

## REVIEW

**for awarding the educational and scientific degree "Doctor" in the scientific speciality "Finance, Monetary Circulation, Credit, and Insurance."**

Reviewer: **Associate Professor PhD Nadezhda Georgieva Blagoeva**, member of the scientific jury in accordance with Order No. 214/10.03.2026 scientific speciality "Finance, Monetary Circulation, Credit, and Insurance," Agricultural University of Plovdiv

Author of the dissertation: **Nikolay Vasilev Todorov**, doctoral student at the Department of "Finance and Credit," D.A. Tsenov Academy of Economics, Svishtov

Scientific Supervisors: **Assoc. Prof. Angel Angelov, PhD (2021-2022), Prof. Andrey Zahariev, PhD (2022-2024), Prof. Stefan Simeonov, PhD (2025-2026)**

Title of the dissertation: **"FINANCIAL ASPECTS OF THE TRANSITION TO A CIRCULAR ECONOMY"**

### 1. General Overview of the Dissertation

Nikolay Vasilev Todorov was enrolled as a PhD student at the Department of Finance and Credit, Faculty of Finance, at the D. A. Tsenov Academy of Economics - Svishtov in 2022. He completed his Master's degree in "Agricultural Management" at the same institution. His professional experience includes holding various positions, each of which is directly related to the topic of his dissertation. Among these, positions such as Project Manager/Expert in "Circular Economy", Municipal Councillor, and Tax Inspector at the National Revenue Agency – Lovech stand out. This professional background enables him to identify and analyse a number of significant issues relevant to the Bulgarian context in the process of transition towards a circular economy.

The dissertation submitted for review is of substantial volume, comprising a total of 393 pages, of which 370 pages constitute the main body of the text. It follows a classical structure, including an introduction, three chapters, a conclusion, references, and appendices. To support and illustrate the research findings, the author has used 31 figures and 40 tables. The three chapters are closely interconnected and follow a logical sequence. A certain emphasis is evident in the second chapter, particularly in the third, which is the most extensive.

In the course of developing the dissertation, the author has reviewed and analysed a considerable number of literature sources, totalling 169. These include both Bulgarian and English-language publications and cover a wide range of recent studies in the field of circular economy. All sources are properly cited in accordance with APA style requirements. The breadth of the literature review is indicative of the author's thorough familiarity with the existing academic research in the field. Supporting evidence for the research is also presented in three separate appendices.

## **II. Evaluation of the Format and Content of the Dissertation**

The topic selected by the doctoral candidate and his supervisors is characterised by exceptional relevance and significance, both from a theoretical and, in particular, from a practical-applied perspective. The transition to a circular economy has become a key priority of contemporary economic policy at both European and national levels, imposing new requirements on the management of financial resources, investment processes, and mechanisms for sustainable development. In the context of increasing resource scarcity, intensified environmental challenges, and the need to transform the traditional linear economic model, the financial aspects of the circular economy are gaining increasing importance. Financial mechanisms such as investments, public expenditures, tax incentives, and financing instruments play a crucial role in enabling this transition. This, in turn, necessitates in-depth scientific research to assess the effectiveness of existing financial instruments and to propose new, more sustainable and adaptive solutions.

At the same time, the dynamics of the economic environment, regulatory changes associated with European sustainability policies, and the growing importance of ESG factors further reinforce the need for a systematic scientific analysis of the interaction between the financial system and the principles of the circular economy. In this regard, the present dissertation fully aligns with current research directions, addressing important and still insufficiently explored aspects of the financial support mechanisms for the transition to a more sustainable economic model.

The selected topic is not only highly relevant but also distinctly interdisciplinary, combining knowledge from public finance, investment analysis, environmental economics, and economic policy. This contributes to the further development of theoretical frameworks and creates conditions for the formulation of practically applicable solutions for sustainable economic development.

The introductory section clearly and precisely defines the aim, object, and subject of the research, the thesis to be subsequently substantiated, the research tasks, methods, and limitations. The **main objective** of the dissertation is to examine the development of circular economy concepts and to identify applicable circular models and transferable elements from international and European regulatory and administrative frameworks for application in the national economy. The **object** of analysis is the process of implementing circular economy principles within the system of local governance in the Republic of Bulgaria, considered in the context of public policies for sustainable development, resource management, and improvement of the living environment. The research examines the economic, social, institutional, and regulatory mechanisms through which circular economy principles can be applied and institutionalised at the municipal level. The **research thesis** defended by the doctoral candidate is that implementing circular economic approaches at the municipal level to achieve a balanced, resource-efficient, and low-carbon economy is not only feasible but also beneficial from both environmental and social perspectives. To substantiate this thesis, the author formulates six research tasks. During their implementation, he applies **methods** such as comparative analysis, induction and deduction, cost–benefit analysis, and a combination of qualitative and quantitative approaches. In addition, he conducts a survey among 103 respondents, the results of which are carefully analysed and illustrated through appropriate graphical tools.

