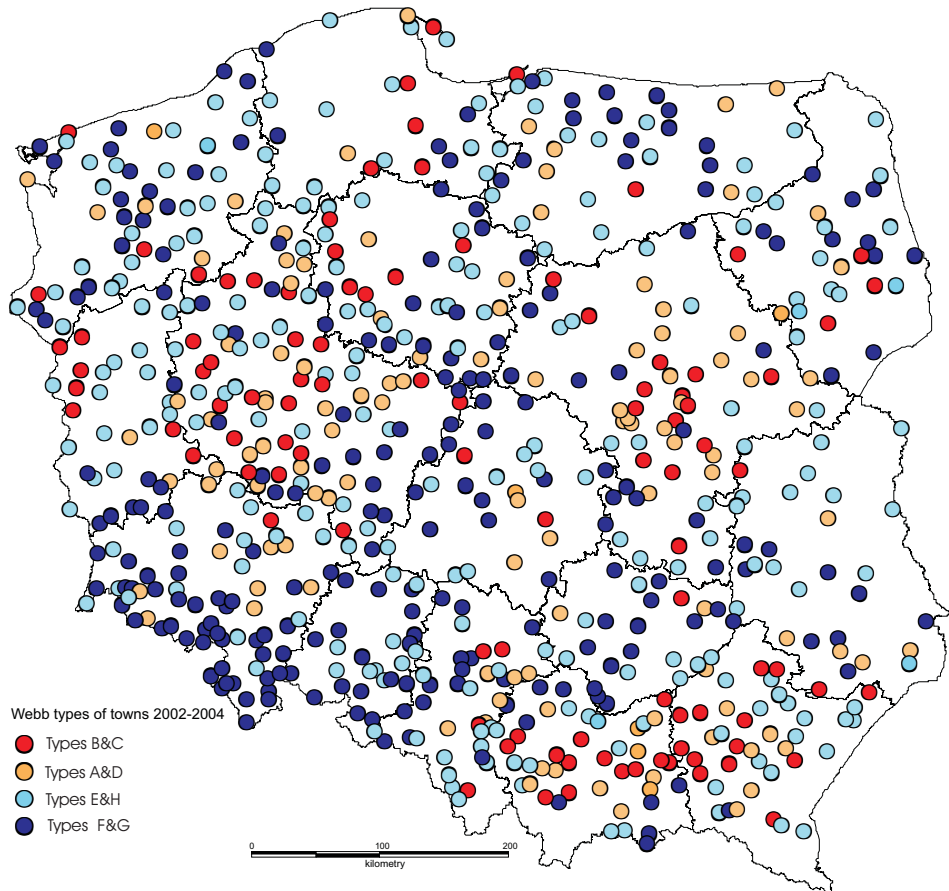
As the emigration, especially to Germany, is in this region of a long origin, it is worth to stress that some similar links emerged in other areas of intensive, mainly economic, emigration between Podlaskie and Belgium or southern part of the Małopolska one and Austria. Furthermore, the 2005–2007 period was characterized by

the extremely high emigration to western European countries, because of an accession of Poland to the European Union (Grabowska-Lusińska, Okólski, 2009).

### Webb types of small towns

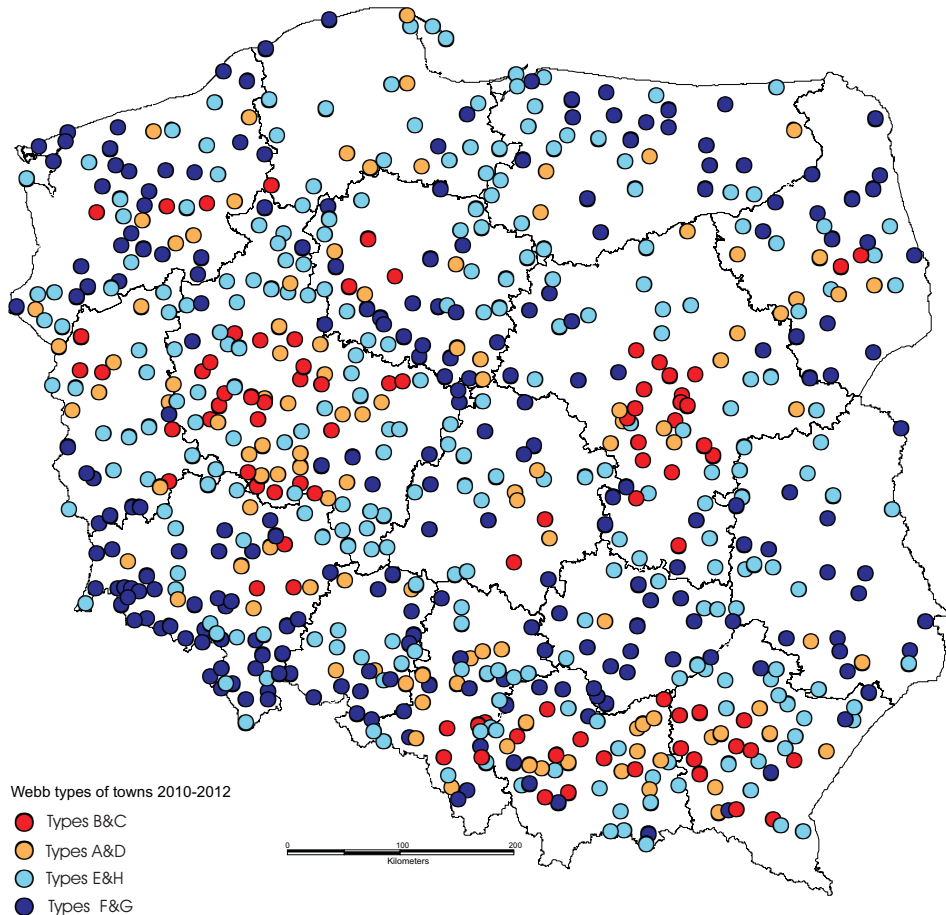
The effect of natural changes and migration growth of towns can be shown when the Webb types of towns are analysed (Webb, 1963, 1964). Types A, B, C and D contain the groups of towns with the population growth; in types a and B mainly by the natural increase and for types C and D – by high positive migration balance net. Types E, F, G and H are the depopulating ones, in type E the depopulation is caused by natural loss and for types G and H – mainly by high outflow. Additionally for types F and G both the natural increase index and that of migration balance net are negative, while in B and C both values are positive.

In the paper two three-years periods averages were analysed: the first one 2002–2004 and the second one for 2010–2012 period. Using of the three-years averages eliminated one-year incidental cases (Fig. 4, 5).



**Fig. 4.** Webb types of small towns in the 2002–2004 period

Source: own work based on Bank Danych Lokalnych, GUS, Warszawa



**Fig. 5.** Webb types of small towns in the 2010–2012 period

Source: own work based on Bank Danych Lokalnych, GUS, Warszawa

The depopulation type is represented by 71.7% of small towns (Tab. 3).

**Tab. 3.** Changes of the Webb types of small towns in Poland over the 2002–04 and 2010–12 period

Webb types	Small towns			
	number	%	number	%
	2002–2004		2010–2012	
A	52	7.8	66	9.6
B	41	6.1	33	4.8
C	50	7.5	51	7.4
D	59	9.1	44	6.5
Total A–D	202	30.5	194	28.3

E	44	6.6	41	6.0
F	64	9.7	59	8.6
G	165	24.9	176	25.7
H	188	28.3	215	31.9
Total E–H	461	69.5	491	71.7
Grand total	663	100	685	100.0

Source: own work based on Bank Danych Lokalnych, GUS, Warszawa

In addition, the dominance of types H and G can be seen. The worst situation is observed in the Świętokrzyskie and Lubelskie Voivodeships, where over 90% of small towns are depopulating, similarly also in the Warmińsko-Mazurskie, Dolnośląskie, Opolskie and Zachodniopomorskie Voivodeships shares of depopulating towns are over 80% (Tab. 4).

**Tab. 4.** Webb types of small towns in Poland by voivodeship

Voivodeship (capital)	small towns	Types A, B, C, D		Types E, F, G, H	
	number	number	%	number	%
Dolnośląskie (Wrocław)	71	10	14.1	61	85.9
Kujawsko-pomorskie (Bydgoszcz, Toruń)	44	9	20.5	35	79.5
Lubelskie (Lublin)	30	2	6.7	28	93.3
Lubuskie (Gorzów Wlkp., Zielona Góra)	36	13	36.1	23	63.9
Łódzkie (Łódź)	28	6	21.4	22	78.6
Małopolskie (Kraków)	47	21	44.7	26	55.3
Mazowieckie (Warszawa)	61	27	44.3	34	55.7
Opolskie (Opole)	29	5	17.2	24	82.8
Podkarpackie (Rzeszów)	40	18	45.0	22	55.0
Podlaskie (Białystok)	32	8	25.0	24	75.0
Pomorskie (Gdańsk)	27	6	22.2	21	77.8
Śląskie (Katowice)	35	13	37.1	22	62.9
Świętokrzyskie (Kielce)	25	1	4.0	24	96.0
Warmińsko-mazurskie (Olsztyn)	38	4	10.5	34	89.5
Wielkopolskie (Poznań)	89	41	46.1	48	53.9
Zachodniopomorskie (Szczecin)	53	10	18.9	43	81.1
Total	685	194	28.3	491	71.7

Source: own work based on Bank Danych Lokalnych, GUS, Warszawa

Furthermore, the depopulation process started in the nineties deepens in all small towns with the only exception of towns remaining under the influence of the urban agglomerations, mainly those of Warszawa, Kraków and Poznań (Lisowski, 2007).

Depopulation is characteristic for all size categories of towns, what is confirmed by the depopulation seen also in many great and medium sized cities (Runge, 2013). However among the small towns' group the lower share of growing ones can be



seen in the middle size classes (for towns between 5 and 15 thousand inhabitants). In this category the share of depopulating towns in the highest (78%), while for the smallest towns (below 5000 inhabitants) it amounts for 66%. The values confirm the rural model of demographic development for this category of small towns. The biggest towns with the population number between 15 and 20 thousand are diversified as there are towns developing under the big cities influence on the one hand and the district towns on the other as well as small towns with the peripheral location, these located in the depopulation zones of the country and the former small industrial towns.

The types of small towns showing the population growth are represented by only 28% of small towns, mostly those of a type. The positive situation appears also in the C type, for which both indices are positive, with the predominance of migration balance net as the number of towns representing this type is almost equal in the analysed period. These are not only the towns developing in the vicinity of a big city but also the local service centres or those of “modern” industry, often connected with the special economic zones (e.g. that of Niepołomice).

## Discussion

The question asked in the title refers to the research on the development level of small towns. The authors’ former works were descriptions of the socio-economic situation and the rank of the small towns in Poland (Kwiatek-Sołtys, 2011b, 2014). It has turned out that migration factor together with the population dynamics one are the main elements influencing the image of small towns. The strength of these factors allowed for treating them as the stimulants of the development. They also make the small towns so differentiated. The image presenting the rank of small towns, including different set of indicators (social, labour market, social and technical infrastructure, elements of budgets, etc.) is generally similar to the one according to the population dynamics and migrations. The small towns developing in the suburban zones are not in cohesion.

The question whether the positive demographic changes really reflect the higher level of development has a crucial importance. Can the positive values of the population dynamics and migrations be treated as stimulants and good symptoms of small towns development and growth? Are these small towns attractive to new inhabitants or do the new inhabitants not care? Many small towns lying in the suburban zones lost their functions as centres of the rural micro-regions, industrial centres or even the local service and trade zones, but they record fast population growth. They have become the great cities’ satellites. What is the life quality of “old” inhabitants? Do they have to fulfil their basic needs in the great city? What are the chances for the small towns in the metropolitan areas to keep their identity and functions, and what should be the new paths for their development?

On the contrary, the peripheral location of towns, which within the emigration regions and the population loss seems not to be a problem for local authorities, as they do not look for new inhabitants. Does it mean that the unfavourable demographic trends don’t affect the economic situation of small towns or maybe the duration of changes is not long enough to realise the threat of depopulation? Even in

well-developed countries, where aging can be regarded as high there is a lot of attention paid to attract new inhabitants (Niedomyśl, 2007; Mainet, Edouard, 2014).

Another aspect of the discussion on shrinkage is the question whether it should be perceived as the problem and what sort of problem? The low natural increase (or even decrease) and the outflow of economically active population leads to the aging of small towns societies. Aging is still perceived as a difficult issue as there are questions of less taxes income, and greater the need of social care development, rather the profits from the “silver economy”. Many Polish small towns are facing difficult problems associated with the poor technical and transport infrastructure, underdeveloped health system or the lack of houses for the elderly, etc. – not to mention the low income of pensioners. Local small towns communities will not benefit from aging or shrinkage very soon. This problem is observed not only in Poland – small towns of Slovenia and Moravia also face depopulation. This is especially the case of former industrial small towns with actually high unemployment rate, poverty and social exclusion, and also with a poor services equipment (Lampič, Rebernik, Vaisnar, 2007).

The examples of separate towns where the high population dynamic is accompanied by the high level of economic growth, could become the clue for building the new and proper development strategies for small towns. The lesson from those good examples shows that the sustainable development, based on both endogenous and exogenous factors, caused, thanks to the active stable local policy, building the good air for enterprises, without forgetting about the local cultural assets and the solicitude of the high quality of life results in the high position in towns socio-economic ratings.

## Conclusion

Small towns in Poland make a very differentiated set. They differ in their geographical location, history of their regions, and different demographic and economic situation. They differ in their origin, former and present functions, including that of district towns and size (population number). There are small towns with the population number below 5,000 inhabitants, which makes them similar to rural municipalities, and also towns nearly reaching 20,000 inhabitants. All those factors strongly influence the present demographic situation, shaping population growth, stagnation or decrease. The general image of population dynamic, migration balance net and Webb types shows the group of small towns developing under the influence of the big cities Warszawa, Kraków, Poznań as well as Wrocław, Gdańsk, Gdynia and Sopot and Rzeszów, where the better demographic situation and positive demographic net are observed. The question to what extent the population growth in those towns is adequate to their economic situation remains open. The attention should be paid there to keep the living standards on a high level and not to allow them to lose their identity.

However, for the majority of cases the strengthening of the unfavourable demographic trends started in 1990s can be clearly seen. The action implementing a proper policy towards the development of small towns should be started on both national and regional levels and the local one as well.

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## **Influence range of towns in the light of economic linkages – an example of small and medium-sized towns in the Lodz voivodeship**

### **Abstract**

The main aim of the author was to determine the influence range of towns in the light of their economic linkages. The text is part of the author's larger research project which focuses on the problem of identification and delimitation of functional areas of small and medium-sized towns. An important element of the analyses, apart from their cognitive aspect, is a proposal of an independent tool to measure the phenomenon of economic linkages with the use of data included in the REGON (National Register of Business Entities) database. All the analyses have been conducted on the basis of 38 small and medium-sized towns in the Lodz voivodeship.

**Key words:** economic linkages; influence range of towns; Lodz region; medium towns; small towns

### **Introduction**

The topic of relations between the city and its surroundings has a well-established position in science. Geographers play the leading role in this topic as explaining spatial correlations represents one of their many (if not the most important one) subjects of research interests. Adequate recognition of human spatial behaviours (in their different dimensions: demographic, social and economic) is the key to appropriate social and economic, as well as spatial policy-making. This is of great importance above all in the case of regions characterized by considerable population concentration, or urban areas in other words. Consequently, researchers are mostly interested in the problem of social and political relations in the case of town, including predominantly the largest ones. One proof of this phenomenon is the popularity of research into metropolisation of space. The metropolis status shaped by the type of its functions is nothing else but a derivative of solutions which take place between the city and the globalizing world, other towns and countries but also linkages between the metropolis and its immediate surroundings which does not only perform the function of hinterland but very often also shapes or reinforces metropolitan functions of the centre. For this reason adequate identification of correlations on the metropolis – surroundings axis plays such an important role.

The most reliable tool scrutinizing the problem of relations between the city and its surroundings can be found in correlations resulting from the existing movement of persons, goods and information. Komornicki (2003) defines them as interaction, influence, connection or relations which take place in space. They form a common subject of interest of social and economic geography. There are numerous types of linkages depending on the kind of research and the author of the given study. The most frequent, however, include: economic, social, transport, institutional and environmental (ecological) ones (compare: Bartosiewicz, Pielesiak, Marszał, 2012). Due to statistical data resources identification and measurement of these linkages is difficult, in particular in local relations between the town and its surroundings. Better opportunities are provided by analyses on the interregional or intentional level.

Geographers have been interested in adequate recognition of linkages in the relation between the town and its surroundings for many years but currently (at least in Poland) this topic has gained importance anew. This is connected with the problem of delimitation of functional areas forced to a certain extent by the new European Union policy for 2014–2020. As part of this urban policy assumptions have been established and they envisage tighter co-operation on the town and its surroundings axis through implementation of new instruments of financing investment from the EU funds, or Integrated Territorial Investment (ITI). It is assumed that implementation of this tool is to take place within the so-called Functional Urban Areas (FUA). In this way meeting the requirements necessary to apply for funds within ITI has given rise to an increase in the number of executed association agreements between communes of metropolitan areas.

Looking at the topic of spatial relations in urban regions, the greatest problem, from the Polish perspective, concerning co-operation in management on urbanized areas is independence reinforced by law in relation to local authorities which are often unwilling to take initiative which goes beyond their statutory competences. This translates into lack of co-operation on the supralocal level and tackling problems in a coincidental way. In an attempt to tackle this situation there have been many endeavours (unsuccessful so far) to institutionalize statutorily co-operation of local authorities, in particular in case of cities (metropolis). Parallely, there are bottom-up initiatives of co-operation of metropolitan areas. There are a number of associations or agreements aimed at solving common developmental problems, even though the effectiveness of these activities tends to be limited (Pielesiak, 2012).

Another significant difficulty in shaping functional areas of towns resides in determining their spatial range (delimitation). If bottom-up willingness of individual territorial units (municipalities) to associate plays an important role here, then another important factor resides in determining spatial framework of such an area resulting from the existing linkages (relations) between the town and its hinterland. This problem has been already dealt with from the top down in the case of big cities in Poland. Delimitation of 16 capitals of voivodeships has been accomplished to the order of the ministry in charge of regional policy (compare Śleszyński, 2013). The author of this work presented not only results of this delimitation but also put forward a set of criteria and indicators<sup>1</sup> which such a procedure should be accompanied by.

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<sup>1</sup> The following criteria were used in delimitation of functional areas of provincial centres in Poland: journeys to work, volume and directions of migrations, level of social and economic development of communes or density of population and distance to the central town.



The proposed method did not meet with full approval of the scientific circles (e.g. Heffner and Gibas, 2014a, 2014b). One should bear in mind, however, that the broad scope of the research, as well as limited resources of statistical data (mainly the lack of a number of data allowing to establish real functional linkages) required a number of simplifications. Hence the document should be treated as a guideline for potential disambiguation of delimitation in individual cases of functional areas.

The complexity of the problem of functional area delimitation has been reflected in the literature of this subject. Focusing only on Polish works, although the situation is similar in other countries, there are plenty of works devoted to the issue of relations which take place between the town and its surroundings. Most of them focus on the analysis of volumes and directions of functional linkages. The most interesting works are, for instance: Heffner and Gibas (2014a, 2014b), Churski (ed.) (2009); Jewtuchowicz and Wójcik (ed.) (2010), Marszał and Pielesiak (2008) as well as Bartosiewicz, Marszał and Pielesiak (ed.) (2012).

The output concerning smaller towns is far more modest. And this does not refer to only recent years. Generally speaking, small and medium-sized towns in Poland are still waiting for large-scale research concerning their relation with the surroundings. The existing studies are either contributory in character or concern specific urban centres while they fail to lead to larger generalizations. Analyzing this output it should be remembered that researchers tend to believe that small towns, especially those located peripherally in relation to big cities, have a nodal function for the rural areas surrounding them. There are direct and mutual social and economic relations between local centres and rural, predominantly agricultural, areas surrounding them (Heffner, 2000), which unambiguously point to the validity of the research topic. A number of publications devoted to the problem of functional hinterland or the influence range of towns. In 1970s and 1980s many studies of this type were published in Lodz geographical centre, like: Matczak and Michalski (1982), Michalski (1980, 1985), Matczak (1984), Michalski and Suliborski (1989) and Dziegieć (1984). More contemporary analyses comprise, among others, texts by: Bartosiewicz (2012), Bartosiewicz and Pielesiak (2010), Czarnecki (2007), Heffner (2000, 2005), Heffner and Solga (2006), Kwiatek-Sołtys (1998), Matczak and Szymańska (1997) and Jazewicz (2006).

Diversification of approaches to analysis of functional area of towns does not translate itself into different attitudes towards defining this term in scientific circles. In Polish realities it is defined in the most accessible way in National Spatial Development Concept 2030: the urban functional area is the town together with its outer zone which, through a dense network of connections, creates functionally "one organism" of intensive linkages and relations. According to this document one of its great advantages is stressing the importance of these linkages (primarily social, economic and infrastructural, including transportation connections) as the basic indicator of the functional zone.

## Scope and goal of research

From the viewpoint of relevance of delimitation of functional areas the basis is an analysis of linkages which take place between the town and its surroundings. For



this purpose, both in national and international research, scientists use commuting to work which tends to shape spatial relations in the most durable manner. Comprehensive studies also take into consideration other types of linkages. Consequently, in the above-mentioned work by Śleszyński (2013) these are most frequently migrations as an indirect effect of the existing connections. In case studies these may be also, for instance, commuting to schools or to retail outlets (Bartosiewicz, 2012). Studies on economic linkages are much less frequently encountered, both as a separate topic and considering their use in research into identification of functional areas.

The reason for decreased interest in economic linkages understood as all kinds of interactions taking place in the space and resulting from conducting business activities is poor access to suitable data. These are not collected in public statistics and access to them in the source, i.e. entities conducting business activities, is hampered. Companies treat information concerning their counterparty connections as a business trade secret. These limitations concern to a lesser extent analyses conducted on the interregional or international levels. In turn, they hinder research on the local level in the relation between the town and its surroundings. In Poland research into economic linkages has a long tradition. In particular in the 1960s and 1970s it was quite popular to do research into the movement of goods from the regional perspective (see, e.g. Chojnicki, 1961). Among contemporary studies it is worth mentioning above all works by Komornicki (2003) who dealt with this issue from the international perspective and Śleszyński (2010) who did research into economic linkages among biggest Polish cities.

From the point of view of the author's interests, the measurement methods are the most important issue in the scope of research into economic linkages. This interest arises from the research project conducted by the author which concentrates on the problem of functional areas of a set of small and medium-sized towns in Poland. This project is aimed at identifying and delimiting these areas, and subsequently accounting for diversification of this phenomenon through identification of factors which determine their occurrence and spatial range.

One may ponder if it is necessary for this type of research to include analyses concerning economic linkages. In the author's opinion, the answer is yes as in case of small and medium-sized towns identification of relations with the surroundings is not so obvious as in case of big cities. Recognition of the widest possible spectrum of functional connections increases the chances of adequate identification of the researched phenomenon.

The main aim of this work is to characterize relations among a set of towns and their surroundings in the scope of economic connections. What is equally important is the methodological aim, which is elaboration of an independent method of measuring this phenomenon, which is a kind of compromise between research precision and accessibility to statistical data.

In the course of search of different solutions to the measurement problem it turned out that the only source of knowledge which may be used in this type of analyses is the REGON database which comprises a list of all business entities together with their location and profile of activity. This database also includes data concerning the location of parent companies – headquarters of companies as well as location of regional branches (local units) of these companies. In this way it is possible to identify expansion directions of companies outside the place where their

core business activity is conducted. These data may be used to determine economic relations which take place on the given territory. But data from the REGON database have their own limitations and require certain assumptions to be taken. Firstly, this database includes all the business entities operating on the market. Regrettably, this assumption is not always true as the obligation to register and deregister companies in the REGON database lies with the entrepreneurs themselves who in particular in the case of deregistering the company fail to fulfil this obligation (there are no administrative or financial consequences to this end).

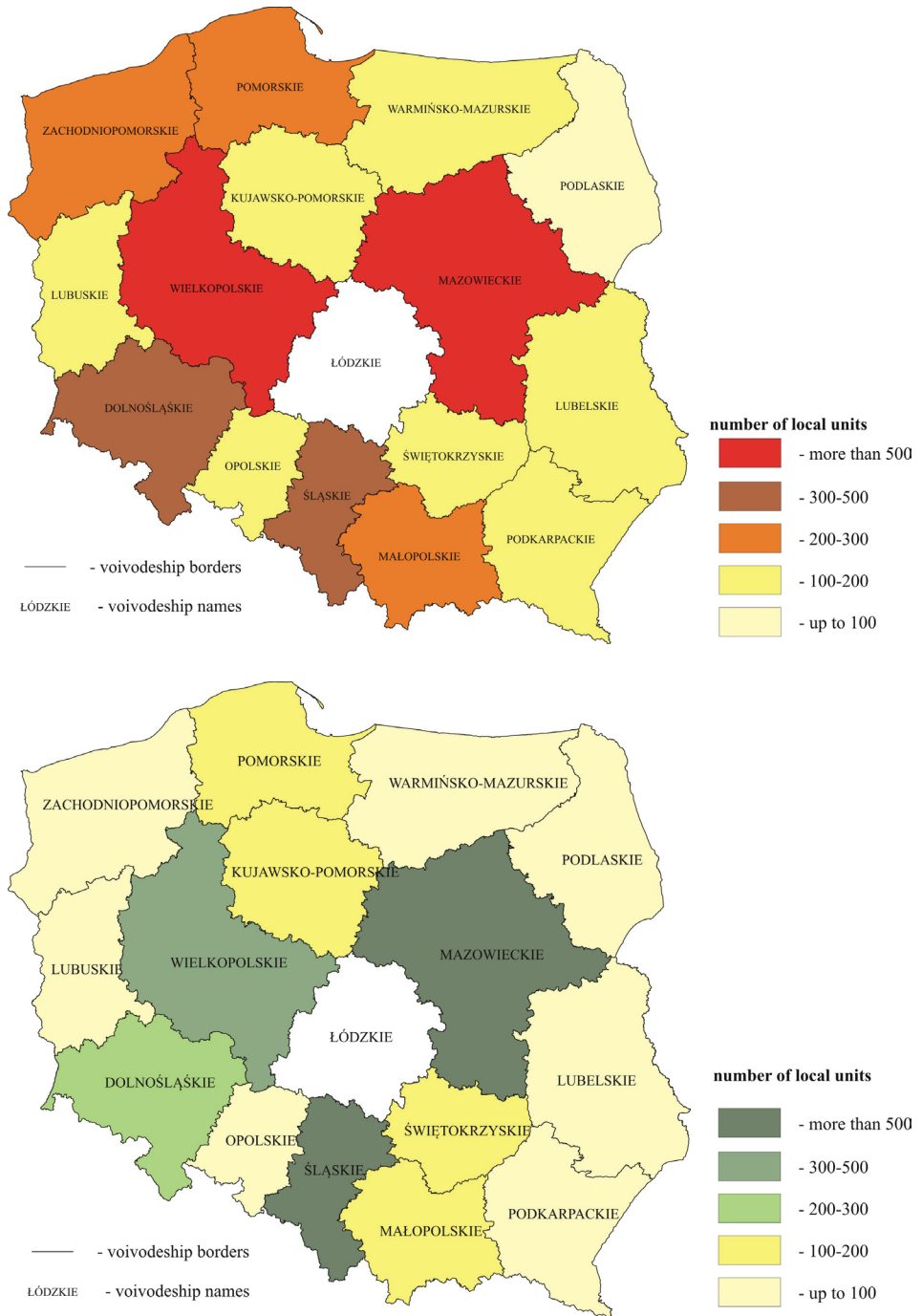
The author presents results of a test research (the proper research includes all centres in the country) conducted on a set of small and medium-sized towns (up to 50,000 inhabitants) of the Lodz voivodeship, a region situated in the central part of Poland, whose capital, Lodz, is the third biggest city in Poland (after Warsaw and Krakow) as far as the number of inhabitants is concerned. The analysed set comprises 38 towns diversified in terms of their size: 13 of them are towns with up to 5,000 inhabitants while in the case of 5 of them the number of inhabitants exceeds 40,000 people. This is a set with a highly diversified social and economic structure which to a large extent is determined by the pattern of transport and settlement network (primarily the distance from Lodz). This set includes typical centres catering for rural agricultural hinterland, dynamically growing service and industrial areas as well as typical suburbia (this is in the case of towns adjoining Lodz).

