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Research Directions and Achievements of Polish Geography of Construction

Abstract: Although the second half of the 20th century is the period of development of economic geography in Poland, in the first post-war decades geography of construction did not function as a separate geographical subdivision. More significant development of spatial research in this field was brought about a quarter of a century ago. In the article devoted to the problems of geography of construction in Poland, the subject scope, main directions of research and the achievements of this sub-discipline are discussed. Geography of construction is a branch of economic geography, which examines spatial aspects of construction and assembly 'production', with special attention to spatial organisation of investment processes, as well as conditions and effects of location and spatial structure of construction investments. The literature review allows for isolating the main directions, among which the following can be listed: conditions for the development of construction of different functions, also in the context of the accompanying phenomena (e.g. in the social sphere), location factors and effects of construction investments, as well as research devoted to the spatial structure of construction projects and their links with geographical environment. Research topics of geography of construction are part of the spatial processes within the interests of other geographic sub-disciplines, as well as of related social, economic and even technical disciplines. The achievements of Polish geography of construction of the last quarter of a century are important from the point of view of a better recognition of the conditions and course of the socio-economic transformation in Poland in different contexts and different spatial scales.

Keywords: Polish geography of construction; research achievements and directions; subject of research

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INTRODUCTION

The second half of the 20th century brought dynamic development of economic geography in Poland, in particular geography of industry and geography of transport, both related to the material sphere of economic activity. However, Polish geographical

literature in the early post-war decades barely contained any reference to such a term as geography of construction. It was not until the conference of the Industrial Geography Commission of the Polish Geographical Society, which took place in Krakow at the turn of the 1970s and 1980s, that L. Straszewicz proposed the inclusion of a rather marginally treated theme of geography of construction. In the article published after this conference, when analysing the role of geography of industry in the system of geographic sciences, L. Straszewicz suggested:

“Specialists in industrial issues are sometimes limited in their research... only to the processing industry... On the other hand, construction is also rarely included in industry; in our planning and statistical practice it is generally thrown into a separate housing sector. In my opinion, despite many doubts and reservations, geography of industry should include all these three sections (i.e. also mine industry), although they are characterised not only by the diversity of the subject matter, but also very different issues, and – what may be the most important – different research methods” (Straszewicz, 1986: 28).

The argument for such a solution to situating the problems of construction was that together with the processing industry it belongs to the second sphere of human economic activity and is subject to the same laws that tie construction with industry, especially industry of investment goods. The difference concerns the nature of the work and the type of a finished product which cannot be subject to movement and is quite a different merchandise on the specific service and real estate market. As L. Straszewicz writes, “in geographical practice so far no one has dealt with construction thoroughly, leaving this important sector of the national economy beyond the sphere of interests of economic geography. I think, however, that there is no more serious reason our discipline (i.e. geography of industry – added by the authors) should not include construction as a special phase of industry” (Straszewicz, 1986: 29).

This demand for broader integration of construction issues into geographical research within the sub-discipline of geography of industry did not receive much response, as evidenced by the very carefully reviewed achievements of Polish geography of industry at the end of the 20th century (Miształ, Zioło, 1998; Marszał, 2001). The next decades, and especially the last quarter of the century, have brought significant development of spatial research in the field of construction.

Taking the above into account, the article discusses several issues that relate to: (1) the scope of the subject and object of research of geography of construction, (2) the main directions of research carried out within this geographical subdivision in Poland, and (3) the achievements of Polish geography of construction.

OBJECT OF RESEARCH IN GEOGRAPHY OF CONSTRUCTION

Presentation of the achievements of geography of construction, and more broadly spatial research on the issues of construction, requires in the first place specifying the merits of the subject of research of this relatively young subdivision of socio-economic geography.

Construction is part of the national economy, in which purposeful and conscious human activity adapts natural resources for human needs through the implementation of construction projects. Construction investments are a specific kind of economic activity, the aim of which is to construct a building with specific utility characteristics

and in a specific place, as well as the reconstruction, extension and superstructure of a building¹. The notion of a construction project, referring to the result of this activity, can mean the effect of investment. On the other hand, in economic terms, it can be understood as an economic burden incurred for maintaining, creating or increasing capital, which has the form of a construction object.

