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CONDITIONS AND IMPROVEMENTS IMPACTING URBAN SPRAWL IN POLAND

Abstract: The paper deals with the topic of urban sprawl and the impact of the compact city theory on the process of spatial development. Drawing from research findings, authors point out the main sources of crisis in spatial planning resulting from the phenomenon of urban sprawl.

Keywords: Local politics, planning, study, urban sprawl, urbanization.

Introduction

The fundamental problem discussed in the study is the phenomenon of urban sprawl in Poland. In the literature, the term of urban sprawl is associated with the phenomenon of suburbanization, which is characterized by great impetuosity due, among others, to the lack of relevant legal regulations that allow a comprehensive and all-embracing approach to urban regions [Wassmer 2002]. In addition, the current suburbanisation phenomenon can be perceived as a component of urban transformation processes identified with metropolitanisation. In this sense, it is a process aimed at establishing a new urban form referred to by authors as intercity, dispersed city, network city, fuzzy structure [Lisowski, Grochowski 2007]. Urban sprawl is defined as the shifting of urban population and employment from the city towards suburban communes, along with the process of reducing the degree of control through the regional spatial policy. More precisely, the process of urban sprawl can be identified with a form of spatial development that encompasses the following aspects: low population density and uncontrolled dispersal of new developments, significantly hindered access for pedestrians and cyclists, creation of retail parks along major roads along with shopping malls that become centres of suburban towns located around a large city, passenger cars as the predominating means of transport. As noted above, a characteristic feature is the negligible impact of spatial policies implemented at the regional and local level [Perrsky, Wiewel 2012]. These policies may be flawed, and thus ineffective, which justifies remedial actions. In this context, spatial development is based primarily

on transport – in particular passenger car transport. In foreign literature, two essential features of urban sprawl are distinguished [Ewing 1997]. The first is the limited accessibility of areas characterized with uncontrolled construction projects (sporadic or non-existent public transport connections, long distances between residential areas and social infrastructure); the second is the functional inefficiency of open spaces. In addition, some experts suggest a working definition that summarizes numerous approaches to interpreting the phenomenon of urban sprawl: unplanned, practically unchecked and virtually uncoordinated process of construction and land planning. The limited extent of „planning,” „control” and „co-ordination” mentioned above is directly related to formal and legal circumstances, respect for the letter of the law and its interpretation. When expounding the problem, we must also take into account the “human factor”, *i.e.* insufficient competences, low awareness of spatial order or the potential effects of urbanization. It can be assumed that legal provisions currently in force in Poland allow for an efficient management of space (local plans, studies, administrative decisions, offices in charge of controlling the process). However, the inconsistent interpretation of legal regulations by investors, officials and residents, as well as the divergent intentions of these groups, impinge on the eventual spatial layout in Poland.

The compounding pressure of urbanization in suburban areas has increased in the last decade. To a large extent, this can be attributed to three aspects: „weak” law; growing lack of respect for the natural environment and landscape; increased reliance on private vehicles in everyday life. The analysis of space in a variety of urban and suburban areas points to the fact that technical infrastructure projects are focused on driver - and vehicle-centred solutions. It finds confirmation, *i.a.*, in the frequently observed transformation of green spaces into parking lots, or the widening of streets at the expense of sidewalks.

Urban sprawl is not limited to national territories, but rather a phenomenon that should be analysed on the international level, as evidenced by numerous monitoring and advisory projects implemented by various institutions *e.g.* the Organisation for Economic Co-operation and Development (OECD) [Newman, Kenworthy 1989; Kahn 2007].

Importantly, this process generates significant costs, which are borne by public sector entities. Two aspects of the system are generally referred to, due to an increased demand for goods and services provided by the public sector, due to the growing number of suburban residents. The second factor is due to the low density of development in the suburbia and the fact that the public sector provides services to the population of widening suburban areas. The public sector incurs costs mainly due to investments in the development of road infrastructure, educational infrastructure,

¹ A variety of definitions of urban sprawl have been formulated. The process is complex and its forms are diverse, it is therefore difficult to adopt a single and universally recognized definition of this phenomenon.

water and sewage networks, the power grid, fire protection systems, the police, health care facilities, infrastructure and public transport (urban and suburban). In addition, the advancement of urban sprawl results in increased operation and maintenance costs of road infrastructure and water/sewage networks; they are higher than in areas with greater population density, as greater distances between buildings decrease the relative efficiency. Urban sprawl brings potential benefits to the residents of the suburbia, even though living in a better environment comes at a cost and one of the major disadvantages is longer commuting time.

The main aim of the study is to present the causes of the spatial management crisis due to the process of suburbanization. Authors shall also outline proposals of changes to be introduced to improve the current situation.

1. Methodology

Theoretical argumentation was preceded by an analysis of spatial structures of selected areas where urban sprawl has been observed. The analysis was conducted with respect to developed areas and open public spaces; the study also takes into account the existing formal and legal circumstances.