## Economic linkages

Among nearly 56 thousand companies located in the researched towns, 16% have their local units (branches) outside their administrative boundaries. Their number is directly proportional to the size of the given centre. Analyzing location of these local units, it may be observed that the majority of them are situated in the Lodz voivodeship. Only one fourth of them is located outside of this region. The structure of local units by type is dominated by service and commercial companies (nearly 60%) as well as the industrial ones (20%). Small and medium-sized towns of Lodz region as a set are characterized by a negative balance of economic linkages. For one branch of a company based in town there is 1.3 unit which headquarters are outside the town boundaries. This situation may be accounted for in a number of ways, the most well-aimed, however, seems to be the factor of attractiveness of these towns as markets. The town, also the smaller one, implies concentration of population, at the same time being a frequent destination from adjacent areas which is used to satisfy basic livelihood needs (services, trade).

The balance of economic linkages looks similar from the regional perspective, although in this case the difference is much smaller (1.1). What seems to be the most interesting in supraregional linkages of the analyzed towns is their diverse spatial structure depending on their direction (see Fig. 1).

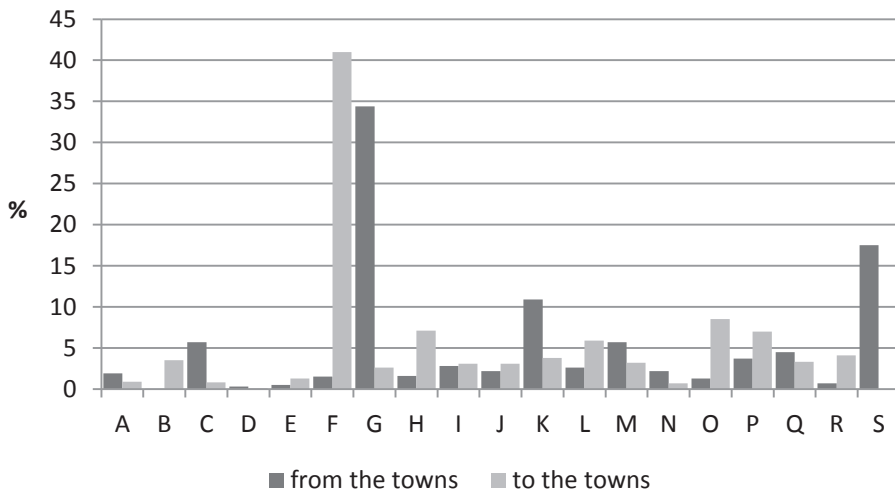
In the case of both directions of economic linkages the main factor of the scale of the phenomenon is the distance: the strongest connections are observed in relation to the adjoining regions (predominantly Mazowieckie and Wielkopolskie voivodeship). Then in the case of the influx of entities to towns from outside the region we can observe a more even dispersion of their place of origin than in the case



**Fig. 1.** Spatial layout of local units in Poland from towns (A) and to towns (B) of the Lodz voivodeship  
 Source: own elaboration on the basis of the REGON National Register of Business Entities, 2014

of expansion of town-based companies which are characterized by a clearly greater concentration on areas directly adjoining the Lodz voivodeship.

Interesting conclusions may be also drawn on the basis of an analysis of structure of economic linkages by kind scrutinized from the supraregional perspective. In the case of branches opened in towns by companies located outside Lodz region, one third of them represents the commercial sector (section G following Polish Classification of Activity 2007) (see Fig. 2). This structure is complemented mostly by entities of the sector of services (sections S, K and M). The most expansive group of business entities with headquarters in the researched towns comprises, in turn, companies from the construction sector (section F) – over 40%. The share of the remaining kinds of entities is rather even and generally oscillates in the discussed region of 5%.



**Fig. 2.** Structure of local units by kind in the supraregional perspective

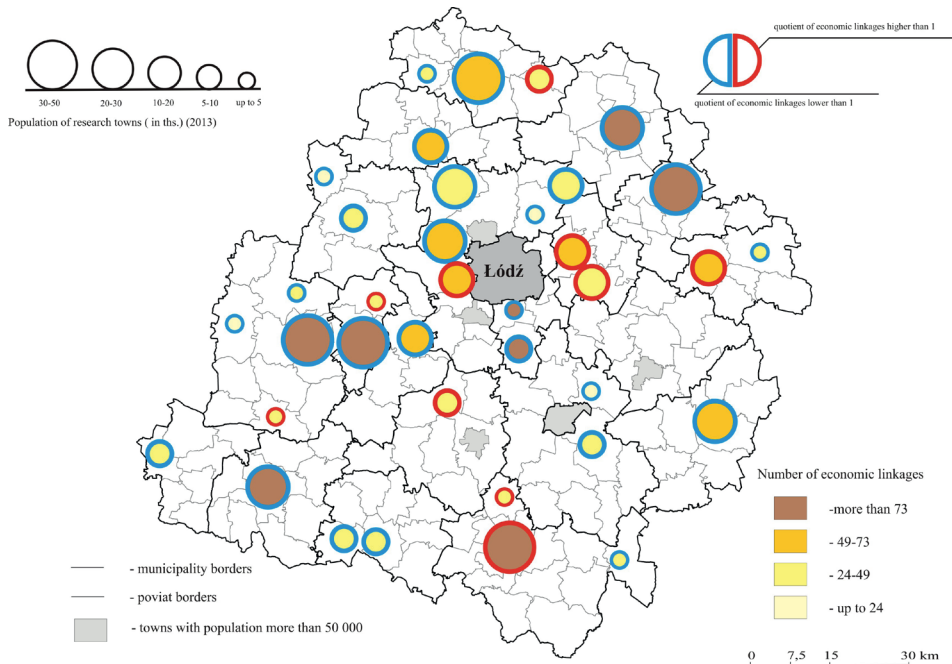
A. Agriculture, forestry and fishing; B. Mining and quarrying; C. Manufacturing; D. Electricity, gas, steam and air conditioning supply; E. Water supply, sewerage, waste management and remediation activities; F. Construction; G. Trade, repair of motor vehicles; H. Transportation and storage; I. Accommodation and catering; J. Information and communication; K. Financial and insurance activities; L. Real estate activities; M. Professional, scientific and technical activities; N. Administrative and support service activities; O. Public administration and defence, compulsory social security; P. Education; Q. Human health and social work activities; R. Arts, entertainment and recreation; S. Other service activities

Source: own elaboration on the basis of the REGON National Register of Business Entities, 2014

Such specialization in this group of companies may be connected with the specificity of this trade. Construction companies are characterized, against the background of other companies, by a big spatial scope of business activity. Commencing large and long-lasting construction projects, companies open their branches in the place where at the given time construction work is being carried out in order to facilitate their business operations. The scale of this expansion, however, may be inflated. One may imagine a situation in which companies completing an investment

on the given territory just fail to deregister their branch, hoping that they will continue works on the given area in the future.

Due to the aim of this work and the volume of economic linkages it is important that a more thorough analysis of spatial relations of the researched towns in Lodz province be conducted in the future. This phenomenon is illustrated by Fig. 3, where the scale and character of identified linkages have been presented against the background of the region's administrative division.



**Fig. 3.** Spatial diversification of the number and the quotient of economic linkages in towns with up to 50 thousand inhabitants in the Lodz voivodeship

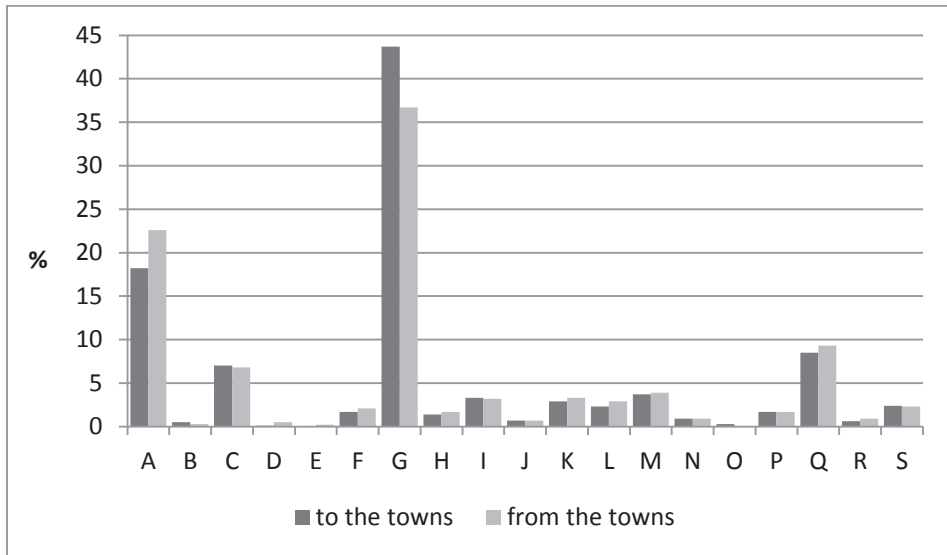
Source: own elaboration on the basis of the REGON National Register of Business Entities, 2014

The scale of linkages has been defined constructing  $0 \times 2$  matrix for the relation between the town and all communes of Lodz region<sup>2</sup> where '0' means lack of economic linkages, '1' one-way linkage and '2' two-way linkage<sup>3</sup>. Subsequently the values obtained from the matrix constructed in such a way were added. The maximum possible value which entities may have achieved was 404, which is twice the number of researched entities. The results obtained point to a considerable correlation between the number of linkages and the size of the centre measured by the number of

<sup>2</sup> In the case of urban and rural communes, the urban part and the rural part of the commune have been treated as separate research units.

<sup>3</sup> Two-way linkage should be understood as a situation in which at the same time there are branches of parent companies from the given town in the given commune and branches of parent companies from this commune in the town.

its inhabitants (the value of Pearson correlation coefficient calculated for these two features is 0.75). The bigger the town, the larger its market, which results, on the one hand, in its greater attractiveness for location of business activity, while, on the other, the bigger the number of companies in town, the greater the potential willingness to expand outside the town.



**Fig. 4.** Structure by kind of local units from towns and to towns in the Lodz voivodeship

A-S – see Fig. 2

Source: own elaboration on the basis of the REGON National Register of Business Entities, 2014

Figure 3 also shows the quotient of economic linkages illustrating the ratio of the number of parent unit branches from a town located outside its boundaries to units located in this town whose headquarters are outside its boundaries. When the this indicator value is higher than 1 it means that the given town is characterized by prevalence of linkages which are expansive in character.

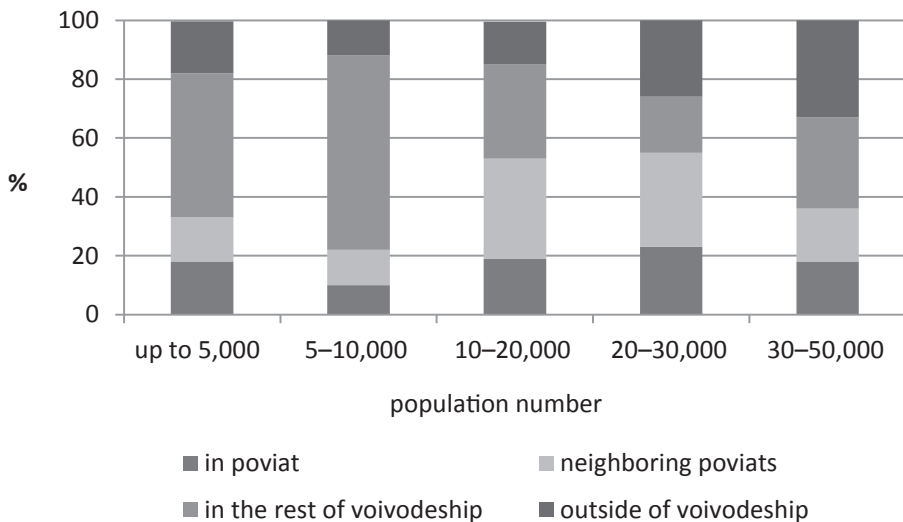
In the case of differentiation in the value of the quotient of economic linkages it is difficult to find any spatial regularities. An interesting dependence is illustrated by comparing the value of the quotient of economic linkages and the indicator of entrepreneurship (the value of Pearson correlation coefficient is  $-0.55$ ). The only logical explanation of this dependency seems to be the existence of benefits arising from localizing business activity in a town whose attractiveness results from absorbency of the market. This kind of reasoning is supported by the structure of economic linkages by kind (Fig. 4). In both the case of influx and expansion of economic entities, companies from the trade sector tend to prevail.

## Influence range

With the use of the size category of town as a variable, this work comprehensively analyzes the spatial layout of economic linkages which at the same time constitutes an answer to the question concerning what the town's scope of influence is. The choice of such a variable seems to be correct, taking into account conclusions drawn from the analysis of dependency between the number of economic linkages (reflecting the spatial scope of linkages) and the demographic potential of the given centre.

An illustration of the spatial distribution of economic linkages has been effected through the classification of local units into four categories (depending on the distance to town): a) district in which the given town is located, b) districts surrounding the one in which the town is located, c) the remaining part of the voivodeship and d) area outside the Lodz voivodeship. All analyses have been conducted separately for local units coming to towns (Fig. 5) and for local units established by companies from towns (Fig. 6).

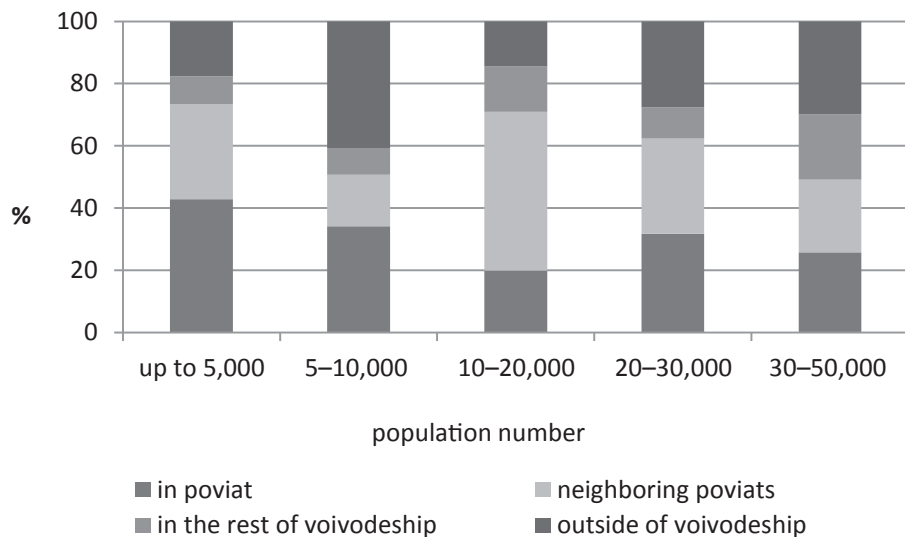
The two analyzed groups differ considerably. In the case of local entities inflowing to small and medium-sized towns of the Lodz voivodeship the size of the centre does not affect the place of their origin in a considerable manner. What is characteristic of this group is an appreciable share of local entities coming from areas situated farther away from towns. Depending on the centre's size group their share oscillates from nearly 50% to as much as 80%. At the same time, there are visible correlations between the place of origin of branches and the centre's size category. The bigger the centre is, the greater share of companies from outside the Lodz voivodeship it gets.



**Fig. 5.** Source of local entities in small and medium-sized towns of the Lodz voivodeship according to the size of the urban centre

Source: own elaboration on the basis of the REGON National Register of Business Entities





**Fig. 6.** Location of local entities from small and medium-sized towns of the Lodz voivodeship according to the size of the urban centre

Source: own elaboration on the basis of the REGON National Register of Business Entities, 2014

The situation is different in the case of expansions of companies outside towns. Above all, irrespective of the town's size category the dominant direction of expansion are areas located directly in the vicinity of the given centre (within the neighbouring district or districts). At the same time the importance of this direction tends to drop together with the increase in the centre's size. The biggest towns are characterized by the most even structure of spatial expansion. This phenomenon may be easily explained by the centre's economic potential which generally grows together with an increase in the demographic potential. Additionally, this coincides with an array of functions (including predominantly administrative ones) performed by the larger towns.

Analyzing the spatial layout of economic linkages it must be stressed that the assumed way of illustrating the phenomenon in question ignores a possibility of identifying factors which in some particular situations may significantly determine the character of this phenomenon. Such a factor, for instance, is the location of town in the settlement network. Towns located peripherally are characterized by an increase in the number of connections with the neighbouring region. At the same time towns situated in the vicinity of a large urban centre (in Lodz) display a stronger connection with this centre than with its immediate surroundings.

## Conclusion

In conclusion, despite numerous disadvantages of the REGON National Register of Business Entities, it remains a tool which offers ample possibilities of analysis of

economic linkages. The universal character of this tool allows for its use in different types of research. It may be used both for research into economic integrity (coherence) of the given area, identification of economic linkages between towns and regions as well as relations between the town and its surroundings. In the author's opinion of the author the presented research approach may be used successfully also in the case of research into the delimitation of functional areas with the assumption that it cannot be the only method of measuring this phenomenon.

From the viewpoint of the analyses conducted in this article, special attention should be paid to spatial layout of functional connections. And in this scope this is above all their different character depending on the direction of these linkages. With a relatively small spatial scope of expansions of companies from the territory of small and medium-sized towns of the Lodz voivodeship, the area from which local units get location in towns is appreciably larger.

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## The role of industry in the labour market of small towns

### Abstract

The problem of changing and shrinking economic base of many small towns causes necessity of searching new paths of development for them. Central service functions existing in those towns previously are largely washed out to larger cities as a result of the present metropolisation processes. The opportunity for economic base or redevelopment of small towns should focus on manufacturing industry. The issue of the paper is to indicate the role of industry for the development of labour market in the space of the small towns, proving the positive impact has practical applications because of its ability to design and implement new development strategy objectives of these towns. The study area were Poland's counties (poviats), in which the central city had less than 20,000 inhabitants.

**Keywords:** economic base; industry; metropolitan areas; small towns

### Introduction

Economic transformation of Poland and the whole region of Central Europe, which had started in the late 1980s and the beginning of the 1990s, led to profound changes in the economy, including the spatial organization of industrial production. Economic structures developed under the centrally planned system had to face the reality of the free market. Another considerable change was the inflow of new foreign investment resulting in the relocation of industrial production. These processes have led to significant spatial differentiation of productive activities, both at the local and regional levels. These processes were the subject of many studies since the early 1990s (e.g. Czyż, 1998; Domański, 2001; Domański, 1997; Kukliński, Mync, Szul, 1997; Stryjakiewicz, 1999; Szlachta, 1993).

Restructuring and modernization of the industry and the growth of new investment in production impacted significantly to the growth of competitiveness of production which resulted in a decrease of the labour demand and to a large decrease in employment in manufacturing industry, also in the case of companies that had developed intensive manufacturing activities. There was a significant decline in the importance of the industry in the labour market (Rachwał et al., 2008, 2009). These

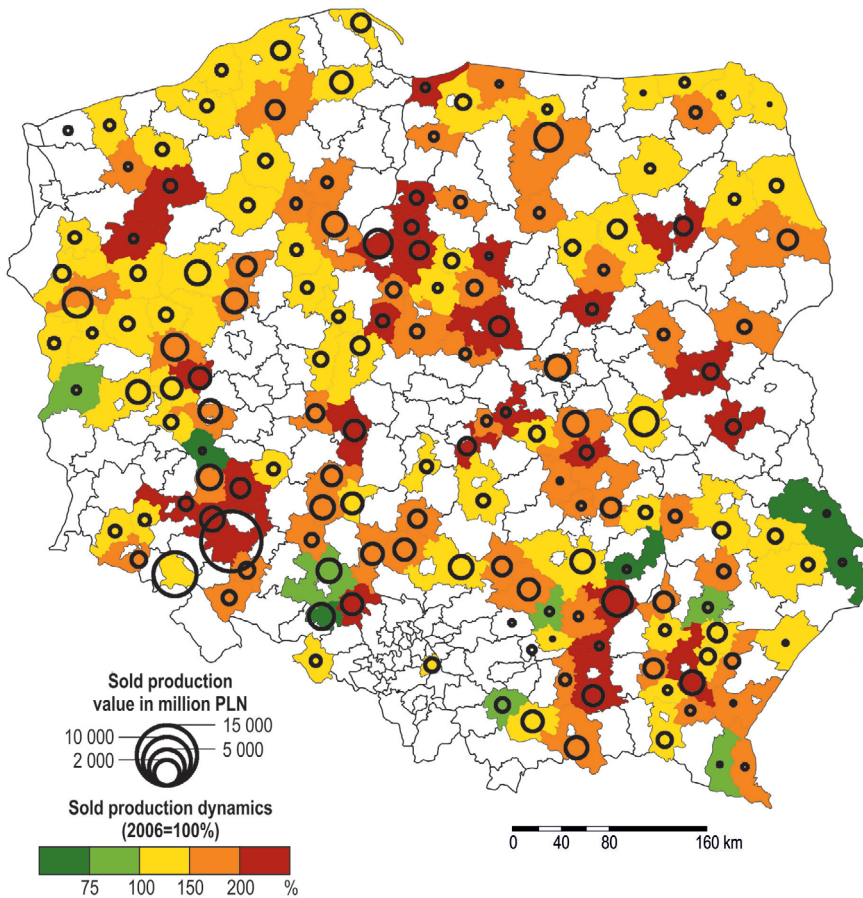
processes, together with the fall of many unprofitable industrial enterprises significantly contributed to the shrinking of the economic base of many areas, to their economic stagnation or even recession. To a large extent, this problem affected many small urban centres, particularly in areas where labour-intensive industry was developed (Heffner, Marszał 2006; Kwiatek-Sołtys, 2001; Kwiatek-Sołtys, Wiedermann 2014; Rajman 2000–2001).

Metropolisation processes and the resulting leaching processes of central functions to the greatest cities make it necessary to search for new paths of development of small towns (Kwiatek-Sołtys, 2011; Kwiatek-Sołtys et al., 2014). Metropolitan areas are also very attractive for the location of new specialized functions, industry included (Rachwał, 2012). The most important factors for the competitiveness of these places are good transport accessibility, large resources of a diversified workforce, and, of course, a much greater market. Metropolitan areas are characterized by relatively high prices of land property in relation to the peripheral areas. In the case of production activities this is essential due to the relatively large space needed for building factories. This facilitates and accelerates the process of relocation of existing production resources from major metropolitan areas to those located on the outskirts of the agglomeration or beyond them. The process is particularly visible in the former socialist countries, because the lack of an appropriate rent from the point of view of a free market economy meant that many industrial plants, were located in the very city centres. Since the 1990s, such areas have been converted to service and residential units such as shopping malls, hotels, restaurants or lofts, while production is moved outside the city centres.

The author presents the contemporary industrial space of Polish counties (poviats) in which there are no large or medium-sized urban centres. This image was compared with the economic situation of these areas and its labour markets. The districts taken for analysis are those where the number of inhabitants of the greatest town is below 20,000. The level of detail of the analysis carried out on the basis of districts resulted not only from an availability of the Polish Statistical Office (GUS) data concerning in the labour market and industrial production. Industrial activities and its economic connections went beyond the boundaries of cities, to their immediate surroundings. These links show large relations closure in the context of the labour market or income growth in the local environment that can be considered for the area of the county (Domański et al., 2005; Huculak, 2011; Gwosdz 2011).

## **Development of industry**

Spatial differences in the size of production shows high diversity both on a local and regional basis (Fig. 1). It is due to the considerable degree of production concentration in the districts located within the metropolitan areas of large cities. This mainly concerns those of Wrocław, Warsaw, Bydgoszcz-Toruń and Poznań. Also around the smaller centres such as Rzeszów, Opole, Olsztyn and Gorzów Wielkopolski developed areas the high production value is observed.