The empirical research is based on the case of the Municipality of Troyan, where the author identifies several significant issues and proposes solutions to address them. **The first chapter** is devoted to the theoretical and regulatory framework of the circular economy, including a historical analysis of its emergence and development, an examination of its links with efficiency-oriented economics and sustainable development, an analysis of the European and national regulatory frameworks, and an identification of institutional and governance deficiencies. **The second chapter** focuses on international experience, social dimensions, and integrative models, serving as an analytical bridge between the theoretical framework and the applied part. Particular attention is paid to Japan’s experience in the transition to a circular economy, the social dimensions of circularity, the concept of Society 5.0, and the development of a circular urban agriculture model.

The dissertation's applied core is presented in the **third chapter**, where a specific financial model is developed and tested through a cost–benefit analysis under three scenarios: conservative, realistic, and ambitious. Sensitivity analysis is performed using discount rates of

3%, 4%, and 5%. Of particular interest is the author's proposal for a new methodology to determine the municipal waste fee in Bulgaria, which currently relies on an inadequate basis that fails to comply with the "polluter pays" principle.

In the **conclusion**, the doctoral candidate clearly outlines and systematises the achieved results, summarising the main findings and recommendations. The research hypothesis and its sub-hypotheses are convincingly substantiated, with a clearly expressed and consistently defended authorial position. This position is built upon a thorough analysis of a substantial body of literature, demonstrating a strong familiarity with existing scientific contributions in the field.

A positive impression is created by the fact that conclusions are formulated not only in the final section but also at the end of each chapter and subsection, which enhances the structure, logical coherence, and overall readability of the work. These are further supported by strong visualisation through a rich, well-prepared set of figures and tables. The conceptual apparatus and writing style meet the required academic standards and demonstrate both solid prior preparation and a deep understanding of the practical issues addressed.

It should also be noted that the author could have further refined the dissertation's volume to strengthen the research's focus. A particularly strong indicator of the study's relevance and applicability is that some of the developed models and analyses have already been implemented in practice through adopted amendments and supplements to the Municipality of Troyan's secondary legislation on waste management, green infrastructure, and municipal forest management.

The essence of the research is effectively summarised in the author's **abstract**, where the main elements of the study are clearly and concisely presented. The abstract comprises 39 pages and fully complies with the established requirements for structure and content. It includes all mandatory components: the relevance of the topic, the object and subject of the research, the research thesis, objectives and tasks, methodology, the dissertation structure, a statement of scientific and scientific-applied contributions, a list of publications, and a declaration of originality.

It is particularly noteworthy that the doctoral candidate independently outlines directions for future research, which indicates research maturity and the ability to further develop the achieved results beyond the scope of the present work. This demonstrates that the author possesses the necessary knowledge and competencies not only to conduct the research but also to expand it in the future. I accept the stated scientific and applied-scientific contributions and consider them fully justified and consistent with the dissertation's content.

In relation to the dissertation topic, the author has published four scientific articles and three conference papers, all single-authored, totalling 80 points, exceeding the legally required minimum of 30 points. The doctoral candidate has participated in three scientific conferences. These publications are closely related to the dissertation's subject and reflect its key aspects. They demonstrate not only that the author's research has gained public visibility but also that it has already been subject to academic discussion and evaluation. Furthermore, a significant part of the dissertation's results has been normatively validated through adopted amendments to secondary legislation at the municipal level, highlighting the strong practical relevance of the research.

A declaration of originality is also provided, confirming that the dissertation represents an authentic and independent scientific contribution of the author.

### **III. Scientific and Applied Scientific Contributions of the Dissertation Work**

The present dissertation represents a comprehensive and fully developed scientific work in which the initially stated research objective is consistently achieved, and the author's thesis is firmly defended. Several contributions are identified and grouped into two main categories: scientific-theoretical and scientific-applied, which I fully accept, as they are entirely the result of the doctoral candidate's independent work and achievements.

