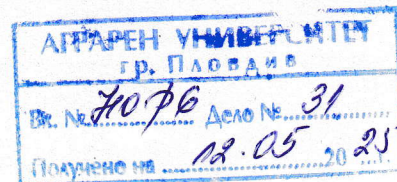


OPINION



on the dissertation for obtaining the educational and scientific degree "Doctor" in: Higher Education Area 3.0 Social, Economic and Legal Sciences, Professional Field 3.8 Economics, Scientific Specialty: Organization and Management of Production.

Author of the dissertation: Pavel Georgiev Chervenkov – full-time doctoral student at the Department of Management and Marketing at the Agricultural University, Plovdiv.

Dissertation topic: "Strategy for the Digitalization of the Viticulture and Winemaking Sector."

Opinion prepared by Prof. Dr. Violeta Dinkova Dirimanova, Agricultural University, Plovdiv, Higher Education Area 3.0 Social, Economic and Legal Sciences, Professional Field 3.8 Economics and Management, Scientific Specialty: Organization and Management of Production. Appointed as a member of the scientific jury by Order No. RD 16-519/22.04.2025 of the Rector of AU.

1. Brief Presentation of the Candidate

Pavel Georgiev Chervenkov graduated with a Bachelor's degree in Regional Development Management from the Faculty of Economics at the Agricultural University, Plovdiv in 2018. He completed his Master's degree in Agricultural Marketing in 2019 at the same faculty and university. Pavel Chervenkov was a full-time PhD student at the Department of Management and Marketing at the Agricultural University, Plovdiv for the period 2022–2025. Currently, he works as an Automation Engineer at "Industrial Solutions" Ltd., Sofia, Bulgaria. He is fluent in English and has a good command of Russian.

2. Relevance of the Topic

The topic of the dissertation is related to sustainable competitive development, which requires perfect control over all business processes in the viticulture and winemaking enterprise through the adoption of digitalization. Competitiveness increasingly relies on digitalization and the skillful extraction of its benefits, which can be transformed into a competitive advantage. The doctoral student identifies the need for a sectoral digitalization strategy to be a key competitiveness-determining factor in the development of viticulture and winemaking. Although Bulgaria currently has an approved digitalization strategy for agriculture, it must be broken down into sector-specific strategies to achieve effective competitive development. The viticulture and winemaking sector has its own specific characteristics, which should be reflected in a dedicated digitalization strategy to ensure maximum effectiveness. Therefore, the dissertation considers the core hypothesis that digitalization is a critical factor in achieving competitiveness and competitive development in this sector in Bulgaria.

3. Objectives, Tasks, Hypotheses, and Research Methods

The objective of the dissertation is clearly stated: to develop a digitalization strategy for the viticulture and winemaking sector, taking into account its specific characteristics. To achieve this goal, the following research tasks are set: (1) Clarify the essence of competitiveness in the context of business process digitalization; (2) Analyze digitalization processes and their impact on the competitiveness of viticulture and winemaking enterprises; (3) Evaluate the influence of digitalization on the sector's competitiveness; (4) Identify the challenges of implementing digitalization and applying precision agriculture in viticulture and winemaking enterprises; (5) Develop and validate a digitalization strategy for the sector.

The *research focuses* on viticulture and winemaking enterprises in Bulgaria, defined as businesses combining grape cultivation and winemaking—i.e., they own vineyards and process part of the harvest into wine products. The subject of the research is the critical factors for digitalizing the sector over a five-year period (2018–2022). Specific approaches and methods are used to analyze and address the dissertation's research questions.

The doctoral student used the following *methods*: system analysis, situational analysis, comparative analysis, statistical methods, diagnostic analysis, forecasting analysis, and others.

4. Visualization and Presentation of Results

The dissertation includes an introduction, three main chapters, a conclusion, and a bibliography. It spans 137 pages. The analysis is illustrated with 5 tables and 48 figures. A total of 97 literature sources are cited, mainly in Bulgarian and English.