For many years, the phenomenon of urban sprawl has been widely discussed and studied by researchers and experts of spatial and urban planning throughout the world. Urban sprawl was first identified and analysed in the 1920s in the US, and later in the 1960s-1970s in Europe. In Poland, the issue (the suburbanization phase that began in post-communist cities) came to researchers' attention in the period after the country's political transformation [Jałowicki 1999; Parysek 2004; Litwińska 2008]. Since the early 1990s, migration towards suburban zones has been observed in particular among more affluent city dwellers and the elderly, who – once they have retired - transform their secondary or holiday homes into permanent places of residence. The extent of the phenomenon has been amplified by widespread car ownership. Already in 1990-2000, the rate of migration from urban to rural areas grew from approx. 16% to over 26% [Liszewski 2012]. Earlier, back in the 1940s, suburban area development was analysed, among others, by Tołwiński [1948]; in the 1960s, the spatial development of city outskirts (spatial systems in suburban areas) became the subject of interest *inter alia* to Czarnecki [1964].

When examining such a broad and interdisciplinary subject, it is necessary to avail oneself of reliable statistical information. The analysis was based on compilations of figures and data pertaining to spatial planning in all Polish gminas (urban and rural communes) in the period between 2009 and 2013². In this study, the results of surveys

² Ministry of Infrastructure and Development, Department of Spatial Planning Policy, Division of Spatial Planning System. Study 1.02.04(16) „Spatial planning in gminas” carried out by the minister

and an analysis of the spatial structure of the Cracow Metropolitan Area (KMA) and selected areas of two poviats (counties) - Wieliczka and Myślenice - were also used³.

The research enabled the authors to review the phenomena occurring in the metropolitan core - Cracow - and the area where the process of urban sprawl has been identified. Research on KMA was conducted mainly in June 2012 and involved questionnaire interviews conducted in local municipality offices and among local residents. The study encompassed all municipalities of KMA, with the exception of the city of Cracow (the number of municipalities n=50). Both questions addressed to municipal offices and to residents were divided into two thematic groups: strategic planning and spatial planning in the development of gminas. The questionnaire addressed to municipal offices consisted of 62 open-ended and closed-ended questions, and a significant proportion of them were subject to further inference (~70%). The majority of respondents were employees of municipal offices in KMA, in particular those responsible for land management and spatial planning, real estate management, municipal service management and environmental protection [Hołuj, Zawilińska 2013]. A total of 15-20 respondents participated in the survey conducted among local residents in each municipality (total n=656). The questionnaire addressed to residents consisted of 17 questions⁴. The most general conclusion that can be drawn from the study is the following: citizens' expectations in terms of investment in technical and social infrastructure (its maintenance) are directly proportional, and the assessment of the quality of space and the spatial policy implemented in a municipality is inversely proportional to the number of area redevelopment permits issued. The survey was complemented with a detailed urban planning inventory (carried out using a direct method, which allowed the verification of the actual state of linear, punctual and surface elements of a territorial unit) carried out in June 2014 in the gmina of Biskupice⁵. The main objective of the study was to draw up an inventory of land management, which involved the analysis of the location, building use, type of development, number of storeys, technical installations, technical condition and the architectural value of buildings. From the point of view of the urban sprawl process, it is also important to assess the intensity of traffic. Traffic analysis was carried out on a 24-hour basis, in three phases: the first

responsible for construction, local spatial planning, management and housing, in accordance with the Programme of Research on Public Statistics (CSO).

³ Research results are outlined in unpublished studies of the Department of EU Regional Economics in Cracow.

⁴ A. Hołuj – director of field research on spatial and strategic planning [Brańka *et al.* 2012].

⁵ A. Hołuj - director of field research. The research was conducted in cooperation with the head of the gmina of Biskupice, Director of the Department of Economic Development and Investment, employees of the Department of Spatial Planning, Surveying and Property Management of Biskupice Commune Office and the firm Creative GIS Solutions. Field inventory work was carried out by a group of nearly 40 participants on an area of 4,100 hectares.

was conducted in June-July and in November 2012, the second in June 2013 and the third in January and May 2014. Passenger cars, trucks and buses running along district road K1935 were all taken into account for the purposes of the study [further information: Hołuj 2014]. The findings informed a cross-section analysis of the phenomena occurring in space and the assessment of daily traffic.

