

# *Drivers of innovations with environmental benefits in Central and Eastern European countries*

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## **Abstract**

The issue of clean production has been of keen interest in recent years. On the one hand, this results from the observed climate change, the source of which is seen to be human activities (primarily commercial ones). On the other hand, it is due to the wide range of activities undertaken as part of various initiatives to counteract climate change. These initiatives include, among others, the 2015 Paris Agreement, the United Nations Sustainable Development Goals, the European Green Deal, and the Glasgow Climate Pact.

Innovation is assigned a unique role here. Terms such as eco-innovation, green innovation, environmental innovation, and sustainable innovation – often treated as synonyms have entered our vocabulary for good. Consequently, research has been conducted for many years to identify the factors determining the introduction of environmental innovations. It should be noted, however, that in most empirical studies, these determinants are analysed on a very general level. Only some studies have raised the issue of specific environmental innovation types contributing to cleaner production. Therefore, it is interesting to look at innovations from the perspective of the specific environmental effects, that is, benefits obtained both within enterprises and during the consumption or use of goods or services by end users.

Prior empirical research has shown that the key determinants of environmental innovations should be sought, amongst others, in legal regulations, taxes, charges or fees, government support (grants, subsidies or other financial initiatives), high energy costs or market demand.

Consequently, in this proposal, I aim to broaden the knowledge about the determinants of environmental innovations in Central and Eastern European (CEE) countries, emphasising the environmental effects obtained within companies and by end users.

A systematic review of the literature showed that a significant proportion of prior research was focused on individual countries. Therefore, I decided to use a set of

micro-data from the Community Innovation Survey conducted in the European Union in 2008 (127,672 observations) and 2014 (97 980) to compare the change in factors influencing the implementation of environmental innovation. As the research area, I selected the seven following CEE countries - Bulgaria, Estonia, Hungary, Latvia, Lithuania, Romania, and Slovakia.

The estimated logistic regression models showed that over 2008-2014, in the analysed CEE countries, some changes in the determinants of eco-innovation can be noted.

I observed that the importance of existing and future environmental regulations has decreased; that government grants, subsidies, or other financial incentives for environmental innovations have turned out to be statistically irrelevant; that current or expected market demand still plays an important role; and that the impact of voluntary actions or initiatives for good environmental practice within a sector is ambiguous.

### **Keywords**

Environmental innovations; Eco-innovation; Determinants; Community Innovation Survey; Central and Eastern European countries