

OPINION

by Assoc. Prof. Dr. **Angel Angelov Marchev** ,
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of a dissertation for the award of the educational and scientific degree "**doctor**" in: field of higher education 3. Social economic and legal sciences, professional field 3. 8. Economics, doctoral program in Finance and Accounting "Finance and Accounting", Faculty of Economic and Social Sciences, Plovdiv University "Paisiy Hilendarski"

Author : Todor Slavchev Anev, full-time doctoral student

Topic : Financial and economic effects of stimulating climate-neutral growth

Scientific advisor : Prof. Dr. Stanimir Ivanov Kabaivanov, Plovdiv University "Paisiy Hilendarski"

1. General presentation of the procedure and the doctoral student

This opinion is prepared on the basis of order RD 21-2369/19.12.2024 and the decisions of the first meeting of the scientific jury of 20.12.2024. The presented set of materials **is** in accordance with the requirements of the Law on Academic Affairs and Research, the regulations for its implementation and the Regulations for the Development of the Academic Staff of the University of Sofia.

Doctoral student Todor Anev graduated with honors in economics. He has gained practical experience working for several years in the banking sector and consulting businesses in the field of corporate finance. His scientific interests are related to green economic models and sustainable growth strategies, and he actively participates in international conferences and seminars. During his doctoral studies, he participated in research projects related to the climate-neutral transition in emerging markets. I have no personal impressions of the doctoral student.

2. Relevance of the topic

The study of the financial and economic effects of stimulating climate-neutral growth is a relevant and relevant topic, especially in the context of the European Green Deal and global efforts for sustainable development. The dissertation analyzes the key economic and financial aspects related to limiting carbon emissions and adapting national economies to new environmental requirements.

The importance of the topic is highlighted by the growing impact of regulatory constraints on the business environment, as well as the need for new financial instruments for the transition to a climate-neutral economy. The present work provides an in-depth analysis and quantitative assessment of these processes, which makes it particularly valuable for the scientific and practical spheres.

3. Understanding the problem

The doctoral student Todor Anev demonstrates a thorough knowledge of the issue, which is evident from both the theoretical analysis and the empirical methods used. The dissertation presents a comprehensive literature review of the concepts of climate-neutral growth. As for the knowledge of the research apparatus – this is one of the strong features of the dissertation with a detailed theoretical derivation of the statistical models

4. Research methodology

The chosen methodology is adequate to the set goals and objectives. The dissertation uses econometric models such as Autocorrelation Function, Ridge Regression, ARIMA models and residual analysis, which allow for precise quantitative study of the relationships between carbon emissions, financial policies and economic growth.

The dissertation is distinguished by a high empirical contribution through the application of data from Eurostat, the World Bank and national statistical institutions, which guarantees the reliability of the results obtained. The methods used ensure a high degree of validity of the conclusions and allow for the prediction of the economic effects of future environmental regulations.

5. Characterization and evaluation of the dissertation work and contributions

The dissertation work of doctoral student Todor Anev has a total volume of 224 pages (including appendices) and is structured in 3 chapters, conclusion, bibliography and appendices. The abstract contains the main highlights and results, presented on 34 pages.

Dissertation structure and content:

- **The first chapter** (pp. 7–15) provides a detailed introduction and overview of the main concepts related to the study and modeling of climate-neutral growth, as well as the applied financial and economic incentives and regulations.
- **Chapter Two** (pp. 16–64) mainly contains theoretical and methodological aspects of the study. The excellent preparation of the doctoral student regarding the various quantitative and qualitative approaches for assessing the economic effects of environmental policies is evident. The financial instruments used to implement such policies are further examined.
- **Chapter 3** (pp. 65–200) presents the empirical results, where specific data and indicators are analyzed, reflecting the impact of climate-neutral policies on financial and economic stability. Of particular note is the analysis of financial instruments and the risk assessment of investments in green assets (pp. 194-200).
- **In the conclusion** (pp. 201-212), the doctoral student summarizes the most important conclusions from the study, formulates recommendations to stakeholders, and outlines potential directions for further research.

My most significant criticisms can be directed at the structuring of the dissertation. The classical structure and the expected balance have been violated to some extent, without it being necessary, while at the same time the individual components – theory, method, application – have not been clearly separated enough. The work would be more readable if a clearer logical framework had been followed. For example, essential parts of the introduction could have been at the beginning of the theoretical chapter, introducing the issues. Immediately after that, in my opinion, the credit instruments should have been, since they are de facto the focus of the research, and the methodological apparatus should be brought out afterwards. The last section of the introduction is an excellent introduction to a separate methodological chapter, to which the sections describing the Model and the individual methodological approaches preceding the many empirical studies in the current chapter 3 can be included.

Evaluation of scientific and applied scientific contributions

The formulated claims for scientific contributions have both methodological values, contributing to the development of economic science in the field of sustainable development, and an applied nature, with the potential for implementation in the strategic planning of public policies and corporate strategies in the field of economic analysis of climate-neutral growth, by successfully combining theoretical statements and empirical research. The first three of the contributions are of an applied nature, and the fourth is of a methodological nature. And although I do not agree with the formulation that contribution 5 is of a theoretical nature (in my opinion, it should be methodological), I agree with all the indicated contributions of the dissertation.

6. Assessment of the doctoral student's publications and personal contribution

The presented publications testify to the good research activity of the doctoral student and are fully consistent with the topic of the dissertation. They contribute to the enrichment of the analysis regarding the quantitative dependencies between climate policies and economic processes, as well as to the development of methodological tools for assessing the effects of environmental regulations.

The personal contribution of the doctoral student is significant, as he demonstrates an analytical approach and competence in the application of complex econometric methods.

7. Abstract

The abstract is prepared in accordance with the requirements and accurately reflects the main results of the dissertation. Its structure and content correspond to the original work, clearly presenting the objectives, methodology, main conclusions and contributions of the research.

8. Recommendations for future use of the dissertation contributions and results

- A more detailed consideration of the technological aspect – analysis of specific innovative technologies and their economic efficiency.
- Additional quantitative analyses – the PhD student makes an interesting analysis of the risk of green investments. The assessment could be deepened through comparisons with traditional investment portfolios.
- Expanding geographical scope – The study focuses primarily on examples from the European Union. Broader international comparisons would be useful, especially for countries with higher carbon intensity of the economy.

Conclusion

The dissertation is an independent and original scientific study that contributes to the understanding of the financial and economic effects of stimulating climate-neutral growth. The remarks and recommendations are more towards the future development of the work. The research is theoretically sound, methodologically correct and practically applicable.

On this basis, I vote in the affirmative for awarding the educational and scientific degree of "doctor" to Todor Slavchev Anev.

03.02.2025

Prepared the opinion :

Assoc. Prof. Dr. Angel

Marchev