

Executive summary of the doctoral thesis

***Air pollution and wellbeing: the costs of development in the case of
the metropolitan area of Warsaw***

The current model of development, understood as a path to wellbeing, has led us to a climate and ecological crisis on an unprecedented scale. The effects of this crisis are felt acutely in Poland, especially with regard to the air pollution. In the field of economics, numerous attempts are made to include the natural environment within the concept of development, while simultaneously elaborating alternative approaches to wellbeing, that go beyond traditional income measures. However, research on the environmental correlates of these wider approaches to wellbeing is scarce. To fill in this gap, this thesis investigate the relationship between different approaches to wellbeing and spatially-explicit environmental externalities of development, using the example of air pollution in the Warsaw metropolitan region. Placing the analysis at the local level allows to consider the problem of environmental costs in the context of urban and rural spatial transformations, e.g. suburbanization.

I start my research by systematizing the role of the environment in three distinct concepts of wellbeing, i.e. economic, social and subjective. This allows me to identify the concepts and theories describing the expected relationship between wellbeing and environmental degradation, i.e. the Environmental Kuznets Curve, environmental justice and happiness economics. The second pillar of the study is a comprehensive analysis of air pollution. Drawing on the DPSIR framework, I assert that air pollution is a wicked problem that should be seen as a key civilizational challenge for Poland.

In the empirical part of the study, I use a set of advanced statistical techniques to uncover the relationship between air pollution and the three concepts of wellbeing. Using the spatial regression model, I indicate that the increase in both social and economic wellbeing levels in local communes of the Mazowieckie voivodeship drives air pollution upwards. However, in case of the income measure, after a certain threshold, this negative impact disappears. Against the background of the studied region, the relatively favorable position of the peri-urban zone is found, confirming the importance of environmental factors for driving suburbanization. Next, I use the questionnaire data collected in Warsaw to show the negative impact of both short-term air pollution and the perceived air quality on the respondents' life satisfaction levels.

The results of my study confirm that the environmental consequences of development would be different, depending on which wellbeing concept is being pursued. Given the challenge of sustainability, the subjective wellbeing is of particular importance. It allows to break the existing model of separation between the social and environmental spheres, emphasizing how environmental degradation – both factual and perceived – reduces the level of personal wellbeing.