**Fig. 1.** Sold production value of industry and construction in 2012 and its dynamics over 2006–2012 period

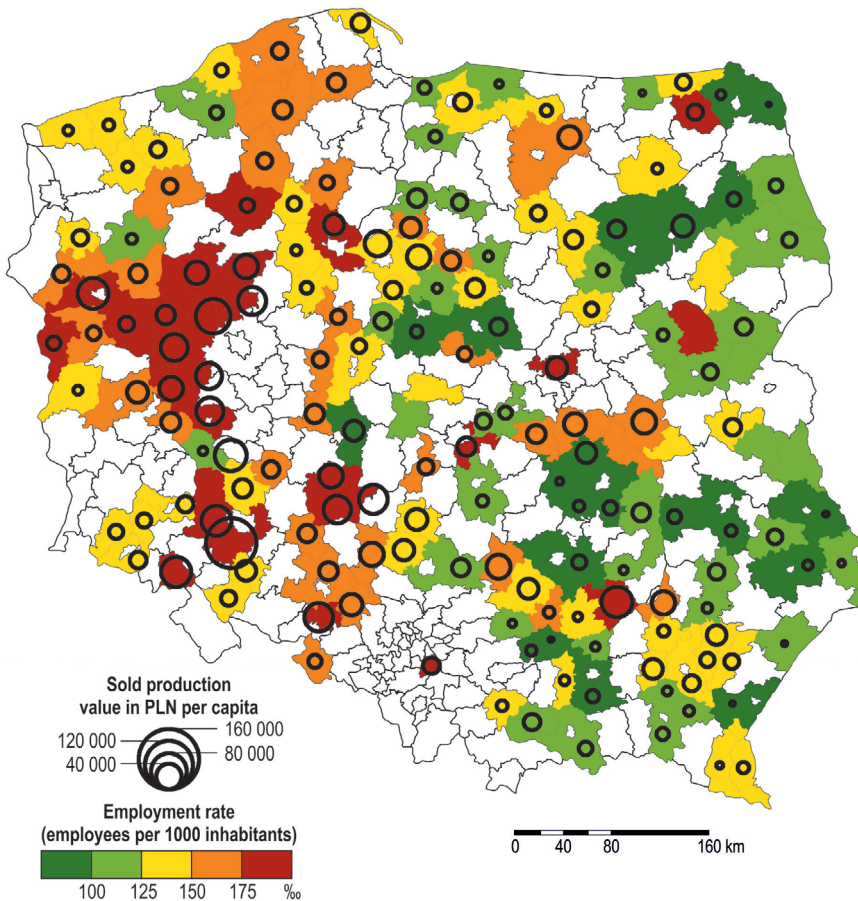
Source: the author's own work based on GUS Database

To better show the importance of industry and construction for the economic development of the particular counties, it was also presented on the map (Fig. 1) by the dynamics of production over the years 2006–2012. On a national scale, it is clear that industrial production grew in this period. There are only few areas showing a decrease. Nevertheless, in such cases the decline may be a problem in the local area. Such examples are usually found in the eastern Poland where it has especially negative effects due to the fact that the decrease in production relates to the areas in which its size was already low. The largest scale of changes was characteristic in the areas of Bydgoszcz-Toruń and Wrocław regions. Especially in the first case, this was very important because this region has been rather weak in comparison with other large urban centres. These changes are in both cases the result of large industrial projects in the field of TV sets and LCD screens productions in their new established industrial parks (including Łysomice near Toruń, or Biskupice Podgórne near Wrocław).



## The impact of industry on local labour market

The impact of the industry on the local environment has been the subject of numerous studies (Grabher, 1994; Lloyd, Dicken, 1972; Porter, 1990). In Polish geography of industry since the 1990s there has been a growing interest in local and regional development. The most important works dealing with industry – environment relations are issues of location factors including with special emphasis the creation of areas of enterprise clusters (Porter, 1990), links between the business environment known as embeddedness (Grabher, 1994; Hardy, 1998) induced multiplier effects in the environment (Lloyd, Dicken, 1972; Domanski et al., 2005; Stryjakiewicz, 2004; Gwosdz, 2011; Huculak, 2011; Micek, 2011; Rachwał, Wiedermann, 2008; Wiedermann, 2007), as well as the sustainability of investment in production, particularly in the context of globalization and progressive relocation processes.



**Fig. 2.** Sold production of industry and construction in 2012 and the employment rate

Source: the author's own work based on GUS Database

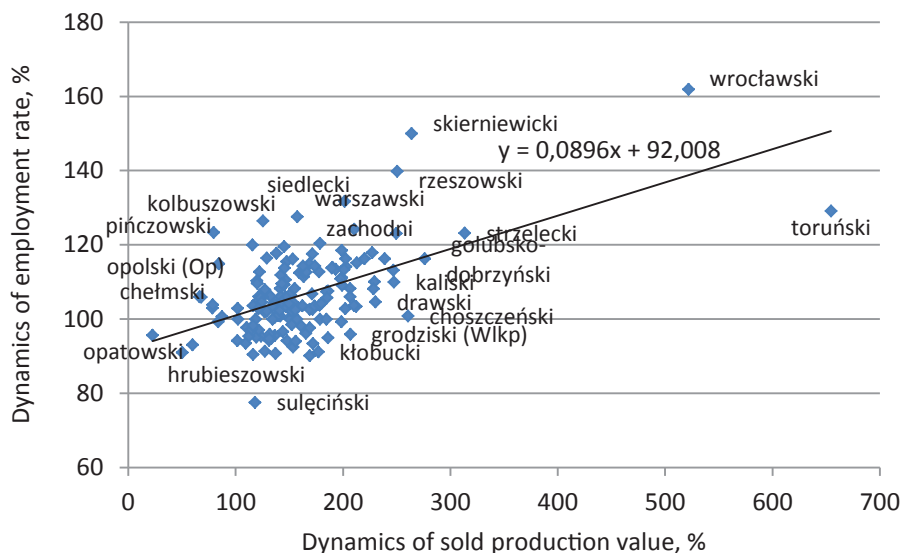


One of the major current socio-economic problems of the most developed countries is the increase in unemployment resulting from the reduction of the demand for labour. This is due to the increase in labour productivity in production resulting from on the one hand the automation of production processes, on the other – the relocation of activities with high labour costs to those with the lower one. In the structure of the labour market the lack of jobs for people with low skills concerning especially young people is continuously growing. The greatest problem concerns the areas located on the outside of major metropolitan areas, where the loss of jobs in manufacturing is not offset by an increase in demand for services. In the case of Europe, this situation is observed mostly in its southern and central-eastern part. To a large extent, these are the areas that seem to be attractive for the relocated investment in manufacturing. Although progressive globalization means that now a large part of this type of investment goes to areas with much lower labour costs.

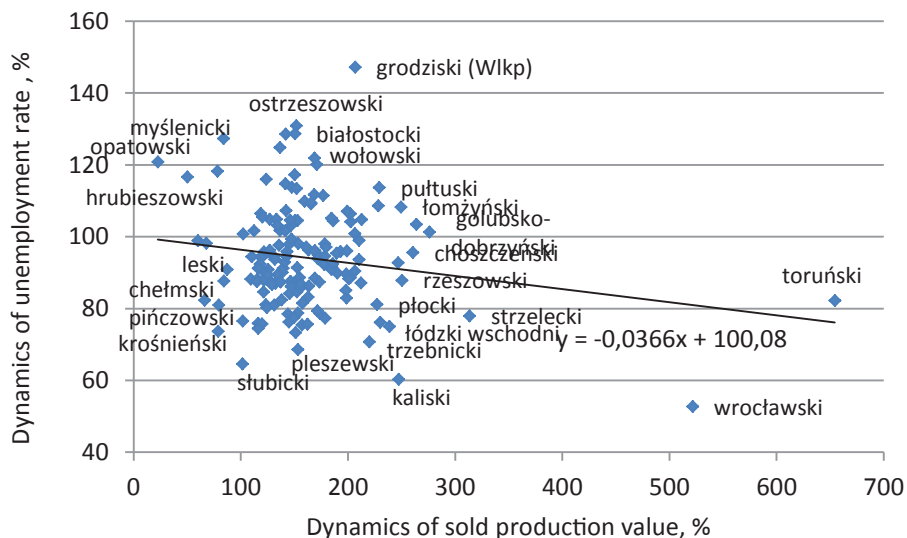
In Poland industrialized counties are located in its western part. The comparison of the volume of production with the employment rate show strong relationship (Fig. 2). This applies not only to the Wielkopolska, Lower Silesia and Pomerania regions, where the average production level achieves a much higher percentage of employees but also is higher in other provinces such as Świętokrzyskie voivodeship (Kielce) or Podkarpackie one (Rzeszów), where staszowski and tarnobrzewski counties respectively show the highest values of both parameters. Some exceptions are the metropolitan areas of Warsaw and Lodz, where in some cases the relatively low production value is not reflected in the low employment rate. This is due to the great development of central functions of these metropolitan areas.

Described above, the production value even at high results may also apply to the areas affected by the recession. Thus, the impact of production on employment is even more visible in their output growth with the dynamics of the employment rate (Fig. 3). This relation is nearly linear. Of course, there are areas where the discussed relation is less visible. Among the surveyed counties the fastest growth in production in 2006–2012 was characteristic for toruński and wrocławski. However, in the case of the first one more than six times higher production value resulted in the nearly 30% increase in employment while in the second case five times higher production value was associated with the two times higher increase in employment. Generally, districts for which rates were above the regression line are characterized by rapid growth in jobs, resulting from the production increase. Hence, in the case of such counties as skierniewicki, warszawski zachodni or rzeszowski, production growth is less important than the development of services, especially in the core areas of central cities.

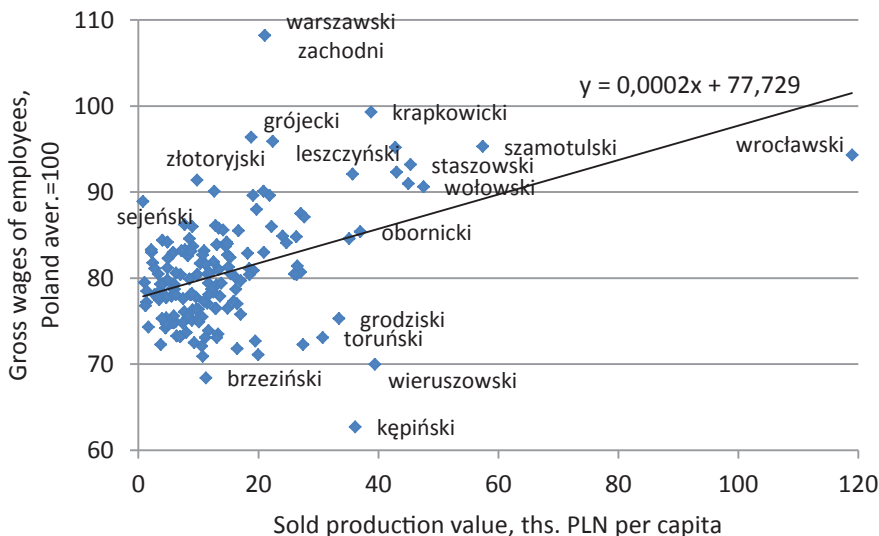
To a lesser extent, the relationship between the development of production is linked to the unemployment rate recorded in particular counties (Fig. 4). The same increase in labour supply due to the industrial development and that of other functions does not affect the various factors of demand for labour. Less correlation in this case is caused by such factors as migration processes, the age structure of population and, last but not least – by the “hidden” unemployment, mainly in agriculture. The zones of high population outflow, mainly people in the productive age, show a decrease in unemployment, despite the absence of changes in the labour market. The agricultural population is not recorded in the unemployment statistics. There is an underestimation of the unemployment rate in most of Eastern and South-Eastern



**Fig. 3.** Dynamics of sold production of industry and construction value over 2006–2012 period and employment rate  
 Source: the author's own work based on GUS Database

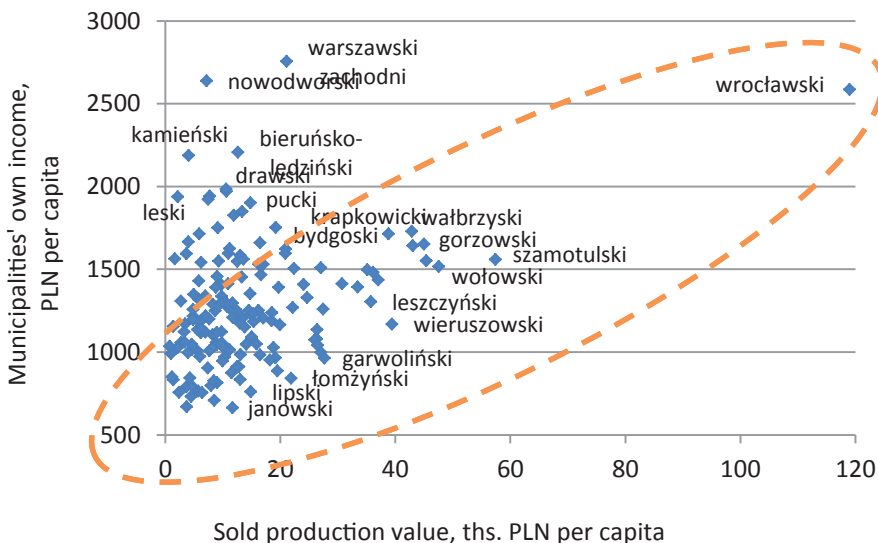


**Fig. 4.** Dynamics of sold production of industry and construction value over 2006–2012 period and unemployment rate  
 Source: the author's own work based on GUS Database



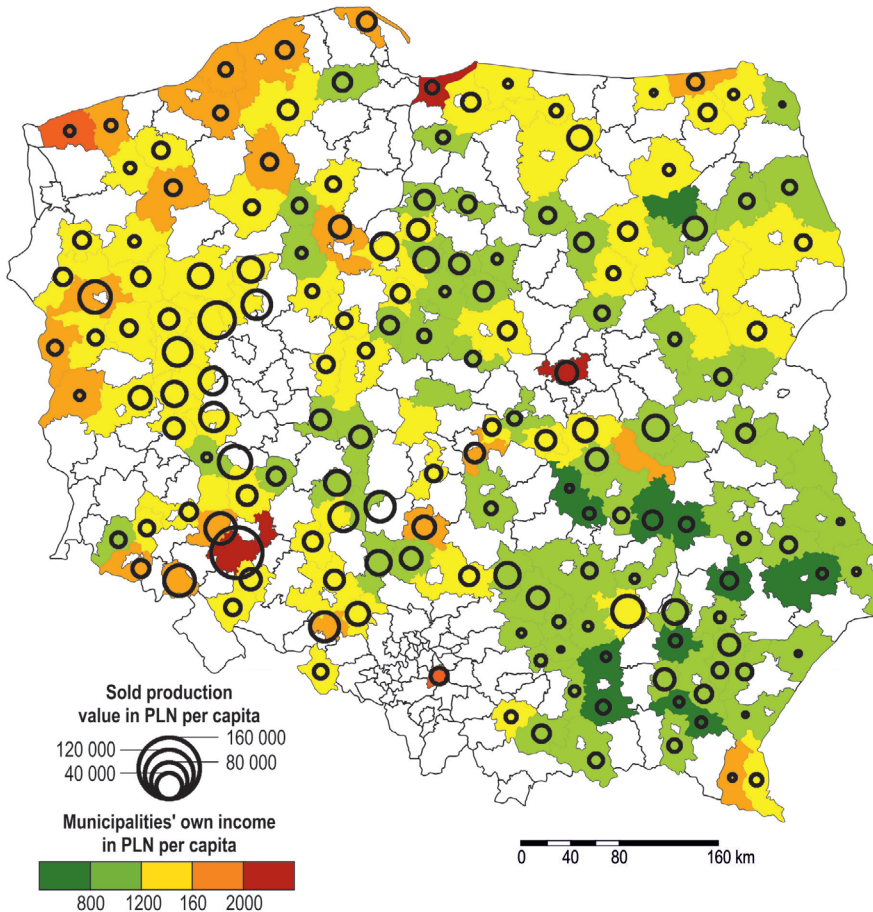
**Fig. 5.** Indices of sold production of industry and construction value in 2012 and wages of employees number 2012

Source: the author’s own work based on GUS Database



**Fig. 6.** Sold production of industry and construction and municipalities’ own income in 2012

Source: the author’s own work based on GUS Database

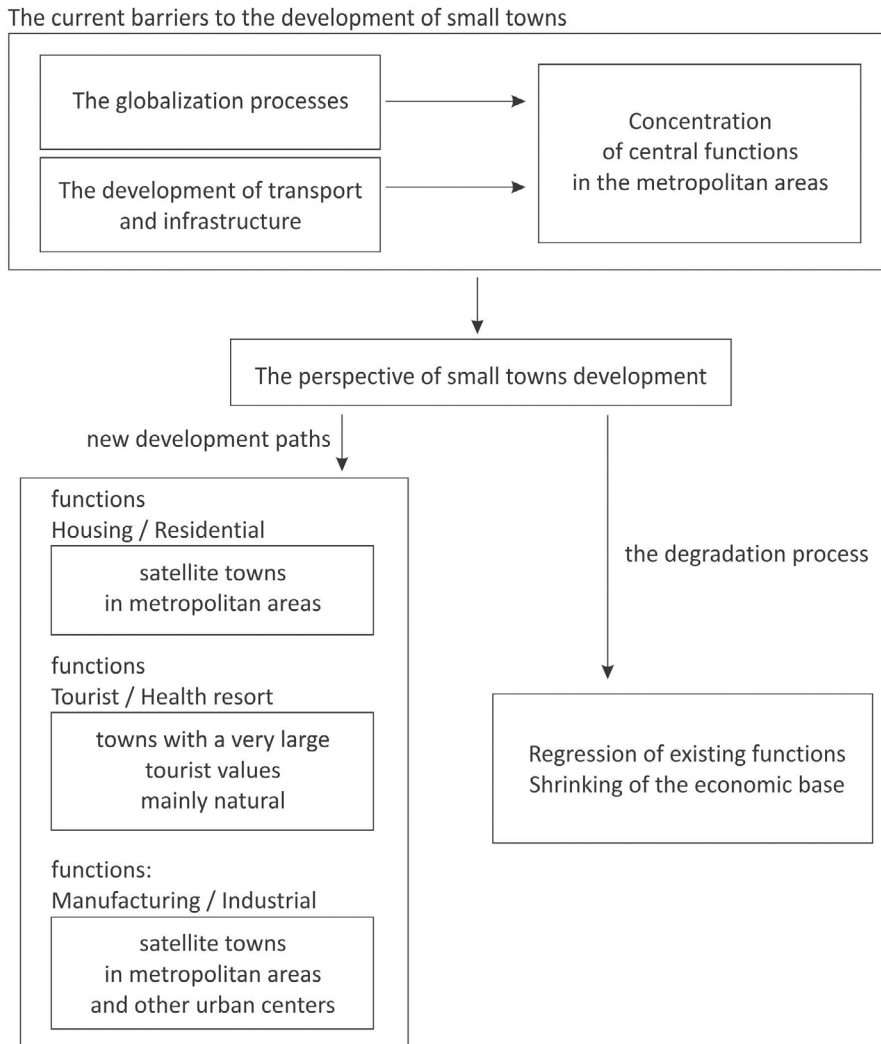


**Fig. 7.** Sold production of industry and construction value in 2012 and municipalities' own incomes

Source: the author's own work based on GUS Database

Poland mainly in voivodeships of Podkarpackie (Rzeszów), Małopolskie (Kraków), Świętokrzyskie (Kielce), Lubelskie (Lublin) and Podlaskie (Białystok). Therefore, the increase in the job number is not reflected in the decrease of the unemployment. a good example is the district of Golub-Dobrzyń where in the years 2006–2012 the unemployment rate heavily decreased while the number of the Kujawsko-Pomorskie (Bydgoszcz-Toruń) voivodeship employees grew by more than 15%.

Type of employment and unemployment rates in the region are reflected in the level of wages. In the case of small towns and rural areas located in the analyzed counties wage rate is significantly lower than the average for Poland (Fig. 5). Only in the case of the western Warsaw district, the average wage in the county was higher than the average for Poland. In the strongly industrialized Krapkowicki district, in the zone of numerous large manufacturing companies, this value was equal to the national one. Another counties showing high-wage values were situated in



**Fig. 8.** Model of possible paths of small towns development by type of their location

Source: the author's own work based on GUS Database

metropolitan areas of large cities and in their neighbourhood (Warsaw, Wrocław and Poznań), or in the zones of large industrial projects, like the county of Staszów, by the Połaniec power station. On the other hand, the author found the counties with relatively high level of industrialization and where wages are among the lowest. This situation was typical for Southern Wielkopolska, where a large part of the industry is a labour-intensive, with relatively low added value. This is due to (among other factors) rather early adoption by this region of companies relocated mainly from Germany, when the process is usually very time-consuming and concerning the

stages of production. The result of this relationship between the production and the level of wages is lower than the supply jobs.

To assess the impact of industrial economic base of analysed towns and municipalities, the volume of production was compared with their own revenues (Fig. 6, 7). The value of these incomes is largely derived from the property taxes and personal income taxes paid by residents. Therefore, this index shows the level of the economic base and wealth of the inhabitants. There are two different paths of urban development (Fig. 6). The dependence of revenues from industrial and construction production concerns to such counties as wrocławski, wałbrzyski, krapkowicki, gorzowski, szamotulski, wieruszowski and garwoliński. There is also a large group of counties for where the increase of incomes has no relation with the development of the production base. These are such poviats as warszawski zachodni, nowodworski, kamieński, drawski, leski or pucki. The author compared these observations with the map (Fig. 7) and noticed better spatial distribution of these two indices. Municipalities lying in the metropolitan areas or on Baltic Sea shore have higher incomes than there would resulted from the production development. This image shows an alternative path of development for such areas. In the metropolitan areas, what is important is the residential function, growing in the zones of high value natural attractiveness and some local development opportunities arise for the development of tourism or second homes concern the coastal areas and those of the Bieszczady Mts.

This analysis allowed the author to build a model of potential pathways of Polish small towns under current economic conditions (Fig. 8). The development potential function has been assigned to the types of areas, resulting from the features of urban locations. By far the small towns within metropolitan areas have the greatest opportunities for development. These are, on the one hand, areas attractive for the locating new, modern production (Kwiatek-Sołtys et al., 2014), and, on the other hand – for dwellings. The areas of exceptional natural beauty of landscape or natural resources can focus on the tourism development. This applies, for example, to spas and towns located in the mountainous or coastal areas. However, the vast majority of small towns do not have such advantages, so they need to search for new chances for their economic growth.

## Conclusion

This study clearly demonstrated the advantages of attracting productive investment. As a function of specialization, the export does not compete with the neighbouring resorts. What is more, it can become an asset for the location of similar companies and the formation of clusters. Of course, in remote areas it is uneasy to attract a large external investor because to a relative inaccessibility of them. But there are examples proving that it is possible in such areas to develop new productive activities. From the point of view of small towns, particularly valuable type of productive economic base are neo-Marshallian industrial districts due to their high local embeddedness and flexibility, with which they are able to respond quickly to market needs. Examples of such regions are footwear or furniture manufacturing in the surrounding of Słupsk or in small town of Kalwaria Zebrzydowska. In agricultural

areas it is worth to develop local manufacture of food products. This is a potential industrial sector, the role of which in local economy should be increased.

The necessity of industrialization or re-industrialization in many areas is still neglected. Lack of awareness in this matter is mainly visible at the level of local government managing. Many small towns and communities in their documents of their development strategy or the land use plans do not include the new path of development. Investments in infrastructure, which can improve an access to such areas are treated only in terms of better transport. The next step after these investments should be the designation of new zones of economic activity in the form of industrial parks. Nowadays there are numerous places with a very convenient location with well-developed communication infrastructure – but without the economic development. The application of these actions by the local authorities can be the opportunity for obtaining new production activities, resulting both in growth of local labour market and improvement of the economic situation of the given town and county, too.

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# Annales Universitatis Paedagogicae Cracoviensis

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## Endogenous capital of small towns in the Poznań agglomeration

**Abstract:** The aim of this paper is to identify the endogenous capital of small towns in the Poznań agglomeration and to analyse its role in their development. The agglomeration of Poznań (a NUTS 4 unit) is located centrally in the Wielkopolska voivodeship, which lies in the western part of Poland. There are eight small towns in the Poznań agglomeration that vary in size and socio-economic functions they perform. They belong to two size classes. Those with 5–10 thousand inhabitants predominate; those are Buk, Kostrzyn Wielkopolski, Kórnik, Pobiedziska, Puszczykowo, and Sęszew. The class with the population of 10–20 thousand contains Mosina and Murowana Goślina. Their endogenous capital is identified in terms of three types: endogenous social capital, or population, its resources and quality; endogenous economic capital, or local wealth and production base, free lots and investment areas; and endogenous natural capital, or the condition of the environment, natural resources, and landscape attractiveness. In the analysis of the endogenous capital of small towns of the Poznań agglomeration, the following research instruments have been used: the index method, mathematical-statistical methods, and the survey research technique. The final analysis reveals that in the set of eight small towns of the Poznań agglomeration the highest quality of endogenous capital can be found in Puszczykowo, Kórnik, Mosina, and Murowana Goślina, and the lowest, in the peripheral ones: Buk and Kostrzyn.

**Keywords:** endogenous economic capital; endogenous natural capital; endogenous social capital; Poznań agglomeration; small towns

### Introduction

In the contemporary socio-economic conditions, endogenous capital, known also as endogenous potential or endogenous resources, is an important factor in the development of small towns. The significance of endogenous capital for their development is stressed in strategic documents, scientific publications and current theoretical conceptions of regional development (the new theory of endogenous growth – Romer, 1990, 1994; Lucas, 1988; Molle, Cappellin, 1988; Barro, Sala-i-Martin, 2004; Stilianos, Konstantinos 2011).

Following the place-based policy approach (National placed base policies in the Netherlands 2010), emphasis is laid on the specificity of endogenous resources of

areas and their importance for improving the efficiency of development processes. This approach is one of the pillars of the reform of the EU cohesion policy mentioned in Fabrizio Barci's report (2009). It stresses the necessity of breaking with a homogeneous, linear vision of development since each area has its own specific endogenous resources influencing its development trajectory.

The socio-economic development of small towns is determined by various groups of factors, but in the opinion of Parysek (2001: 70), in Poland, "given the situation, the surest chance of development of smaller towns is a local economy based on endogenous [i.e. local] development factors". Local development factors corresponding to local endogenous capital of small towns can be divided into three basic groups: social (endogenous social capital, e.g. population dynamics, social activity), economic (endogenous economic capital, e.g. the wealth possessed and the production base), and natural (endogenous natural capital, e.g. natural resources and landscape attractiveness).

The aim of this paper was to identify the endogenous capital of small towns in the Poznań agglomeration and to analyse its role in their development. The Poznań agglomeration (a NUTS 4 unit) is located centrally in the Wielkopolska voivodeship, which lies in the western part of Poland. The examined towns vary in size and the socio-economic functions they perform. There are eight such towns here that belong to two size classes. Those with 5,000–10,000 inhabitants predominate; they include Buk, Kostrzyn Wielkopolski, Kórnik, Pobiedziska, Puszczykowo, and Sęszezew. The class with 10,000–20,000 inhabitants contains only Mosina and Murowana Goślina. Their endogenous capital is identified in terms of three types: endogenous social capital, or the population, its resources and quality; endogenous economic capital, or local wealth and the production base, free lots and investment areas; and endogenous natural capital, or the condition of the environment, natural resources, and landscape attractiveness. To achieve the goal, the research proceeded in three stages.

(1) In the first stage, 8 small towns of the Poznań agglomeration were characterised in terms of their socio-economic development. Published data were used to determine their position against the entire set of 89 small towns of the Wielkopolska voivodeship (2010).

(2) In the second stage, selected aspects of the endogenous capital of these towns were defined on the basis of statistical data (published data, 2012).

(3) In the third stage, the endogenous capital of the discussed towns was defined on the basis of the results of a field research into selected aspects (in-depth fieldwork, 2012).

Publications on endogenous resources in the development of small towns include those by Heffner (2008), Marszał (2009a, b) and Poczobut (2009); there are also papers devoted to selected small towns, e.g. Barek (2009; Koźmin Wielkopolski), Tkocz et al. (2009; Wisła), Kwiatek-Sołtys (2009; Krzeszowice), Struczyński (2009; Gniew), Slenczek, Sikorski (2009; Kowary), Namyślak (2010; Kamienna Góra), and Kaczmarek and Konecka-Szydłowska (2013; Nowy Tomyśl, Koźmin Wielkopolski, Wolsztyn, Sieraków, Murowana Goślina).

