

REVIEW



on a dissertation thesis for obtaining the educational and scientific degree “**Doctor**” in: field of higher education 3.0 ‘Social, business and legal sciences’, professional field 3.8 ‘Economic’, scientific specialty: ‘Organization and management of production’.

Author of the dissertation thesis:

TATJANA IVAN PILJAN, a PhD student at the Department of Management and Marketing in the Agricultural University, city of Plovdiv.

Dissertation topic: “OPPORTUNITIES AND BARRIERS FOR SUSTAINABLE AGRICULTURAL DEVELOPMENT IN THE REPUBLIC OF SERBIA”.

Reviewer:

Associate professor Dr. Teodora Orfeeva Parisheva-Stoeva, 3.0. “Social, business and legal sciences”, 3.7 “Administration and Management”, Organization and management of production, appointed as a member of the scientific jury by order № ПД-16-1342 /02.12.2021 of the Rector of the Agricultural University.

1. Brief introduction of the candidate.

TATJANA IVAN PILJAN was born on June 11, 1988 in the town of Zemun, Serbia. She has a master's degree in economics from the Faculty of Business Economics and Entrepreneurship in Belgrade. Currently, the doctoral student works as an assistant at the Faculty of Business Economics and Entrepreneurship in Belgrade.

2. Relevance of the issue.

The dissertation thesis presented for review provides a detailed study of a global environmental problems that will lead to changes in existing economic systems and lifestyle changes due to the rapid deterioration of the environment caused by pollution as a result of increased industrial production and consumption. All factors in the process of creating and implementing new forms of decision-making and control that will implement the process of change in accordance with the approach to sustainable development must be taken into account.

3. Purpose, tasks, hypotheses and methods of research

The aim of the dissertation is analysis and classification of ecology and sustainable development and application of modern technologies in agriculture of the Republic of Serbia. The social goal is to develop awareness of the importance of ecology and sustainable development and the application of modern technologies in agriculture.

Research hypotheses.

The main hypothesis in this study is:

H-1: The application of modern technologies in the field of sustainable agriculture, contributing to the optimization of investments, reduction of losses and maximization of income. The nature of the general hypothesis thus set requires that it be operationalized by special hypotheses:

H-2: The advantages of using modern technologies in agriculture are undoubted.

H-3: The application of modern technologies in agriculture enables sustainable agriculture and healthy food.

H-4: The level of application and perception of modern technologies in the Republic of Serbia is still low.

The subject of research is related to the analysis and consideration of the concept of ecology and sustainable development, land and the use of modern technologies in the field of sustainable agriculture, as well as the search for adequate modalities for sustainable development of agriculture.

The main research idea is to study global environmental issues in as much detail as possible, to study the impact on all areas of sustainable agriculture and to propose methods and techniques to minimize the harmful effects on sustainable agricultural development.

The methodological approach to the research requires the application of basic analytical methods, namely: methods of analysis, abstraction and deduction, as well as basic synthetic methods such as synthesis, concretization and generalization. The following general scientific methods were used: deductive and analytical deductive.

4. Visualization and presentation of the results obtained.

The dissertation consists of an introduction, three chapters and a conclusion, and it is comprised of 152 pages and bibliography. It contains 33 figures, 38 tables and 29 graphs. The dissertation work is well structured and includes all the necessary elements. 77 literary sources are quoted in the dissertation, of which 50 are works by foreign authors, 19 are electronic resources and 8 are normative documents and laws of the Republic of Serbia.

The dissertation meets the requirements of the Law on Scientific Degrees and Scientific Titles, in terms of volume, structure, bibliography and empirical applications.

5. Discussion of the results and bibliography

The sustainable agriculture is based on the use of technologies that maximize productivity while minimizing the negative effects on natural (land, water and biodiversity) and human resources (rural and consumer).

The first chapter of the dissertation defines global environmental issues, principles and strategies for environmental management. Environmental management is defined and models of eco-management are analyzed. The second chapter of the dissertation defines the concept of agricultural production - precision farming. The connection between information technology and precision agricultural production is explained.

The third chapter deals with the study of consumer attitudes towards the applicability of modern technologies in the function of sustainable agricultural development. A non-parametric statistical procedure for assessing the attitude of the population to the applicability of modern technologies in the function of sustainable agricultural development is presented.

Regression analysis and forecast for the connection between the attitudes of the respondents and their socio-andragogical characteristics are also presented. It has been proven that without the application of modern technologies in the field of sustainable agriculture we cannot have optimization of investments, reduction of losses and increase of incomes, which shows the interconnectedness of modern technologies and sustainable agriculture. Based on all indicators, we can conclude that the level of application and adoption of modern technologies in the Republic of Serbia is still low.

6. Dissertation Contributions.

The following contributions of a scientific and applied nature can be highlighted in the dissertation:

- The essence of environmental management is clarified and models of eco-management are analyzed.
- The methodological approach used analyzes the applicability of modern technologies in the function of sustainable agricultural development.
- Innovative solutions in the field of agriculture are offered.
- A forecast for the connection between the attitudes of the respondents and their socio-andragogical characteristics is presented.

7. Critical comments and questions.

I would recommend to the PhD student that the scientific-applied contributions be presented at the end of the dissertation in order to help develop the conclusion of the dissertation research.

