SERVICE AND INDUSTRIAL AREAS IN LAND-USE PLANS – POTENTIAL FOR THE DEVELOPMENT OF LOCAL PRODUCTION SYSTEMS IN REGIONAL CAPITALS IN POLAND

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Abstract
The paper purpose is to present the potential of regional capital cities in Poland when it comes to providing land for the development of business (service) and industrial functions. We need to stress that these areas impact the competitiveness of cities and are decisive for their future growth. They create opportunities for establishing links between enterprises and institutions based in a given city, which helps building innovation potential within the territorial unit in question. That is vital particularly in agglomerations, which are considered knowledge and innovation concentration centres. The paper provides an analysis of the potential of available industrial and business areas and enables to assess which of regional capitals offer the biggest land reserves capable of hosting these two functions.

Key words: land-use plans, business and industry land allocations, local production systems, spatial planning policy.

INTRODUCTION

Space is a fixed resource hence we should manage it properly to provide all local actors with the possibility to meet their needs. Location of local production systems is also connected with space and relationships built within these spaces, which develop into links between entities operating in a given area. As Porter points in his writings clusters are embedded in geographic space and form concentrations of interconnected companies and institutions operating in a particular market area. The connections can be formal or informal. How can possibly cluster-based collaboration be created? Actors within a cluster collaborate and compete with one another for clients and markets\(^1\). However, the first step consists in creating space that could comprise economic operators and at present that is the task of local authorities. Collaboration among companies becomes feasible as a result of the reduction of distance among them, which facilitates the establishing of relationships. As a result, market is mobilised and value added is created for cooperating entities. The proximity of companies and institutions together with repeatable contacts among them deepen collaboration and mutual trust enhancing the capacity to absorb, produce, and disseminate innovation\(^2\).

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Agglomerations offer a specific environment for the development of relationships among operators, in particular their cores, which helps minimise transaction costs. Cores of agglomerations are often places where knowledge and innovation concentrate and substantially increase their potential compared to other less prominent centres in the country. Obviously, the growth of an agglomeration usually depends on the policy pursued by local authorities. Spatial planning policy is a component of the local policy, which enables building up innovation potential in big cities.

Location factors were first highlighted by Weber, who started with identifying three location factors: transport, labour, and agglomeration. Further works on the subject expanded the theory of location with new factors, such as: markets and raw material base. Weber’s approach was cost-based and it focused on the reduction of costs involved in individual factors. Independently of the approach, the set of business location factors in the theories of location continuously evolved. Changes with regard to that are discussed in the work by Dziezmanowicz, who highlights differences in location factors identified in two time slots, i.e., in the 1960s and 1990s. Location factors listed in the studies from the end of the 20th century clearly include elements pointing to the fact that location of businesses depends also on the potential of a particular city or town and is not always an immediate consequence of cost-related location factors. The policy of local authorities is also mentioned.

Location of companies in cities depends on resources, which they can offer and on the site ensuring the best possible use of spatial location at micro level. We mean here the wish to get an easy access to roads and means of transport. Factors connected with infrastructure are also relevant as they enable reducing initial costs relating to business location. Business – industrial areas in cities create potential, which helps building relationships among newly established economic operators and develop local production systems.

Development policy pursued by local authorities impacts location behaviours of companies. Spatial planning policy may prove to be vital as it improves local potential by shaping local law concerning new space where start-ups may develop or which may receive existing companies. The process can be supported by local authorities who through local regulations make it possible to create areas of proper quality for developing business and industrial functions.

1 LAND-USE POLICY IN POLAND

Spatial planning - an instrument of local authorities, which creates spatial development - is important as it builds potential for newly established operators as well as for those who wish to change their location. The main act, which regulates issues connected with spatial planning in Poland is the Spatial Planning and Management Act of 2003. It entrusts a commune, a basic territorial unit, with the responsibility for spatial planning.

Two strategic documents are worked out by communes: study of conditions and directions of spatial management and a land-use plan. Study of conditions and directions of spatial management in a commune is a mandatory document for all territorial units. It

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provides a framework of spatial policy exercised by local self-government. However, the document is binding only on local authorities and related institutions with respect to their competencies, not on local actors.

Figure 1 The way to get the building permission
Source: Feltynowski M., 2013. Land information system – a tool to keep the registry of planning permission. Case study of the Szczutowo commune. Infrastructure and ecology of rural areas No. 2013/ 04 (2)

Land-use plans as a rule are optional. They create local law and their content is binding on all local actors. Local plans allocate land and decide on the dividing lines. They identify the following seven general allocation categories: housing, service facilities, rural land, technical and production facilities, green areas and water, transport and technical infrastructure. Land allocation for a particular use and land management links to the need to develop functional connections between individual districts in the city. It is also important that local plans shorten the investment process. That is because administrative decision on planning permission is omitted and building permit is issued based on land-use plan (Figure 1.). Local plans also enable better monitoring of the behaviour of local actors because they become local law. They lay down detailed guidelines on how land may be used in given districts of the city. Their adoption helps better protect the environment and ensures proper functioning of the urban mechanism.