Construction investment, treated as a synonym of a construction process, is a complex and multi-stage activity serving the implementation of a construction project and includes not only the phase of physical implementation of a building, but also the necessary accompanying measures required by law, such as:

- development of a construction project (development of the plot, as well as architectural and construction project),
- obtaining an administrative decision enabling the commencement of construction.²

For construction plots or areas where construction is planned, it is necessary to design and implement appropriate development (before putting objects into service)³. The obligatory element of the construction process is the investment's characteristics including, in addition to the land development and building characteristics (design and dimensions of the planned structures), the legal status of the property (including planning as well as protection and conservation), technical infrastructure needs (availability of utilities), transportation accessibility, technical parameters and geotechnical conditions of the investment and its impact on the environment⁴. The key issue determining the construction investment is compliance of the construction project with the provisions of the local spatial development plan (or with the decision on land development conditions, as well as environmental protection requirements) and building regulations.

Construction objects – whose inherent feature is permanent connection to the ground (so they are unmovable) – may take the form of (a) structures, i.e. objects not singling out the inner space intended for living beings, but which are not objects of small architecture, (b) buildings, i.e. cubature objects with foundations and a roof, separated from space by means of building partitions and used for various purposes by man, and (c) objects of small architecture.

As part of such defined construction, the following can be distinguished based on the purpose and functions: housing (single-family, multi-family, and collective), service and municipal (technical infrastructure and small architecture), industrial construction, communication/road, agricultural and water (marine and inland).

Construction, understood both as the investment process and the effect of this process, is the subject of research of many academic disciplines falling within the scope of both technical and social knowledge. What makes geography stand out among them is conducting spatial analyses. Geography of construction is thus a branch of economic geography, which examines: (a) the spatial aspects of the construction and assembly 'production' (related to site preparation, raising structures and buildings, performing

¹ See Article 3 of the Construction Law Act of 1994.

² An administrative decision requires a change of land development consisting in the construction of a building or other construction works, as well as a change in the use of the building or its part, if there is no local zoning plan.

³ Cf. Article 6 of the 1994 Construction Law Act.

⁴ Cf. Article 52, Item 1, Point 2 of the Spatial Planning and Development Act of 2003.

installation construction, and execution of finishing works), and especially the spatial organisation of investment processes, and (b) conditions and effects of location and spatial structure of construction investments.

The above-presented definition of the research area of geography of construction, although its theoretical dimension should not raise doubts, in practice does not always allow assigning specific scientific achievements to a given sub-discipline. This is primarily determined by the nature of the construction activity, which very closely fits into the spatial processes remaining in the interest of other geographic sub-disciplines, as well as the related social, economic and even technical disciplines. An example can be geography of transport, industry and settlement, as well as spatial management and urban planning. Spatial analysis of construction fits perfectly within the issues of spatial development, revitalisation, location of investments, housing policy and many other issues often undertaken in an interdisciplinary approach.

This specificity of geography of construction had a key impact on the lack of its clear delimitation as one of the sub-disciplines of socio-economic geography; consequently for many years studies dealing with the issues related to the spatial aspects of construction projects were incorporated within related disciplines. An entirely separate and debatable issue is the problem of classification of studies devoted to manufacturing activities related to the production of building materials, which in itself is not a component of the construction process, but significantly conditions it and thus to some extent constitutes its extension.

The problem of construction defined as the field of human activity associated with the erection of buildings, including redevelopment, reconstruction, modernisation and conservation of the existing facilities, was prevalent in many studies published after World War II, although often mentioned briefly as part of settlements issues or the problems of selected business sectors. Although 'explicitly' not referred to as geography of construction, a series of analyses were in fact devoted to investment issues related to this geography sub-discipline, whose basic element is construction investments, covering both the industrial and infrastructural spheres, as well as housing construction.

MAIN RESEARCH DIRECTIONS OF POLISH GEOGRAPHY OF CONSTRUCTION

As previously mentioned, the classification of construction can be made, among others, based on its purpose and functions. Taking into account this criterion, it can be concluded that the housing construction has become of particular interest for geographers representing various academic centres in Poland, which results both from its importance for the national economy and the functioning of society. The complexity of problems related to this sector of the economy affects the fact that the subject of housing construction has been undertaken in many academic studies, as well as specialist and daily press, among others due to significant transformations that affected this sector in Poland during the period of the centrally planned economy, and then during the political and economic transformation.