## Study methods

In the analysis of the endogenous capital of the small towns of the Poznań agglomeration, the following research instruments have been used: the index method, mathematical-statistical methods, and the survey research technique.

### The index method

Indices of socio-economic phenomena are necessary to make a correct assessment of processes taking place in the social and economic spheres. In the methodological sense, an index is a feature, occurrence or phenomenon on the basis of which we conclude with certainty, (or with a specified degree of probability), that the phenomenon of interest to us is actually present (Nowak, 1970). The basic classification of indices employed in this study looks as follows:

- structural indices, which present the ratio of the number of units with the given value of a variable to the size of the sample; structural indices are expressed in per cent (%), e.g. the percentage of people connected to a wastewater treatment plant (%);
- intensity indices, which present the number of cases of the phenomenon examined in relation to the total number of units in the statistical population from which the phenomenon derives, e.g. the total number of enterprises per 1,000 population;
- growth indices, which define the relation between figures characterising some quantity (phenomenon) in two periods or moments of time and are expressed in per cent, e.g. total population growth in % against a reference year (2000–2012).

### Mathematical-statistical methods

To obtain a linear arrangement of small towns in terms of their socio-economic development level and endogenous capital, Perkal's synthetic index (Z-score index) was used in the following form (Runge 2007: 214):

$$W_s = \frac{\sum_{j=1}^p z_{ij}}{p}$$

where:

$W_s$  = synthetic index,

$j$  = number of a variable, 1, 2, ...,  $p$ ,

$p$  = total number of variables considered, and

$z_{ij}$  = standardised value of the  $j$ -th variable for the  $i$ -th object.

To use the synthetic index, it was necessary to start with standardising the values of indices describing the intensities of individual variables in poviats. For

variables of a stimulant nature, standardisation was performed on the basis of the formula:

$$z_{ij} = \frac{x_{ij} - \bar{x}}{S_j}$$

where:

$z_{ij}$  = standardised value of the  $j$ -th variable for the  $i$ -th object,

$x_{ij}$  = value of the  $j$ -th variable for the  $i$ -th object,

$\bar{x}$  = arithmetic mean of the values of the  $j$ -th variable,

$S_j$  = standard deviation of the values of the  $j$ -th variable.

For the destimulant type of variables, standardisation followed the formula:

$$z_{ij} = \frac{\bar{x} - x_{ij}}{S_j}$$

## Survey research

The fieldwork using the survey research technique was conducted in June 2012 on a group of 500 inhabitants of 8 small towns. The questionnaire contained both close-ended and open-ended questions. The research sample was proportional to the number of inhabitants of a town and ranged from 37 to 87 questionnaires per town. The research embraced representatives of the local authorities and the remaining population.

## Level of socio-economic development of the small towns of the Poznań agglomeration

The population situation is a basic aspect of the socio-economic development of towns. It is both a conditional factor and a consequence of urban development. In 2012 the number of inhabitants of the small towns of the Poznań agglomeration amounted to 70,983, or 3.7% of the total urban population of the Wielkopolska voivodeship. This was an increase of 6,398 over the year 2000. The dynamics of their population change is high. In the years 2000–2012 the mean dynamics index for this set of towns was 110.0%. Its highest values, over 110.0%, were noted in Kórnik, Stęszew, Pobiedziska and Kostrzyn, and the lowest one, at 100.2%, in Buk (Tab. 1). In the case of Buk, what is readily visible is the outflow of inhabitants from this town to suburban areas (a 'micro-suburbanisation' process), as well as the inflow of new inhabitants in the rural areas of Buk commune. For example, in Wielkawieś, a village directly neighbouring the town of Buk, ten new streets appeared over the years 2002–2012 owing to the development of residential construction, and the population grew by more than 300. Another impulse for the development of Buk commune rural areas was also the location of the Buk Industrial Park in the north-eastern part of this commune, along the A2 motorway (Szwarc, 2014).

**Tab. 1.** Population of small towns in the Poznań agglomeration

Town	Population number		Population dynamics index (in %)	Type of population development, after Webb, in 2012
	2000	2012		
Buk	6,209	6,220	100.2	H
Kostrzyn	8,313	9,426	113.4	A
Kórnik	6,266	7,351	117.3	C
Mosina	11,969	12,941	108.1	C
Murowana Goślina	9,856	10,437	105.9	B
Pobiedziska	7,903	8,997	113.8	C
Puszczykowo	8,983	9,787	109.0	E
Stęszew	5,086	5,824	114.5	C

Source: own compilation on the basis of the Local Data Bank and the Central Statistical Office

The structure of the population change of small towns is determined by population types. In 2012 the small towns of the Poznań agglomeration mostly belonged to population increase types A-C in Webb's (1963) classification (Tab. 1). In 2012, type A, characterised by natural increase exceeding emigration, was represented by Kostrzyn; type B, with natural increase exceeding immigration – by Murowana Goślina; and type C, with immigration over the natural increase – by Kórnik, Mosina, Pobiedziska and Stęszew. Only in the towns of Buk (a great outflow of residents to the rural commune area) and Puszczykowo (an ageing community, a negative natural increase) a slight decrease in the population number was noted (types H and E, respectively).

Economy of the Poznań agglomeration small towns shows a mixed structure, with a high proportion of services (due to the tertiarisation). What is important for the development of a small-town economy is the diversification of its structure (Domański 2000, Małuszyńska 2000), both in terms of the economy as a whole and in its components, i.e. industry and services. a diversified structure is one of the features that give a competitive advantage to an economy (a town). In 2010, the small towns of the Poznań agglomeration showed average and high diversification of their economic structures. The group with its high level (diversification index  $W_D \geq 4.1$ ) included five towns: Kórnik, Mosina, Murowana Goślina, Pobiedziska, and Puszczykowo. In the remaining towns the diversification was average ( $2.1 \geq W_D \leq 4.0$ ).

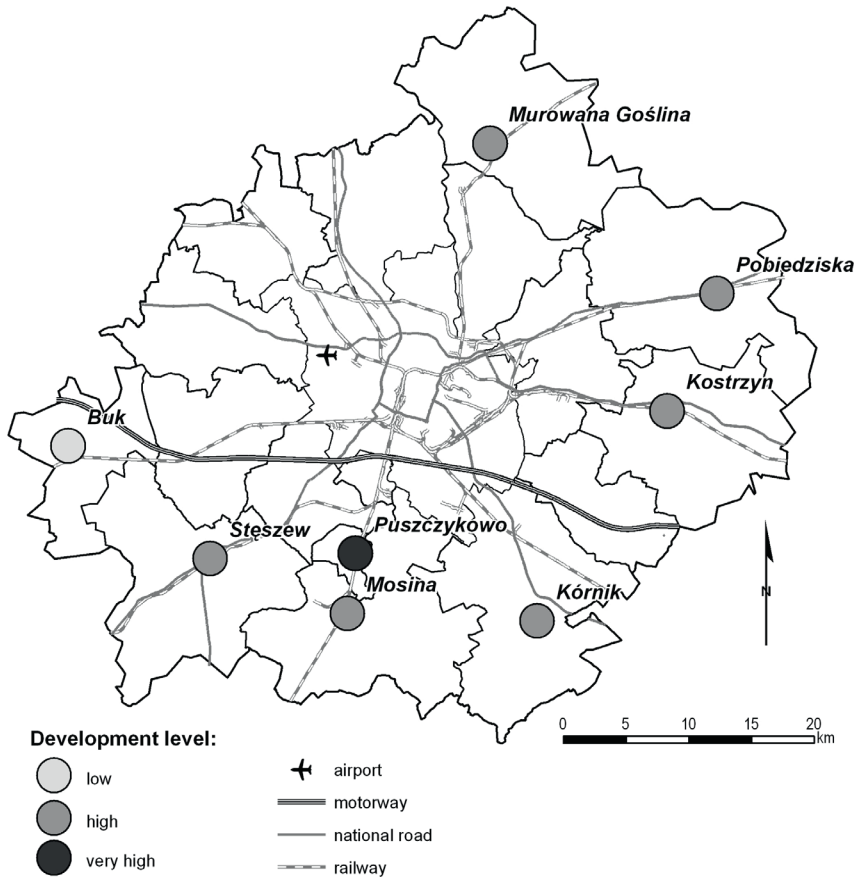
To establish the position of small towns of the Poznań agglomeration against those of Wielkopolska voivodeship, the socio-economic development of the entire set of the Wielkopolska voivodeship's 89 small towns was examined. To this end, a set of 27 indicators in five categories was used: (1) population, (2) economy, (3) social infrastructure, (4) physical infrastructure and housing, and (5) social and human capital. Each category was described by a set of 3 to 7 indicators (Konecka-Szydłowska 2014). It should be stressed that most of the analysed indicators are stimulants of socio-economic development that show a positive correlation with the development level of small towns. For a linear arrangement of the small towns in terms of their level of socio-economic development, Perkal's synthetic index (z-score index) was employed.



**Tab. 2.** Ranks of the small towns of the Poznań agglomeration

Small towns in the Poznań agglomeration	Z-score ( $W_s$ ) index	Population	Economy	Social infrastructure	Physical infrastructure and housing	Human and social capital	
	value						position in the set of 89 small towns of the Wielkopolska voivodeship
Puszczykowo	0.63	3	40	4	80	8	2
Kórnik	0.46	10	24	8	55	11	8
Murowana Goślina	0.43	12	3	13	52	19	40
Pobiedziska	0.30	14	11	40	46	5	23
Stęszew	0.21	21	6	30	41	7	72
Mosina	0.16	29	39	16	74	10	27
Kostrzyn Wlkp.	0.12	33	12	31	84	3	88
Buk	-0.16	58	76	22	76	71	67

Source: own compilation



**Fig. 1.** Ranks of the small towns of the Poznań agglomeration by their development level

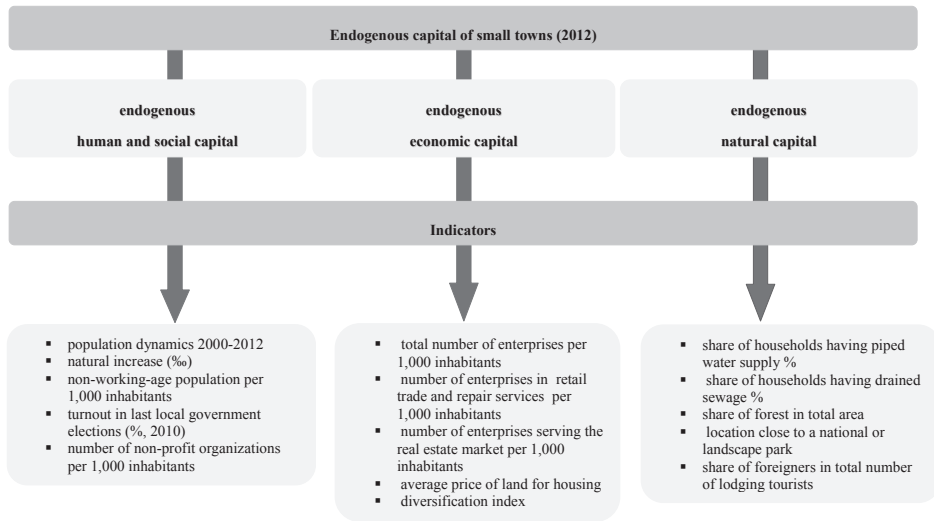
Source: own compilation

On the basis of the distribution of the values of this index ( $W_s$ ), the small towns of Wielkopolska voivodeship were arranged in a linear order (their rank was established) and then classified into spatial units with similar values of the index. The towns were divided into relatively uniform classes in a subjective way considering differences in the index. Five classes were obtained: of a very high, high, average, low, and very low level of socio-economic development in terms of the five categories of input variables. The analysis showed that, against the 89 small towns of the Wielkopolska voivodeship, those of the Poznań agglomeration were at a relatively higher level of socio-economic development. Most of them (6) belong to the class at a high development level. The highest position (3rd) among the small towns of the Poznań agglomeration is occupied by Puszczykowo, which belongs to the class of a very high level of development. Buk is the only town belonging to the class at a low development level (58th position – Tab. 2, Fig. 1). Against all the small towns of the voivodeship, those of the Poznań agglomeration stand out for their high level of development of the economy, physical infrastructure and housing. Their social infrastructure is rather underdeveloped, which is an indirect consequence of the availability of a variety of this type of services in Poznań city. a broader analysis of the socio-economic situation of the small towns of the Poznań agglomeration can be found, among others, in Konecka-Szydłowska (2006a, 2006b, 2014), Zuzanska-Zyśko (2007), Churski et al. (2009), Kaczmarek (2010), Męczyński et al. (2010), and Korzeniak (2014).

### Endogenous capital of small towns in the light of published data

In the second stage of the analysis, that on the endogenous capital of the small towns of the Poznań agglomeration, published data were used, mostly from the Central Statistical Office. On this basis indicators were constructed that were assigned to the three kinds of endogenous capital studied: social, economic and natural. Each kind was described by five indicators (including stimulants and destimulants) which characterised, whether directly or indirectly, the level of endogenous capital in the towns examined. a full list of the indicators by type of endogenous capital is presented in Fig. 2. Within each type, Perkal's synthetic index was calculated for each town on the basis of the partial indicators adopted. Its values allowed a linear ordering of the towns and selecting those that differed in their levels of endogenous capital in each of its aspects. After averaging the results, a town's ultimate position was established in terms of the three aspects of endogenous capital (Tab. 3).

In terms of endogenous social capital, Kórnik is the most outstanding town for its high dynamics of the population number over the years 2000–2012, a high natural increase, and a large number of registered associations per 1,000 inhabitants. The highest level of endogenous economic capital was recorded in Puszczykowo, which follows from its large number of economic entities, including retail outlets, and the highest prices of land for housing construction (Maćkiewicz, 2007). As to endogenous natural capital, Mosina came first owing to its tourist-recreational assets (a location in direct contact with the Wielkopolski National Park) and good pro-ecological physical infrastructure.



**Fig. 2.** Endogenous capital indicators by type

Source: own compilation

**Tab. 3.** Endogenous capital of the Poznań agglomeration’s small towns on the basis of published data

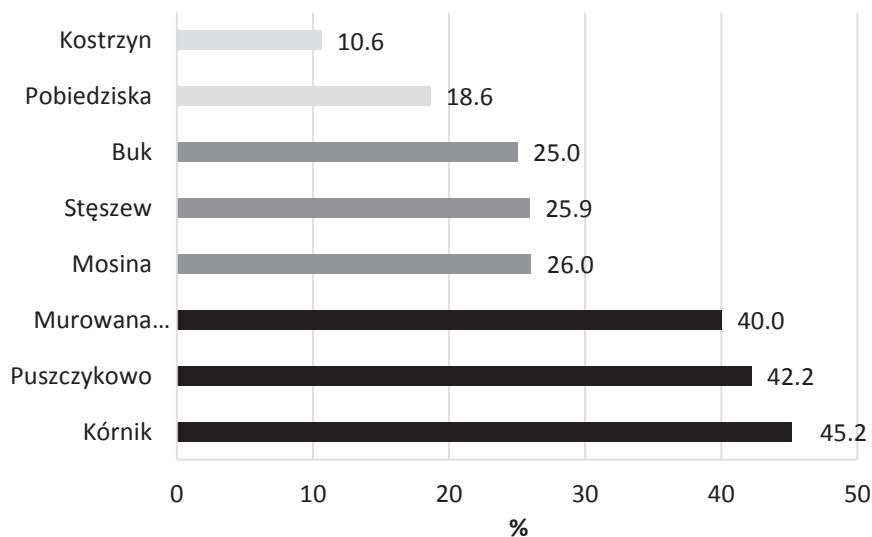
Town	Z-score ( $W_s$ ) index		Endogenous social capital (position)	Endogenous economic capital (position)	Endogenous natural capital (position)
	value	position in the set of 8 small towns in the Poznań agglomeration			
Buk	-0.57	8	8	5	8
Kostrzyn	-0.50	7	7	4	7
Kórnik	0.54	1	1	2	2
Mosina	0.24	3	5	3	1
Murowana Goślina	0.06	4	2	6	6
Pobiedziska	-0.08	5	3	8	5
Puszczykowo	0.41	2	6	1	4
Stęszew	-0.09	6	4	7	3

Source: own compilation

Summing up the analysis of endogenous capital according to the published data, it can be stated that in the set of the eight small towns of the Poznań agglomeration, Kórnik shows the highest level of endogenous capital in terms of all three aspects investigated. The high level can also concern towns of Puszczykowo (especially the economic one) and Mosina (the natural one). The lowest level of endogenous capital (social and natural) is observed in Buk and Kostrzyn.

### Endogenous capital of the small towns in the light of fieldwork

The survey research conducted among residents of the small towns of the Poznań agglomeration revealed a high and a very high level of their satisfaction with living in their towns (49% and 31%, respectively). The highest, (i.e. a very high) level of satisfaction was declared by the residents of Kórnik, Puszczykowo and Murowana Goślina (over 40%), the towns which also show the highest level of their socio-economic development (Fig. 3).

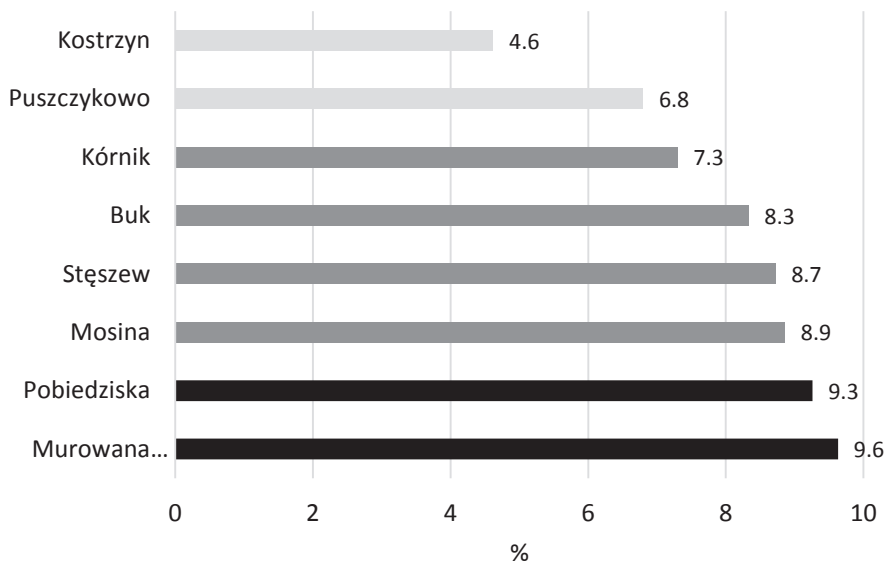


**Fig. 3.** Share of residents declaring very high satisfaction with living in their small towns

Source: own compilation

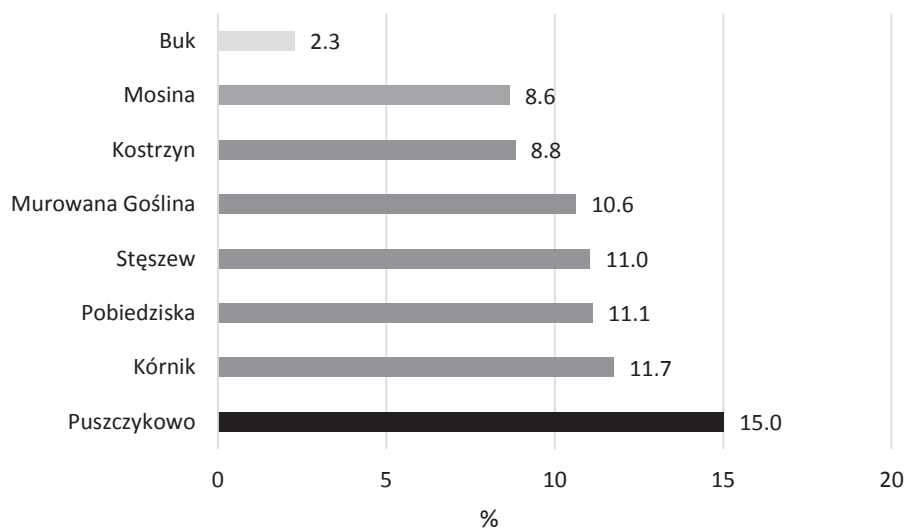
As regards three aspects of endogenous capital: social, economic and natural ones, the situation of the particular towns differs. Thus, in terms of endogenous social capital, measured by efficient activity of the local self-government, Murowana Goślina and Pobiedziska are the leaders: here, over 9% of respondents decided that the activity of the local authorities was a significant endogenous factor of the development of these towns. This factor was the least significant in Kostrzyn (Fig. 4). The case of Murowana Goślina Cittaslow proves that the role of endogenous social capital is extremely important for its development (Kaczmarek, Konecka-Szydłowska, 2013).

In terms of endogenous economic capital, measured by free lots for economic and housing investment, the town that stands out is Buk, and (more precisely) its immediate surroundings. Over 11% of Buk respondents stated that this was an important component of the endogenous economic capital (Fig. 5). This factor plays the least important role in Puszczykowo, where there is limited possibility of constructing new buildings and the few building lots belong to the most expensive ones in the entire Poznań agglomeration (Kaczmarek, 2010).



**Fig. 4.** Activity of the local self-government authorities as an endogenous development factor in the opinion of the small town inhabitants (%)

Source: own compilation

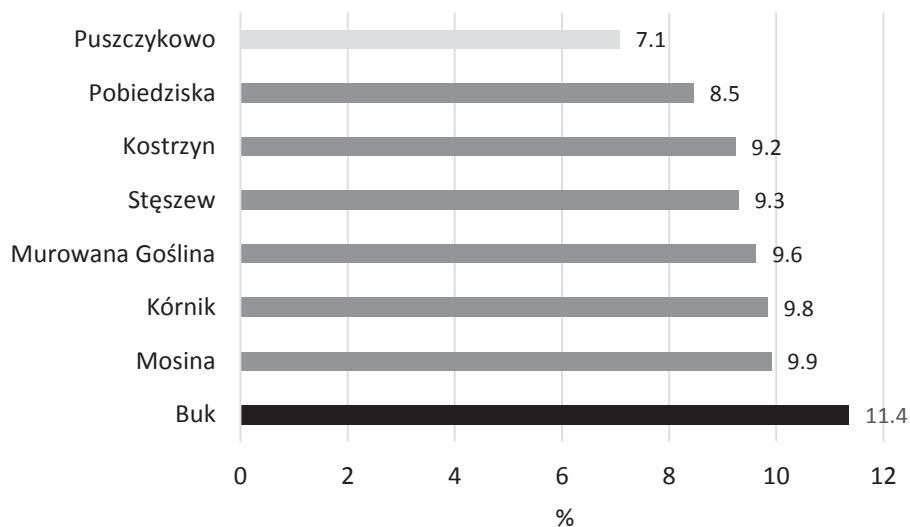


**Fig. 5.** Land lots for economic and housing investment as an endogenous development factor in the opinion of the small town inhabitants (%)

Source: own compilation

The leader in terms of natural endogenous capital as measured by landscape and natural assets as well as a good environmental condition is Puszczykowo, located close to the Wielkopolski National Park. The Park, situated between Puszczykowo, Mosina and Stęszew, has a high natural and landscape value, rich fauna and flora, and is the great attraction for the agglomeration residents in tourist and recreational terms. In the case of Puszczykowo, half of its area is covered by forest, mostly that of the Park. It is the greenest town of the Poznań agglomeration, a garden town with villas, today performing residential and tourist functions (Przybysz, 2009, Kaczmarek, 2010). The residents' opinion are shown on Fig. 6.

In the case of Kórnik, its tourist-recreational functions are determined by its cultural heritage. The town has an interesting neo-Gothic castle belonging formerly to the Działyński family, with an adjacent arboretum, one of the oldest and richest in terms of species number dendrological parks in Central Europe (Kaczmarek, 2010). Tourist-recreational assets were decidedly the least important for endogenous development in Buk.



**Fig. 6.** Tourist-recreational assets as an endogenous development factor in the opinion of the small town inhabitants (%)

Source: own compilation

### Synthetic analysis of the endogenous capital of the small towns

In order to establish the final position of the small towns of the Poznań agglomeration in terms of endogenous capital, a synthetic analysis was made of the results obtained at each of the three research stages (Tab. 4). This led to distinguishing three classes of small towns: those at a high, an average and a low level of endogenous capital, in terms of all the aspects studied. The highest level of endogenous capital can

be found in Puszczykowo, Kórnik, Mosina and Murowana Goślina, and the lowest, in the peripheral towns of the Poznań agglomeration; these of Buk and Kostrzyn. An average level is that of Pobiedziska and Stęszew.

There are notable differences and lack of cohesion between the results obtained from the published data and from fieldwork. This was the situation recorded in Buk, Kostrzyn, Pobiedziska, and Stęszew.

**Tab. 4.** Level of the endogenous capital of the Poznań agglomeration small towns: a synthetic analysis

Towns	First stage	Second stage	Third stage	Total
Buk	-	--	+	low
Kostrzyn	+	--	-	low
Kórnik	+	++	+	high
Mosina	+	++	+	high
Murowana Goślina	+	+	++	high
Pobiedziska	+	-	+	average
Puszczykowo	++	++	+	high
Stęszew	+	-	+	average

Source: own compilation

## Conclusion

The analysis of the endogenous capital of the small towns of the Poznań agglomeration carried out on the basis of official statistical data and the results of fieldwork leads to the following conclusions:

- Due to their specific position in Wielkopolska, these small towns demonstrate a higher level of socio-economic development than other small towns of the voivodeship.
- The small towns of the Poznań agglomeration accumulate population and investment potential: economic (industry, services) and housing (suburbanisation processes).
- These small towns differ in their endogenous capital; what contributes to it in particular are strictly territorial factors: site in the agglomeration, transport accessibility, free land for investment, landscape and tourist assets as well as social capital (cf. also Zaucha, Komornicki, 2013).
- Interviewed residents perceive the endogenous capital of their towns in a positive light as a significant factor of their development.
- The analysis of endogenous capital on the basis of statistical data is not fully consistent with the fieldwork results in the aspects studied.
- The final analysis reveals that in the set of the eight small towns of the Poznań agglomeration, endogenous capital has the highest quality in Puszczykowo, Kórnik, Mosina, and Murowana Goślina, and the lowest in the peripheral ones: Buk and Kostrzyn.

According to Korcelli (2007), Poland's spatial policy should recognise the role of small towns, especially the powiat centres (Benedyk, 2014), and the significance



of keeping up and strengthening their function in the spatial organisation of social life. The reconstruction and maintenance of the small towns economic potential should rest primarily on their endogenous resources. It is also necessary to support voivodeship self-government in its efforts to encourage local communities and local development institutions to take initiatives for the development of their towns and cooperation with large urban units. Promoting small towns as local growth/sustainable development centres using their endogenous potential has also been emphasised by ESPON in one of its three scenarios of Europe's development until 2050 (ESPON 2014).

