

Popular summary

The subject of the proposed project concerns the ways of modeling consumers' preferences. The aim of the project is to propose new methods which will be better at describing the preference differences in the population. These new approaches include: (1) using more flexible distributions, than currently applied (2) proposing a model in which there are main preference types but also differences within each type and (3) going away from the typical assumption of the linear relationship between the cause and effect.

The new methods we propose can be used in statistical models which are used for the analysis consumers' choices. The observed choices make it possible to quantitatively describe consumers' preferences. As a result, it is possible to evaluate the changes in their welfare, their maximum willingness to pay and to predict their market behavior.

In this project, we will prepare theoretical foundations and tools which will allow for using the new approaches we propose. Their practical applicability and performance will be evaluated and compared using (1) computer simulations, (2) existing and (3) newly collected empirical data. The empirical study planned within the project deals with visual pollution caused by outdoor advertising in Warsaw. This is a relevant empirical problem due to potentially high impact on consumers' welfare, but also in the light of the new regulations (the act of 'ustawa krajobrazowa' dated 24 April 2015) which allows policy makers to influence the number, size and placement of outdoor advertisements. Our empirical study will thus provide the much needed results which will allow for defining the socially-optimal level of outdoor advertising in Warsaw.

Preference modeling is one of the keystones of modern microeconomics and is difficult to be overestimated. It is critical for supporting public policies, designing new private goods or predicting consumers' behavior. These methods have been implemented in a vast number of papers in many fields of applied microeconomics, including marketing, transport, health and environmental economics.

Our research project addresses the fundamental methodological problem related to the modeling of consumers' preferences, i.e. accounting for the differences in consumers' preferences. This has been one of the priorities of the research in this field for many years, and remains to be one of the most important points in the research agenda. Providing new, more efficient methods to describe the differences in consumers' preferences will make it possible to better describe the reality and to improve predictions of consumers' behavior. The improvements in the methodology will therefore transfer directly to empirical applications and policy making. At the same time, the empirical study to be conducted within the project has a chance to provide a valuable input to the public debate regarding the level of outdoor advertising, and the results will likely be in the interest of the general public and policy makers in Poland and abroad.