

REVIEW

by Prof. Dr. Silvia Trifonova Trifonova-Pramatarova, University of National and World Economy (UNWE), Sofia

of a dissertation for awarding the scientific degree “Doctor of Science” in the Area of higher education 3. Social, Economic and Legal Sciences, Professional field 3.8 Economics, Department “Finance and Insurance”, Higher School of Insurance and Finance (VUZF University), Sofia

Author: Dr. Bożena Kusz

Topic: “Economic efficiency of farms in Poland depending on economic size”

1. General description of the presented materials

By Order No. 85/21.02.2025 of the Rector of the Higher School of Insurance and Finance (VUZF University), Corresponding member Prof. DSc. of Law Boris Velchev, I have been appointed as a member of the scientific jury to ensure the procedure for the defense of a dissertation on the “Economic efficiency of farms in Poland depending on economic size” for the acquisition of the scientific degree “Doctor of Science” in the Area of higher education 3. Social, Economic and Legal Sciences, Professional field 3.8 Economics. The author of the dissertation is Dr. Bożena Kusz - candidate at the Department “Finance and Insurance”.

The materials submitted by the VUZF include all the necessary documents for the procedure, namely: a CV in English, dissertation in Russian, abstract in Bulgarian and English, list of publications, summaries of publications, including in Bulgarian, certificate of fulfilment of the national minimum requirements for acquiring the scientific degree “Doctor of Science” in professional field 3.8 Economics, declaration of authenticity and originality, certificate of the candidate’s citations.

The publications that Dr. Bożena Kusz has submitted for the competition include: 1 habilitation thesis – monograph, 1 published monograph that is not submitted as a habilitation thesis, 10 articles published in refereed journals indexed in SCOPUS or WoS, 23 articles published in non-refereed journals with scientific review or published in edited collective volumes, 1 published chapter of a collective monograph.

2. Brief biographical information of the candidate

Bożena Kusz is a PhD in Agricultural Sciences from the National Research Institute of Animal Husbandry in Krakow since 2015. She has a Master’s and Bachelor’s degree in Economics in the specialty “Economics of Agricultural Production” from the Agricultural University in Krakow since 1997.

Dr. Bożena Kusz currently works as an assistant professor at the Department of Computer Science in Management at the Faculty of Management of the Rzeszów University of Technology from 1.03.2020 to the present. Previously, she was a part-time assistant professor at the same department from 2017.

3. Relevance of the topic and relevance of the goals and objectives

The topic of Dr. Bożena Kusz's dissertation is extremely relevant, as it examines the problem of the economic efficiency of agricultural farms using the example of Poland and allows us to draw conclusions about agricultural policies in the EU and to compare what is happening in Poland with the state of agriculture in Bulgaria in particular. The study is of scientific interest, especially considering that Poland is the absolute leader in the EU in aid to farmers in 2023 – 3 billion and 700 million euros were provided to Polish farmers. Given that 9.3 billion euros were provided to farmers from across the EU in 2023, it turns out that this aid to Poland amounts to almost 40% of all EU aid.

Dr. Bożena Kusz's dissertation is distinguished by the application of a rich empirical analysis based on researched data from the European Union Farm Accountancy Data Network (FADN). FADN publishes data on different types of farms by region and country and different types of agriculture within the EU. In fact, there are not many studies in the economic literature on these issues in the whole European context. Dr. Bożena Kusz's work aims to bring novelty to the whole spectrum of stakeholder types in these areas, following the example of the agricultural sector in Poland.

The study provides the reader with an insight into the development of farm types in Poland in recent years, when significant changes were taking place in the EU's Common Agricultural Policy (CAP). The two major reforms of the EU CAP took place in 2003 and 2013, and they had a strong impact on the agricultural sector in Poland, which became an EU member state on 1 May 2004. It is reported that in Poland one of the most important drivers of change in agriculture in recent years has been the institutional conditions related to the EU CAP, which has covered Polish farms and agricultural markets since 2004.