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## Development of educational services in small towns of the Małopolskie and Podkarpackie voivodeships

### Abstract

The aim of this study was to present the variety of educational services in small towns of Małopolskie and Podkarpackie voivodeships. Performance of educational services is determined by numerous factors, of which the key ones are: economic and social policy, rules governing the funding of education and demographic processes. Education is a public service aimed at particular citizen groups (children, youth, adults) or at the society itself. The main methods used in study was analysis of statistic data and structural coefficient and profiles of educational services.

The first part of this paper deals with the condition and structure of the system in consideration to the types of schools and number of students affected by demographic changes in the region. The second part is an analysis of educational profiles in secondary schools in small cities with relation to their local job market and the economic advancement of the regions. The paper contains a juxtaposition of barriers and opportunities for the development of educational services in the analysed towns.

**Keywords:** educational service; geography; settlement network; small towns

### Introduction

The interest of Polish geographers in small towns displays a certain regularity and variety of the topic range. Studies which analyse functional structure of towns are most commonly represented. It is largely defined on the basis of the professional and vocational structure of local populations. On the other hand, it is not very common to encounter studies which research how the functionality changes and evolves for a particular category of a settlement. These research trends, however, made it possible to distinguish and identify the influence of certain functions on the development of cities and settlement network in the region, along with its typology (Jerzyński, 1977; Rajman, 1984; Łoboda, 1992; Pawliowska-Maj, 1990).

Another research direction is connected with the role of a local community in the socio-economic growth and development of a city. a particularly important research issue is to evaluate the reaction of local communities to development problems which are caused by internal and external factors (e.g. financial difficulties and

limits, demographic changes). These issues are taken up by the studies which analyse contemporary functions of small towns, their changeability and dynamism, as well as point out the factors leading to their reactivation (Domański, 1991). Additionally, this study includes those which estimate the influence of local authorities on the shaping of the image of Polish cities (Parysek, 1995).

Through the standpoint of this paper, an essential topic group is represented by the studies of morphologic and functional structure of small and medium-sized towns (Górka, 1986; Łoboda, 1992; Rajman, 1984). The latest studies in this matter additionally accentuate the role of individual economic entities in shaping the functional city environment. The subject-matter literature increasingly concerns itself with the role of small towns in local settlement networks. The location of regional centres in the settlement network and their role as the heart of local development within that network appears to be a predominant issue in this field of interest (Brodzińska, 1979; Maik, 1993; Wysocki, 1975). Some of the more recent studies deal with contemporary opportunities for the development of small towns in the period of political transformation in Poland (Jażewicz, 1999; Kwiatek-Sołtys, 2004). It is increasingly common to take into consideration such factors as social problems, including the role of small towns in providing particular services for the changing rural environment.

Despite their low population number, small cities constitute a very important part of the Polish settlement network. Settlement network consists of 903 cities, including 685 small towns. They fulfil various exogenic functions, but also serve as service centres for the surrounding rural hinterland. One of the functions of such the small towns is to education, available through private or state funding. According to the legal basis, in return for fulfilling the educational duty, local governments are entrusted with funds subsidised by the state. The subvention depends on many factors, e.g. number of pupils, type of the settlement (town, village).

## Methodology

The main interest of this study was the educational services in small cities. The definition of a small city is not entirely meaningful. There are different approaches towards the population threshold for small cities. In paper, a small town has no more than 20,000 inhabitants (Heffner, 2005; Heffner, Marszał, 2005; Kwiatek-Sołtys, 2004). Such towns from the Małopolskie and Podkarpackie voivodeships were chosen for a detailed analysis. Their provinces are shown different level of social and economic advancement. The Małopolskie (Cracow) voivodeship is industrial and agricultural, whereas the Podkarpackie (Rzeszów) one is agriculturally-industrial with some signs of new branches (e.g. advanced industrial technologies). Both provinces are dominated by small towns and show a level of urbanisation below the national average. Urban population state in the Małopolskie voivodeship amount for 51.3% and in the Podkarpackie one – 41.5% only.

The aim of the research was:

- to present the condition and the structure of education in small cities, as well as to establish the rank of these settlements in the education system,

- to compare a profile of education in secondary schools in small cities with relation to the requirements of local job markets,
- to reveal and define the barriers and opportunities for the further development of educational function in the analysed towns.

The research was based on the number of pupils, schools, profiles of education, population according to the division into age groups – all available from the Local Data Bank provided by GUS (Central Statistical Office of Poland), statistical annals published by regional departments of GUS in Kraków and Rzeszów, Regional Examining Commission in Kraków as well as the Internet websites run by schools in small cities. Data on the education service were verified by research conducted in a large group of educational institutions in small towns of both voivodeships. This was achieved through the inspection of teaching practise undergone by the Pedagogical University geography students.

### Profile of the small town research pool

The area of interests contains 85 small cities. Małopolska province settlement network consists of 61 cities, including 47 small towns. Podkarpackie province settlement network comprises 50 cities, with the domination of small cities up to 10,000 citizens (Tab. 1). Small cities constitute large portions of the total number of cities (Małopolskie – 77.1%, Podkarpackie – 78%), yet they are home to a relatively small portion of city population (Małopolskie – 20%, Podkarpackie – 25%).

**Tab. 1.** Small towns by their population number in 2013

Classes of population number (groups size) [in thou.]	The Małopolskie Voivodeship				The Podkarpackie Voivodeship			
	Small cities		Population		Small cities		Population	
	Number	%	Thou.	%	Number	%	Thou.	%
0–2	3	6.4	4.9	1.3	5	12.7	19.7	7.1
2–5	12	25.5	40.2	10.6	11	28.3	30.7	11.0
5–10	16	34.0	117.6	31.1	13	33.4	76.9	27.5
10–20	16	34.1	216.1	57.0	10	25.6	151.6	54.4
Total	47	100.0	378.8	100	39	100.0	279.1	100.0

Source: author's own work based on *Województwo małopolskie...*, 2013; *Województwo podkarpackie...*, 2013; *Powierzchnia i ludność...*, 2013

Very small cities, below 2,000 inhabitants, constitute the smallest group since the Małopolskie voivodeship has only 3 (6.4%) and the Podkarpackie – 5 (12.7%). The share of towns between 2,000 and 5,000 inhabitants is similar, hence they compose one-third of the small cities in both analysed regions. The number of cities with 5,000–10,000 population is higher in the Podkarpackie voivodeship – 33.4%, whereas in the Małopolskie one – 32.0%. Domination of towns that are inhabited by up to 10,000 citizens in the Podkarpackie province is the result of different genesis



of the settlements. On the other hand, it is also a reflection of the current economic structure. The number of towns inhabited by 15,000–20,000 people is higher in the Podkarpackie voivodeship (6 towns), whereas the figures are substantially smaller in Małopolskie (5).

The layout of small towns in the Małopolskie province is regular. This is mainly caused by the conditions of the natural environment and the uneven industrialisation. The vast majority of the current small cities were established in the mountains and foothills, while the rest is located in uplands and lowlands. The distribution in Podkarpackie voivodeship is different. Most small towns can be found in lowlands (The Sandomierska Basin) on the northern border of Carpathian Foothills and within the Jasiocko-Sanockie Depression. Looking at the location of small cities of this province, one can distinguish a particular territorial pattern. They are situated along river valleys (of San, Wisłoka and Wisła) and main routes, e.g. Kraków-Rzeszów-Przemyśl and Jasło-Krosno-Sanok-Ustrzyki Dolne (Rajman, 2001; Rajman, Kwiatek-Sołtys, 2009).

### **Structure of the education service in small cities – conditions and diversity**

The development of education service is affected by many factors. Among the pivotal macroeconomic factors are: the social policy and the changes governing the financing of education. Demographical processes and financial condition of the local governments play also the decisive role as microeconomic factors (Kołodziejczyk, 2008).

Service of education is provided by various subjects. However, the greatest share is that of the public sector. Local governments are the prevailing institutions responsible for organisation of the school network in municipalities and districts. The share of private sector in small towns of Małopolskie voivodeship is only 1.5%–5.1% depending on the type of school, and 1.2%–3.4% in the Podkarpackie one.

The structure of educational system in small cities is dominated by primary schools and lower secondary ones (Tab. 2, Tab. 3). This situation is an answer to the elementary educational requirements of the local population. Allocation of these institutions in a particular region (city, municipality) should be proportional to the population. The average number of pupils in a small towns primary schools of the Małopolskie province is 328, but in 16 towns is below this average and in 9 towns does not exceed 200 (e.g. those of Nowe Brzesko, Alwernia, Ryglice and Czychów). The similar average for lower secondary schools 311. In 24 small cities are below this average and in 9 the students number does not exceed 200 (e.g. Alwernia, Kalwaria Zebrzydowska, Ryglice, Radłów, Jordanów). In the Podkarpackie province the average number of pupils in primary school is 228, but in 6 towns it below exceed 200 (Cieszów, Narol, Przecław, Sieniawa, Dukla, Ulanów). The average for the low secondary schools is 207 students. Again, in 10 towns those numbers do not reach the average.

In both of the discussed voivodeships, the third group of schools with the considerable number of pupils are that of the secondary schools which comprise in total over 20%. Lesser shares are observed in the schools of next stage of education, such as post-secondary schools, the post-secondary schools, the centres of continuing education, the supplementary schools for adults as well as institutions offering higher education (Tab. 4).

**Tab. 2.** Structure of educational system of the Małopolskie and Podkarpackie voivodeship by number of schools types in 2013

Type of school	Małopolskie voivodeship	Podkarpackie voivodeship
	%	
Primary schools	43.6	52.8
Lower secondary	23.5	20.2
Basic vocational	4.5	3.1
General secondary	11.7	9.9
Technical secondary	11.0	9.8
Post-secondary schools	5.7	4.2
Total	100.0	100.0

Source: author's own work based on *Województwo małopolskie...*, 2013; *Województwo podkarpackie...*, 2013; *Oświata i wychowanie*, 2013

**Tab. 3.** Primary schools and lower secondary schools in small towns by number of pupils in 2013

Classes of population number of small towns [in thou.]	Małopolskie voivodeship		Podkarpackie voivodeship	
	Primary schools	Lower schools Schools	Primary school	Lower secondary school
	%			
0–2	52.0	45.5	51.2	46.9
2–5	50.5	44.0	50.0	47.0
5–10	46.3	41.0	48.1	46.3
10–20	42.2	35.2	47.9	44.5

Source: author's own work based on *Województwo małopolskie...*, 2013; *Województwo podkarpackie...*, 2013; *Oświata i wychowanie*, 2013

**Tab. 4.** Secondary and post-secondary education in small cities of the Małopolskie and Podkarpackie voivodeship by number of students in 2013

Classes of population number of small towns [in thou.]	Małopolskie voivodeship				Podkarpackie voivodeship			
	Secondary schools			Post-secondary schools	Secondary schools			Post-secondary schools
	Basic vocational schools	General secondary schools	Technical secondary schools		Basic vocational schools	General secondary schools	Technical secondary schools	
	%							
0–2	0.3	2.2	0.0	0.0	0.5	2.3	0.0	0.1
2–5	0.5	4.1	0.4	0.5	0.6	2.4	0.6	0.0
5–10	1.3	7.4	3.2	0.8	1.1	2.0	1.5	1.0
10–20	2.3	11.6	7.7	2.0	2.1	2.1	1.9	1.5

Source: author's based on *Województwo małopolskie...*, 2013; *Województwo podkarpackie...*, 2013; *Oświata i wychowanie*, 2013

Presentation of the state and structure of educational institutions in small towns needs to discuss the relative estimate of their availability. This availability is affected by the type of educational services provided by a particular settlement unit. Thus, the diversity of secondary schooling only satisfies meets the demand of people living small towns below 5,000 inhabitants.

The majority of the small cities in Małopolska and Podkarpackie present generally similar educational structures, with substantial difference between particular schooling units. However, this pattern is not achieved among the towns below 2,000 citizens, where the access to secondary schooling is reduced (Tab. 3, 4). An exception are the towns of specialised functions, health resorts and tourist centres where there is demand for a qualified staff, especially graduates secondary and post-secondary schools. For example at Iwonicz-Zdrój there is the significant number of vocational schools (technical secondary ones) associated with the of rest-homes, guest-houses and private owned holiday quarters.

Small divergence in the structure of education is observed between the cities populated by 2,000–5,000 inhabitants. There is a significant dominance of secondary schools offering general education (general secondary schools) and vocational schooling is scarcely offered (basic vocational schools). The exception is the towns of Tyczyn, where, since 1997, has functioned the university level school (The Higher School of Social Sciences and Economy). The existence of this institution contributed to the development of educational services and establishment of new schooling units (e.g. Centre of Continuing Education), consequently improving the position of this town in the settlement network of the region.

Substantial disproportion in the structure of education can be observed in the towns populated by 5,000–10,000 people. Those which are districts centres (powiat), like Brzozów, Strzyżów, Lesko, Kolbuszowa and Sucha Beskidzka, usually offer a wider and diverse range of their educational services. The number of secondary schools in such cities varies from 3 to 6, i.e. general secondary schools, technical secondary schools and vocational schools. Moreover, there is greater offer for adults: supplementary and technical schools which enable their students the acquisition of 'maturity diploma' (Matura), as well as variety of post-secondary schools. Additionally, there are also art schools (e.g. primary music schools) offering this specialised education.

Sucha Beskidzka (the Małopolskie voivodeship) is a district centre which deserves to be mentioned separately. Its educational offer has been extended by establishing the Higher School of Tourism and Ecology, the College of Foreign Languages for Teachers, the Private Centre for Professional Development of Teachers and other institutions for education and professional development (public and private). Dynamic growth of educational services increased the rank of this town from local to regional. The town of Kolbuszowa (the Podkarpackie voivodeship) is another example. The offer for learning is systematically developed (the number of post-secondary schools and vocational schools is increasing). Relatively positive demographic condition can be a promising factor for this town development in the domain of secondary level schooling.

Conversely, the schooling network is fairly homogenous for towns between 10,000 and 20,000 inhabitants. These are mostly the centres of districts (e.g. Lubaczów, Nisko, Miechów, Brzesko) or those of some specialised functions, i.e. industry (Nowa Dęba, Brzeszcze, Kęty, Bukowno), tourism (Ustrzyki Dolne, Limanowa) and medical treatment (Rabka Zdrój). The secondary schools and the post-secondary schools as well as various institutions for education and professional development of the youth and adults are significantly represented in these towns. Out of this group the town of Nisko gradually becomes a supra-regional centre for education,

due to the College of Foreign Languages for Teachers and the Higher School of Development and Defence (a branch department) – Table 5.

**Tab. 5.** The range of educational services in small towns in Małopolskie and Podkarpackie Voivodships

The range of educational service	Small towns by numbers of inhabitants			
	below 2 thou.	2–5 thou.	5–10 thou.	10–20 thou.
Local centres	Małopolskie – 3 Podkarpackie – 5	Małopolskie – 14 Podkarpackie – 11	Małopolskie – 9 Podkarpackie – 7	Małopolskie – 7 Podkarpackie – 2
Regional centres	Małopolskie – 0 Podkarpackie – 1	Małopolskie – 2 Podkarpackie – 2	Małopolskie – 6 Podkarpackie – 4	Małopolskie – 7 Podkarpackie – 5
Supra-regional centres	Małopolskie – 0 Podkarpackie – 0	Małopolskie – 0 Podkarpackie – 1	Małopolskie – 1 Podkarpackie – 0	Małopolskie – 2 Podkarpackie – 1

Sources: *Województwo małopolskie...*, 2013; *Województwo podkarpackie...*, 2013; *Oświata i wychowanie*, 2013

According to the research, the functioning of the educational system, the structure and organisation of schooling centres has notably transformed (Szmigel, 2012; Tracz, 2009; Tracz, Świątek, 2014). On the one hand, one can observe the process of school network relocation by the shrinking number of pupils, lower interest among the young people in some types of the technical schools, insufficient funds for the realisation of the educational tasks by the local governments and the continued education system reform. In the analysed voivodeships, the largest number of schools have been closed in the districts of Proszowice, Miechów, Ustrzyki Dolne, where the population dynamic is low. On the other hand, a process in which educational units are merged into educational groups can be observed. This activity is supposed to prevent the liquidation of small schools (e.g. primary, lower secondary and secondary ones) and simultaneously provide a wider range of educational offer to the society. The merging of primary schools with lower secondary ones is most common. In such units the continuity of schooling in two educational stages is possible. Units which are a result of joining lower secondary schools with upper secondary ones or merged with several types of secondary schools (comprehensive, technical, vocational), which appear in the educational structure, are expected to guarantee the recruitment of the most gifted students from the local area and prevent the redundancies among teachers.

### Profiles of education in secondary schools in small towns

The meaning of education as a defining factor on the job market has considerably increased over the last years. One of the reasons for social exclusion is maladjustment of education to the current situation of the job market and needs. Adequate education level is also important for the economic development of a particular region. Having that in consideration, a various set of education projects that would increase the innovative character of the service are implemented in both analysed voivodeships. Scholarship programmes for the most gifted students encourage the youth to continue education in the secondary schools and the ones of university level, higher schools are launched.

A very important and informative concept depicting adaptation and adjustment of the educational system for the needs of the local society and economic development of small towns is the offer of profiles of education in secondary schools and the post-secondary ones. The variety of educational paths in secondary comprehensive schools is the right answer for the expectations and demands of the young students. Besides some rather traditional profiles, like biology-chemistry, mathematics-physics, foreign languages, humanities, the new ones are offered, e.g. engineering and defence, social, bilingual. Their graduates usually take up higher or post-secondary schooling. Over the last years the number of secondary comprehensive schools has not shrunk and in some instances of merged centres the recruitment is conducted separately for each type of school within a joint unit.

The vocational education and training have a particular influence on the economic growth and the background of the small towns. Their presence, as well as the wide offer of education profiles, seems to confirm the availability of the services and a proper adjustment to the current needs of the local job market and attractiveness for the young people. The secondary schools in small towns from Małopolskie voivodeship prepared a rich offer of education.

Detailed scrutiny of the educational profiles allows to say that the offered paths of schooling in these types of establishments are highly related to the size of the educational centre, its local infrastructure and the local economic conditions. In small cities located in agricultural zones (e.g. Brzostek, Proszowice, Miechów), there are secondary vocational schools which provide education strictly connected with farming (e.g. agriculture technician, mechanic and farming machinery technician, farmer), small gastronomy (e.g. cook, confectioner) and personal services (salesman, hairdresser). As it was revealed in the research conducted, in over a dozen secondary schools of this region, where operate small or greater industrial plants the educational offer is still related to the traditional industrial profile of the area. Examples are: Brzeszcze (mining), Sułkowice (blacksmithing), Kęty (mechanic technician). In the Podkarpackie voivodeship one can mention: Jedlicze (mechanic technician, mechatronics technician), Nowa Dęba (mechanic technician), Nisko (electrician). Along these profiles some new specializations are offered, e.g. computer technician, economy technician, administrative technician, which is the reaction to the needs of the local job market and interests of the contemporary youth. Conversely, in the towns located in touristic and health resort zones, the offer is represented by paths of education connected with servicing the touristic traffic (hotel management technician, economy technician, cook, confectioner) and personal services (hairdressing technician, sales technician, salesman). The towns of Rabka Zdrój, Sucha Beskidzka, Krynica Zdrój are good examples in the Małopolskie voivodeship, use of Rymanów Zdrój, Lesko, Ustrzyki Dolne from the Podkarpackie voivodeship is represent the same trend. However, in smaller cities where the economic activity is more varied, the secondary schools offer training in services and production. What is more, some new profiles begin to appear as well (e.g. logistics technician, advertisement technician).

According to the number of pupils and that of offered profiles in the end of 2013, the secondary schools of both region, the most popular education paths were: computer technician, economy technician, hotel management technician, mechanic technician, administrative technician. In the basic vocational schools the most common choices were: car mechanic, whitesmith, painter, small gastronomy cook,

hairdresser and salesman. These are the trades which allow for self-employment if the situation on the job market is difficult.

### **Opportunities and barriers for the development of educational services in small towns**

Implementation and realisation of the education is legally regulated. An important role in this area is played by the local government, i.e. the authorities of municipality, district and voivodeship (province). Schooling is also influenced by the level of socioeconomic advancement of the area, which modifies the development of educational services. The research on concentration and availability of public services revealed high level of access to education in the districts of the Małopolskie voivodeship. Additionally, a tendency to dominate in the domain of education has been observed in large urban centres (Kraków, Tarnów, Nowy Sącz) which does not leave the educational system in small cities unaffected (INSE, 2012; Tracz et al., 2003). Similar tendency is present in the Podkarpackie voivodeship. Rzeszów is the leading educational centre on all levels. Over the last years cities of Tarnobrzeg, Krosno and Przemyśl have become a subregional centres of education, with access to university level schooling (Tracz et al., 2009).

The access to educational services and the variety of the profiles in small towns is determined mainly by their position in the settlement network. Very small ones below 2,000 inh. usually fulfil their services in the area of comprehensive teaching securing the function of kindergartens, primary schools and lower secondary ones. Potential and financial resources which are at the disposal of district seats allow for offering extensive secondary schooling and in some cases university schooling (e.g. Sucha Beskidzka and Nisko). The secondary level education in these centres is varied and usually strictly connected with the demand of the local background of economy and society. The towns which are not the seat of a district (10,000–20,000 inh.) are diversified according to schooling traditions of their regions and actual socioeconomic changes.

The fundamental barrier in the development of educational services in small towns of the analysed provinces is the gradual decrease of the number of children and youth in group age of 5–16 years. This problem affects the small towns in both researched regions. Another problem is the fact that the local governments find it particularly challenging to secure financial resources to sustain educational institutions. The issue is especially visible in small cities of strong service and agriculture profile. Thus, being concerned solely with economic outcome of many local councils decide to liquidate some of the schools, merge them in groups or hand down the management of educational institutions to associations.

In the case of small towns located in the neighbourhood of greater cities (e.g. Kraków, Rzeszów, Tarnów, Nowy Sącz) one can observe the decline of certain secondary schooling and this process intensifies. Those towns simply cannot cope in the education offer with large educational hubs. Young people, very often gifted and talented decide to leave their small hometowns and commute to renowned schools in big cities.

## Conclusion

After the analysis of the condition and structure of the educational services it can be stated that they play a very important role in the development of small towns and that they modify their background. The structure of education, numbers of schools and teaching profiles of the secondary and post-secondary ones are closely related with the size of a small towns, infrastructure and the level of economic development. Higher level of development stabilises the access to the educational services as well as improves their quality. Additionally, it stimulates the changes of professional structure within a population group. The development of educational services in small towns, their diversity, significantly increases intellectual potential of the communities and improves the competitiveness of the town and the region in the area of socioeconomic growth.

The evaluation of the number and types of schools functioning in small towns of the analysed voivodeships displays a strong relation to the rank of the towns within the hierarchy of the settlement network. However, the educational offer can also be modified by the rank-and-file initiatives of self-governed organisations or local communities. The examples are: Tylicz, Sucha Beskidzka and Nisko, which increased their educational offer and created new institutions (including the university level).

As it has been shown by the analysis of the educational services, the existence of a vocational higher schooling institution in a small town favourably affects the development of education, particularly the spectrum, quality and structure of teaching profiles. The local governments can achieve that by preparing the grounds for such services, organising meetings with interested higher schools as well as suggesting types of schools and profiles of education which should be implemented in a given community.

The main barrier in the development of educational services are negative changes in demography seriously affecting many small towns of the region. Additionally, small towns situated in the vicinity of large centres experience outflow of pupils into the schools in the big cities.

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## Models of service systems in the split towns of the Polish-German and Polish-Czech borderlands

**Abstract:** On the basis of an empirical study, this article offers some generalisations concerning service systems characteristic of split towns in East-Central Europe. Three frontier urban complexes were examined, including two in the Polish-German borderland, viz. Słubice (Poland) – Frankfurt on the Oder (Germany) and Gubin (Poland) – Guben (Germany), and one in the Polish-Czech borderland, viz. Cieszyn (Poland) – Český Těšín (Czech Republic). The model approach adopted was intended to ensure an insight into the basic properties of the service system in the form of significant factors and connections holding within it. There are many factors giving shape to a service system, but those primarily responsible for differences between the service systems of the examined frontier urban complexes include: (a) the kinds of services offered, (b) specific forms of retail trade, (c) intensity of transborder traffic, and (d) consumers of services. Their unique combination allowed for distinguishing two service systems: in the Polish-German borderland and in the Polish-Czech one. The research also revealed that each system had a double service practice. One, geared to the service of the local population, is fairly stable, and the other – geared to a transborder customer – is different. In the Polish-Czech borderland it is balanced, equally open to the local customer and one from abroad, while in the Polish-German borderland it displays a marked asymmetry in terms of volume and function.

**Keywords:** Polish-German and Polish-Czech borderlands; service systems; split towns

### Introduction

Split towns in East-Central Europe are units dissected by a state border, which was a strong barrier limiting their residents' movement until the end of the 1980s. Significant changes in their economies only began in the 1990s. They followed primarily from several favourable legal regulations and the signing of new treaties laying the foundations of good neighbourhood.

The opening of the border between Poland and Germany and between Poland and the Czech Republic brought about an increase in the intensity of border traffic, thus becoming one of the chief factors dynamising changes in the service sectors of the split towns. The bigger role of services in their spatial-functional structure has led to the appearance of specific forms of retail trade (marketplaces, large-lot shops) designed to serve consumers from the other side of the border, and to a sharp periodic increase in the number of some service stations (e.g. exchange offices, hairdressers' shops, tobacco shops, etc.).

The aim of this paper is to construct models of service systems in the split towns of the Polish-German borderland, viz. Słubice (Poland) – Frankfurt on the Oder (Germany) and Gubin (Poland) – Guben (Germany), as well as those of Polish-Czech borderland, viz. Cieszyn (Poland) – Český Těšín (Czech Republic). The model approach is intended to identify basic properties of a service system in the form of significant factors and relationships holding within it. The article gives a summary of the author's research conducted in the split towns of the Polish-German and Polish-Czech borderland after 1990.

The frontier urban complexes examined differ fundamentally both in population numbers and areas (cf. Tab. 1). Those measures were used to analyse the level of asymmetry for each pair of towns.

