

National Carbon Accounting – a Review on the Role of Institutional Quality on Environmental Degradation

Alina Cristina Nuță¹, Florentin Emil Tănasă²

Abstract: Climate change is a challenge for the whole world, no matter the level of social or economic development. The effects of it hinder the evolution of society and put under scrutiny human welfare. Organizations, institutions, and government worldwide state their willingness to mitigate the environmental issues and struggle to find the proper policy options to do it without affecting other priorities such as unemployment, poverty, structural gaps, and various inequalities. The study aims to briefly review the role of institutional quality on environmental degradation. The research in this field is rich and diverse covering different ways of expressing the institutional quality and its impact on ecological quality.

Keywords: institutional quality; environmental degradation; ecological quality; carbon emissions

1. Introduction

Climate change mitigation is a critical matter recognized by major organizations worldwide and included on the governmental agenda. The pollution-sphere (Nuță, 2023) cannot be ignored anymore or put aside in favour of growth. The will of decision makers seems to exist, and it remains to be seen how the environmental issues will find a response as other vital matters need to be addressed and resources allocation, such as poverty, social and economic asymmetries, corruption, and various institutional weaknesses.

Europe is a multilevel region with countries with different stages of economic development and, as a result, various challenges related to development gaps between the developed Western and emerging Eastern parts of the continent. Having different historical backgrounds in terms of institutional evolution, these two parts of Europe incorporated different priorities and development goals. Central and Eastern European economies exist as the communist bloc, engaging in a long and complex path of transformations, opening themselves to foreign capital and embracing common values such as those related to sustainable development. However, at first, they fell into the trap of limited financial and production resources but extensive natural capital. With less strict regulations protecting the natural environment, weak institutional framework, and low raw materials exploitation rent, they became favourite destinations for relocating obsolete production capacities characterized by low energy efficiency and high emissions levels. Moreover, these countries used the circumstances to attract foreign investments, transforming their weaknesses in protecting the ecological quality into a competitive advantage. In this sense, previous research demonstrated the validity of the pollution

¹ Associate Professor, PhD, Danubius University, Romania, Corresponding author: alinanuta@univ-danubius.ro.

² Lecturer Phd, Danubius University of Galati, Romania, E-mail: florentinemil.tanasa@univ-danubius.ro.

haven hypothesis for such countries (Balsalobre-Lorente et al., 2023; Mani & Wheeler, 1998; Saqib et al., 2023).

Besides, corruption and the extensive informal sector deepened the development gaps (Shahbaz et al., 2023). Instead of recovering faster from the transition period and using foreign financial resources to advance social welfare, these countries worsened the environmental quality and depleted their natural resources. As a result, the effect of institutional weaknesses was more issues related to high pollution, biodiversity loss, and high energy intensity. The Global South versus Global North debate translated into East and West at the European level, as may be observed in Figure 1.