5. Discussion of Results and Literature Used

The doctoral student thoroughly researched modern scientific literature by Bulgarian and foreign authors. Information sources also include data from the Ministry of Agriculture's Agrostatistics Directorate, Rural Development Directorate, Compensatory Measures Directorate, the Agricultural Report of the Ministry of Agriculture, Eurostat, and regulatory documents from the European Commission and the Republic of Bulgaria. A large part of the data was collected through surveys with managers and owners of viticulture and winemaking enterprises.

The theoretical section includes a critical analysis of researchers' opinions on the topic. Key competitive advantages of different organizational forms of business management in the sector are outlined. Theories of innovation and digital business management approaches are deeply analyzed. The digitalization process is presented as a system involving various software and hardware solutions aimed at improving competitiveness. The first chapter ends with a detailed justification of the methodological approach of the research.

The main methodological steps developed and adapted in the dissertation include: (1) identifying obstacles to accelerated digitalization of business processes in the sector using surveys and focus groups; (2) analyzing and evaluating supply and demand of digital technologies for competitiveness improvement through statistical

data and surveys among suppliers and users of such technologies; (3) assessing the competitiveness of enterprises that have implemented digital technologies; (4) developing a sectoral digitalization strategy using SWOT analysis and focus groups; (5) engaging stakeholders to accelerate sectoral digitalization. The dissertation also methodologically analyzes and evaluates competitiveness indicators, showing that digitalization positively affects competitiveness, especially in terms of gross profit and sales profitability.

The final analytical chapter addresses the internal transformation processes in enterprises during digitalization amid changing business conditions. The proposed strategy outlines four strategic goals and six key measures, all aimed at enhancing the sector's competitiveness.

6. Contributions of the Dissertation

The dissertation "Strategy for the Digitalization of the Viticulture and Winemaking Sector" includes the following contributions:

- Clarifies the role of digitalization in managing business processes in the sector;
- Analyzes digitalization processes and their impact on enterprise competitiveness;
- Evaluates the influence of digitalization on sectoral competitiveness;
- Identifies challenges to implementing digitalization and precision agriculture;
- Develops and validates a sector-specific digitalization strategy;
- Proposes a stakeholder engagement strategy to accelerate digitalization in the sector.

7. Critical Notes and Questions

The methodological section lacks sufficient argumentation in some parts of the research. The literature review is extensive and well-analyzed in the theoretical section. It is recommended that the doctoral student publish more academic articles in high-impact journals to ensure broader recognition of their scientific contributions both in Bulgaria and internationally.

8. Published Articles and Citations

The doctoral student has published three independent articles on the dissertation topic, meeting the minimum requirement for obtaining a doctoral degree:

1. Chervenkov, P. (2022). Digitalization processes in precision farming and their role in sectoral competitiveness. *Journal of Bio-based Marketing* vol. 2, 2022, pp. 59–75, ISSN 2683-0825
2. Chervenkov, P. (2023). Impact of digitalization on the competitiveness of viticulture enterprises. *Journal of Bio-based Marketing* vol. 2, 2023, pp. 11–19, ISSN 2683-0825

3. Chervenkov, P. (2023). Main determinants of demand for digital services in viticulture. Journal of Bio-based Marketing vol. 2, 2023, pp. 21–28, ISSN 2683-0825

CONCLUSION:

Based on the applied and well-chosen research methods, the correctly conducted analyses, and the conclusions drawn by the doctoral student, I believe that the presented dissertation meets the requirements of the Law on the Development of Academic Staff in the Republic of Bulgaria and the Regulations of the Agricultural University. Therefore, I give a **POSITIVE** evaluation.

I recommend that the esteemed Scientific Jury also votes in favor and awards **Pavel Georgiev Chervenkov** the educational and scientific degree Doctor in the scientific specialty Organization and Management of Production.

Date: 8.05. 2025
Plovdiv

OPINION PREPARED BY:
(Prof. Dr. Violeta Dirimanova)

