

Popular science summary

The dominant approach in the framework of neoclassical economics is to optimize. Optimization is often performed assuming the availability of full information. On the other hand, there is a growing base of empirical data, mainly experimental, that indicates that the people making decisions do not only rely on optimization, but also take into account other factors. This is particularly evident in the case of multiperson social dilemmas in which the individually optimal choices are different from the socially optimal choices.

The main objectives of the proposed research are experiments and construction of models of typical strategic situations in economics that correspond to a greater extent to the observed behavior of people. In particular, the proposed project will be a contribution to theoretical economics, and the models created in the project will be used to more accurately describe the economy.

The proposed project will include two main tasks. The first task is associated with the carrying out of experiments. There is an extensive empirical literature which is related to the topic of the proposed research, in particular, it is literature on the public goods dilemma, the assurance problem or the prisoner's dilemma. However, in the context of theoretical models, the decision-maker is to be found in a specific context which is usually different from the experimental. In addition, there are few experiments related to trust in and perception of other decision-makers.

The second task is associated with modelling. Standard economic models assume the existence of decision-makers engaged in optimizing with unlimited computational and information resources. The inclusion of decision-makers who have a limited rationality only partially improves the situation. Under the proposed project hybrid models with a more accurate description of the behavior of people will be developed.

An additional objective of the project is to propose effective methods of conducting experiments on-line along with integrated tools for quantitative analysis of the data collected. As part of the work mathematical techniques will be proposed that are specifically adapted to the analysis of economic models.