

In the past decades, complex transport systems have developed in Polish regional centres to ensure an efficient transportation system for residents of the city core as well as for new inhabitants of growing suburban areas. These systems are being continually modified by infrastructural investments (but also organizational changes in public transport and new legal regulations), and have a substantial impact on traffic conditions in urban areas, and indirectly on the whole urban structures. But it seems that the impact of new transport investments is much wider – they could shape also local travel behaviours and even affect (to a certain extent) the migration processes.

Public transport investments have been particularly often considered in this context. Because of relatively low land consumption and moderate environmental impact, public transport tends to be the preferred mode of transport in urban areas. It is reflected, among other things, by objectives included in numerous international and national transport policies. In effect, there seems to be an increasing interest in studying the social and economic impacts of public transport infrastructure (PTI). Although much work has been done in the last years, many questions still remain open, and new evidence is clearly needed. For example, there are many studies concerning the effects of large-scale rail and metro investments. These studies concern mostly the price effects on commercial spaces and single family housing, mainly in the USA and Western Europe. On the other hand, there are few studies from post-socialist countries, where public transportation plays a relatively important role. In this context the following question seems to be of particularly large importance: What are the consequences of new public transport investments for the urban structures and travel behaviours in Polish urban areas? The answer to this question could help local authorities in predicting the future changes in urban patterns, and thereby in identifying relevant urban policy issues, as well as in constructing long-term strategies for urban areas. Therefore, the main objective of this research project is:

to deliver scientific knowledge about the role of PTI in urban areas – especially to recognize its influence on daily mobility of inhabitants and the effects for land use, residential decisions and real estate market.

Additionally we could indicate the methodological objective, which is to integrate different approaches of quantitative and qualitative research (statistical analysis, questionnaire survey, case studies) in one research process and to present a general model of the impacts of PTI on travel behaviours and urban structures.

Referring to the main objective, we put forward the hypothesis that because of the historical conditions, including limited availability of cars on market in socialist period, and the fact that public transport has a substantial share in modal split in daily travel patterns in large Polish cities, the PTI plays an important role in shaping travel patterns and urban structures, especially in immediate surroundings. In order to verify the adopted hypothesis we address three main research questions:

1. In what way does the proximity of the PTI affect the travel behaviours of the residents of nearby housing estates?
2. What is the effect of the proximity to the PTI on the satisfaction with the place of residence and housing choices?
3. What is the influence of distance to the PTI on the prices of apartments?
4. We suppose that mentioned relations could be particularly strong in Polish cities. To verify this hypothesis, it is necessary to compare our findings with studies from other countries. Therefore, we also want to address an additional research question:
5. Are the conclusions for Polish cities similar to these from urban areas in the other parts of the world, or they are significantly different?

This research project aims to add a contribution to a dynamically expanding research field. It is situated on the border of several scientific disciplines: transport geography, economic geography, urban economics and spatial management. What is more, it will be the first attempt in Poland to conduct comprehensive researches on the impacts of investments in PTI. The scientific contribution of the project can be considered from a theoretical, empirical and practical point of view.

We expect that the projected results of our research could significantly contribute to a better understanding of urban processes. We hope to take part in the scientific discussion (on international and national level) on the issue of PTI impacts on property values, location decisions and travel behaviours. For example, we plan to prepare a book in English and a series of articles in prestigious scientific journals (e.g. Journal of Transport Geography, Transport Review, Transport Policy). In our opinion, a significant contribution to the knowledge on transport and urban geography could regard especially the following issues:

- bringing new evidence on the mentioned relations based on several new case studies,
- proposing a new model of the mentioned relations – one of the first attempt of a general view on the analysed problem,
- implementing new mixed methodological approach, comprising GIS, statistical analyses, survey research and fieldworks.

What is more, the results of the project could help in a better understanding of current urban processes, what could be especially important for local authorities in many Polish cities. The answer to research questions could help them especially in predicting the future changes in urban structures, and thereby in identifying relevant urban policy issues, as well as in constructing long-term strategies for urban areas.