

REVIEW

for the acquisition of the **educational and scientific degree "Doctor"** in the field of higher education: 3. Social, economic and legal sciences, professional field: 3.8. Economics, doctoral program: "Finance, monetary circulation, credit and insurance" (Finance).

Reviewer: Prof. D.S. Bojidar Violinov Bojinov, Department of Finance and Credit, D.A. Tsenov Academy of Economics, Svishtov, professor in scientific specialty 05.02.05 "Finance, Money Circulation, Credit and Insurance"

Author of the dissertation: doctoral student Teodor Lyudmilov Borisov (D010221244), full-time student in the doctoral program "Finance, Monetary Circulation, Credit and Insurance" (Finance) at the Department of Finance and Credit at the "D. A. Tsenov" University of Applied Sciences - Svishtov.

Topic of the dissertation: " Financial analysis of the industrial transition to low-carbon transport"

On the basis of Art. 71 and 73 of the **Regulations for the Development of the Academic Staff at the SA "D.A. Tsenov"** and Order No. 571/01 July 2025 of the Rector of the SA "D. A. Tsenov" - Svishtov, I have been appointed as a reviewer in the procedure for the defense of a dissertation on the topic "**Financial Analysis of the Industrial Transition to Low-Carbon Transport**" with author **Teodor Lyudmilov Borisov**, applying for the acquisition of the educational and scientific degree "Doctor" in the field of higher education: 3. Social, economic and legal sciences, professional field: 3.8 "Economics", doctoral program: "Finance, monetary circulation, credit and insurance" (Finance).

This review has been prepared in accordance with the requirements of the **Act on the Development of Academic Staff in the Republic of Bulgaria**, the related **Regulations for the Implementation of the Act on the Development of Academic Staff** in the Republic of Bulgaria and the **Regulations for the Development of Academic Staff at the DA Tsenov University**.

The **normative requirements for the dissertation work for acquiring the educational and scientific degree of "doctor"** are available in Art. 27 of the Regulations for the Implementation of the Law on the Development of the Academic Staff in the Republic of Bulgaria and Art. 68 of the Regulations for the Development of the Academic Staff at the "D.A. Tsenov" Academic University, according to which:

(1) The dissertation must contain scientific or applied scientific results that represent an original contribution to science. The dissertation must demonstrate that the candidate possesses in-depth theoretical knowledge in the relevant specialty and the ability to conduct independent scientific research.

(2) The dissertation must be presented in a form and volume that meets the specific requirements of the primary unit. The dissertation must contain: title page; table of contents, introduction; presentation; conclusion - a summary of the results obtained with a declaration of originality; bibliography.

Art. 72, item 4 of the Regulations for the Development of the Academic Staff at the "D.A. Tsenov" University also implies the requirement to meet the minimum national requirements for acquiring the **educational and scientific degree "doctor"**

The starting point for the review is:

1. Dissertation " Financial Analysis of the Industrial Transition to Low-Carbon

Transport " in a volume of 159 pages. I accept the total volume as sufficient to clarify the author's thesis.

2. A list of the candidate's publications on the topic, including the following publications:

1. Borisov, T., (2021) **The Republican Road Infrastructure in Bulgaria - Specifics and Regional Differences** , Annual Almanac of Scientific Research of Doctoral Students, Volume XIV, Book 17, AI "Tsenov", pp. 697-709, Svishtov, ISSN 1313-6542)
2. Borisov, T., (2022) **Development of low-carbon transport in Europe: tax breaks and purchase incentives** , Yearbook, volume CXXV, D. A. Tsenov Academy of Economics, AI Tsenov, Svishtov, ISSN 0861-8054, pp. 122-135
3. Borisov, T., (2023) **Fiscal instruments - a factor for increasing environmental friendliness in the "Transport, warehousing and postal" sector in Bulgaria** , Collection of reports from the scientific conference "Logistics and public systems", March 16-17, 2023, Publishing complex of the National University "Vasil Levski", Veliko Tarnovo, ISSN 2738-8042, pp. 627-633

3. A list of contributions including 4 defined contributions, namely:

First . Based on the author's analysis of the transport sector in Bulgaria, regional imbalances in the development of road infrastructure and the need for targeted investments for its modernization in accordance with European standards have been identified. The dynamics of the vehicle fleet structure have been studied and a growing trend towards the use of low-carbon means of transport has been identified.