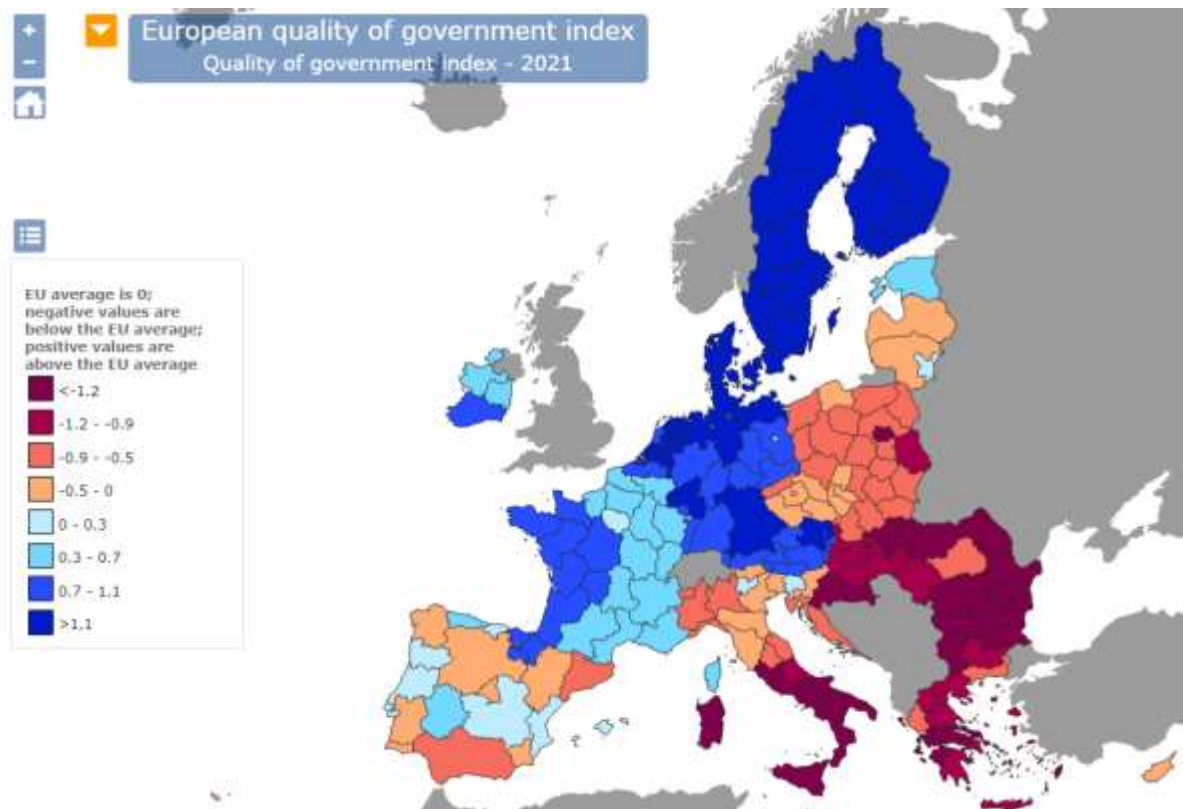


Figure 1. European Quality of Government Index (2021)

Source: European Commission. European Quality of Government Index map)

Over time, low technological advancement and the lack of innovation meant a highly energy-intensive and carbon-intensive economic output for the Central and Eastern European countries, as seen in Figure 2.

Recently, these countries also adopted stricter regulations to protect their ecological quality. They designed public policies targeting an increased share of renewable energy sources, phasing out fossil fuels, reducing carbon emissions, and endorsing climate change mitigation (Abban et al., 2023; Tiwari et al., 2023).

