

The objective of the planned analysis is to provide knowledge on spatial consequences of administrative changes and of physical barriers with respect to economic development at regional level. The project builds on rich academic literature in the area of regional development which has gained importance in recent decades among others thanks to the work of Paul Krugman, the Nobel Laureate of 2008. The field of the so-called “new economic geography” has in recent years included numerous studies focused on understanding of economic development at regional level and location of economic activity around the globe. The topics analysed within this field included such aspects as the reasons behind the economic success of cities, location of production capacities and differences in the pace of growth at regional level.

By using innovative sources of data and identification strategies, we take advantage of important administrative changes to analyse a number of aspects in the area of regional development. The administrative changes which form the institutional background of our analysis cover, on the one hand, the Polish administrative reform of 1999, and on the other, two significant changes at international level: accession of Poland into the European Union in May 2004 and entry into the Schengen Area in December 2007.

To measure economic development at regional level we shall use, on the one hand, traditional regional data on socio-economic characteristics and fiscal measures. However, an important innovation of the project will be the extension of this information by data in the form of night lights intensity. This very detailed data coming from satellite images contains information which is consistent over time and space of measurement, and is independent of the definition of borders of administrative units. At the same time it is a reliable reflection of economic activity. The information contained in the data can be averaged for specific regions and detailed values are available for surface area as small as one square kilometre. Thus the average values for light emissions can be calculated for very specific regions or cities.

One of the aspects of our analysis will be estimation of the consequences for variation of regional development of the Polish administrative reform of 1999. The reform will be used as the so-called “natural experiment” to identify the role of potentially important aspects determining economic development at regional level. In particular we shall analyse the effect of limitation of the number of administrative regional capitals, which could have had an effect on the specific cities as well as on other municipalities and towns in the form of the change of the physical distance to new regional capitals.

The second aspect of our work will be issues regarding the effect of physical barriers for economic development at regional level. In particular we shall examine the effects of a natural barrier in the form of the Oder-Neisse rivers along the Polish-German border. The rivers delimit approximately 380 km of the border and there are bridges which cross the rivers along this distance in twenty locations. In the analysis we shall use administrative changes at international level (entry of Poland into the EU and the Schengen Area) as independent factors which will allow us to distinguish the effect of the historical level of integration between the border regions and the actual role played by border bridges for recent changes in economic development.

Both in the first and in the second part of our work the analysis shall use the traditional regional data and the data on night light illumination. In the latter case, taking into account the universal nature of the lights data, the analysis will be able to cover the regions on both sides of the Polish-German border in a consistent fashion. The causal analysis of the spatial role of the administrative structure should provide important arguments in the debate on administrative reforms in Poland, Germany and many other countries. Similarly, the analysis of the role of physical infrastructure for economic development at regional level might translate into important decisions concerning development of infrastructure which can overcome existing barriers between regions.