Second . Based on the author's analysis of the norms, policies and good European practices for industrial transition to low-carbon transport, the need to implement targeted and effective tax incentives and reliefs to stimulate the purchase of low-carbon vehicles in Bulgaria has been deduced.

Third . Based on the author's empirical study of public attitudes, the financial highlights of the industrial transition to low-carbon transport have been derived. For the purpose of accelerating the transition to sustainable and ecological transport, the author's concept for the strategic placement of public charging stations based on transport corridors in Bulgaria has been developed.

Fourth . Based on the author's analysis of the applied fiscal policies, optimization solutions have been formulated for the financial management of the industrial transition to low-carbon transport as a key step towards reducing carbon emissions and achieving long-term sustainability in the transport sector - part of the country's commitment to the environmental and climate goals of the European Union.

4. Abstract in volume 27 pages.

5. A report on the fulfillment of the minimum national requirements and publications for the dissertation , with 3 publications listed, allowing for the acquisition of 30 points according to the national requirements.

6. List of the doctoral student's participation in scientific forums , with indicated participation in 2 scientific forums, namely:

1. Participation at the X I V Doctoral Scientific Session, held at the D. A. Tsenov University of Applied Sciences - Svishtov , 202 1
2. Scientific Conference "Logistics and Public Systems", March 16-17, 2023, held at the Vasil Levski National University of Economics, Veliko Tarnovo

The doctoral candidate has presented the materials that are formally required for candidacy for the educational and scientific degree of "doctor".

In fulfillment of **my duties as a reviewer**, I present the following findings and conclusions:

I. General presentation of the dissertation work

Dissertation work "**Financial Analysis of the Industrial Transition to Low-Carbon Transport**" in a volume of **159 pages**. I accept the total volume as sufficient to clarify the author's thesis. The title fully corresponds to the content of the study.

The subject of the dissertation is formulated as "**the possibilities for transition to low-carbon road transport in Bulgaria**".

For the writing of the dissertation, **66 literary sources were used**, of which 27 are in English and 39 in Bulgarian. The sources used are thematically related to the topic being developed and duly used in the dissertation work and, in my opinion, have been used correctly.

Structurally, the dissertation is structured neatly and logically – three chapters, an introduction and conclusion, and additional appendices. In my opinion, the structure of the dissertation, the balance between the parts, and most of all their content, present the doctoral student as an extremely conscientious researcher.

The first chapter is entitled "**ANALYTICAL PROFILE OF THE TRANSPORT SECTOR IN BULGARIA**" and it provides a critical review of the achievements in the specialized literature in the field of the researched issues and outlines the role of financial analysis in decisions for the development of transport. An assessment of the Republican road network of Bulgaria has been carried out and the provision of transport means in our country has been analyzed.

Chapter Two "LOW-CARBON MOBILITY - A PREREQUISITE FOR SUSTAINABLE DEVELOPMENT OF THE TRANSPORT SECTOR" focuses on national and supranational policies and norms in the transport sector, presenting and analyzing good European practices for industrial transition to low-carbon transport. A methodological framework is presented for conducting an author's survey of the challenges facing the automotive industry in the transition to a low-carbon economy.

The third chapter "EMPIRICAL STUDY OF THE INDUSTRIAL TRANSITION TO LOW-CARBON TRANSPORT IN BULGARIA" presents the author's empirical study of the state of the industrial transition to low-carbon transport. The author's views on the possibility of using fiscal instruments as a factor for increasing environmental friendliness in the "Transport, Warehousing and Post" sector in our country are presented, and optimization solutions for the financial management of the industrial transition to low-carbon transport in our country are proposed.

