

Modelling of climate change impacts on regional competitiveness

The fundamental objective of the project is an attempt at establishing answers to the following question: Whether and to what degree do climate change manifesting in e.g. the increase of average temperature and climate policy exert an impact upon the competitiveness of selected European regions? The specific objectives of the project include:

1. To analyze the concept of regions' competitiveness in the context of climate change, and develop the competitiveness model to include (input and output) factors associated with climate change;
2. To analyze relations between dimensions and pillars of regional competitiveness, physical outcomes of climate change and climate policy;
3. To perform an empirical analysis concerning the impact of climate change and climate policy on the current competitiveness of selected regions;
4. To predict the competitiveness level for various climate scenarios and attempt to optimize the competitiveness level;
5. To perform the simulation pertaining to the impact of climate change upon the competitiveness;
6. To draw conclusions useful for regional policy makers.

The subject matter the project pertains to is undeniably current and of research significance. The argument finds support in the interest in the outcomes of climate change expressed by several international organizations, governments of individual countries, regions, NGOs, and the academic community. However, hitherto studies of the impact of climate change upon the economy of regions have discussed the issue in the course of the following:

- analysis of the impact for selected socio-economic sectors or selected regions,
- evaluation of economic outcomes of climate change and climate policy,
- explanation of present and prospective regional diversity by means of geographic factors (including climate-related ones),
- assessment of the cost of adaptation to climate change.

The authors of the project seek to bridge the gap in hitherto studies, which have neglected the issue of regional competitiveness, and to redefine the issue in terms of dominance and attractiveness. The project constitutes a reference to the new regional policy paradigm developed on the verge of the 20th and 21st centuries in OECD countries. The paradigm is characterized by e.g. integrated, development-focused initiatives, well-defined competitiveness factors, strategically selected directions of improvement, multi-sectoral approach focused territorially, and a diversified approach to various types of regions

Research process is composed of several stages. The first stage will involve the analysis of competitiveness theories and models, and the development of an original, multi-factorial competitiveness model. Based upon the Delphi method and ESPON study, the second stage will select 10 representative European regions. These will undergo empirical verification in stage three. Next stage involves simulations under alternative future climate scenarios.

The project is characterized by an original approach to regional competitiveness. The development of an original, multi-factorial competitiveness model including climate change will constitute the methodological outcome of the project contributing to the enhancement of theory concerning regional policies and economies. The cognitive outcome will be achieved by the examination of 10 European regions under present conditions and forecast climate scenarios. The project also offers practical outcomes in the form of conclusions and recommendations for regional policies pursued both in Poland and in other European states.