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ECONOMIC IMPACT OF GREEN DEAL IN THE BALTIC STATES: BALANCING GROWTH AND SUSTAINABILITY

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Abstract

Among scholars, the debate on environmental sustainability and balancing economic growth remains a hot topic. In 2019, the European Union introduced the green deal to achieve climate neutrality by 2050 and become the first climate-neutral continent. The motivation for this research is to examine the economic impact of the green deal and carbon emission levels in the Baltic states using the econometric technique of cointegration regression analysis from 2018 to 2024. Overall, the study outcomes show that the impact of economic growth on the green deal and carbon emissions is positive in Lithuania, where the green deal has been beneficial. However, in Latvia, the impact of economic growth on carbon emissions and the green deal is not as effective. Similarly, in Estonia, there is a need to revise policies, as economic growth is associated with increasing emission levels. The recommendations of this study are helpful not only for the Baltic states, but and also benefit for the European Union and other regions working toward a zero-emission target.

Keywords: economic growth, green deal, impact, carbon emissions, sustainability

1 Introduction

The debate over environmental sustainability and balancing economic growth remains a key focus among scholars. In 2019, the European Union introduced the green deal, the strategic plan to achieve climate neutrality by 2050. With this strategic plan, the European Union strives to become the world's first climate-neutral continent. The green deal offers insight into many sectors, one of them being energy, with a particular focus on clean energy, which promotes environmental sustainability. In the last few years, the share of power generation from renewable sources has increased (Our World in

Data, 2024). Similarly, per capita emission levels have also declined in the European Union (Our World in Data, 2024).

Energy and environmental problems are directly linked to economic activities. If economic growth increases, more energy is required, and this higher energy consumption leads to increased emission levels (Zhang et al., 2024). According to Pratiwi et al. (2020), energy is an important factor for a country's growth, as it is a requirement for economic activities, and many sectors depend on energy use. Scholars are still thinking about how it is possible to balance economic growth and environmental sustainability. According to Brock and Taylor, environmental sustainability is a part of economic growth (Brock et al., 2005). Furthermore, in the 19th century, Reverend Thomas Malthus was one of the scholars who discussed the impact of economic activities on environmental quality (Glass et al., 1976).



Fig. 1. Trend analysis of the study variables in Lithuania, Latvia and Estonia from 2019-2024 (i.e., Carbon emissions, Economic growth and Renewable energy) (prepared by authors, 2025).

The present research examines the economic impact of the green deal in the Baltic states. In these states, the green deal plays a role in increasing environmental sustainability or not. To estimate long-run equilibrium relationships, this study employs econometric models using Cointegration Regression Analysis (COINTREG). It analyzes the long-run equilibrium relationships between economic growth, carbon emissions, and the green deal

from 2018 to 2024 in the Baltic states. This research measures the green deal through clean energy, specifically renewable energy sources. This study not only contributes to the Baltic states but also benefits the European Union and other regions working toward a zero-emission target.

Research Objectives

This research has the following objectives:

- To analyze the effect of carbon emissions and green deal on economic growth in the Baltic states.
- To develop a model and estimate the long-run equilibrium relationships between carbon emissions and green deal on economic growth in the Baltic states.
- To examine the economic impact of the Green Deal – specifically, whether it increases environmental sustainability or not in the Baltic states.

Research Methods

The main intention of this research is to examine the economic impact of the green deal in the Baltic states from 2018 to 2024. This study analyses the long-run equilibrium relationships between economic growth and other variables, such as carbon emissions and green deal. To achieve the research objectives, this study employs the cointegration regression analysis approach. As well, a robustness test is conducted to enhance the reliability of the results.

Conclusion

This research estimates the relationship between carbon emissions, the Green Deal, and economic growth in the Baltic states from 2018 to 2024 using a cointegration regression analysis econometric model. The impact of the Green Deal on economic growth and emissions varies across the Baltic states. In Lithuania, the Green Deal policy plays a significant role, with economic growth leading to lower emissions due to increased renewable energy use. In Latvia, while the Green Deal is important, its effects are not statistically strong, indicating partial implementation and the need for further efforts. Although economic growth leads to lower emissions, the relationship remains weak. In Estonia, the Green Deal policy has had little impact on environmental sustainability, suggesting the need for revision and further research, as economic growth has led to higher emissions. Overall, a positive and significant relationship indicates that increased renewable energy usage contributes to GDP growth in the region.

The recommendations of this study are helpful for the Baltic states and also benefit the European Union and other regions working toward a zero-emission target.

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