

STATEMENT OF OPINION

By: Prof. Dr. Galina Pencheva Mladenova, Professional Field 3.8 "Economics", Scientific Specialty "Marketing", University of National and World Economy, Sofia

Regarding: Dissertation for the award of the scientific degree "Doctor of Sciences" in Professional Field 3.8 "Economics", Scientific Specialty "Marketing"

Author of the dissertation: Prof. Dr. Todor Borisov Krastevich

Topic of the dissertation: "CUSTOMER LIFETIME VALUE (Conceptual, Methodological and Applied Aspects)"

Reason for repairing the opinion: participation as a member of the scientific jury for the defense of the dissertation in accordance with Order No. 253/25.03.2026 of the Rector of D. A. Tsenov Academy of Economics.

The documents submitted in the procedure for awarding the scientific degree "Doctor of Sciences" fully comply with the regulatory requirements. The doctoral candidate has presented the dissertation for discussion at the Department of Marketing, Faculty of Management and Marketing, at the D. A. Tsenov Academy of Economics – Svishtov, in accordance with Art. 12 (6) of the Academic Staff Development Act in the Republic of Bulgaria. The initiation of the procedure for the defense of the dissertation was carried out by decision of the Faculty of Management and Marketing (Protocol No. 6/25.03.2026), in compliance with Art. 89 (6) of the Regulations for the Development of the Academic Staff at the D. A. Tsenov Academy of Economics – Svishtov.

1. General characteristics of the submitted dissertation for awarding the scientific degree "Doctor of Sciences" in professional field 3.8 "Economics", scientific specialty "Marketing"

The dissertation entitled "Customer Lifetime Value (Conceptual, Methodological, and Applied Aspects)" comprises 318 pages and consists of an introduction; a main body structured into five chapters; a synopsis; and a conclusion (reflective epilogue). An integral part of the dissertation are two appendices containing a reproducible analytical protocol for modeling customer lifetime value. The list of references includes 264 sources. The main text and appendices contain 31 figures, 29 tables, and numerous online references to the data and publicly accessible source code used.

The presented dissertation systematically and in great depth examines the issues related to the evaluation and forecasting of customer value in the context of the contemporary digital economy. From the outset, a clear logical framework is established through precise formulation of the research object, subject, goals, tasks, and hypotheses, all aligned with key areas in strategic marketing and customer relationship management. These precise formulations are a prerequisite for the systematic nature of the study and the consistent development of the research throughout the work.

The topic is positioned within the context of the growing role of data, analytical methods, and machine learning in marketing, with customer lifetime value (CLV) considered as an integrative metric combining financial, behavioral, and strategic dimensions of customer relationships. In this sense, the study explores the relationship between CLV and key managerial processes, including segmentation, targeting, and allocation of marketing resources (Chapter 1, 1.3).

The theoretical part focuses on a systematic examination of the nature and evolution of the CLV concept (Chapter 1, 1.1–1.2), critically analyzing various definitions and approaches (Table 1). In this context, CLV is presented as a concept integrating indicators such as customer acquisition cost, margin, return, and customer equity (Chapter 1, 1.4). The analysis is further expanded through methodological approaches for evaluating and forecasting CLV (Chapter 1, 1.5), as well as ethical and managerial aspects (Chapter 1, 1.6), contributing to a broader interpretation of the concept.

A significant part of the theoretical section is devoted to the typology of CLV models (Chapter 2), including deterministic, heuristic, probabilistic, machine learning, deep neural, and hybrid models. The typology is presented through comparative analysis, taking into account assumptions, data requirements, advantages, and limitations (Tables 11 and 12), enabling the formulation of criteria for selecting appropriate models depending on the context (Figure 4).

Chapter 3 distinguishes between contractual and non-contractual customer relationships and their implications for CLV modeling (Chapter 3, 3.1–3.4). The focus on customer churn observability and differences in modeling approaches creates conditions for more precise adaptation of analytical methods to specific business contexts.

