DESCRIPTION FOR THE GENERAL PUBLIC

Energy poverty is defined as a situation where households cannot afford essential energy services due to a combination of households' low income, high energy costs, and energy inefficiency of buildings and energy appliances. It is difficult to identify energy poor households because energy poverty is a complex phenomenon, often hidden and country-specific, i.e., countries have different climate conditions, levels of development, and cultural factors. There is also a problem with data that have to contain many variables, including income and buildings' technical characteristics. Due to a lack of relevant data, energy poverty is measured indirectly with subjective indicators. In previous studies, the authors of the project put forward the original methodology of identifying energy-poor households, which is suitable for the estimation of energy poverty prevalence in Central and Eastern European countries. The methodology is based on the comparison of declared and theoretical energy costs calculated in the model that accounts for demographic, geographic, and technical characteristics. Another common way of identifying energy poor households is based on questionnaires in which respondents assess their situation. However, subjective indicators are not precise and are biased. Besides, the mere identification of energy-poor households does not provide full information on the scale of the problem. The energy poverty gap can be dramatically large or quite small. It is therefore necessary to measure the severity of the problem, in other words, the depth of energy poverty. It is also important to define profiles, i.e. socio-demographic characteristics of energy poor households. The precise definition of policies counteracting energy poverty is not possible without information on the profiles and the depth of the phenomenon. Indicating the profiles of households at risk of energy poverty is particularly important in the context of the discussion on the effects of the Fit for 55 package that aims at reducing gas emissions in the European Union by at least 55 percent by 2030. In particular, this package includes trading emissions generated by households, which will increase heating costs and might contribute to the spread of energy poverty.

The project pursues four goals. The first and second goals are to determine the profiles of energy poor households and to measure the depth of energy poverty, i.e., to show how severe this problem is in different countries. Both goals will represent an extension of the authors' previous studies, which means that the current estimation will rely on the original methodology of identifying energy poor households introduced earlier. This part of the research will focus on the countries of Central and Eastern Europe.

The next two goals are related to the assessment of the persistence of energy poverty. The third goal focuses on households and will be based on microeconomic data. The fourth goal is to describe the impact of business cycles on the prevalence of energy poverty in European countries. To identify energy poor households in European countries, we will propose a new statistical model. Thanks to this model, it will also be possible to examine the persistence of energy poverty in Europe.

The proposed project will allow for a better understanding of the problem of energy poverty in European countries. The project will expand the existing knowledge of energy poverty in many ways. What is also important, the results of the conducted research will suggest solutions for social policies, among others, and contribute to the reduction of energy poverty.