

The aim of the project is to determine the role of innovation in the processes of technological convergence in the European regional area. The implementation of the main objective will be associated with the following specific objectives:

1. Determining the total factor productivity - TFP of EU regions.
2. Examining the occurrence of unconditional technological convergence in the European regional area.
3. Formation of clubs/groups of regions based on similarity of their initial level of innovativeness.
4. Testing the occurrence of technological convergence in particular groups of regions.
5. Determining the impact of innovative activities carried out in the regions on the processes of technological convergence, considering their spatial aspect.

So far, studies on economic convergence at the regional level have focused on absolute or conditional income convergence. The proposed approach shifts the interest to technological convergence and its determinants. The significance of the concept of technological convergence results from the fact that income convergence can be both accelerated and impeded, depending on whether the initial differences in the level of technology (TFP) decrease or increase over time. The planned theoretical and methodological framework for defining the role of innovation in the processes of technological convergence has not been found in the literature. Thus, the results of the project will open the new field of research on determinants and trajectory of UE regions development. In a wider context, the obtained results will constitute a contribution into the development of the Knowledge-Based Economy paradigm in the regional context, which is still *in statu nascendi*.