

The aim of the proposed project is to evaluate the economic consequences of cooperation among companies in research and development. We look into the effects of such cooperation on the innovativeness of industries, and on the market for the final product. In particular, we assess the size of product supply and market prices in order to evaluate companies' profits, consumer benefits and social welfare.

We will take into account various legal arrangements regarding patent protection. The key hypothesis that we test in our project says that the cooperation of companies in research and development encourages them to form a cartel in the product market. Moreover, we investigate the influence of 'good' and 'bad' patents on innovativeness of firms. Our research methods rely on game theory – a highly regarded scientific field that has been acknowledged several times by Nobel Prizes in Economics.

An important element of our research is the process innovation, which allows the companies to reduce the costs of production. The costs of research and development in many industries have exceeded the financial capabilities of individual enterprises for a long time. Even the largest companies may not be able to develop and implement new technologies on their own. That is one of the reasons why firms undertake various forms of cooperation in that area. However, the question arises whether the cooperation among companies in research and development does not lead to a reduction of competition in the product market, and in particular to cartel formation. Our project will contribute to the existing knowledge by considering various types of competitive behaviour of firms on the product market.

The assessment of innovative activities of firms combined with different styles of their behaviour in the product market will play the key role in providing better understanding of the competition and the cartelization processes in many industries, which could be expected to have a significant impact on the development of economics.