First and foremost, it should be noted that the author provides an original definition and a well-argued interpretation of the circular economy as an integrated socio-economic model for the sustainable development of the contemporary Bulgarian city, extending beyond its traditional perception as merely an environmental or resource policy. Also belonging to the category of scientific contributions is the conducted theoretical and regulatory analysis of the development of the circular economy concept, which allows for the identification of key problem areas hindering its sustainable implementation. On this basis, the need for a continuous, multidimensional analysis encompassing political, economic, regulatory, and social dimensions is convincingly substantiated as a prerequisite for the sustainable development of circular models at the municipal level.

Furthermore, an analytical framework is developed to examine the social dimensions of the circular economy and their relationship to the concept of Society 5.0. The concept of circular urban agriculture is also elaborated as an integrative model linking bio-waste management, green infrastructure development, social inclusion, and local production. In

addition, the methodology for studying the circular economy at the local level is enriched by combining qualitative and quantitative research methods.

The scientific-applied contributions of the dissertation include, first and foremost, the development of a new methodology for determining the municipal waste fee, aligned with the principles of the circular economy and the “polluter pays” principle. In addition, the proposed methodology is empirically tested within a specific municipal context through the application of cost–benefit analysis, scenario analysis, and sensitivity analysis using different discount rates. A particularly significant contribution of the author is that the proposed models have already been normatively validated through amendments and supplements to secondary legislation in the Municipality of Troyan, covering waste management, green system development, and municipal forest management.

I consider the contributions identified by the doctoral candidate to be entirely his own work; they are well substantiated and consistently argued throughout the research.

#### **IV. Critical Remarks, Questions, and Recommendations on the Dissertation Work**

I consider that the submitted dissertation entitled “Financial Aspects of the Transition to a Circular Economy”, developed as a result of the joint work between the doctoral candidate and his supervisors, represents an in-depth, relevant, and strongly practice-oriented scientific study, focused on a key aspect of the transition to a circular economy.

It should be noted that the author has developed the dissertation in accordance with established academic standards and the requirements for obtaining the educational and scientific degree “Doctor”. The research is characterised by a solid theoretical foundation, an appropriately selected and correctly applied methodological framework, and clearly defined objectives, tasks, and conclusions.

The research problem has been examined thoroughly and systematically, yielding significant findings of both scientific and applied nature. The doctoral candidate demonstrates the ability to conduct independent scientific research, as well as the skills to analyse and interpret empirical data and to formulate well-grounded conclusions and recommendations.

All of the above mentioned provides sufficient grounds to conclude that the doctoral candidate, Nikolay Todorov, has developed his dissertation with the required level of competence and depth of scientific knowledge. In this regard, I do not have any substantial critical remarks, but would rather raise the following question:

1. How do you assess the practical feasibility of changing the tax base for determining the municipal waste fee in the Republic of Bulgaria according to your proposed methodology, and what challenges and difficulties do you anticipate in the process of its practical implementation?

## **V. Summary, Conclusion, and Opinion**

In conclusion, I consider that the dissertation submitted for evaluation, entitled “Financial Aspects of the Transition to a Circular Economy”, represents an independent, comprehensive, and in-depth scientific study on a highly relevant and significant contemporary issue for both theory and practice. The work is characterised by a clear logical structure, solid theoretical grounding, and a convincing connection between theoretical concepts and empirical analysis. The initially stated objective has been achieved, and the formulated research thesis has been convincingly substantiated throughout the study. The results obtained have both scientific and applied value, contributing to expanding existing knowledge in the field of financial mechanisms for the transition to a circular economy, as well as to improving practical approaches to their implementation.

The dissertation demonstrates a very good understanding of the subject matter, the ability to conduct independent scientific research, and strong skills in analysing and interpreting empirical data. A clearly expressed authorial position is evident, supported by well-reasoned arguments and logically sound conclusions, which testify to the candidate’s research maturity and well-developed scientific competencies.

On the basis of the above, I give my unequivocally **positive evaluation** of the dissertation and strongly vote **IN FAVOUR** of awarding the educational and scientific degree “Doctor” to Nikolay Vasilev Todorov in the field of higher education 3. Social, Economic and Legal Sciences, professional field 3.8 Economics, scientific speciality “Finance, Money Circulation, Credit and Insurance”.

**Date:** 2.04.2026

**Reviewer:** (.....)

Assoc. Prof. PhD. Nadezhda Blagoeva