For firms seeking concrete business locations local plans perform an information function. Operators looking for land for their new activities get a clear guidance from the plan and learn about parameters of potential new investment projects, which facilitate their location decisions often of strategic importance. Independently of their size, economic operators must face a location decision when they start a business or at a later stage. These are often key decisions for the future of businesses in service and industry markets.

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From the viewpoint of the development of local production systems, areas allocated for service and industrial functions become important for the development of cities. These areas may host economic operators, who may become parts of existing local production systems or develop such systems in new sectors, which previously were not directly linked with the territorial unit in question. The only ramification in locating companies comes from the local law, which identifies authorised business profiles to which a company must conform. Local law, in turn, must comply with sustainable development principle and meet environmental requirements.

2 METHODOLOGY

The paper uses a comparative method consisting in the assessment of the ratio of areas allocated for business (service) and industry operations in land-use plans. First stage of the assessment includes all regional (voivodeship) capital cities in Poland. In total we ended up with 18 cities of different potential but with the same status of a regional capital city. The main differentiating criterion was the area of each city which in this particular group varied from 5,834 ha in Zielona Góra to almost 52,000 ha in Warsaw, the capital of the country. Similarly population in these cities in 2013 accounted for fewer than 120 K in Zielona Góra while in Warsaw it exceeded 1,724 K. We should recognise, however, that the most important assessment criterion was the coverage with land-use plans. The average for the studied group was 39% of the area covered with plans while the median was 42%, that is why we took the average as the point of reference and conducted detailed analyses for cities where land-use plan coverage was above the average. In total 11 cities met the criterion (Figure 2.). The largest in terms of the area was Kraków, which also had the biggest population. On the other extreme end of the group covered by the study was Zielona Góra.

![Figure 2. Localisation of cities participating in the study](image)
Source: own work based on maps from Central Geodetic and Cartographic Documentation Centre.
Data on the coverage with local land-use plans came from the Local Data Bank of the Central Statistical Office. On top of that, we also used data from the Ministry of Infrastructure and Development collected for the study entitled „Planowanie przestrzenné w gminie” [Spatial planning in a commune] for 2013. Only for Olsztyn data referred to 2012 because the questionnaire for 2013 was not complete. The study „Planowanie przestrzenné w gminie” is an annual inquiry of the Central Statistical Office for the Ministry of Infrastructure and Development. Collected data enable to monitor spatial planning in communes and show how land-use plans are obeyed. These studies are also used to collect data on land allocations in land-use plans, which allows identifying development directions approved by local authorities.

3 SPATIAL PLANNING IMPACT UPON BUSINESS AND INDUSTRIAL LAND ALLOCATIONS

The review of data on spatial planning in communes selected for the study demonstrates that more local plans translate into bigger areas in the city covered with plans, which produces higher plan coverage ratio. Average number of local plans binding in 11 studied cities was 169. Lublin has got the fewest documents of such type, only 19. On the other extreme there is Gdańsk with 531 binding local land-use plans. Gdańsk is also a regional capital with the highest land-use plan coverage ratio (68%). Independently of that, the average coverage ratio for local land-use plans amounts to 49.2% in analysed cities; it is the lowest in Poznań where it slightly exceeds 40%. Besides Gdańsk, high coverage ratios for land-use plans was reported for Zielona Góra and Wrocław with respective ratios of 59% and 54.6%. We should admit that all regional capitals within the study group either have already achieved or will most probably soon achieve the real coverage with land-use plans identified in literature, i.e., 50%.7

<table>
<thead>
<tr>
<th>City</th>
<th>No. of land-use plans</th>
<th>Land-use plans area [ha]</th>
<th>Land-use plans coverage ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Białystok</td>
<td>102</td>
<td>4,714</td>
<td>46.2</td>
</tr>
<tr>
<td>Gdańsk</td>
<td>531</td>
<td>17,822</td>
<td>68</td>
</tr>
<tr>
<td>Gorzów</td>
<td>64</td>
<td>3,496</td>
<td>40.8</td>
</tr>
<tr>
<td>Wielkopolski</td>
<td>130</td>
<td>15,752</td>
<td>48.2</td>
</tr>
<tr>
<td>Kraków</td>
<td>19</td>
<td>6,360</td>
<td>43.1</td>
</tr>
<tr>
<td>Lublin</td>
<td>59</td>
<td>4,403</td>
<td>49.8</td>
</tr>
<tr>
<td>Olsztyn</td>
<td>174</td>
<td>10,491</td>
<td>40.1</td>
</tr>
<tr>
<td>Poznań</td>
<td>208</td>
<td>13,828</td>
<td>46</td>
</tr>
<tr>
<td>Szczecin</td>
<td>167</td>
<td>5,193</td>
<td>44.9</td>
</tr>
<tr>
<td>Toruń</td>
<td>335</td>
<td>15,980</td>
<td>54.6</td>
</tr>
<tr>
<td>Zielona Góra</td>
<td>67</td>
<td>3,441</td>
<td>59</td>
</tr>
</tbody>
</table>

Source: own calculations based on data from Central Statistical Office of Poland.