Studies in the field of geography of construction include problems of housing development and changes in its spatial concentration (Tkocz, 1993; Gaczek, Rykiel, 1999; Marszał, 1999a, 1999c; Pieniążek, 2005; Milewska, Ogradowczyk, 2006a; Tkocz, 2010; Stępnia, 2014). They also analyse the quantitative development of housing construction against the background of national policy in those terms (Marszał, Juraś, 1998;

Ilnicki, 1999a, 1999c, 2003; Juraś, Posatskyy, 1999; Marszał, 1999b; Marszał, Stawasz, 2006a, 2006b; Ogrodowczyk, 2015). The influence of spatial policy and changes in the construction law on the development of new housing construction is also underlined (Milewska, 2003a, 2003b; Borowska, 2011; Ogrodowczyk, 2011b). The specificity of construction, including its sensitivity to economic fluctuations, favours interest in the relationships that exist between housing and the economy, as well as the state's tax policy.

The emergence of new forms of financing and supporting the development of housing construction in the conditions of market economy means that analyses devoted to this sector also concern its changing investment structure, as well as problems in the management of housing resources, occurring especially in the new socio-economic conditions (Marszał, 2000; Marszał, Stawasz, 2006a, 2006b).

Important themes of analyses are still the directions of technological development in the construction industry and the problems of standard and technical equipment of housing resources and their exploitation, as well as problems of modernisation and revitalisation in connection with often unsatisfactory technical condition of residential buildings (Kozłowski, 2005; Słodczyk, Jakubczyk, 2005).

The issues of the location of new housing constructions in urban areas are rarely described in detail in the literature. They appear as part of wider problems, especially in the context of spatial development conditions of various types of housing, as well as in the area of acquisition of land for investment and selection of a detailed location of new housing, also in the form of housing estates (Gaczek, Rykiel, 1999; Słodczyk, Klimek, 2003; Wdowicka, 2007; Ogrodowczyk, 2011a). The directions of spatial development of housing, also in connection with changes in infrastructure of urban areas (Bartosiewicz, Turczyn, 2008) and the spatial structure of housing (Dzieciuchowicz, 2002; Milewska, 2008) are also analysed. It is worth noting that new housing construction is of interest for geographers in the context of its impact on social transformations taking place in urban areas, including processes of gentrification (Holm, Marcińczak, Ogrodowczyk, 2015).

The majority of studies in the field in question is related to the issues of housing development, structures of residential spaces and housing conditions of the population, especially residing in large cities and suburban areas (Dzieciuchowicz, 1974, 1975, 2002; Gaczek, 1979; Tkocz, 1992; Jakóbczyk-Gryszkiewicz, 1995, 1998; Ilnicki, 1996, 2001, 2006; Kaczmarek, 1996; Gotowski, 2003; Milewska, Molenda, 2004; Matykowski, Tobolska, 2005; Milewska, 2005, 2008; Ogrodowczyk, 2006; Milewska-Osiecka, 2010, 2011, 2015), as well as the broadly understood theme of value and the real estate market (Groeger, 2004), while publications on the housing development of medium and small towns are definitely less numerous. In particular, they deal with the topic of conditions for the development of housing construction, as well as the types of buildings located within these urban centres (Kaczmarek, 1991; Jażdżewska, 1998; Lamprecht, 2003; Konecka-Szydłowska, 2006; Zaniewska, Barek, 2005; Ogrodowczyk, 2005/2006; Milewska-Osiecka, Ogrodowczyk, 2006b) and implementation of various types of construction projects in their areas (Milewska, Turczyn, 2005; Turczyn, 2005, 2016; Durecka, Durecki, 2015; Węclawowicz-Bilska, 2015). If compared to the studies referring to the problem of housing construction in cities, those related to national scale (Marszał, 1999b; Ilnicki, 2003) are not numerous.

In the second half of the 20th century, construction investments with an industrial function were the object of interest of geography of construction, among others in the context of their planning (Knyziak, Lissowski, 1964), location (Opałło 1963, 1978), and the development of the building materials industry (Gajowski, 1958; Misztal, 1958; Najgrakowski, Grzeszczak, 1959; Grzeszczak, 1962, 1964; Bolkowski, 1966, 1968). Research in the field of industrial investment development was often conducted not only at regional, but also national level (Szerwentke, 1962; Balcerska, 1971). In geographical literature, the location of industrial investments is also undertaken (e.g. Kis-towski, 2012).