2. Urban sprawl or compact city?

In the light of the consequences of urban sprawl, sustainable spatial forms gained popularity and stirred controversy in both academic literature and public policies in the late 1980s [Breheny 1996]. In 1990, for the first time, the European Commission published Green Paper on the Urban Environment [CEC 1990], thus introducing the concept of the compact city, which emphasises the advantages of high residential density [Elkin *et al.* 1991]. A compact city is defined as a city with high residential density and a diversified use of space, where development takes place primarily within the city limits [Burton 2000]. The concept is widely associated with efficient public transport systems and spatial arrangements that encourage walking or cycling. Yet “compact” has also been misinterpreted and equated with excessive residential density [Neuman 2005], and therefore to overcrowding, lack of open or green spaces and soaring housing prices. It should be noted that the term of “compact city” has been given numerous definition by scholars, who have highlighted different aspects of it [Daneshpur, Shakibamanesh 2011]. In recent years, compactness has also been transposed to the macroeconomic dimension, which has been reflected in the publication entitled Compact City Policies: A Comparative Assessment [OECD 2010]. Despite the numerous studies and extensive knowledge about the issue, defining the compact city continues to pose problems. There are several reasons for this, the most important of which is the lack of a single (specific) model. Therefore, the concept of the compact city is defined through the prism of its characteristic features. An important strand of research conducted in Poland and pertaining to space, its development and distribution is the abovementioned process of urban sprawl and the concomitant phenomenon of shrinking cities (Shrink Smart)⁶. Polish cities still have significant reserves of land suitable for housing and the current situation allows for the construction of new buildings and for accommodating future residents. This has been emphasised, among others, by Markowski [2004, 2011] and Bohm [1996], who point to large stretches of land designated in spatial management studies (absorption capacity of 300 million people). What is more, reserves that have already been included in the adopted local spatial

⁶ The issue of shrinking cities has been further examined in an international project *Shrink Smart – The Governance of Shrinkage within a European Context 2009-2012*; Poland was represented in the project by the Department of Economic Geography, the University of Silesia - project manager R. Kszysztofik.

management plans provide for a total construction area exceeding 1,000,000 ha suitable for single-family housing (absorption capacity of more than 40 million persons) and multifamily housing (~ 190,000 ha, absorption capacity exceeding 37 million people)⁷. Also, certain economic and social factors - not all of which are fully justified – contribute to the process of urban sprawl.

Conclusions

New urbanism – concept that offers alternatives to the typical and traditional urban model with extensive suburbs - provides a certain antidote to negative changes, such as uncontrolled construction, its form and location. New urbanism is a set of principles [Lund 2003] including the concept of the compact city, self-contained neighbourhoods where all services are accessible within a walking distance, a clearly defined city centre with public spaces, buildings and businesses (retail). The location of public transport stops plays an important role, as well as an interconnected network of streets forming a coherent system of neighbourhoods. These aspects affect the quality of life in the public space and can encourage using public spaces or moving within them. Civic buildings in prominent parts of the city and the existence of conveniently located open spaces, accessible to the residents of all neighbourhoods, also encourages their use by city dwellers. The new urbanism also highlights the importance of mixed-use streetscapes, the variety of buildings and economic activities pursued within them, as well as their accessibility to passers-by.

In addition, three important aspects impact the development of urban areas, namely: economic feasibility, environmental responsibility and social agreement [Porter 2002]. In order to achieve these goals, it is important to stimulate development in areas with existing or planned infrastructure. Within these areas, it is recommended to diversify the use of space, pedestrian movement and transport-based development; stimulating investment; limiting regulations on spatial development and financing infrastructure investments from local, regional, and national sources [O’Neil 2000].

When analysing the situation in Poland, many doubts arise as to the solutions that may - in the future - improve the system currently in place. Firstly, studies and local plans drawn up at present are not an appropriate tool for steering the process of spatial management. Specialists dealing with spatial planning favourably assess the nature and the idea behind these documents, but less approving opinions have been expressed in relation to persons involved in the creation, adoption and implementation of local plans and studies. The human factor that fails, thus undermining the methodology of spatial planning introduced in 2003. Experiences from the last decade have shown that

⁷ On the basis of data of the Ministry of Infrastructure and Development, *Planowanie przestrzenne w gminie*, Warsaw 2012 and 2013.

the “universality” of legislation results in detrimental – from the point of view of the future – measures being introduced in spatial planning studies (lack of sustainability). The growing number of local spatial development plans (43,600 in 2013, with a total area of 8.95 million hectares) does not translate directly into the implementation of the desired spatial policy. According to the letter of the law, investments initiated on the basis of land development decisions and “overwritten” with local plans continue to be implemented, not necessarily in line with the provisions of the study. Some of recently enacted local plans fail to represent the current state of spatial development, which results in a substandard level (possibilities) of space management. Furthermore, it is assumed that land development decisions have - in many cases - a negative impact on the process of urbanization in Poland (129,400 decisions were issued in 2013, as well as 21,800 decision on the location of public investments; this shows a decrease in relation to previous years, even though initially, land development decisions were regarded as a solution to be implemented “sporadically”). However, do local plans really provide an unshakable foundation for space management? One may doubt it, as a lot depends on their quality, timeliness and the awareness of the essence of the procedure being applied in preparing planning documents at the municipal level. Besides, studies conducted in the gmina of Biskupice and the analysis of the results of the survey conducted in Cracow Metropolitan Area have proven that urban sprawl advances despite the local development plans in force. Locally applicable provisions do not provide a sufficient guarantee. The process of indiscriminate housing development can be kept in check only through appropriate legal provisions that define the desired structure of development within a municipality. It is essential to bear in mind the influence of the environment on human life, as the lack of awareness of this fact might result in injudicious decisions on spatial planning and use of land.

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