**Tab. 1.** Characteristics of split towns in the Polish borderland

No.	State	Frontier urban complex	Population number	Area in km <sup>2</sup>	Frontier urban complex			
					population		area	
					number	proportion	in km <sup>2</sup>	proportion
1	Poland	Słubice (31 Dec. 2012)	16,902	19.21	75,439	1:3.5	167.21	1:7.7
	Germany	Frankfurt/O (31 Dec. 2012)	58,537	148.00				
2	Poland	Gubin (31 Dec. 2012)	17,019	20.68	34,990	1:1.2	64.48	1:2.1
	Germany	Guben (31 Dec. 2012)	17,971	43.80				
3	Poland	Cieszyn (31 Dec. 2012)	36,119	28.60	60,513	1:1.5	62.40	1:1.2
	Czech Republic	Český Těšín (26 March 2011)	24,394	33.80				

Source: own compilation on the basis of [www.citypopulation.de](http://www.citypopulation.de) (accessed 5–6 May 2014)

The level of asymmetry as measured by the rate of the larger to the smaller town in a pair is determined by the values adopted: (a) low asymmetry – a rate up to 1.4, (b) moderate asymmetry – 1.5 to 2.4, and (c) high asymmetry – 2.5 and more. The frontier urban complex showing the lowest asymmetry both in terms of the number of inhabitants and area is that of Cieszyn/Český Těšín in the Polish-Czech borderland, while the highest asymmetry characterises the Słubice/Frankfurt (Oder) complex in the Polish-German borderland. It is worth observing that the towns exhibit greater asymmetry in their areas than in population numbers.

### Political-administrative and legal-normative determinants of the development of services in frontier areas

What greatly influenced the nature of contacts and the intensity of cooperation of the split towns in the Polish-German and Polish-Czech borderland was the change in the political systems in Poland (elections of 4 June 1989), the German

Democratic Republic (GDR, elections of 18 March 1990) and Czechoslovakia (elections of 24 November 1989), as well as later political changes in Europe (the unification of Germany – 1990, the breakup of Czechoslovakia – 1991, accession of Poland and the Czech Republic to the European Union – 2004, and accession of Poland and the Czech Republic to the Schengen Treaty – 2007). They had a great impact – each in its time – on the intensity of mutual interactions of the split towns, and hence on the development of services in the frontier zone (Bałtowski, Miszewski, 2007).

Once those towns used to be uniform organisms which were then divided by a new state border. The division of towns at the southern border resulted from the ultimate division of Cieszyn Silesia between the two newly created states, viz. Poland and Czechoslovakia, as a result of a decision by the Council of Ambassadors in 1920, which set the border on the Olza river (cf. Nowak, 2008; Gąsior, 2008a, b; Kulczyńska, Matykowski, Siwek, 2009). The division of towns at the western border followed from decisions made at the Potsdam Conference in 1945 and was connected with a shift of the Polish-German border to the west.

Thus, towns, earlier interdependent in functional terms, were divided by a state border and, in legal-administrative terms, became independent units lying in different states. After their patterns of socio-economic links had been disrupted, the new urban organisms had to learn to operate on their own (in the organisation of life in the town, e.g. by an expansion of physical infrastructure, setting up industrial plants like bakeries, service stations, etc.). It should be noted that the split was always asymmetric, i.e. one of the states obtained a greater part of the town, usually with its historic district, much easier to adjust to the new conditions of operation. The situation was much worse for those towns that used to be only a district of the parent town before the division, like Słubice, a right-bank district of Frankfurt on the Oder, known then as Dammvorstadt, and featuring, apart from a few streets with a metropolitan type of building, small industrial facilities and service posts of little significance, single-family houses, orchards, allotment gardens, and a stadium built in the years 1914–1927 (East-March Stadium, *Ostmarkstadion*), modelled on the German Stadium (*Deutsches Stadion*) in Berlin. It is also worth emphasising that Słubice, connected with Frankfurt in administrative and economic terms, had not got many historical buildings, institutions and indoor spaces essential for independent operation as a town (Preiss et al., 2003). Hence the post-war years should be regarded as a difficult period in the development of Słubice, turned into a peripheral unit from the moment of the division and described, even as late as the 1950s, as a town with no prospects. It was only a change in the policy of the central authorities towards the borderland that brought Słubice financial means for an arrangement of matters and development in the other half of the 1960s (Romiszewska, 1995; Kulczyńska, 2008).

In the post-war years one can distinguish several periods in the conditions of coexistence of the two parts of frontier towns in which the character of the border changed, although until the end of the 1980s it was usually a strong barrier of little permeability (cf. Ciok, 1992). It was only the late 1980s and early 1990s that initiated significant changes following from several favourable legal regulations and the signing of new treaties that laid the foundations of good neighbourhood. In 1989 significant systemic transformations occurred in Poland and Czechoslovakia, followed in 1990 by the GDR. Fast changes occurred in the conditions of operation of

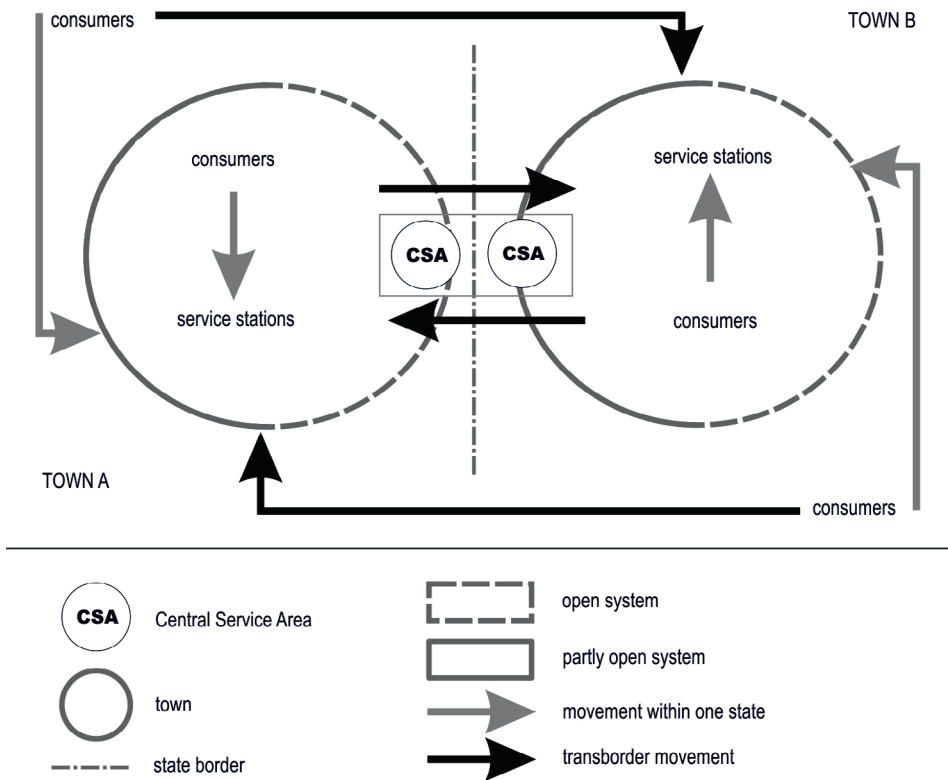
their economies, and from 1 July 1990 the GDR found itself in the mark zone of the Federal Republic of Germany. After the unification of Germany, which took place on 3 October 1990 (its symbol is the fall of the Berlin Wall), Poland almost immediately regulated its relations with the new neighbour by signing a border agreement and a good neighbourhood treaty on 14 November 1990 with the Federal Republic of Germany (Matykowski, Schaefer, 1996). A new agreement about neighbourly relations and friendly cooperation between Poland and Czechoslovakia was signed on 6 October 1991. When Czechoslovakia had split, Poland signed a similar document with the newly established Czech Republic. The agreements between the states, and later also between towns (by way of new agreements), reduced many barriers in frontier traffic and contributed to a rapid increase in cross-border movement (Kulczyńska, Matykowski, 2008).

The economic changes of the late 1980s and early 1990s bore fruit, among other things, in the form of actual freedom of entrepreneurship, which could be observed in the frontier towns as a mushroom increase in the number of newly set-up service firms. Especially significant changes occurred in the structure of the commercial space of those towns. Besides the traditional petty retail trade, urban marketplaces appeared as early as the beginning of the 1990s, being especially popular in the towns of the Polish-Czech borderland. This traditional trading system changed significantly with the appearance of supermarkets at the turn of the century that modernised the shopping system of the split towns (it should be noted that this form of retail trade existed in Germany even before 1990). Today a sign of a new way of management seems to be a diversity of services, both in terms of their kind and quality, that would meet the needs of the modern, increasingly demanding, customer (Kulczyńska, Matykowski, 2008).

The structure of services in the split towns has also been moulded by changes in the customs law resulting from political changes and those in the conditions of economic operation. Today the Czech Republic, Germany and Poland as EU members are in a customs union with other European countries (within the Community, goods brought to and from Poland are duty-free). EU citizens travelling within the European Union can cross borders carrying 800 cigarettes, 10 l of spirits, 20 l of wine of high alcohol content, 90 l of ordinary wine, and 110 l of fuel.

### **Properties of the service systems of towns divided by the state border**

After the transformation period, in the socio-economic systems of Poland and the neighbouring countries (Germany and the Czech Republic) – and especially in the frontier towns – there appeared manifestations of symbiosis on the one hand and rivalry on the other. This also concerned the services sector, which performs an important town-forming function and contributes to the development of frontier traffic. That is why this paper seeks to construct models of service systems in towns divided by the state border. The model approach is intended to capture basic properties of a service system in the form of significant elements occurring in it and correlations holding among them (cf. Fig. 1).



**Fig. 1.** Conception of an urban service system in frontier areas

Source: own compilation

Each service system consists of basically two subsystems, viz. service stations and potential consumers of services. The surroundings that influence the system include primarily: the demand for services, labour resources, the presence of other sectors of the economy, and factors controlling the structure of services and the number of stations offering them.

What seems highly significant is the nature of the components of the service space. Generally, there are two main groups of elements affecting its character. First, it is the consumer of services who is both a subject of the service space displaying specific spatial behaviour, and also its inhabitant. In a way, the consumer organises the service space and also manages it by undertaking steps in it as an entrepreneur. The other element of the service space is service stations of each town designed to serve: (a) residents of the parent town and its vicinity, (b) residents of the parent town and customers from abroad (primarily inhabitants of the neighbouring town), and (c) customers from abroad (primarily inhabitants of the neighbouring town).

The services space is dynamic, i.e. it changes its character over time as a result of the successive appearance of new service stations and disappearance or modernisation of old ones, mostly through a change in the line of business. Besides, the

services space is relational, i.e. it cannot exist without a subject, or the consumer, and internally diversified in terms of the line of business.

## **Models of service systems in the split towns**

The service systems that have developed in the Polish-German and Polish-Czech borderlands are different owing to the operation of both, country-specific and frontier mechanisms. The former include a Christallerian mechanism that introduces order into a service system. Its basic elements are: (a) the state's service system, (b) the regional service system, (c) the subregional service system, and (d) the local service system. The other country-specific mechanism is a modernising one which partly concerns frontier towns and disturbs the Christallerian mechanism by introducing some disorder. It manifests itself primarily in new forms of the spatial concentration of trade (shopping galleries, large-lot shopping centres, bazaars) and the appearance of new kinds of services, e.g. those of the business environment. Both the Christallerian and the modernising mechanisms mould the service systems of the split towns in each of the analysed countries. But in their case there are also such frontier mechanisms as transborder competitiveness and transborder complementarity. It should be noted that competitiveness and complementarity are not fully exclusive because, e.g., price or assortment competition often results from complementarity.

The two mechanisms produce specific changes in the spatial-functional structure of the split frontier towns, thus creating their unique service systems. Their uniqueness can be defined in as many as four basic fields: (a) kinds of services offered, (b) specific forms of retail trade, (c) intensity of transborder traffic, and (d) service consumers. Those are the chief factors moulding the number and structure of services and influencing consumer behaviour, thus shaping the service systems of the split towns (Kulczyńska, 2013).

## **Service systems of the split towns of the Polish-German borderland**

Generally, there are two types of service practice in the examined towns of the Polish-German borderland. One, fairly stable – both on the Polish and the German side – is geared to the service of the local population, while the other – geared to the transborder customer – is different. On the Polish side, this system responds to changes very dynamically and adjusts to the expectations of the consumer from the German side. The German system, in turn, shows only a measure of openness to the Polish consumer (Kulczyńska, 2010a) (Fig. 2).

The Polish-German service system is characterised by high selectivity of services controlled by prices and the needs of demographic groups. Both Germans and Poles – treated as consumers in the respective neighbouring country – pay close attention to differences in the prices of services offered and products sold. The services and products arousing interest are those that the neighbour sells cheaper. The services that enjoy great popularity with German customers on the Polish side are medical ones (e.g. plastic surgery or dentistry), and those connected with body





as the purchase of a specified product at the lowest possible price. Those are chiefly foodstuffs, which are much cheaper in Poland. Polish consumers, in turn, are primarily occasion hunters seeking maximum advantages at seasonal sales in Germany, i.e. when the price of a product is at its lowest.

Another factor shaping the service system is the intensity of traffic at border crossings located in the split towns (cf. Tab. 2, 3). The analysis of border traffic covered the years 1994–2007, although the 2007 statistics are incomplete because of the inclusion of Poland and the Czech Republic to the Schengen Zone (21 Dec. 2007). This event meant the abandonment of control on internal borders in accordance with the Ordinance (WE) No. 562/2006 of the European Parliament and Council of 15 March 2006 (Official Gazette no. L 105 of 13 April 2006), establishing the Community code of rules regulating the flow of people across borders (the Schengen Border Code).

When analysing cross-border movement using the general statistical data of the Border Guard Headquarters, one can note that in the years 1994–2007 its intensity differed in each of the frontier urban complexes, although in all of them this intensity declined. In the Gubin-Guben complex both pedestrian and car traffic dropped by as much as two-thirds, and at the Słubice-Frankfurt border crossing, by a half and a third, respectively (cf. Tab. 2, 3).

The next level of analysis is a comparison of the intensity of cross-border movement in two directions, viz. from and to Poland. Readily visible at the Polish-German border is a clear asymmetry in the intensity of border traffic: decidedly more Germans crossed the state border to Poland than Poles to Germany, with the exception of 1994 (pedestrian traffic) and 2006 (car traffic), when the situation was reversed. At the Słubice-Frankfurt (O) border crossing the numerical advantage of Germans moving to Poland was substantial: in pedestrian traffic, by 2.0–3.7 million in the years 1995–1999, 0.5–0.8 million in the years 2000–2003, and 1.2–1.7 million after 2004; and in motorcar traffic, by 0.2–1.0 million in the years 1995–2007, with the exception of 2006 when more cars came to Słubice than left it (0.3 million). The situation was similar at the Gubin-Guben border crossing where Germans going to Poland also predominated. In pedestrian movement, there are two clear sub-periods differing in intensity, namely the years 1995–1999 when foreigners going to Poland predominated by 2.0–2.7 million, and the period from 2000, characterised by a surplus of pedestrian traffic of 0.9–1.2 million. Generally, in 2007 the number of Germans going to Poland via the Słubice-Frankfurt (O) border crossing was twice as high, both in pedestrian and vehicular traffic. At the Gubin-Guben crossing this number was four times higher for pedestrian traffic and as many as five times higher for vehicular traffic (cf. Tab. 2, 3).

The clear disproportion in the intensity of border traffic at the Polish-German border, with decidedly more Germans crossing the border to Poland than Poles to Germany, affects the development of services on the Polish side. The inflow of German consumers stimulates the development of entrepreneurship in towns on the Polish side, which manifests itself in a clear asymmetry in the number of some services on the two sides of the border (e.g. in 2009, in Słubice with its population of 16.5 thousand there were some 40 hairdressers' shops; Graff 2006).

Tab. 2. Pedestrian and vehicular border traffic at the Stubice-Frankfurt (Oder) border crossing in the years 1994–2007

Year	Pedestrians				Motorcars			
	total		foreigners crossing the border to Stubice		total		foreigners crossing the border to Stubice	
	in absolute numbers	1994=100	in absolute numbers	foreigners crossing the border to Frankfurt (O)	in absolute numbers	1994=100	in absolute numbers	foreigners crossing the border to Frankfurt (O)
1994	15,058,584	100.00	1,831,791	5,950,337	4,261,845	100.00	562,229	1,560,729
1995	16,492,387	109.52	5,962,583	2,235,014	4,727,690	110.93	755,788	1,671,803
1996	12,528,247	83.20	4,337,852	1,970,565	4,029,031	94.54	672,190	1,357,553
1997	11,011,203	73.12	3,777,573	1,793,028	3,508,621	82.33	536,911	1,235,853
1998	10,877,956	72.24	3,633,641	1,867,876	3,622,064	84.99	575,044	1,230,629
1999	9,862,876	65.50	3,489,976	1,495,991	3,356,797	78.76	477,684	1,221,890
2000	5,523,554	36.68	1,625,662	1,136,069	2,839,323	66.62	477,495	957,951
2001	7,052,453	46.83	2,162,743	1,391,841,	1,889,171	44.33	357,688	603,203
2002	5,671,978	37.67	1,749,748	1,105,668	1,456,601	33.44	286,116	447,226
2003	5,861,840	38.93	1,800,616	1,144,364	1,425,053	33.44	282,253	432,885
2004	6,091,308	40.45	2,118,539	914,114	1,587,123	37.24	261,226	531,157
2005	6,480,477	43.03	2,457,646	788,672	1,841,194	43.20	265,654	657,307
2006	7,118,634	47.27	2,637,551	916,617	2,242,434	52.62	700,753	436,100
2007 <sup>1</sup>	7,815,951	51.90	2,704,724	1,216,397	2,915,321	68.41	469,784	988,962

<sup>1</sup> statistical data cover the period from 1 January to 21 December

Source: own compilation on the basis of statistical data of the Border Guard Headquarters

Tab. 3. Pedestrian and vehicular border traffic at the Gubin-Guben border crossing in the years 1994–2007

Year	Pedestrians				Motorcars			
	total		Poles crossing the border to Guben	foreigners crossing the border to Gubin	total		Poles crossing the border to Guben	foreigners crossing the border to Gubin
	in absolute numbers	1994=100	in absolute numbers	in absolute numbers	in absolute numbers	1994=100	in absolute numbers	in absolute numbers
1994	10,771,541	100.00	3,649,125	1,646,649	4,775,941	100.00	674,468	1,754,070
1995	10,521,731	97.68	1,642,352	3,677,755	4,595,903	96.23	723,272	1,610,274
1996	11,062,669	102.70	1,624,974	4,006,449	5,211,314	109.12	733,198	1,944,590
1997	11,896,004	110.44	1,814,971	4,208,516	5,478,491	114.71	807,937	1,971,487
1998	10,929,048	101.46	1,524,831	3,982,885	4,736,702	99.18	615,902	1,786,368
1999	11,486,824	106.64	1,559,851	4,222,696	4,870,139	101.97	584,190	1,843,900
2000	4,198,764	38.98	468,484	1,652,113	3,672,000	76.89	385,305	1,447,739
2001	3,359,514	31.19	270,318	1,461,139	1,270,714	26.61	86,820	565,381
2002	3,476,020	32.27	374,188	1,399,903	940,616	19.69	95,295	391,224
2003	3,685,037	34.21	332,353	1,561,084	595,375	12.47	58,019	251,422
2004	3,055,919	28.37	285,321	1,266,574	1,026,503	21.49	97,539	424,276
2005	2,666,719	24.76	241,350	1,103,099	1,184,068	24.79	100,737	492,690
2006	3,194,467	29.66	356,950	1,247,311	1,405,267	29.42	471,387	229,079
2007 <sup>1</sup>	3,596,442	33.39	350,411	1,453,436	1,567,381	32.82	128,602	646,676

<sup>1</sup> statistical data cover the period from 1 January to 21 December

Source: own compilation on the basis of statistical data of the Border Guard Headquarters

An analysis of the intensity of border traffic can also be conducted in relation to the year and week. During the year the greatest number of consumers were recorded from April to August and in December, and during the week, decidedly at weekends. The towns on the Polish side experience then a real rush of consumers from abroad. A study of the intensity of traffic at the Słubice-Frankfurt (O) border crossing conducted by this author on 18 June 2011 showed that between 6:00 and 18:00 the Polish-German border to Poland was crossed by 6,914 cars and 2,338 pedestrians. Such a great proportion of motorised consumers causes the Słubice infrastructure to fail, with a permanent traffic jam on the border bridge, queues at petrol stations, scarcity of parking places near bazaars and supermarkets, etc.

### The service system of the Cieszyn-Český Těšín urban complex

Like the split towns in the Polish-German borderland, the Cieszyn-Český Těšín frontier urban complex has two service systems. One, fairly stable and operating on both the Polish and the Czech side, is targeted at the local population. The other is balanced and shows a similar degree of openness to the customers from abroad (Kulczyńska, 2010a) (Fig. 3).

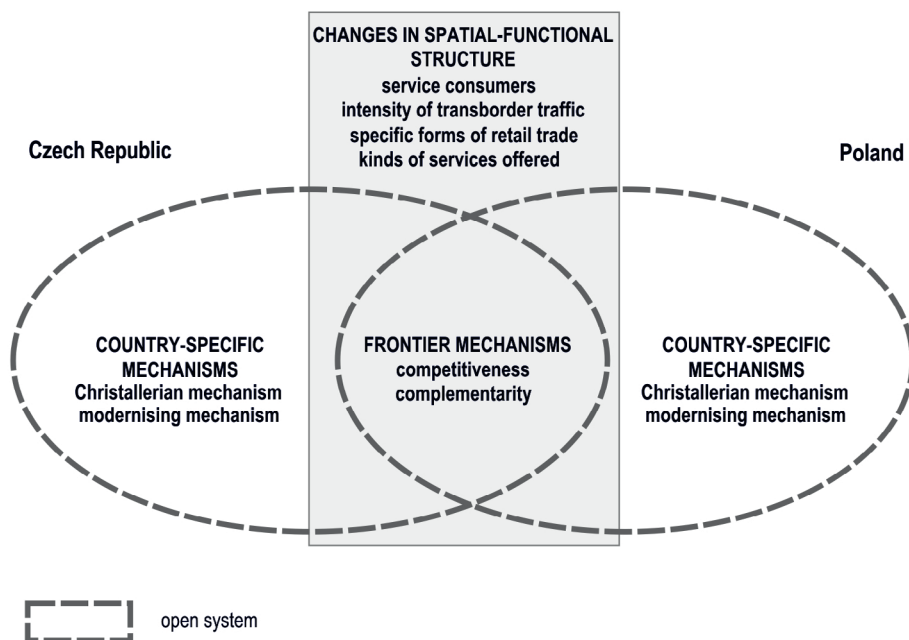


Fig. 3. Service system of the Cieszyn-Český Těšín frontier urban complex

Source: own compilation

The Polish-Czech service system is also characterised by selectivity of services, but mostly in the range of services offered. Generalising, one can say that the

assortment of services on the two sides of the border differs to some extent, which means that Český Těšín offers services that can be found only on the Czech side (e.g. casinos) and the other way round. This selectivity has little to do with differences in the prices of goods. In Poland consumers from the Czech Republic buy goods at similar prices as at home, but which they think are better.

The places in Cieszyn visited most frequently by customers from the Czech Republic are two urban marketplaces offering a wide range of goods. The diversified offer encourages them to buy articles both available and not available on the Czech side. What Czechs seek at Polish bazaars are, for example, wickerwork, a commodity in scarce supply in the Czech Republic, or strawberries that appear in the summer season. Poles, in turn, go to Czech shops mainly for alcohol and some sweets (e.g. the Studencka chocolate).

An important, though hardly measurable, feature is the openness of traders or merchants on the two sides of the border to the customer from abroad. It manifests itself – especially on the Polish side – in their use of the Czech language to establish contact with the customer, and in running advertisements also in Czech. Those and other elements certainly facilitate communication in the purchase of goods or in the use of other kinds of service.

There are two basic groups of consumers, viz.: (a) residents of Cieszyn and Český Těšín who cross the border to buy several goods at similar prices as in the home country, but which they think are better (e.g. Czech consumers buy in Polish meat shops, while Polish consumers buy in Czech shops with alcoholic goods), and (b) consumers from outside Cieszyn and Český Těšín who usually come to do weekend shopping and seek standard goods at the lowest prices in order to obtain as large a profit as possible, and also to provide themselves with goods unavailable on the Czech side. An especially high intensity of visitors can be observed on Wednesdays and Saturdays when both bazaars on the Polish side are open (Kulczyńska, Matykowski, 2008).

Among Polish customers there are groups of pensioners from Silesia coming to Český Těšín to do shopping. They get to Cieszyn by coach, leave it at a car park there, and walk to the Czech side in search of services. Also Czech customers from outside Český Těšín make organised group trips to Cieszyn in order to do shopping at the Polish frontier bazaars.

When analysing consumer movement at the Cieszyn–Český Těšín border crossing, a fall was observed in the intensity of pedestrian traffic by about one-third, but an increase in motorcar traffic by about one-eighth (cf. Table 4). Unlike at the Polish–German border, there are no significant differences in the number of people crossing the border in a given year in both directions: there are as many Poles going to the Czech Republic as there are Czechs coming to Poland.

A detailed analysis of pedestrian traffic reveals that in the years 1995–2000 and 2003–2007 more Czechs came to Cieszyn, while in 1994 and 2001–2002 more Poles crossed the border to the Czech Republic. This predominance of foreigners coming to Poland amounted to 0.1–3.2 million, while the predominance of Poles going in the other direction is not as great, the minimum and the maximum values amounting to 1.0 and 1.6 million. The situation was quite different in the case of cars: with the exception of the years 2001–2002 and 2006, motorised foreigners coming to Cieszyn predominated, at 0.03–0.2 million.

Tab. 4. Pedestrian and vehicular border traffic at the Cieszyn-Český Těšín border crossing in the years 1994–2007

Year	Pedestrians				Motorcars					
	total		foreigners crossing the border to Cieszyn		total		Poles crossing the border to Český Těšín		foreigners crossing the border to Cieszyn	
	in absolute numbers	1994=100 1997=100	in absolute numbers		in absolute numbers	1994=100 1997=100	in absolute numbers		in absolute numbers	
1994	16,694,615	100.00	4,906,221	3,282,701	2,208,733	100.00	498,209	647,966		
1995	24,045,157	144.03	4,527,791	7,664,766	3,291,460	149.02	731,720	942,510		
1996	30,289,062	181.43	6,068,593	9,289,081	4,686,485	212.18	1,112,813	1,294,245		
1997 <sup>1</sup>	11,662,320	100.00	2,022,300	3,884,999	820,249	100.00	152,047	266,916		
1998	11,874,836	101.82	2,168,951	3,825,564	681,120	83.04	130,844	212,537		
1999	15,561,523	133.43	3,492,664	4,376,550	801,691	97.74	165,584	245,264		
2000	15,616,076	133.90	3,871,964	4,006,259	880,986	107.40	208,053	241,487		
2001	16,845,130	144.44	4,884,004	3,579,159	1,003,543	122.35	277,519	232,446		
2002	14,781,503	126.75	4,198,070	3,245,200	1,002,075	122.17	270,893	237,708		
2003	13,471,216	115.51	3,162,402	3,611,908	1,001,357	122.08	237,621	272,677		
2004	13,126,878	112.56	2,798,971	3,814,012	998,500	121.73	209,205	297,751		
2005	11,491,155	98.53	2,610,723	3,149,907	988,115	120.47	223,937	277,341		
2006	8,850,227	75.89	1,974,363	2,445,682	937,693	114.32	250,156	219,524		
2007 <sup>2</sup>	7,452,675	63.90	1,706,242	2,039,629	925,171	112.79	198,781	262,181		

<sup>1</sup> establishment of the Cieszyn-Boguszowice border crossing

<sup>2</sup> statistical data cover the period from 1 January to 21 December

Source: own compilation on the basis of statistical data of the Border Guard Headquarters



## Summing up

The patterns of the service systems in the split towns of the Polish-German and Polish-Czech borderlands are not the same. There are many factors shaping a service system, but those primarily responsible for differences between those of the examined frontier urban complexes include: (a) the kinds of services offered, (b) specific forms of retail trade, (c) intensity of transborder traffic, and (d) consumers of services. Their unique combinations allowed distinguishing two service systems: in the Polish-German borderland and in the Polish-Czech one.