Publications in the field of geography of construction are also devoted to the issues of construction investments with a service function (in this case, it is possible to talk about close links with the object of research of geography of services). One can distinguish those that treat the services sector as a whole, not taking into account its differentiation (Śleszyński, 2006; Nowak, Turczyn, 2009), and those in which attention is devoted to the selected objects, e.g. based on a functional criterion (Micek, 2003; Gwosdz, Sobala-Gwosdz, 2008; Stryjakiewicz, 2009; Kowalski, Wiśniewski, 2017).

A large group of studies from the discussed topic is devoted to the problem of construction investments with various functions, especially in urban areas (Broniewski, 1978; Marszał, 2003; Śleszyński, 2008; Jarczewski, 2008). Geographical research on this subject, conducted during the centrally planned economy, concerned, inter alia, distribution of investment expenditures (Eberhard, 1975), but the issue of location of the investment and its conditions was a particularly important issue (Pyszkowski, 1976; Zajda, Szlachta, 1982). Contemporary studies in this field have quite a diverse subject matter – they relate to, among others issues, the structure of implemented investments and their impact on urban development (Bartosiewicz, Turczyn, 2008), acquisition of new investment areas (Mazur, 2005), as well as social effects of investment implementation (Szmytkowska, 2003; Bednarek-Szczepańska, Dmochowska-Dudek, 2016). It is worth emphasising an increased interest in investments in the field of communication/road construction (Komornicki, Śleszyński, 2009; Rosik, 2010; Ciechański, 2013; Rosik, Kowalczyk, 2015; Komornicki et al., 2015).

Taking into account the scope of the issues of the discipline defined in the article and studies undertaken by geographers in this regard, we can distinguish some research directions of geography of construction in Poland, focusing on the following issues:

- conditions of the development of construction of different functions both at national and local level (with particular emphasis on legal and institutional conditions);
- development of construction, especially in the context of phenomena accompanying this economic activity, including those in the sphere of social cohesion;
- location factors and effects of construction projects with different functions;
- spatial structure of construction projects;
- relationships between construction projects and the surrounding geographical environment.

Among the publications that can be listed as achievements of geography of construction are also studies addressing theoretical and methodological issues, with this current of research being rather poorly represented in Polish literature of the subject. Geography of construction, as a young sub-discipline of geographical sciences, in the field of theoretical approaches and research methodology utilises in a broad sense

achievements of socio-economic geography and other fields of knowledge, which is emphasised by the already mentioned, interdisciplinary character of the spatial research devoted to this branch of national economy.

FINAL REMARKS

The current state of Polish geography of construction is a consequence of both the evolution of the scientific discipline itself and the institutional and economic changes taking place in Poland in recent decades. The importance of geography of construction in the general achievements of geographic sciences in Poland in the last decades has undergone significant changes. In the last quarter of the century, a more explicit separation of this sub-discipline occurred, as evidenced by a quite significant number of worthy publications since 1990, undertaking complex themes of construction investments, especially in the context of their functional and spatial diversity.

In quantitative terms, in the second half of the 20th century, a large group of studies were related to industrial construction, including, among others, the issues of conditions and location factors, and its relationship with the development of the industry of building materials. Another important issue analysed in geographic literature at that time was investments in housing, which was probably related to the level of unmet housing needs of the population, especially in large urban centres, during the centrally planned economy.

The last two decades have brought greater thematic diversity of the research issues implemented within geography of construction, conditioned by the changes which after 1990 were brought by the socio-economic processes, progressive globalisation and tertiarisation of the economy, technological development and rapidly changing needs of the society. In addition to the traditionally undertaken issues in geographic studies, the issues of municipal housing and services construction were discussed, rather sporadically referred to in the past. Nonetheless, housing investments are still a significant research topic, whose development and location are analysed in various contexts, often on the border with other scientific disciplines.

Functionally differentiated construction investments remain an important object of research of geographers in Poland. This is evidenced by the rich published scientific output and a number of presentations at conferences devoted to this subject (often seen in its entire interdisciplinary dimension), as well as some successful doctoral dissertations dealing with construction issues in spatial terms. The results of research conducted in this field have contributed in a significant way to better recognition of the conditions and course of socio-economic transformation in Poland in various contexts and various spatial scales.

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