

The purpose of the proposed research project is to analyze the impact of the metro station proximity on the prices of nearby residential properties in Warsaw. The research will be carried out for the first Warsaw metro line and will cover properties in all districts, where the metro line is located. The study will be based on the current data concerning transaction prices of residential properties, and will use statistical tools and econometric models aimed at estimating the impact of the relationship between variables of interest (specifically: the metro proximity and property prices). To derive the proximity measures, the research will also use geographical information systems (GIS).

Metro is a unique public transport mode that thanks to its specific characteristics gives passengers a possibility of fast and collision-free commuting along the metro line and helps them to avoid traffic jams. By attracting business and services, it also leads to a greater development of the areas previously regarded as peripheral. In consequence, metro is a factor that helps eliminate the comparative advantage of the city center.

Warsaw is a unique case when it comes to the public transport usage, as compared to other European capitals, its inhabitants use it much more frequently. At the same time, metro infrastructure in Warsaw is relatively much less developed, while different means of public transport, including buses and trams, are more easily available. It can be therefore expected, that the accessibility of the metro line – which due to its limited spatial coverage is a “scarce product” – will be reflected in the prices of nearby properties. On the other hand, Poland is ranked almost last in the European ranking of housing conditions and housing supply. The socio-economic context of Poland, along with the specific features of Warsaw public transportation system, thus make the analysis of the effects of metro accessibility on property prices in Warsaw an important and interesting research question both in terms of understating and explaining the phenomenon.

A review of the existing research on the impact of the metro accessibility on property prices suggests that it still lacks a comprehensive and reliable analysis of Central and Eastern European countries, including Poland. Most of the existing studies have been carried out for cities with highly developed subway infrastructure (e.g. Toronto, Washington, Seoul, Taipei). The results from these studies – due to embedded differences in social, economic and political country profiles – cannot be generalized and transposed to Poland. The proposed research project, by examining the case of Warsaw, will thus fill in this “geographical” gap regarding the relationship between the metro accessibility and property prices.

The results of the project – by taking into account previously overlooked aspects – will also contribute to the development of new knowledge in the field of spatial and urban economics. In particular, the research will involve the use of three different ways to measure the distance between two locations (a given property and a metro station): 1) a standard approach, i.e. measuring the distance in a straight line; 2) the GPS pedestrian mode (distance); 3) the GPS pedestrian mode (travel time). Moreover, the study will also account for potential interaction effects, which take place between the subway and other means of public transport (e.g. buses, trams).