In each of the split towns there are two service systems. One, geared to the service of the local population – on all sides, Polish, German and Czech – is fairly stable. The other, in the Polish-German borderland, shows a marked asymmetry in terms of volume and function. On the Polish side, this system responds to changes very dynamically and adjusts to the expectations of the consumer from the German side. The German system, in turn, shows only a measure of openness to the Polish consumer. In the Polish-Czech borderland the system is balanced, equally open to the local customer and one from abroad.

The degree of openness of the service system largely results from the intensity of transborder traffic. Readily visible at the Polish-German border is its disproportion: there are decidedly more Germans crossing the state border to Poland than Poles to Germany. There has been a general decline in movement figures, both in pedestrian and car traffic. In the Polish-Czech borderland, border traffic maintained a similar level over the study period with reference to pedestrian traffic, and even grew slightly with reference to cars. Unlike at the Polish-German border, there were no significant differences in the number of people crossing the border in a given year in both directions.

It seems that the service system of the Cieszyn-Český Těšín urban complex is more compact in territorial terms than those of the split towns in the Polish-German borderland, which follows from similar initial conditions of the economies in both countries and going through individual stages of European integration at the same time. That is why it is possible to state that the service system in the Polish-Czech borderland is more complementary, while that in the Polish-German borderland shows signs of competitiveness.

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## Conditions of divided towns development – an example of Guben and Gubin

**Abstract:** The article concerns about conditions of development of a peculiar small towns – Guben (German) and Gubin (Polish). Their situation is interesting with reference to their border location, as well as peripheral and divided and because of the geopolitical context of globalization and European integration where they have to deal with it in a common way. The main objective of this article was to discover the differences and similarities of two border towns as a base for their future socio-economic development and co-operation due to the new political situation and end of barriers, both institutional and legal. Spatial analyses focused on two towns – Guben and Gubin, nowadays divided by a Polish-German border, that before World War II used to be one unit. The temporal extent of the article refers to the period of 1995–2012, but some historical background was also showed. The applied methods and data sources were based on Polish and German statistics. The demographical and economic situation was analysed and showed a difficult and complex problems in both towns despite the fact that in details they differ from each other. Detailed analysis included: the population number, the births and deaths rates as well as migration balance. The economic and functional images of both towns are different and traffic at the border-crossing does not play a stimulant role. Due to the EU and Schengen Area enlargement in Guben and Gubin did not greatly stimulate the socio-economic situation. The representatives of both towns stated that common actions are a viable and the best solution to problems of both towns.

**Keywords:** border cities; frontier; small towns; socio-economic development

### Introduction

Nowadays cities play a very important, stimulating role in the reorganization of European space where the East is becoming disintegrated, and the West endeavours to integration (Brzosko-Sermak, 2007; Jerczyński, 2002). a border is a strong factor that has an impact on many aspects of the nearby cities' development (Paasi, 2001). One should also be aware of the changing nature and the function of state borders in the advanced industrialized regions at the beginning of the 21<sup>st</sup> century (Andreas, 2003; Andreas, Biersteker, 2003; Andreas, Snyder, 2000) and the growing importance of cross-border regions and cross-border cooperation (Brzosko-Sermak,

2007). Political, as well as economical transformations and the access to the EU structures have caused that frontiers are no longer only barriers and they have gained a new function, i.e. integration (Chojnicki, 1999). Borders themselves can be both positive and negative factors for the local development (Brzosko-Sermak, 2007:84). Some researches point out that not all border regions can develop from political and economy periphery into the zones of international co-operation and synergy (Herbst, Olejniczak, Smętkowski, 2002). The strengths or weaknesses of border cities are determined not only by their location but also by the way they are governed (Brzosko-Sermak, 2007:84).

The interest in border cities like Guben and Gubin was based on the willingness to trace and compare their socio-economic situation as divided Polish-German border towns. The fact that border regions are changing their character from 'front lines' towards socio-economic 'contact zones' for neighbouring communities should be taken into account (Ratti, Reichman, 1993). One should also be aware of the changing nature and the function of state borders in the 'advanced industrialized regions of the world' in the eve of the 21<sup>st</sup> century (Andreas, 2003; Andreas, Biersteker, 2003; Andreas, Snyder, 2000) and the growing importance of cross-border regions and cross-border cooperation. This is what is gradually happening in the case of the studied towns as they are exceptional in their location, as well as peripheral and divided (Brzosko-Sermak, 2007). Peripheral – due to the closeness of the national border of Poland and Germany, and divided – due to the fact that the aforementioned border line split one urban tissue creating a twin-city Guben (German) and Gubin (Polish) in 1945. On the other hand, their situation is interesting with reference to the geopolitical context of globalization and European integration where they have to deal with it in a common way. The position of the studied towns has changed many times recently. The modifications mainly concern local policies and attitudes of citizens towards their neighbours.

The main objective of this article is to discover differences and similarities of two border towns as a base for their future socio-economic development and co-operation due to the new political situation and end of barriers, institutional and legal. The additional objective is to check whether this changing political situation is a factor of economic development of the cities or if its outcomes are too weak to make the vision of backwardness and recession less visible for them. It is also to understand and explain local patterns of the economic development in relation to active local governing.

With reference to the objectives, the authors put the main research questions to find answers: what were the conditions and problems in the development of Guben and Gubin from mid-90s (are they similar or different in both countries?); how does socio-economic development (economy) change or influence the development of these border towns in both countries before and after the EU enlargement?

Spatial analyses focused on two towns – Guben and Gubin, nowadays divided by Polish-German border, that before World War II used to be one unit. The temporal extent of the article refers to the period of 1995–2012, but some historical background was also showed. Applied methods and data sources were based on Polish and German official statistics.

## Historical and political conditioning

Guben was the oldest town of the Łużyce Dolne region, as it was founded in 1235. At that time and long afterwards, the town was developing as the only urban unit on the East side of the Lusatian Nysa river. Before World War II, Guben had more than 40 000 citizens that were maintaining/making a living from the production of the baize and hats.

The division of the town was made in 1945, due to the demarcation of the national border between Germany and Poland along the Lusatian Nysa. As a consequence of a new geopolitical order after World War II, German Guben and Polish Gubin experienced a complete exchange of the population. From that time the historic old town was the core of Polish Gubin and some labour suburbs on the West side of Lusatian Nysa had to succeed in creation of the self-sustaining German city of Guben. In 1960, there were several new housing complexes formed, as well as an industry plant that specialized in the production of chemical fibres. Due to these decisions there was a growth of population not only in Guben, but also in Gubin. This industry plant employed the labour from both cities. This first co-operation between those divided cities was possible because there was no need (in the 1972–1980 period) of any visa to cross the border at the river Lusatian Nysa. It was the time when cross-border social contacts were ascribed to a daily routine. The closing of Polish border in 1981 caused by the introduction of the martial law put an end to this co-operation between Guben and Gubin.

Great political changes in 1989, both in Poland and Germany that resulted in very serious socio-economic transformations in the following decade, improved the situation of both towns. The aperture of the border between Poland and Germany in 1990 gave a potential chance for new transborder co-operation (Bafol, 1999) and the enlargement of areas of influences for both studied towns.

Due to the fact that Eastern Länder in 1990 became part of the European Community, some institutional and legal barriers appeared in transborder co-operation between Guben and Gubin. Although local leaders took some common transborder actions, their importance was almost nonexistent in the socio-economic development of both cities. The turn of 20<sup>th</sup> and 21<sup>st</sup> centuries brought some changes in this matter. Some new and more comprehensive transborder co-operation actions were undertaken, mainly due to the involvement of the German side.

Additionally, on 1<sup>st</sup> May 2004 Poland joined the EU and on 21<sup>st</sup> December 2007 – the Schengen Agreement, which sustained institutional and legal barriers in transborder co-operation between two border cities. This situation gave ‘tools’ and opportunities for further transborder co-operation.

## Demography

A border city Guben experienced a great loss of population after the Second World War. Due to demarcation of national border at the Lusatian Nysa river, the former city Guben was divided into German – Guben and Polish – Gubin. Both towns experienced a complete exchange of population. Nowadays Guben is a shrinking town with a population of slightly over 18,000 (Tab. 1.).

**Tab. 1.** Changes of population number of Guben (1939–2012)

Date		Population
17 May	1939	45,934
29 October	1946*	25,297
31 August	1950*	25,929
31 December	1964*	25,492
01 January	1971*	29,607
31 December	1981*	36,708
31 December	1990	30,791
31 December	2000	25,245
31 December	2005	21,089
31 December	2010	18,957
31 December	2012	18,166

\* census results

Source: <http://www.guben-online.de> (15 January 2015)

The changes in population can serve as a 'barometer' of economic condition of the given town (Płaziak, 2004). Good organization, management, and the opportunities for the socio-economic development make the city attractive for its inhabitants and potential investors. However, Guben, partly due to the border location, and to serious economic problems (common for East German cities), had to struggle with economic recession and demographic problems. For many years there has been a steady downward tendency as far as the loss of population is concerned. In 2012 Guben had 18,166 citizens – a half of the level from 1981, the year of maximum number of population after the II World War.

The number of population changed also in Gubin, but differently than in Guben (Tab. 2.). First of all, Gubin was two times smaller and did not have such negative population tendency throughout the studied period of time (1995–2012). In the second part of 1990s, the number of population was growing until 1997, when it reached about 19 thousand citizens. In 1999 there was a serious drop in the number of population and next one can observe a systematic depopulation – but not so serious as that in Guben. In 2012 the population of Gubin was at the level of 17,019, that means the loss of population of about 10% in comparison to the year 1997 with maximum number of citizens. It is noteworthy that the accession of Poland to the EU in 2004 and to the Schengen Agreement in 2007 did not change anything in this trend.

**Tab. 2.** Changes of population of Gubin (1995–2012)

Date		Population
31 December	1995	18,672
31 December	2000	18,042
31 December	2005	17,055
31 December	2010	17,072
31 December	2012	17,019

Source: <http://www.stat.gov.pl> (15 January 2015)



The structure of the population of Gubin showed the domination of women during the whole studied period. Simultaneously to the loss of population from 1999, their share was growing. One can conclude that the aforementioned loss of population was mostly caused by an outflow of males, caused by deindustrialization. In this situation one can assume that women (...) will comprise a much larger portion of paid employees than they have in previous decades (Rosser, 1995: 235).

To sum up, although both towns do not have almost equal number of citizens and the first years of the studied period of time are marked with the differences between Guben and Gubin that refer to the changes in population, they have to struggle with the depopulation during the last years, which in Guben was more serious.

The loss of population is an extremely negative aspect for every urban unit. However, unfortunately it is quite a common process (Płaziak, 2005). Great cities also experience it due to the suburbanization. In the case of the analysed towns this process is not observed. The size, functions and social structure of these two towns do not give ground for the suburbanisation development.

There are four main factors that influence the actual growth/loss of population in the studied towns. The first two are the births rate and deaths, which generate natural growth/loss of population, and the next two are immigration and emigration.

The birth rate in Guben is oscillating at the same level of c.a. 5‰ through the 1995–2012. It is very stable but at the low level, that does not compensate the deaths rate at the level of c.a. 10‰. Therefore, the German town has to struggle with the natural loss of population at the level of c.a. minus 5–7‰. It is worth to mention that there is also a very dangerous trend of growing natural loss since 2001. These trends are very difficult to overcome due to a complex background which is both of social and economical nature. Guben is not a unique town in this field – such problems are observed in most towns in East Germany, especially those with border location.

The births rate in Gubin is higher than in Guben and oscillates at about 10‰. The falling tendency of this rate is slightly visible in the studied period of time because of alternate increases and decreases. As far as deaths rate is concerned, one can state that it oscillates at between –6.5‰ and –10‰, which is less than in Guben and suggests that Gubin population is younger. Up to 2000 the discussed rate was smaller, later it grew up, therefore the tendency is growing. As a result, between 1995 and 2002 there was a small natural growth with downward tendency, later there is an alternate natural growth and the loss of population with little dominance of this second option during last years.

To sum up, the demographic situation is more positive in Gubin, as far as the natural growth/loss and its components are concerned.

Data presenting migration show a more pessimistic view of demography in Guben. One can observe a stable immigration, at the level of c.a. 20‰ throughout the period of 1995–2012, and the emigration with changing tendencies. At the beginning of the studied period of time (1995–1997) the emigration level was stable. Later it grew up to 60‰ in 2001, next there was a downward tendency that is positive for future development of the town and can be perceived as a way of overcoming economic difficulties and growing attraction of this town among citizens. An adverse balance of migration in Guben is the most urgent problem to be solved.

Quite a similar situation can be noted in Gubin – the figures were different, but trends alike. Gubin has immigration at the average level of about 10‰, but before

2000 it was higher and after that there were years of alternate increases and decreases, but mostly below 10‰. The emigration, like in Guben was about two times higher than immigration, and approximated at the level of 10–26‰, with many fluctuations. The maximum rate of emigration occurred in 2001 and 2006 and later was characterized by a huge outflow of people from Gubin but with downward tendency with its minimum rate in 2012. Very similar changes occurred in Guben. After the accession of Poland to the EU, the tendency of emigration was growing. As a result, the migration balance in Gubin in 1995 was positive with predominance of immigration. During the following years the outflow of people outnumbered the inflow mostly between 2001 and 2003. When comparing 2011 to 2001, the migration balance was huge at the level of c.a. –20‰.

One can analyse the whole picture of demographic image of either of the cities in comparison to the balance of natural growth/loss and the balance of migration that gives a real growth/loss of population. The rate of real loss of population in Guben shows that the town has had very serious demographical problems, mostly due to huge emigration. The growing tendency of this rate up to 2001 was the cause of deepening recession in Guben. Since then the situation has not been improving and is still alarming together with the reference to the increasing tendency in the natural loss of population.

One can find many differences in the rate of real growth/loss of population in Gubin in comparison to Guben. Above all, during 1995–1998 the natural growth outnumbered the migration balance that resulted in a real growth that did not occur in Guben. Although Gubin profited from growth in population in the discussed period of time, the tendency was falling. Next years were characterized by the growing adverse balance of migration, like in Guben, that brought about the real loss of population. Up to 2004, both in Guben and Gubin the rates of real loss were decreasing, mostly because of smaller emigration. Yet, the data from the period after the EU enlargement present a serious incensement in the natural loss of population but mostly with respect to emigration, which resulted in a repeated decrease of real loss in population.

A population forecast for Guben shows that in 2030 the number of citizens will decrease about 30% and reach the level of 13,000 ([www.lbv.brandenburg.de](http://www.lbv.brandenburg.de); *Mittelbereichsprofil Guben*, 2013).

The data showing a dwelling stock in the town seems to confirm the loss in population and economic problems of Guben. One can observe the increasing trend until 2000. Afterwards, a very serious real loss of population took place.

Every year the number of dwelling stock was reduced and finally in 2004 it reached the level of 10.6% in comparison to the year 2000. This situation has been quite common for many East Germany cities during the last years.

A different situation occurred in Gubin. Instead of the loss in dwelling stock like it was in Guben one could state a steady growth in this field, although both cities were experiencing the loss of population. This situation suggests that economic condition of Gubin is better. This is also a result of a younger, more mobile structure of citizens in Gubin with a strong demand for new dwelling stock or its shortage as it had occurred before.

## Economy / functions of towns

To study the economy of a town and to find out its main functions, one has to look at data referring to the employment of citizens. It shows some specifics and specialization of every urban unit, as well as its weaknesses and potential fields for implementing changes (Hodson, 1995; Mayo, 1945).

Guben is an industrial city with additional functions, typical of border cities like: hotel trade (Gałasińska, Gałasiński, 2005) and gastronomy or wholesale, retail trade, repairs and other services, very common in most towns, like: education, welfare and social work. It is worth to mention that there is (...) a substantial potential for trade creation in Central Europe (...) with respect to both their intragroup relations and relations with outside world (Van Brabant, 1993:113). This situation could take place because (...) small-scale trading across international borders has developed into mass phenomenon in Central and Eastern Europe since the beginning of 1990s (Egbert, 2006: 347).

Although in 1990 both East Germany and Poland experienced a rapid industrial decline (McKinnon, 1993; Sachs, 1993) (...) that turned out *ex post facto* not to be internationally competitive (McKinnon, 1993:125) – manufacturing (section D) has still the highest share in the employment in town. As the only one it manifests an increasing tendency when comparing 2000 and 2005. In 2011 c.a. 2,000 people were employed in mining, manufacturing, energy and water supply, waste disposal and recycling industry.

The remaining sections experienced a decrease in employment during most of studied period. The medium share was characteristic for sections H (hotels and restaurants), M (education), N (health and social work), O (other community, social and personal service activities), F (construction) and G (wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods). The lower share in employment appears in sections I, K and L, P, O. Such position of services connected with transport, storage and communication (section I) is surprising when taking border location of Guben into account. It suggests neglected potential of the town's economy. a similar low share in employment of the next section – K (real estate, renting and business activities) is more understandable when taking the loss of population and economic recession of the city under consideration.

The next group of sections, i.e. L (public administration and defence; compulsory social security), P (activities of households) and O (other community, social and personal service activities) in every town is an additional part of employment and does not have a great impact on their economy. The section in which employment in Guben cannot be found is financial intermediation (section J). This is due to the aforementioned border location and economic difficulties of the town, what results in a low position in the urban hierarchy and the simplicity of functions that this town serves.

Due to the availability of data, the economy and functions of Gubin have to be analyzed by entities of the National Official Business Register REGON<sup>1</sup> in sections

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<sup>1</sup> National Official Business Register, REGON was established on ground of article 41 point 1 position 1 of the Law dated June 29<sup>th</sup>, 1995 on official statistics (Journal of Laws No 88, position 439, with amendments). REGON register is a continuously actualised set of information on subjects of national economy run as an IT system in the way of central database

by NACE. Although differences in data some comparisons in the economies of both towns can be stated.

Firstly, most of the sections experienced an increase of entities in the economy. One can conclude a stable economic development of Gubin. The most developed section (by the number of entities) is the G one (wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods). It is understandable as Gubin takes the advantage of its border location in terms of lowering prices. The development of trade is a very common feature of those border cities.

The next vital section was K (real estate, renting and business activities). It is not surprising in comparison to the abovementioned growing number of dwelling stock in Gubin. The third position in number of entities of the national economy is occupied by sections: H (hotels and restaurants), M (education), N (health and social work) and O (other community, social and personal service activities). The first of them respectively is also typical of a border city when it services cross-border flows of people. The remaining sections are crucial for proper functioning of every urban unit. However, many other sections only mentioned above play an important role in Gubin. Entities from sections D (manufacturing), I (transport, storage and communication), F (construction) and J (financial intermediation) are slightly visible with reference to functions of the studied town but their presence fulfil the image of the economy of Gubin. The rest of sections generally do not play any role in the study case in question.

As an additional source of information, the author has used the data showing a structure of employment by economic sectors in Gubin. Most people are working in services and the domination of this sector is growing every year. At the same time, the share of employment in industry is shrinking. The agriculture sector plays a marginal role and stays more or less at the same level throughout the whole analysed period.

The economic and functional picture of both towns, however, based on difficult to compare data, is different. Gubin is a more industrial town where 'border city functions' (trade, hotels, restaurants, transport) play rather secondary role. These functions are better developed in Gubin, as well as sections connected with the enlargement and the exchange of dwelling stock. What is more, manufacturing plays a marginal role in the town of Gubin.

Moreover, Gubin is characterized by a dramatic imbalance between a high proportion of unemployment (25%) and a dramatic shortage of competencies in new knowledge-based economic sectors (high, middle and low tech) (Mayall, 1995; Teixeira, 1995). This imbalance is the result of continuous and heavy brain-drain processes since 1989 (Mattchiesen, 2005).

In Gubin, urban development, rooted in and contextualized by the neo-liberal "Big Bang" path of Polish transformation (L. Balcerowicz's Plan), impelled young inventive people to start anew in economics, politics, culture and similar realms, sometimes in the border region, and sometimes in other European cities and

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and local databases. Entry into the REGON register is obligatory for all: legal persons, organizational units without the status of a legal person, natural persons running business activities (including private farms), local units of subjects mentioned above ([http://www.stat.gov.pl/bip/regon\\_ENG\\_HTML.htm](http://www.stat.gov.pl/bip/regon_ENG_HTML.htm) - 12.08.2007).

regions. Certainly, the unrestricted access to Structural Funds of the EU is helping to strengthen these tendencies (Mattchiesen, 2005).

The migration of people at Guben-Gubin border crossing was changing throughout the studied period of time (1990–2012), but the share of Poles was c.a.  $\frac{1}{3}$ . Although the rest of data was collected as a movement of foreigners without specification of nationality, one can say that the majority of them could be Germans. This conclusion can be drawn on the basis of an assumption that Guben is a rather small cross-border town situated in some distance from highways and transit roads that could attract other foreigners. Hence, its importance is mostly local. A low level (3–4,5 mln) of cross-border movement characterizes the years 1990–1992.

Until the year 2000, the traffic was at the level of 11–12 mln people and later it slightly dropped, to the level of c.a. 3 mln of people with a lower contribution of Poles. The last few years show that the EU enlargement in 2004 with the accession of Poland to the Schengen Treaty did not increase the number of people willing to cross the border just in Guben-Gubin.

As far as co-operation in the field of infrastructure is concerned, Guben and Gubin sustain some co-operation in terms of fire brigades, the police, hospitals and some clubs. Yet, these actions are not very visible in the socio-economic development of both cities. The most successful and visible outcome of transborder co-operation is a common sewage treatment plant located in Gubin. Additionally, each city has a modern wastewater treatment with a biological stage. There is no cooperation in public transport between the discussed cities. In Guben, the town and suburban transport is a property of district countries, while in Gubin it has been privatized. One of the difficulties in introducing common public transport is the only border crossing in the town centre – others are located outside the urban area. Additionally, there is no direct connection with any highway from either of the cities. A railway station is only in Guben. Due to the recent closure of a railway station in Gubin there is no rail connection between the two towns.

## Conclusion

The main issue discussed in the present article was the problem concerning the conditions and problems of the development of Guben and Gubin. The demographical situation of both towns is unfavourable and in many aspects similar. The population number, the births and deaths rates, as well as migration balance differ slightly in both towns. However, some trends are very similar. Gubin is smaller than Guben and did not experience such depopulation since the mid-90s. Yet, both towns have been struggling with the depopulation during recent years, which seems to be more serious in Guben. Gubin, on the other hand, has had a higher birth rate and lower death rate after 1995. That makes Gubin's demographic situation a little bit better. Referring to migration, both towns have been experiencing negative nets. The situation in Gubin is more serious. The rate of real loss of population shows more pessimistic vision of the future for Guben.

Both towns differ much from each other as far as dwelling stock is concerned. Guben experienced a serious decrease of dwellings after 2000, due to its demographic and economic problems, whereas Gubin – a systematic growth. Guben is still

more industrialized in comparison to Gubin, where 'border city functions' (trade, hotels, restaurants and transport) play greater role. On the other hand, these functions are well developed simultaneously with sections connected with enlargement or exchange of dwelling stock in Gubin. Both towns have to deal with a difficult situation in the job market and social conditions. Although Guben experienced huge deindustrialization, the unemployment is a more serious problem for Gubin.

The economic and functional images of both towns are different. Guben is still more industrialized. On the other hand, 'border functions' are better developed in Gubin, as well as sections connected with the enlargement and the exchange of dwelling stock. But manufacturing does not matter in the actual development of Gubin.

Traffic at Guben-Gubin border crossing was changing since 1995. However, among the registered people there was a majority of Germans that eagerly used services in Gubin and went shopping there. During the 1990s there was a large cross-border movement which decreased seriously due to equalising of process on both sides of Nysa after 2000.

To sum up, after the change of geopolitical situation, i.e. the EU and Schengen Area enlargement, neither in Guben nor Gubin the socio-economic situation was improved. Many difficult and complex problems are not solved, although some improvements in infrastructure and education were made. In Guben and Gubin the local patterns of economic development connected with transborder co-operation differ from each other as far as inter- and intra-relations are concerned. Surprisingly, the representatives of both towns stated that common actions are a viable and the best solution to problems of both towns – maybe because they are the only solution.

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## Kuřim – the largest small town in the South-Moravian Region (Czechia)

### Abstract

The author has dealt with a role of the small city of Kuřim (population ca. 11,000) in the suburban zone of Brno. Based on statistical data and field research, this small town was analysed with its own activities in jobs and services to compare it with suburbanized villages almost completely reliant on commuting to the main city. Kuřim is a subordinated job centre and junction of the public transport distributing transport flows on the north-western fringe of Brno, including mutual commuting between Brno and Kuřim. Some indices like unemployment rate or education structure are expressively better at Kuřim than in Brno. On the other side, a poorer social infrastructure (in comparison with other small towns of similar size) signalizes weak central role of suburbanized small town in this sphere – except of some administrative activities. Possible losing of their own identity in view to proximity of Brno is another important factor for suburban small towns. The intensive traffic puts high demands on the road network which sometimes lags behind the population development. Future development is unclear. Kuřim grows due to the natural increase (as a consequence of earlier young families inflow), whereas the construction of flats and further immigration have been almost stopped during the economic crisis.

**Key words:** commuting; Kuřim; population development; small town; suburbanization

### Introduction

The small towns are a very important part of the Central European settlement system. They seem to be not very important from the viewpoint of the urban geography, being seemingly backward, less innovative and directed to the productive branches. However, from the viewpoint of rural geography, these towns are centres of the countryside ensuring jobs, services and social contact for their rural hinterland. They often represent local or micro-regional identity as well (Vaishar and Zapletalová, 2009). In many countries small towns play a role of market places for agricultural and other products from their hinterland (Heffner and Solga, 2006).

The small towns do not form any unified group of settlements. They differ according to their historical development, economic basis, geographical position etc. One of their types is that of small towns situated in the suburbanized zones. The

suburban small towns play an important role in the hinterland of cities. Unlike suburbanized villages, which depend on the commuting to cities almost for everything, these towns dispose with basic spectrum of activities. They sometimes also concentrate relatively large industrial or commercial parks, thus offer jobs (Vaishar and Zapletalová, 2007). On the other side, suburban small towns are threatened with loss of their identity.