The methodological framework in Chapter 4 includes analysis of core CLV model components (Chapter 4, 4.1) and key assumptions such as independence of events, stationarity, and heterogeneity (Chapter 4, 4.2). Special attention is given to data preparation challenges, including sparsity, censoring, and information leakage (Chapter 4, 4.3), forming a solid basis for subsequent empirical modeling.

The empirical part (Chapter 5) follows the developed methodology and includes feature engineering (Chapter 5, 5.1), probabilistic models such as BG/NBD and Pareto/NBD (Chapter 5, 5.2), machine learning methods (Chapter 5, 5.3), and Bayesian approaches (Chapter 5, 5.4). A comparative analysis of models is conducted (Chapter 5, 5.5), using accuracy and efficiency metrics (Tables 20 and 21), as well as visual validation tools (Figures 24–26).

Particular interest is generated by the appendices, which extend the theoretical and methodological framework with practical implementations. Appendix A presents a protocol for CLV modeling in a non-contractual omnichannel environment, including synthetic data generation, feature construction, and application of probabilistic and hybrid models. Appendix B focuses on contractual settings, integrating survival analysis (Kaplan–Meier curves and Cox regression) with classification and regression models for predicting churn and revenue.

2. Evaluation of scientific and applied contributions

The work is undoubtedly original and significantly expands the knowledge in CLV management within a dynamically evolving environment. Its multi-layered nature and systematic depth lead to numerous well-founded conclusions, some of which constitute substantial scientific and applied contributions.

What, in my opinion, are the most significant scientific and applied research contributions?

Theoretical: Systematization and integration of existing approaches, including a developed typology of CLV models and conceptualization of their component structure.

Methodological: Integration of probabilistic, machine learning, and Bayesian approaches into a unified framework.

Practical: Development of analytical protocols demonstrating real-world applicability of the models across business contexts.

In conclusion, the dissertation is highly commendable, offering a coherent and comprehensive treatment of the conceptual, methodological, and applied aspects of customer lifetime value, while demonstrating their application in real-world marketing and customer relationship management analytics within a big data environment.

3. Evaluation of the abstract

The abstract accurately reflects the structure and content of the dissertation. It demonstrates the ability to synthesize complex scientific problems and present research results clearly. The author's decision to highlight scientific and applied contributions in each chapter is commendable.

4. Evaluation of publications and academic recognition

Prof. Dr. Todor Krastevich has submitted 12 publications (one monograph, three studies, four conference papers, four articles), five of which are indexed in Scopus. He has participated in eight scientific and professional forums related to the dissertation.

I can state unequivocally that within our marketing academic community, Prof. Dr. Todor Krastevich has rightfully established himself as a recognized authority, with numerous original publications and a lot of followers. My more than 20 years of acquaintance and professional collaboration with him give me grounds to affirm that he is a highly erudite scholar, driven by intellectual curiosity and a constant pursuit of scientific discovery. The present work is further evidence of this."

5. Critical remarks and recommendations

I have no critical remarks or recommendations. At the same time, the broad scope of the study suggests opportunities for further deepening in certain areas, including more detailed examination of specific deep learning algorithms or empirical validation with real business data. These aspects may be considered a natural continuation of the research in future work."

6. Conclusion

The dissertation 'Customer Lifetime Value (Conceptual, Methodological, and Applied Aspects)' is a mature and accomplished work, contributing to marketing theory and methodology and offering a practical tool for CLV evaluation across diverse business contexts.

The dissertation submitted by Prof. Dr. Todor Krastevich for the award of the degree 'Doctor of Sciences' complies with the requirements of Art. 12 (4) of the Academic Staff Development Act in the Republic of Bulgaria.

Based on the above, I vote in favor of awarding Prof. Dr. Todor Borisov Krastevich the degree 'Doctor of Sciences' in professional field 3.8 Economics, scientific specialty Marketing.

21.04.2026

Signature:

Prof. Dr Galina Mladenova