The focus of the dissertation research of Dr. Bożena Kusz is on the influence of the economic size of the farm in Poland on its economic condition and the effectiveness of its activities. The positive relationship between the effectiveness of farm management and its size suggests the need to change the agricultural structure of the sector. This brings to the fore the issues of increasing the size of farms through consolidation, which leads to a decrease in the number of farms and the number of people employed in agriculture, as well as the need to introduce modern, efficient technologies for agricultural production. Such a strategy for the development of agriculture requires appropriate agricultural policy instruments that allow the modernization of agriculture and also minimize the social costs associated with the loss of jobs in agriculture and the marginalization of rural areas in the EU Member States. On this basis, it becomes possible to propose new approaches to the design of future measures and instruments of agricultural policy in the EU.

The aim of the dissertation is to analyze the level of farm efficiency in Poland and the factors that determine it in farms of different economic classes.

The tasks of the dissertation, specified by me, are the following: 1/ Systematization of theoretical research in the field of economic efficiency in agriculture and the factors that determine it; 2/ Characterization and analysis of changes in economic and financial results and organization of the studied farms in Poland, divided into classes according to their economic size; 3/ Study of changes in the efficiency of the economic activity of the studied farms through partial indicators; 4/ Analysis of endogenous determinants of the economic efficiency of the studied farms; 5/ Assessment and analysis of the technical efficiency of the studied farms using the Data Envelopment Analysis (DEA) method.

4. Knowledge of the problem

The candidate Dr. Bożena Kusz is very familiar with the problem of the dissertation research. The subject and object of the research, three research hypotheses, scope and limitations of the research are defined. The subject of the research is the assessment of efficiency and the analysis of its determining factors in farms in Poland. The object of the research is farms of different economic classes in size in Poland.

The study of differences in the efficiency of farms depending on their economic size is related to the prevalence of small farms in Poland. It is recognized that the imperfect agricultural structure in Poland is one of the main factors limiting the efficiency of agriculture and the development opportunities of farms.

Three research hypotheses of the work are formulated: H.1. As the economic size of farms increases, the efficiency of economic activity increases; H.2. Over time, discrepancies in management efficiency between farms of different economic size classes increase; H.3. Due to the increase in the cost of labor relative to other factors of production (land and capital), increasing management efficiency requires the replacement of labor with capital.

5. Research methodology

To achieve the goals and objectives of the dissertation, Dr. Bożena Kusz used a diverse methodology. Theoretical and methodological analysis, comparative analysis, method of analysis and synthesis, method of induction and deduction, factor analysis and a very rich statistical and econometric analysis were applied. A non-parametric method was used, based on the Malmquist productivity index from 1953, further developed by other authors, for the growth of total factor productivity (TFP) of a business unit, reflecting the progress or regress in efficiency together with the progress or regress of the frontier technology over time within multiple inputs and multiple outputs. This allows us to distinguish the change in total factor productivity from the change in technical efficiency and the change in the technological possibilities frontier.

The methodology used by Dr. Bożena Kusz to assess the efficiency of farm business operations is the non-parametric method Data Envelopment Analysis (DEA), based on mathematical programming to determine the efficiency of objects described by input and output vectors. The dissertation process includes a large volume of input statistical data from FADN, as well as data on financial and economic indicators of farms in Poland, which makes it possible to track trends in the efficiency of their business operations.

6. Characteristics and evaluation of the dissertation

The dissertation has a total volume of 234 pages. The exposition consists of an introduction, three chapters, a conclusion and a bibliography. The bibliography of the work includes numerous literary sources – a total of 282 sources. The work contains 20 tables and 31 graphs.

The first chapter of the work is devoted to the theoretical and practical aspects of efficiency in agriculture. The concept of economic efficiency is defined and the main aspects of assessing the efficiency of economic activity in agriculture are indicated.

A thorough and critical review of the literature on the research topic has been conducted. The methodologies and models used by various authors to measure the efficiency of economic activity in agriculture have been examined and discussed. The sources of the efficiency of farms and their relationship with the sustainable development of the sector have been identified.

The second chapter of the work is devoted to the analysis of the main characteristics of the studied farms in Poland. The research period is from 2004 to 2020 based on annual data. The production potential of the farms and the relationship between the production factors, as a basic condition for the efficiency of the production process, are studied in detail. Particular attention is paid to two types of relationships between the production factors: the ratio of capital to labor and the ratio of labor to land. The organization and technical efficiency of agricultural production in Poland, the economic results and the cost structure, as well as the indebtedness and liquidity of the studied farms are studied.

