

Project objectives

The aim of this study is to conduct a comprehensive, microeconomic analysis of the functioning of contemporary urban residential real estate markets. We will develop urban residential real estate market model, which will focus on interactions between market agents, institutional factors and spatial dependencies.

To achieve this goal following objectives are planned:

- analysis of the real estate market agents, we will examine the demand and supply side,
- assessment of an impact of institutional environment, external and socio-economic factors on the sales prices and rental rates of apartments,
- determining how external shocks affect the functioning of housing markets.

The research hypotheses are as follows:

- taking into account the heterogeneity of the market agents allows us to capture the impact of exogenous variables on contemporary real estate markets.
- external shocks (Covid, migrations from Ukraine) through increased market demand influenced the sales prices and apartment rents and resulted in their increases.

Description of research

In order to verify the research hypotheses, a number of economic and econometric analyzes will be carried out to determine which factors have an impact on the demand and supply sides of the residential real estate market, assuming the heterogeneity of housing market agents. Then, a theoretical microeconomic model of the functioning of the real estate market will be built using the agent-based approach. In order to calibrate the theoretical model, we will examine households' housing preferences and choices by conducting a survey conducted with the help of an external and experienced company. The supply side will be studied using analysis of financial reports and the Central Statistical Office data. The model will be calibrated for a Polish city. Scenario simulations will be performed using the calibrated model, which will allow for the assessment of the impact of external factors (including the pandemic, the inflow of immigrants from Ukraine, which was caused by the political situation related to aggression from Russia) on the residential real estate market. We intend to compare the results obtained from the model with the results of analysis conducted for other developed countries.

Originality and the novelty of the project

The theoretical approach and empirical verification presented in this research project plan have not yet been applied to the Polish housing markets. What distinguishes the proposed approach from those created by other researchers is:

- application of simulation methods and agent-based modeling,
- introduction of heterogeneous motives for purchasing apartments,
- taking into account the spatial dimension of the market by conducting simulations of local markets.

Expected effects

As a result of the research project, a theoretical model of contemporary urban real estate markets in the modern economy will be created. The research project will make a contribution to research which allow to determine the mechanisms of functioning of the Polish economy. In particular, factors that have a significant impact on the variables describing the functioning of the housing market, such as real estate prices, activity in the construction sector, etc. will be identified. Moreover, will be expanded the knowledge on how socio-economic factors and external shocks (Covid, migration from Ukraine) affect the development of the sales prices and apartment rentals. The results of the conducted research will be used to give a set of recommendations on how the residential real estate market should be regulated to increase its resistance to external shocks. The presented conclusions can therefore be used to establish the goals of national housing policy. Moreover, the conclusions of the study will provide information on solutions regarding changes in regulations that should increase the efficiency of real estate markets.