I accept the structure (and its corresponding research logic) as fully applicable to the researched issues, and the presented assessments and conclusions - accurate and correctly (personally) formulated.

II. Assessment of the form and content of the dissertation

The topic of the research is dissertable, relevant and significant from a theoretical and practical point of view. The title of the dissertation - "**Financial analysis of the industrial transition to low-carbon transport**" fully corresponds to the content. The author provides convincing evidence of the relevance of the topic on pp. 3-4, which allows me to confirm that the topic is original and relevant.

Object of research of the dissertation work is low-carbon transport. The subject of research is focused on the opportunities for transition to low-carbon road transport in Bulgaria. *The object and subject are formulated correctly on pp. 4-5.*

The main research thesis is, that "the transition to low-carbon road transport in Bulgaria is an adaptive process related to the socio-economic attitudes of the population, tax policy, the introduction of financial incentives and the construction of appropriate infrastructure for a gentle transport environment." (p. 5).

1. The purpose of the study is: to analyze the practices and prospects in the process of industrial transition to low-carbon transport through the prism of financial aspects. The corresponding main research tasks are also correctly stated (p. 5). I find the goal and main tasks to **be correctly formulated** and provide sufficient opportunities for conclusions and recommendations.

The main research approach used in conducting the dissertation research is the *systematic approach*, which is combined with other research methods and scientific tools such as: statistical research, synthesis, induction, deduction, literature review, retrospective data analysis, graphic modeling, questionnaire survey, etc. The following software solutions were used to process the data and display the analytical results: Microsoft Excel and IBM SPSS Statistics, in particular the capabilities for processing and presenting cross-analysis between primary data. To illustrate the results and achieve better clarity, tables and graphical images are included in the study.

The limitations are correctly described (p. 6), namely: the time period of the study includes the officially announced statistical data on the transport network in the country according to the road class for the period 2010-2020; registered means of transport by type and fuel as of February 2017 - 2024 in Bulgaria; carbon dioxide emissions for the period 2007-2018; sales of passenger cars in the EU countries on average for the period 2007-2020. The applicability of the financial analysis is presented as part of the decision-making process for the future positioning of low-carbon transport in the automotive sector in Bulgaria. The analysis of public urban transport vehicles - trains, buses, trolleybuses, trams, metro and others - remains outside the scope of the study.

The sources of the analyzed data are public data from the National Statistical Institute, European Automobile Manufacturers Association (European Automobile Manufacturers' Association - ACEA), as well as a survey among individuals and legal entities.

My general opinion about the dissertation work is that the author has clearly and precisely defined his views and ideas and within the framework of the dissertation has managed to argue and defend his views. A distinction is made between the achievements of scientific thought to date and the author's contribution to the researched issues.

The presented dissertation is 159 pages long, structured in three interconnected and building upon each other chapters. I believe that the volume of the research is sufficient for the doctoral student to develop and defend his/her view on the researched issues.

In support of the presentation in the dissertation, 10 tables and 94 figures have been designed, which have a sufficiently high degree of informativeness and are directly related to the thesis and views of the doctoral student.

The dissertation is written in understandable language with correct use of specialized scientific terminology on the issue. There are no significant deviations from the theses in the presentation, repetitions of views and passages, as well as the presence of logical contradictions and proportionality of the parts. The calculations in the dissertation are based on established mathematical and statistical approaches and models, which are correctly and appropriately applied to the analyzed data.

The dissertation was checked using the "Antiplagiat" type system, according to which it is characterized by a similarity index within the levels permissible for scientific research, which is an independent confirmation that the author has strictly adhered to the rules of scientific ethics when creating scientific research, and has correctly cited the literary sources used.

research and achievements have become available to the interested audience through 3 specialized publications on the topic - 2 articles and 1 report. The publications reflect important

aspects of the dissertation and do not overlap with each other, i.e. we do not have the publication of the same material under different names in different journals.

