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The State and Prospects for Development of Railway Transport Infrastructure in Eastern Poland – Secondary Data Analysis

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Abstract

The aim of the article is to present the state of development of railway transport infrastructure in Eastern Poland (including five Provinces located close to Eastern border of the country). The main directions of development of the railway transport infrastructure in this area, described in strategic documents, have also been analysed. The research method was the secondary data analysis. Authors also developed their own concept of ranking Provinces whose aim was to show the level, to which regions of Eastern Poland differ from others regarding the development of rail infrastructure. The results provide the source of considerable information for regional authorities of Eastern provinces.

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1. Introduction

According to the forecasts the role of rail transport, both passenger and freight, in countries of the European Union will become more significant. The rise in the investment of modernization of rail infrastructure will be imposed by the need to fulfill the legal requirements defined by the European Community requiring the development of rail transport to counterbalance its extensive road network [1]. Although the quality and extensiveness of transport infrastructure (both road and rail), determine the economic growth of particular regions, spatial differentiation in Poland in this area are quite visible.

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The aim of the article is to present the state of development of railway transport infrastructure in Eastern Poland (including five Provinces closest to the eastern border of the country: Warmińsko-Mazurskie, Podlaskie, Lubelskie, Podkarpackie and Świętokrzyskie), as well as the analysis of basic indicators characterizing this aspect of regional development of the analyzed area in comparison to other Polish regions. The main directions of development of railway transport infrastructure in Eastern Poland which are described in both national and EU strategic documents will also be analyzed.

The research method that will be used to achieve the purpose of the article is the analysis of secondary data, including statistical data obtained from the Central Statistical Office in Poland as well as analysis of strategic documents where the crucial directions of development of Eastern Poland were described. The paper also applies statistical method, designed by the authors, which is a ranking of Provinces based on available statistical data. The aim of this ranking was to show the level of development of rail infrastructure of Provinces in Eastern Poland in comparison to other regions of the country.

2. The role of railway infrastructure in regional development

The economic and political changes which began with the transformation of Poland were the cause of an increase in regional differences. Diverse conditions (geographic, historical or economical), including the ability of the local authorities to adapt to the market economy as well as the challenges connected with European integration, were the reason that some regions became economically strong whereas others did not [2]. The various regions of Poland differ in such areas as the quality of human resources, the level of business innovation, efficiency of their institutions as well as the level of development of transport infrastructure which defines their accessibility [2].

Investment into transport infrastructure (roads as well as rail) brings numerous benefits from the perspective of region development which should not be limited only to the physical aspect expressed as an increase in the number of kilometers of new roads or railway track. Transport infrastructure determines the development of other sectors of the economy and society. By influencing the various areas of economic and social life of a given region, transport energizes the competitiveness of regions and increases their attractiveness to investors [3]. On the other hand, the development of transport infrastructure is a condition of regional accessibility.

Many scientific works as well as numerous documents produced by the national government and by local authorities stress the significant role of availability of transport as a factor favouring growth and social and economic development [4]. Creation of an appropriate level of availability of transport in a given area (region) should be considered imperative to its development. Its improvement, fostering the feeling of greater market accessibility, increases cooperation in the fields of social division of labour, promotes the improvement of productivity and work effectiveness as well as lowers costs of labour and enhances internal and transregional integrity [4, 5]. Most often the notion of availability of transport refers to linear transport infrastructure [4].

3. Definition of the transport accessibility

Transport accessibility is an important element determining the investment attractiveness of a given region. Spiekermann and Neubauer [7] define transport accessibility as a product of the transport system which determines how favourable the location of a given area (region, city or route) is in relation to other areas. Various methods of estimating transport accessibility, varying mainly by the choice of assessment criteria, can be found in literature [6]. Transport accessibility can, therefore, be considered through its spatial, temporal, economic and informational aspects. Table 1 presents a classification of transport accessibility.

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