The third chapter of the dissertation is devoted to the results of the author's empirical analysis of the efficiency of economic activity in agriculture in Poland. Quite logically, this chapter is the most extensive and represents the core of the work, corresponding to the set goal of the work and the hypotheses of the study. Here, a detailed assessment of the factors determining the economic efficiency of the studied farms is made, with a special focus on the productivity and profitability of production factors, the determinants of factor productivity and profitability of production factors, and changes in the efficiency of the studied farms.

The main results and conclusions of the study are presented in the conclusion, on the basis of which the contributing points are formulated.

7. Scientific contributions and significance of research results for science and practice

The scientific contributions of Dr. Bożena Kusz's dissertation are defined in the abstract. The author has defined 8 scientific contributions, which are more in the nature of results of scientific research. They reflect the categorical qualities and merits of her work.

In my opinion, the main scientific and applied scientific contributions of Dr. Bożena Kusz's dissertation can be summarized as follows:

1. Enrichment of existing knowledge about the influence of the economic size of farms in Poland on their economic condition and the efficiency of their activities.
2. Enrichment of existing knowledge about the factors that determine economic efficiency in agriculture in Poland, distinguishing the specific impacts of endogenous and exogenous factors.
3. Development of the author's evaluation methodology for measuring the efficiency of the economic activity of farms in Poland, based on the Data Envelopment Analysis (DEA) method.
4. A critical approach is applied to distinguish the change in total factor productivity from a change in technical efficiency and a change in the technological possibilities frontier of the studied farms in Poland, highlighting the role of technical efficiency.
5. Formulation of conclusions and recommendations on the guidelines for improving the economic and financial performance and organization of farms in Poland in the context of the institutional conditions imposed by the existing Common Agricultural Policy (CAP) of the EU.

8. Evaluation of the publications on the dissertation

The candidate Dr. Bożena Kusz has submitted numerous scientific publications to the competition. They are all closely related to the issues of her research. Specifically, the scientific publications presented are the following: 1 habilitation thesis - monograph, 1 published monograph that is not presented as a habilitation thesis, 10 articles published in refereed publications indexed in SCOPUS or WoS, 23 articles published in non-refereed journals with scientific review or published in edited collective volumes, 1 published chapter of a collective monograph. The high quality of Dr. Bożena Kusz's publications and her recognition in the scientific research space is evidenced by their high citation rate. Citations of 13 of her publications are indicated, with the total number of citation points being 1,085.

9. Assessment of compliance with national minimum requirements

The reference on the fulfilment of the minimum national requirements for acquiring scientific degree "Doctor of Science" in Professional field 3.8 Economics shows that the publications submitted by the candidate form 2 042,06 points.

10. Abstract

The abstract correctly and accurately corresponds to the structure and content of the dissertation.

11. Critical remarks, questions and recommendations

I have no critical remarks on the dissertation. I have the following questions for Dr. Bożena Kusz:

1. What is the candidate's opinion on the EU Common Agricultural Policy (CAP) instruments of 2013 and their implementation in Poland – do they justify the use of more inputs (or at least at higher costs) for the same level of output?
2. Do the subsidies given to farmers in the EU not mask the inefficiency that underlies some types of farms? The significant decrease in total factor productivity confirms this trend at the EU level. What is the situation in Poland in this regard?
3. What is the reason for Poland being the absolute leader in the EU in terms of aid to farmers in 2023 – 3 billion and 700 million euros were provided to Polish farmers, which is almost 40% of all EU aid?

CONCLUSION

The dissertation on the topic “Economic efficiency of farms in Poland depending on economic size”, authored by Dr. Bożena Kusz, is an in-depth study that has definite merits and scientific and applied scientific contributions. The presented materials are in accordance with the requirements of the Law on the Development of Academic Staff in the Republic of Bulgaria (LDASRB), the Regulations for the Implementation of the LDASRB and the Regulations for the Admission and Training of Doctoral Students at VUZF. Based on this, I give a positive assessment of the scientific research presented in the above-mentioned peer-reviewed dissertation and abstract, and I propose to the esteemed members of the scientific jury to award Bożena Kusz the scientific degree of “Doctor of Science” in the Area of higher education 3. Social, Economic and Legal sciences, Professional field 3.8 Economics, Department of “Finance and Insurance”, Higher School of Insurance and Finance (VUZF University), Sofia.

31.03.2025

Sofia

Author of review: 

(Prof. Silvia Trifonova-Pramatarova, PhD)