Regarding scientific and applied scientific contributions - there are some in the dissertation and, in my opinion, they are the author's personal work.

With regard to the fulfillment of the minimum national criteria for acquiring the educational and scientific degree "Doctor", a list of publications is attached to the dissertation, which shows that the minimum national requirements in this area are met.

Regarding the volume and content of the abstract, I believe that it is of sufficient volume and correctly, completely and accurately reflects in a summary the content and achievements of the author's dissertation research.

III. Scientific and scientific-applied contributions of the dissertation work.

Submitted for review is a completed scientific work on the topic "**Financial Analysis of the Industrial Transition to Low-Carbon Transport**". Within the framework of the research conducted, the author reaches a conclusion and upgrades, separated within 5 contributions, indicated in the attached abstract.

Among the author's achievements we can highlight:

- Based on the author's critical analysis, the regional imbalances in the development of road infrastructure and the need for targeted investments for its modernization in accordance with European standards are highlighted, in the context of the reported change in the structure of the vehicle fleet in our country, and in particular, the observed increasing trend towards the use of low-carbon means of transport. In this context, the author's concept for the strategic placement of public charging stations based on transport corridors in Bulgaria is also presented, as a way to accelerate the transition to sustainable and environmentally friendly transport.
- Based on the author's empirical study of public attitudes and analysis of norms, policies and good European practices for industrial transition to low-carbon transport, the financial highlights of the industrial transition to low-carbon transport are outlined, arguing the need to implement targeted and effective tax incentives and reliefs to stimulate the purchase of low-carbon vehicles in Bulgaria.
- Based on the author's analysis of the applied fiscal policies, optimization solutions for the financial management of the industrial transition to low-carbon transport have been formulated as a key step towards reducing carbon emissions and achieving long-term sustainability in the transport sector - part of the country's commitment to the environmental and climate goals of the European Union.

Personally, I do not know whether the ideas and results proposed by the author have found resonance and recognition in the specialized scientific literature.

IV. Critical notes, questions and recommendations on the dissertation.

In science, there is never a study that we can say is completely finished and has no potential for future development and improvement. The same applies to the current dissertation.

definitely improve its qualities if the author had expanded the scope of the analyzed authors and literary sources, including Bulgarian authors outside the Svishtov School of Finance. It would be good to analyze the best European practices and successful business projects, in view of their possibilities for transposition to the Bulgarian economy.

I have the following additional questions for the doctoral student related to the topic of the research he conducted:

1. How do you assess the degree of penetration of low-carbon transport in our country compared to other European countries?

2. In your opinion, how will changes in US customs policy, the economic confrontation with China, and limited access to rare earth elements affect the future of low-carbon transport in Bulgaria and in Europe?

V. Summary conclusion and opinion.

My general opinion is: the author has developed a dissertation that has a clearly formulated problem, goal and tasks, implying scientific research; the dissertation is proof that **Teodor Lyudmilov Borisov** knows the scientific literature and scientific achievements in this scientific field, has identified significant problems, has systematized the researched issues, has correctly interpreted the results of the scientific research, has formed them and presented them in an understandable and logical way. The dissertation work contains scientific or scientifically applied results that represent an original contribution to science and shows that the candidate has in-depth theoretical knowledge in the relevant specialty and abilities for independent scientific research.

This is a reason to give my support through a positive assessment of the dissertation work of Teodor Borisov, and to recommend to the members of the scientific jury in the procedure for the public defense of the dissertation work on the topic "Financial analysis of the industrial transition to low-carbon transport", to award doctoral student Teodor Lyudmilov Borisov the educational and scientific degree "doctor" in the professional field 3.8. Economics, in the scientific specialty 05.02.05. "Finance, money circulation, credit and insurance" (Finance).

Date: 04.08.2025

Svishtov

Reviewer:

(Prof. Dr. Bojidar Bojinov)