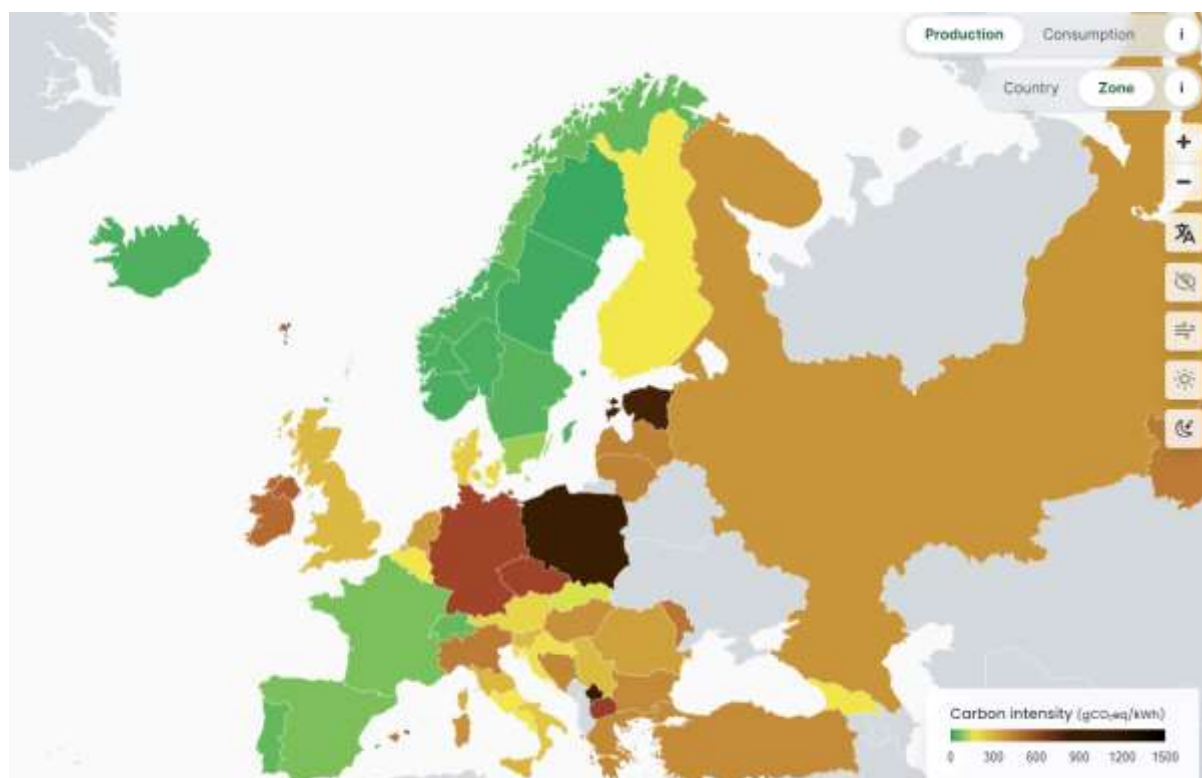


Figure 2. The Map of Economic Output Carbon Intensity

Source: iEnergy.info

The rest of the study will discuss the effects of institutional features on environmental degradation, as seen in the empirical literature. The last section is dedicated to concluding remarks.

2. Environmental Impact of Institutional Quality

Institutions and regulations are a part of a democratic system created to empower specific policies. Weaknesses and the lack of development in one of the system's components may lead to the failure of the whole system.

The knowledge on this topic is rich and various covering the institutional quality under many aspects from the rule of law (Cigu et al., 2020) to government effectiveness (Xu et al., 2023) or corruption (Arminen & Menegaki, 2019). As a matter of fact, corruption mediates the interaction between renewable sources of energy and environmental damage, reducing the positive impact of green energy and increasing the ecological damage (Sinha et al., 2019). In the same sense, corruption is responsible for lowering the environmental protection standards, transforming the countries affected by it in pollution havens (Candau & Dienesch, 2017). In addition, the plague of corruption affects differently developed and developing countries. While in developed economies, with well-established institutional framework, the changes in levels of corruption seems to have less effects on environmental degradation, in developing countries decreasing this issue have stronger effects at the benefit of the ecological quality (Akhbari & Nejati, 2019). Moreover, corruption, economic growth-oriented policies, and dependence on fossil fuels to advance the economic output are among the most significant drivers of ecological degradation observed by previous research (Akalın et al., 2021).

In contrast, institutional advancement favour environmental quality and regeneration, empowering regulations. Previous studies emphasized innovation as a driver for developing the institutional framework and increasing its efficiency in promoting environmental regeneration and renewable sources of energy (Khan et al., 2023; Zhang et al., 2023). Previous studies revealed that the improvement of institutional quality enhance renewable energy consumption, suggesting that lower level of corruption and bureaucracy favour environmental quality (Vatamanu & Zugravu, 2023). At the same time, institutional quality enhances the innovation and technological advancement, with differences between developed and developing economies (Ding et al., 2023), suggesting that developed countries react better to the improvement of government efficiency related to the effect of innovation on ecological quality.

Circular economy may influence the ecological quality by prolonging the life span of resources incorporated into services and products and alleviate the environmental footprint. However, for rigorously implementing policies oriented towards this, a certain level of social welfare must be achieved. Moreover, the institutional framework must be a functional one to empower the responsible behaviour and implement the incentives and penalties (Hondroyannis et al., 2023; Nuță et al., 2015).

3. Conclusions

Numerous previous studies investigated the role of institutional quality on environmental degradation. Institutional development is described in the literature by various features, such as corruption, the rule of law, government effectiveness, and others. There is no agreement on which one best describes institutional quality, depending on which aspect the research tries to emphasize. In addition, there are relevant differences between developed and developing countries. It was generally agreed that the influence of institutional quality on environmental quality is less visible in the case of developed economies, suggesting that well-established democracies with a solid institutional system are already using their institutional framework at its best, while developing and emerging countries are more prone to corruption and less rigorous institutions. Nevertheless, previous findings emphasize the role of institutional quality in mitigating environmental issues and using the resources to benefit social, economic, and environmental welfare. Building a solid institutional framework is critical for empowering ecological protection regulations and creating the premises for responsible behavior.

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