The town of Kuřim was selected as an example of the suburban small town for the analysis. This town has grown rapidly in the last decade and overtook all other small towns in the South-Moravian Region by the population number. Being suburbanized, it can be also considered as multifunctional. The aim of the author was an analysis of the recent development of Kuřim with possible general conclusions, concerning the role of suburban small towns and their possible future development.

### **Small towns and their role in the suburban development**

Investigation of European small towns as a part of the countryside has not along tradition. Much research has been undertaken on both urban issues and rural areas, but the number of recent studies dealing with small and medium-sized towns is limited (van Leeuwen, 2010). This research has started in 1950s and 1960s. a role of small towns was evaluated in different ways: as a positive (places of widening innovations to the hinterland), a negative (places exploiting rural hinterland) or the intermediate (Tacoli, 1998).

United Kingdom (Courtney and Errington, 2000, Powe and Shaw, 2004), the Alpine states (Perlik et al., 2001) and countries with large rural areas, like France or Spain have played the most important role of small towns investigation in Western Europe.

The importance of the small town sector research has increased also with the transformation processes in the post-socialists countries (e.g. Kwiatek-Sołtys, 2004, Rydz, 2006). Konecka-Szydłowska et al. (2010) stated increasing share of service sector in all small towns. However, such a development is slower in small towns in the areas where the people have more possibilities to ensure their demand on services in great and medium-sized cities. Borsig et al. (2011) point out the social capital of small towns.

The small towns are important centres, especially in peripheral areas where low competition of more important centres exists. The role of suburban small towns is different to the certain extent. Some of them are in fact large villages with very limited social infrastructure and other activities which have grown from original rural settlements. Other suburban small towns have their own economic activities and historical heritage, too. Salamon (2007) points the evolution of these owns from agrarian to post-agrarian settlements. Kwiatek-Sołtys et al. (2014) stress the attractiveness of small towns. Capel (2009) argues that present small towns are easily connected with the rest of the world but they offer different quality of life in comparison with large cities. Courtney et al. (2007) discovered that fulfilling the role of small towns in the rural milieu depends on a special mix of firms. Is it true also for suburban towns with globalized architecture and urban pattern?

Heffner and Twardzik (2015) divide surroundings of small towns in the suburban zones of Silesian region as follows:

- agricultural (of dominant agricultural function and agricultural services);
- tourism-oriented (of a significant share of tourist function in the local economy);
- urbanised, often also industrialised

Under suburban influences, residential function increased its importance, sometimes at the expense of original productive activities.

The small towns in suburban zones could be basically of two origins. The first group is formed by original villages which have gained residents and sometimes also commercial activities in the process of suburbanization. Such small towns usually lack central functions and almost fully depend on the collaboration with the respective city. They are often mono-functional and have hardly any realistic urban character.

The second group consists of original (often medieval) small towns which were impacted by the suburbanization later. Such small towns usually keep their traditional hinterland (although it uses to be at least partly overlaid with the gravity power of the city). These small towns have an urban character as a rule. They serve as sub-centres in the territory and reduce the load of the core city in sectors of basic urban services. They could also serve as nodes of public transport.

Unlike pure suburbs, suburban small towns have their identity, their landmarks, natives, public spaces and public life. They are able to absorb some hundreds of newcomers. By such a way they manifest a positive role in the suburban area breaking down the concentration of people and activities in urbanized space. On the other side they are just threatened by loss of their identity because they can be perceived as parts of the core city: those small towns located in, or close to, metropolitan regions run the risk of becoming 'suburbs' (Servillo et al., 2014).

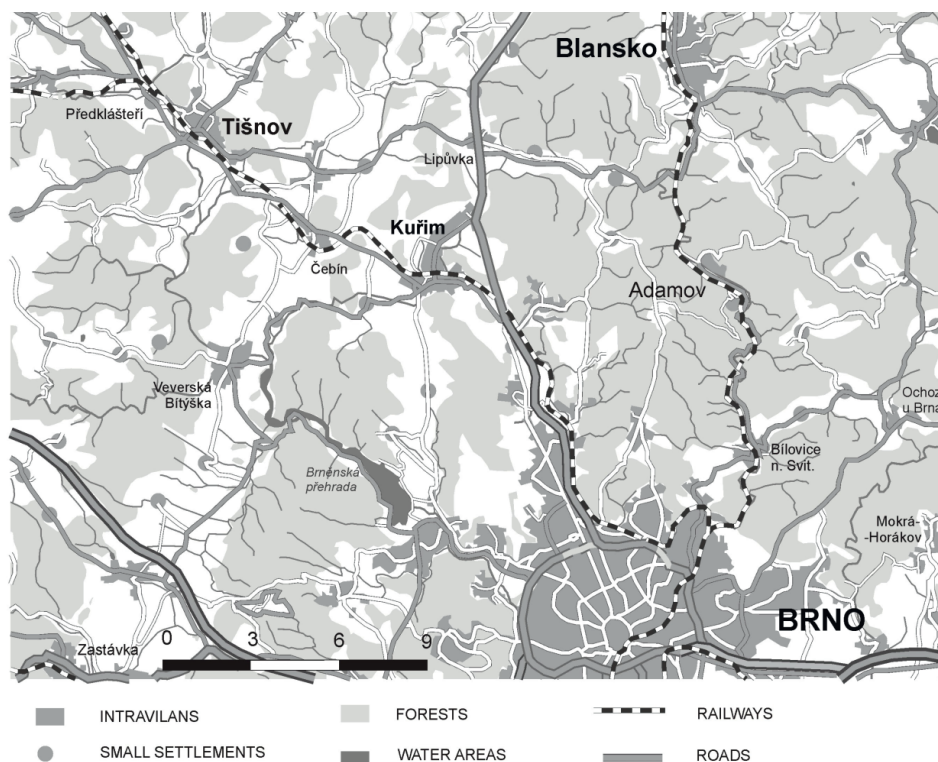
The small towns in suburban positions are places of conflicts among different, often antagonistic activities: residential, agricultural, daily recreation for the population of the core city, manufacturing, infrastructural (Darly and Torre, 2013). Productive functions mingle with non-productive ones. Businesses extrude environmental functions under pressure of the market condition connected with the big city. Concentration of such features can be found just in the vicinity of suburbanized small towns which often serve as transport junctions.

## **Kuřim and its role in the south-Moravian settlement system**

The South-Moravian settlement system consists of the city of Brno, five medium (district) towns with 20 – 35 thousand inhabitants, 11 small towns with 4 – 12 thousand inhabitants and rural municipalities. Brno (statistically 378,000 inhabitants, in reality more than 500,000) is too large for the Region because this city was a Moravian capital in the past and its gravity extends far behind the regional border. Five district towns are relatively of the same size of 20,000 people (Znojmo with population of 35,000 being the only exception). The countryside (small towns and rural municipalities) is divided into 4 basic categories: suburban countryside, inner periphery, borderland periphery and intermediate countryside (Vaishar et al., 2011).

The set of small towns consists of 21 municipalities with population of more than 4,000. Between the last two population censuses, the number of inhabitants of the South-Moravian small towns increased by about 2%. Another 22 municipalities in the Region have also the urban status but their urban character is doubtful.

Kuřim is situated north to north-west of Brno in the Boskovická brázda furrow and on the foothills of Bobravská vrchovina highland, on the fringe of the Baba Natural Park. Lying 14 km from Brno, Kuřim is served by the Brno-Tišnov railway. The 1<sup>st</sup> class road Nr. 43 passes off near the eastern fringe of the town (Fig. 1).



**Fig. 1.** Geographical location of Kuřim

Source: Drawn by J. Pokorná

Although the first written message of the town comes from 1226, the village of Kuřim originated probably during the Premyslide colonization in 12<sup>th</sup> century. Kuřim had been the serf village and then it was sold to Brno in 1547. Economic development had been interrupted by wars (Thirty Years' War in 17<sup>th</sup> century, the Napoleonic wars at the beginning of 19<sup>th</sup> century). When the railway Brno-Tišnov was opened in 1885, some urban development started. But at the same time, this railway divided the village into two parts which began to develop separately (Kuča, 1998, Fig. 1). Kuřim gained the urban character only after WWII (officially in 1965), thus its centre has no historic urban character.



The most important industrial plant TOS (Factory of Machine Tools) was established in 1942 within the German war economy. Construction of a new settlement Podlesí (a detached part of the town at the present) for German technicians of the Klöckner Hamburg firm was evoked. Due to the existence of the factory, Kuřim was bombed by both US and Soviet air forces at the end of the WWII.

The first housing estate was built after the WWII. Later it was followed by other prefabricated housing ones, in the socialist realism style (Fig. 2). It included also new urban centre with services. In the whole socialist period also family houses were built. New constructions in this period resulted also in destroying and rebuilding some old parts of the original settlement. Thus, at the present time only the south-western part of the town with the church and the chateau is of some historical value.



**Fig. 2.** View on the socialist part of Kuřim from the railway line

Source: Photo A. Vaishar

Recently, the suburban constructions grew in the south-eastern fringe of the town (Fig. 3). They consist of both family and apartment houses. The complex includes also supermarkets and other infrastructure.



**Fig. 3.** Kuřim, the suburbanized part of the town

Source: Photo A. Vaishar

## Contemporary role of the town in the suburban process

The long term population development of Kuřim (Fig. 4) shows the increase throughout the whole observation period. The municipality kept the rural size till 1920. The rapid increase in the period 1921 – 1991 was due to the industrialization. After a short stagnation, the growth has accelerated again in the last decade, as the result of suburbanization.

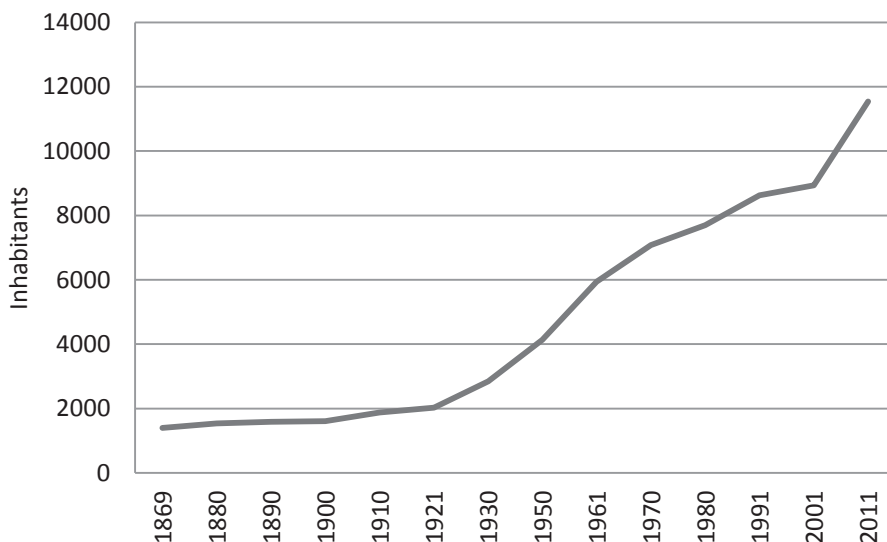


Fig. 4. Population development of Kuřim 1869 – 2011

Source: Historický lexikon obcí. Praha: Český statistický úřad 2005 and Population census 2011

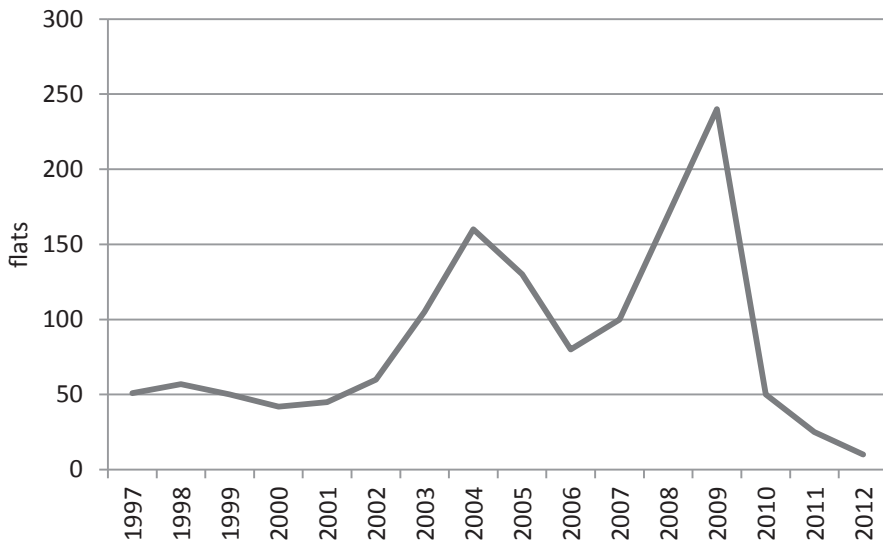
In the 2009 – 2013 period, 749 children were born in Kuřim, whereas 432 people died. This was the natural increase of 337 inhabitants; 31.4‰ during 5 years. In the same time, 1,708 persons immigrated and 1 650 emigrated which gave also positive migration net of 58 people (5.4‰). The total balance was positive (36.8‰). Surprisingly, the population of Kuřim has grown mostly owing to the natural increase. The highest positive migration net was registered in 2007 (269 persons). In the years 2011 and 2012, the migration net became negative. The positive natural increase was caused by the suburbanisation in the period 2002 – 2008 and by the baby boomers from 1970s when then socialist government supported natality as the result of beginning of the second demographic transition. Kuřim reached a level of 10,970 inhabitants at 31<sup>st</sup> December 2014.

In the period 1997 – 2010, Kuřim reported the highest share of finished new flats among towns with more than 10,000 inhabitants within the whole Czechia<sup>1</sup> (more than 9 new flats per 1,1131

<sup>1</sup> Deník veřejné správy on-line, 19 December 2014, [www.dvs.cz/index.asp](http://www.dvs.cz/index.asp).



000 inhabitants). Since 2008 the construction of new flats was reduced by the economic crisis. Fig. 5 shows the course of new flats finished. It is a question of near future whether the suburbanization process is over or whether the new construction will be restored in the post-crisis period.



**Fig. 5.** Number of finished new flats in Kuřim 1997 – 2012

Source: Praha: Czech Statistical Office

Besides the residential function, Kuřim disposes more activities: concentration of jobs, service for the local people and a close hinterland but also the leisure function. There were 7,445 occupied jobs in Kuřim in December 2013<sup>2</sup>. The number of economic active people was 5,633 in 2011. Taking into account the fact that 2,214 persons from Kuřim commute for work to other municipalities, it is clear that Kuřim offers jobs not only for its own inhabitants, but also for about 4,000 in-commuters. It also signalizes a relative intensive multi-course commuting for work in the area north-west of Brno, including mutual commuting of Brno – Kuřim and participation of other centres of jobs (Tišnov town and villages of Veverská Bítýška, with production of hygiene utilities, Čebín with lime production or Deblín with electrical industry).

Blanc et al. (2007) have divided economy of small towns into three parts: agro-alimentary branch, local economy (directed for local residents) and large economy (exceeding the town and its surrounding). From such point of view, Kuřim has a relatively great share of the large economy. On the other side, Kuřim is the second

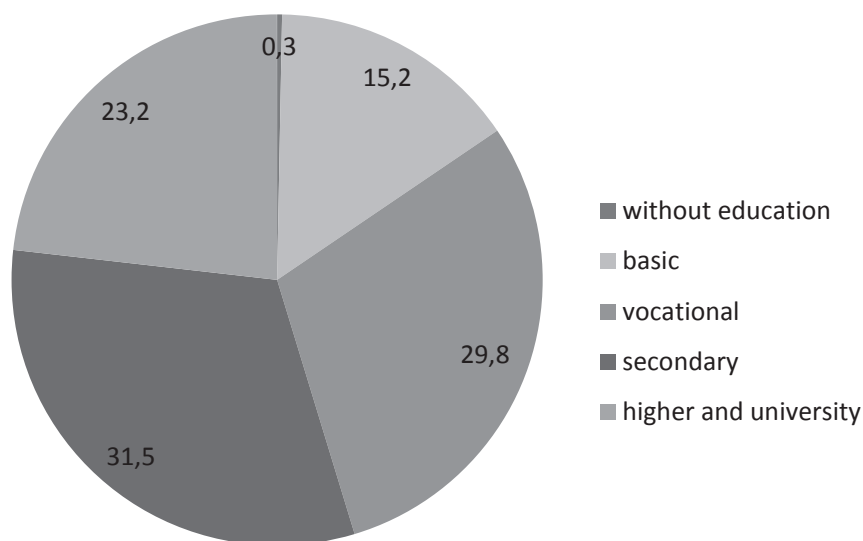
<sup>2</sup> Notice No. 186/2014 Coll. of the Ministry of Finance about the share of individual municipalities on percentage parts of the national gross revenue on VAT and the tax from incomes.

lowest employment centre in primary branches (1.6%) in the South-Moravian Region, after Brno city.

The unemployment rate in Kuřim was 5.2% in April 2015<sup>3</sup>. The same value was noted in its micro-region. It was below that for the district Brno-Countryside (5.8%) and much less than in the City of Brno (8.2%). Of course, the unemployment before the crisis was even lower (3.4% in August 2008). Nevertheless, the unemployment does not matter in Kuřim.

There are 2,408 business entities in Kuřim – of it 1,609 tradesmen, 317 commercial companies, 255 liberal professions, 11 joint stock companies, 7 state enterprises and 5 cooperatives. These subjects are engaged mostly in commerce (559), manufacturing (346) and building industry (213). However, adding together subjects dealing with scientific, technical, financial, assurance, information and communication services, we came to the number of 658.

Such a structure of activities indicates high professional and educational level of population. The education structure of the population in Kuřim (Fig. 6) is better than the national one. It concerns the people with completed secondary education whereas the share of the people with university education is close to the national level. It confirms the suburban character of the discussed town.



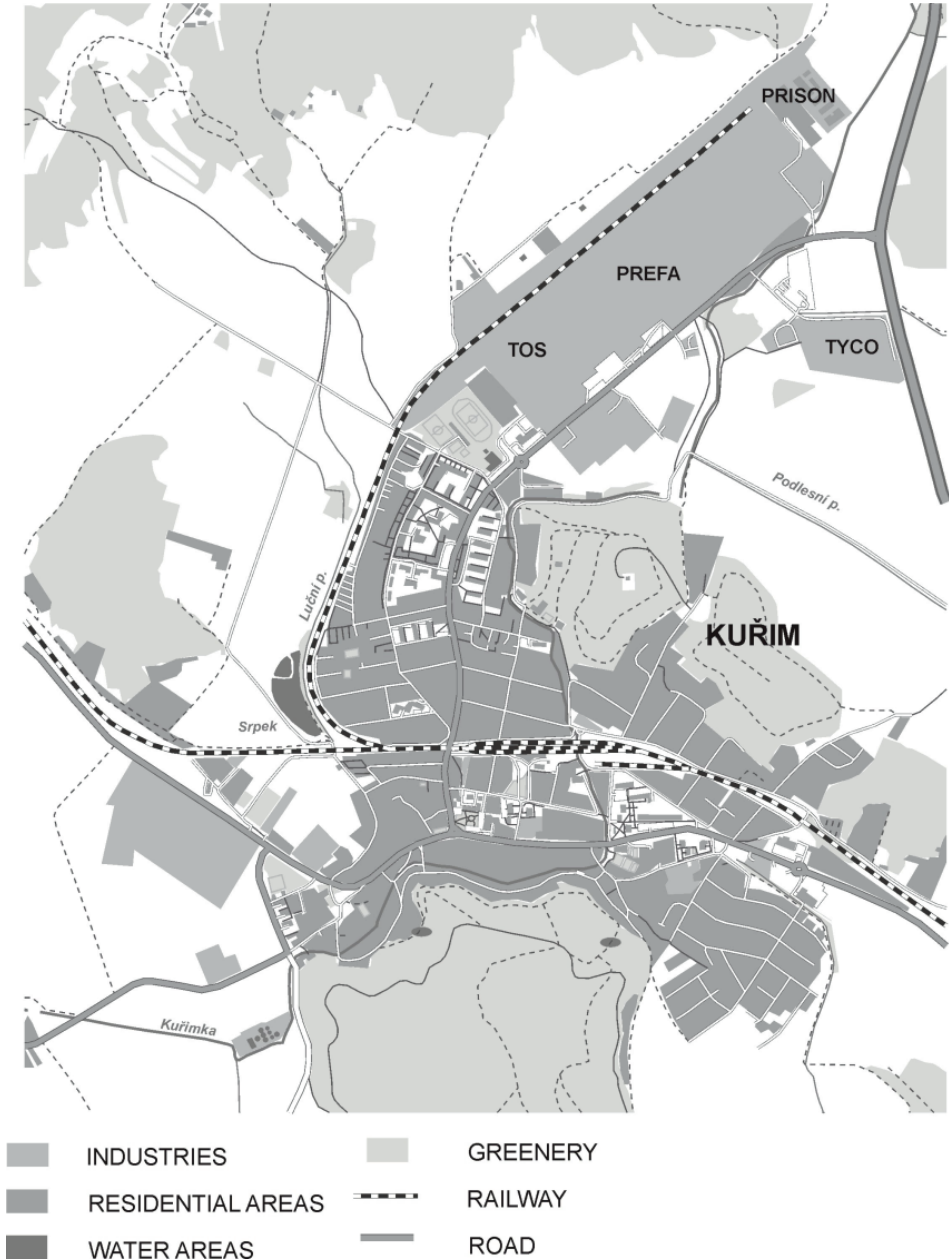
**Fig. 6.** Educational structure of the population of Kuřim in the age of 15 and more [%].

Source: Population census 2011. Praha: Czech Statistical Office.

The TOS factory has survived the transformation. Its production is directed to machining centres and technological workplaces according to the demand of individual customers. Some small machinery firms based on TOS'know-how arose in Kuřim after 1989. Kuřim foundry is another enterprise with a long-term tradition. The Kuřim branch of PREFA Brno produces concrete parts for building industry. The

<sup>3</sup> Integrated portal of the Ministry of Labour and Social Affairs.

TYCO Electronics (part of the global firm TE connectivity) represents a new branch of industry, founded on a greenfield of the Kuřimnorth-eastern fringe (Fig. 7).



**Fig. 7.** Territorial structure of Kuřim

Source: Vaishar et al., 2012

Special activity of Kuřim consists in the localization of a guarded prison<sup>4</sup> for 464 adult male prisoners, with a section for sexual delinquents. Social, health care and social services are less developed. There are 2 basic schools, one vocational school and 27 physicians. Such a weak social infrastructure (in comparison with other small towns) indicates less developed central function of this town.

Nevertheless, Kuřim has some administrative central function as a municipality with extended function. Its office ensures administrative services for 9 rural municipalities in the north-western part of the Brno-Countryside district. These municipalities have about 11,000 inhabitants in total, which is a number similar to the town itself. In reality, all these rural settlements fall individually to Brno. Thus, the central function probably does not cross the administrative activities.

Kuřim is not the tourism centre. Nevertheless, it disposes with some activities attracting also the citizens of Brno. It is necessary to mention the 27-hole Cascade golf course (opened in 2006). Water park wellness Kuřim is another activity of this sort. Walking activities are represented with Baba natural park and the lookout tower on Babí lom hill. Besides of the golf course, which has its own accommodation equipment, all other activities have facultative character.

Transport situation is one of the key factors of the polycentric area development. Kuřim is served by Integrated Transport System of the South-Moravian Region. The main connection is ensured by railway Nr. 250 Brno – Havlíčkův Brod. It connects Kuřim with all main centres of jobs in Brno. The main railway station in Brno is reachable in 27 minutes. In the opposite direction, this railway line connects Kuřim with Tišnovtown which has less inhabitants but fulfils more important central function and has more tertiary activities.

Altogether, 283 connections depart from Kuřim in working days (it means one each 5 minutes in average), of it 90 to Brno<sup>5</sup>. The reminder is directed to other important places in the northern part of the Brno-Countryside district and in the district Blansko. There are another 5 lines with 12 connections out of the integrated system, mostly from the neighbouring Vysočina region. Additionally, the line 310 serves as a municipal public transport connecting all important activities in the territory of Kuřim. It is possible to state that the frequency of public transport is sufficient, but also that Kuřim is one of the nodes of the Integrated Transport System of the South-Moravian Region and there is a variability of alternative goals of commuting. Thus Kuřim is not fully reliant to Brno.

The conditions of individual transport are more difficult. The 1<sup>st</sup> class road No. 43 (a section of the European Road No. E461 Vienna – Wrocław) touches Kuřim on its eastern fringe. This two-lane road is extremely frequented (32,099 vehicle units in 2010 in the section to Brno and 22,165 vehicle units in the direction to Svitavy). Many accidents occur because of such traffic, mostly that of international truck transport. The motorway in the same direction began to be constructed in 1939, as one of the results of the Munich Agreement. This construction was stopped in 1942, due to military failures and economic problems of the Nazi Germany, and after the WWII it lost the priority. After 1989 it has been considered with its construction as R43, connecting Brno with the motorway R35 near Hradec Králové. The investment

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<sup>4</sup> The 3<sup>rd</sup> level of 4 levels of Czech prisons.

<sup>5</sup> Integrated Transport System of the South Moravian Countryside.

was hampered by Greens. Thus the connection of Kuřim with the motorway system is still postponed.

The 2<sup>nd</sup> class road No. 385 (in the same direction as the railway) intersects Kuřim from the east to the west. The traffic is also intensive taking into account the passing of the road through the urban area: 17,304 vehicle units in the section leading to Brno and 14,185 vehicle units to Tišnov. Another 2<sup>nd</sup> class road No. 386 (Brno-Bystrc – road No. I/43) intersects the urban area of Kuřim from the south-west to the north-east. It is considerably less loaded (5,142 vehicle units in the direction to Brno and 9,026 vehicle units in the section to I/43 road). However, the road passes through the main residential and commercial areas of the town with many crossings, where possible are accidents with pedestrians and cyclists. As a result, it is possible to state that Kuřim is overloaded by the road intersecting its residential areas without any possibility of bypassing.

### Suburbanized small town

It is more or less clear that the main advantage of suburbanized small towns consists in some division of functions in the hinterland of a city. Such small towns ensure some jobs and services for local population, which is not so much depending on commuting to the city. Sometimes even counter-current commuting occurs. Thus the traffic flows can be dispersed.

On the other side, suburbanized small towns have usually hardly any central function. Their central impact is drowned by the influence of the city nearby. Both small towns and villages in their hinterland gravitate to the main city. Therefore, the suburban small towns lose an important part of their urban function. It can sometimes culminate in a threat of the loss of identity. Such small towns could be considered for parts of the city.

Nevertheless, in comparison with suburbanized villages – poor on infrastructure, almost complete dependency on the city, one-sided traffic flows, neither public spaces nor public life, small towns are a much better alternative. The question of their sustainability (see e.g. Knox and Mayer, 2009) consists neither in coexistence with nature nor in economic and social aspects, but in their duration as an independent settlement units.

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