С.А."Д.А.Ценов" - Свищов
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OPINION

for acquiring the educational and scientific degree "doctor"
at the D. A. Tsenov Academy of Economics

Prepared the opinion: Prof. DSc Pavel Stoyanov Petrov, University of Economics - Varna, Faculty of Informatics, Department of Informatics

Author of the dissertation: Abrar Ashraf

Dissertation topic: "The Potential of Information and Communication Technologies in the Transition Towards Green Economy" presented for the acquisition of the educational and scientific degree "Doctor" in PN 3.8, in the doctoral program "Application of Computing in Economics"

The opinion was developed based on the Law on the Development of the Academic Staff in the Republic of Bulgaria, Regulations for the Implementation of the Law on the Development of the Academic Staff in the Republic of Bulgaria, Order of the Rector of the D. A. Tsenov Academy of Economics No. 324 of 16.04.2025 and Decision of the Scientific Jury of 17.04.2025.

I. General presentation of the dissertation

The subject of the study is the possibility of information and communication technologies to accelerate the transition to a Green economy by implementing a comprehensive framework for the transition to a Green economy. The object of the study is the transition to a Green economy at the global and national level with the integration of information and communication technologies. In structural terms, the dissertation has a total volume of 223 pages and consists of an introduction, 3 chapters, conclusion, bibliography. 9 figures and 32 tables are included. The list of literature consists of approximately over 150 sources. There are no appendices.

The Introduction justifies the relevance and significance of the topic of the dissertation in relation to the importance of information and communication technologies for the transition to a Green economy. The research thesis, goal and objectives are defined, the object and subject of the study are presented. The research methods used are indicated - both qualitative and quantitative.

Chapter One presents the conceptual foundations of the green economy and sustainable development in relation to information and communication technologies. Chapter Two presents some problems of the linear economy and the digital transformation of information and communication technologies in the green economy. Chapter Three examines the role and potential of green solutions in information and communication technologies in developed countries and Bulgaria.

II. Assessment of the form and content of the dissertation

The problem developed in the dissertation is of a high degree of relevance - the issues related to the application of new technologies, such as smart grids for better integration of renewable energy, managed by artificial intelligence systems, geographic information systems and other technologies can be useful for optimizing sustainable management. Research in this direction is useful and the approach proposed by the author is of interest for theory and practice.

The author demonstrates in-depth knowledge of the state of the problems on the topic of the dissertation and has several publications on the topic. From the attached list of publications, it is evident that there are 5 reports from scientific conferences and 1 article, which covers the minimum requirements of the Regulations for the implementation of the ZRASRB.

The abstract is 40 pages long and truthfully reflects the content of the dissertation.

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

The author claims 3 contributions of a theoretical and 3 contributions of

a practical-applied nature, which in my opinion are a personal achievement of the author and the presented new scientific ideas and results can be used in future research.

IV. Questions on the dissertation work

I make the following critical remarks and recommendations regarding the formation of the list of references:

- It will be good that the list is numbered and arranged alphabetically - for example, the very first source is out of place.
- In many places, the sources are not indicated correctly - for example, there is only "Retrieved from", without other essential bibliographic data - for example: "Data, O. W. (2023). Retrieved from https://ourworldindata.org"
- Some sources seem to be duplicated - for example: Adler, L. (2016, February 18); Agbede, T. (2024, 10 24); Global Forest Watch. (2024); ILO. (2018); Kraetzig, N. M. (2024, October 10); MarketsandMarkets. (2019, NOV 26); UNEP. (2023), etc.

The critical remarks made do not affect the quality and quantity of the results and contributions obtained.

V. General assessment of the dissertation work and conclusion

The comments and recommendations made do not diminish the author's achievements and, in general, I positively assess the developed dissertation work. I believe that Abrar Ashraf has presented a study that, in terms of volume, structure and content, meets the requirements of the ZRASRB and PPZRASRB for awarding the educational and scientific degree "doctor", and I propose to the Scientific Jury to award Abrar Ashraf the educational and scientific degree "doctor" in the PN "3.8. Economics".

Date: 07.05.2025

Prepared the opinion:
/ Prof. DSc P. Petrov /