Through land-use plans local authorities are trying to make use of the potential of areas situated within city borders. By making appropriate choices they must specify management directions of individual areas, which reinforces the position of a local unit in offering potential

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business or industrial allocations. Independently of the proportion of the city covered with local plans, local authorities must approach emerging functions of city areas in a sustainable way. Importantly, solutions proposed in local plans should observe spatial order, the overarching goal of spatial planning.

Analysis of land allocations in land-use plans of regional capital cities reveals differences in the proportion of land used for service and industrial functions. The biggest investment area for such allocations can be found in Gdańsk where the authorities allocated almost 56% of the total area for services and industry in land-use plans. At the other end there is Poznań where local authorities decided to allocate only 12% of the area covered with land-use plans for services and industry. In the analysed group of cities service and industrial allocations represented on average 26.1% whilst the median was 22.3%, equal to the ratio reported for Zielona Góra. Most of the cities decided to allocate from 20% to 30% of areas covered by land-use plans for service and industrial functions. Outside of this range we can find ratios reported for Gorzów Wielkopolski and Gdańsk, respectively, 41.7% and 55.9%. The situation in Poznań, Kraków and Wrocław is completely different with ratios amounting to 11.9%, 14.5%, and 17.8%, respectively.

Table 2 Service and industrial areas in land-use plans in the analyzed cities

<table>
<thead>
<tr>
<th>City</th>
<th>Service area – percent of land-use plans</th>
<th>Industrial area – percent of land-use plans</th>
<th>Industrial area [ha]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Białystok</td>
<td>21.8</td>
<td>5.8</td>
<td>273</td>
</tr>
<tr>
<td>Gdańsk</td>
<td>27.9</td>
<td>28</td>
<td>4,990</td>
</tr>
<tr>
<td>Gorzów Wielkopolski</td>
<td>22.9</td>
<td>18.8</td>
<td>657</td>
</tr>
<tr>
<td>Kraków</td>
<td>9.6</td>
<td>4.9</td>
<td>772</td>
</tr>
<tr>
<td>Lublin</td>
<td>8.5</td>
<td>18</td>
<td>1,145</td>
</tr>
<tr>
<td>Olsztyn</td>
<td>10.8</td>
<td>9.7</td>
<td>427</td>
</tr>
<tr>
<td>Poznań</td>
<td>9.9</td>
<td>2</td>
<td>210</td>
</tr>
<tr>
<td>Szczecin</td>
<td>11</td>
<td>9</td>
<td>1,245</td>
</tr>
<tr>
<td>Toruń</td>
<td>24.6</td>
<td>4</td>
<td>208</td>
</tr>
<tr>
<td>Wrocław</td>
<td>13</td>
<td>4.8</td>
<td>767</td>
</tr>
<tr>
<td>Zielona Góra</td>
<td>15.4</td>
<td>6.9</td>
<td>237</td>
</tr>
</tbody>
</table>

Source: own calculations based on data from Ministry of Infrastructure and Development.

More detailed analyses have shown that in all cases activities relating to the 3rd sector dominate in land allocations. Only in Gdańsk and Lublin the area allocated for services is smaller than that for industry. The ratio for Gdańsk is 27.9% to 28% in favour of industrial land allocation while in Lublin 8.5% to 18%. In both regional capitals local authorities want to promote industrial land. All the remaining cities allocated more areas for services. The biggest disproportions were identified in Toruń where service areas occupy chunks of land by more than 20 percentage points bigger than industrial land. Big differentiation was also found in Białystok where the difference reaches 16 p.p. In other cities the differences contain within 10 p.p. in favour of service areas.

**CONCLUSION**

We need to stress that local authorities in most regional capital cities provide for the possibility to develop service and industrial functions in their local land-use plans. That makes us think in positive terms about the potential to develop local production systems.
Spatial policy of analysed cities demonstrates that despite differences in areas allocated for services and industry in land-use plans, local authorities are taking the first step to enable collaboration of local entities based within new industrial and service areas. Ensuring the potential to economic operators such as investment areas lays ground for joint activities in regional capitals.

Availability of proper infrastructure guaranteed by local authorities is a vital element of the development of entrepreneurship in new investment areas. Sometimes infrastructure must be expanded in areas proposed in local plans as service and industrial allocations. Additional element that could support the potential of land resources is adequate tax policy of local authorities, which may stimulate and encourage using the potential of land reserves offered by local authorities for use. We need to stress that spatial policy pursued by local authorities complements other sectoral policies of the city and often is decisive for business location decisions of economic operators.

Studies conducted in 11 regional capital cities provide evidence that priority in spatial management is given to creating allocations for the 3rd sector. At the same time, local authorities do not forget land reserves for industry, which allows us to conclude that they see the potential in the development of both functions. Rarely does it happen that local authorities in regional capitals decide to give the priority and develop land reserves for industry placing services on the second place. We need to stress that the results show directly the possibility to locate new economic operators in surveyed cities as there are land reserves for industry and services.

References


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