8. Published articles and references.

TATJANA IVAN PILIAN is a co-author of eighteen /18 / articles:

1. Piljan, T., Lukić, M. "Novi kanali pružanja usluga osiguranj", 2019. Treća Nacionalna naučno - stručna konferencija sa međunarodnim učešćem „TRENDVI U POSLOVANJU 2019“
2. Pilan, I., Piljan, T., Lukić, M. „Osiguranje sportista u Republici Srbiji“. 2019. Trendovi u poslovanju, Kruševac. volume 2. pp. 78-86
3. Piljan, T., Lukić, M., Piljan I. "Neophodnost uvođenja reformi PIO". 2019. ISJ INTERNATIONAL REVIEW, Beograd. pp. 82-98.
4. Pilan, T., Lukić, M., "Electronic business and insurance". 2019.VIII MEĐUNARODNA KONFERENCIJA „Zapošljavanje, obrazovanje i preduzetništvo“, ISBN 978-1-993029-3-1. pp. 93-100.
5. Pilan, I., Piljan, T., Cogoljević, D. "Analiza poslovanja dobrovoljnih penzionih fondova u Republici Srbiji". 2019. Vojno delo, Beograd. volume 71, pp. 194-210.
6. Piljan, T., Brzaković, T., Šmigić-Miladinović J. "Analysis of the attitudes of the population on the need for animal insurance". 2019. Ekonomika poljoprivrede, Beograd.

volume 66. pp. 309-323.

7. Pilan, T., Piljan, I., "The importance of insurance for the development of agriculture". 2018. VII MEĐUNARODNA KONFERENCIJA „Zapošljavanje, obrazovanje i preduzetništvo“, ISBN 978-1-9993029-1-7, book 1, pp. 76-94.
8. Pilan, T., Cogoljević, D., "Analysis of the attitudes of the population on the need for animal insurance". 2018. VII MEĐUNARODNA KONFERENCIJA „Zapošljavanje, obrazovanje i preduzetništvo“, ISBN 978-1-9993029-1-7, Beograd. pp. 95-113.
9. Piljan, I., Cogoljević, D., Piljan, T. "Insurance as a factor for the development of the agricultural sector in the Republic of Serbia". 2018. International Review, Beograd. pp. 131-137.
10. Piljan, T., Piljan, I., Cogoljević, D. "Uticaj blockchain tehnologije na osiguranje". 2018, Vojno delo, Beograd, volume 70, pp.360-373.
11. Cogoljevic, D., Gavrilovic, M., Roganovic, M., Matic, I., Piljan, T. "Analyzing of consumer price index influence on inflation by multiple linear regression". 2018. PHYSICA A-STATISTICAL MECHANICS AND ITS APPLICATIONS, volume 505, pp. 941-944.
12. Piljan, T., Brzaković, T. "Obavezno i privatno penzijsko osiguranje - analiza stavova korisnika." 2017. Ekonomija: teorija i praksa, Beograd, volume 10, pp.39-51.
13. Piljan, T., Piljan, I., Cogoljević, D., "Primena informaciono-komunikacionih tehnologija i interneta u distribuciji usluga osiguranja". 2017. Vojno delo, Beograd. volume 69, pp.367-373.
14. Piljan, T., Piljan, I., Cogoljević, D. "Trendovi u osiguranju u Srbiji od 2005. do 2015. Godine". 2017. Vojno delo, Beograd, volume 69, pp.390-403.
15. Piljan, T., Piljan, I., Cogoljević, D., "Utilization of Entrepreneurial Insurance Companies' Approaches to Improvement of Risk Assessment". 2017. INSIGHTS AND POTENTIAL SOURCES OF NEW ENTREPRENEURIAL GROWTH, ISBN 978-88-95922-84-3. pp.232-238.
16. Živković, M., Piljan, I., Piljan, T. "Ocena stava stanovnika prema obaveznom i privatnom penzijskom osiguranju", 2016. Trendovi u poslovanju, Kruševac, volume 4, pp. 91-99.
17. Piljan, T., Cogoljević, D. "Osiguranje kao faktor razvoja preduzetništva u Srbiji od 2005. do 2015. Godine". 2017. VI MEĐUNARODNA KONFERENCIJA „Zapošljavanje, obrazovanje i preduzetništvo“ - FINANCE, BANKING AND FINSURANCE, ISBN 978-86-6069-102-8, Beograd. pp. 179-191.
18. Piljan, T., Piljan, I., "Penzijsko i invalidsko osiguranje – neophodnost uvođenja reformi". 2017. VI MEĐUNARODNA KONFERENCIJA „Zapošljavanje, obrazovanje i preduzetništvo“ - FINANCE, BANKING AND INSURANCE, ISBN 978-1-912009-86-2, Beograd. pp. 209-227.

The materials presented correspond to the topic of the dissertation thesis. The abstract of the PhD thesis objectively reflects the structure and content of dissertation work.

CONCLUSION:

I think that the presented dissertation work meets the requirements of the Act on Development of the Academic Staff in the Republic of Bulgaria, and the Regulations of the Agricultural University regarding its implementation and I therefore confidently give it a **POSITIVE** assessment.

I venture to suggest to the Honorable scientific jury to give their positive vote as well and to award to TATJANA IVAN PILJAN the educational and scientific degree „DOCTOR“ in Organization and management of production.

Date: 14/01/2022
city of Plovdiv

THE REVIEW IS PREPARED BY:
Assoc. prof. Dr. Teodora Stoeva
(.....)

