

OPPONENT ASSESSMENT OF THE DOCTORAL THESIS

Factors affecting sustainable production with Economic growth in Coffee Industry: Evidence from Vietnam

The Author of the Doctoral Thesis: An Tran Van Nguyen

Opponent of the Doctoral Thesis: prof. Ing. Marek Potkány, PhD.

After being appointed by Assoc. Prof. Ing. Michal Pilík, Ph.D., the dean of the Faculty of Management and Economics at Tomas Bata University in Zlin, to provide an opponent's opinion, an assessment of the doctoral thesis authored by An Tran Van Nguyen was prepared. The thesis, developed as part of the Economics and Management program within the doctoral studies, spans 127 pages of text (including reference) and includes 18 tables, 15 figures, 3 appendices, and more than 200 literary sources.

a) The Novelty of the Doctoral Thesis

Vietnam is the second-largest coffee producer in the world. This country faces significant environmental and economic challenges in its coffee industry. Despite favorable conditions and high yields, rising production costs and fluctuating prices push farmers to seek certain solutions that can influence their situation. This study addresses the gap in understanding the economic benefits of sustainable certification by analyzing data from 1,500 producers in key provinces. It examines the impact of certification on productivity and broader economic factors affecting the industry, providing insights for the development of sustainable policies. Therefore, the topic of this dissertation Thesis can logically be considered relevant and beneficial.

b) Fulfilling the Goal of the Doctoral Thesis

The author of the thesis defines the goal of his work very broadly and indirectly, which can be framed (in my opinion) as follows: The aim of this dissertation is to investigate technical inefficiencies and compare the financial gains of certified sustainable and non-certified coffee production in Vietnam. The work focuses on analyzing the impact of input factors, demographic and farming factors, as well as external economic factors on the productivity and efficiency of coffee production. The results of the study will provide insights for the development of sustainable policies and contribute to the Sustainable Development Goals for responsible agriculture and consumption. The goal, formulated in this way, was further divided into three partial goals and research questions. In my opinion, the author of the dissertation thesis has achieved the established goals. The resulting solution brings specific proposals and recommendations, which are presented in various sections of the dissertation. All are based on scientific principles and offer benefits for both theory and practice.

c) Research Methodology for Problem Solution and Results in the Doctoral Thesis: Emphasizing the Student's Specific Contribution

To achieve the goal of the Doctoral Thesis, the author selected a suitable methodology, utilizing both qualitative and quantitative methods. The dissertation uses primary and secondary data sources to analyze coffee cultivation in Vietnam. Secondary data were obtained from agencies such as the General Statistics Office and the Vietnam Coffee and Cocoa Association. Primary data were collected through questionnaires distributed to 1,500 households in four selected regions of the country, covering resources, cultivation practices, costs, and credit use. Additional insights were provided by interviews with 8 local officials and 8 farmers.

To address specific partial goals and research questions, as well as a wide range of established hypotheses, multiple empirical scientific methods were applied along with a wide range of statistical evaluation techniques. I appreciate this approach. I also highlight the use of the Cobb-Douglas production function to evaluate the cost-effectiveness and profitability of sustainable coffee production in the largest coffee-growing provinces in Vietnam. As part of the achieved results, the author of the dissertation presented conclusions from an empirical questionnaire survey. By analyzing data from 864 farming households, the study compared the performance of sustainable (564) and conventional (282) coffee growers. This applied approach, along with a secondary survey and synthesis of existing literature, underscores the PhD student's expertise in scientific work. This comprehensive approach undoubtedly contributed to the development of a high-quality doctoral thesis.

The results showed that contrary to initial predictions, sustainable coffee production was more efficient than traditional methods. Important factors affecting yields include farm size, organic fertilizers, and certification. Expanding the planted area contributed to increased yields in both production models. Organic fertilizers not only increased yields but also protected the environment and maintained biodiversity, while inorganic fertilizers had a significant impact on conventional coffee. Combining these two types of fertilizers promoted growth and profitability in both farming systems. It can be concluded that the research results provide useful information to coffee growers, local authorities, and policymakers in Vietnam and can be widely applied.

d) Significance for the practice and development of the scientific field

The contributions of the study are presented in Chapter 6. The main practical contribution can be considered the findings regarding technical efficiency and profitability of sustainable production: Coffee producers in Vietnam and other countries can gain important insights from the results of this study on how sustainable coffee farming methods lead to higher technical efficiency (96.17%) compared to traditional methods (75.72%). These results can motivate coffee producers to transition to sustainable methods, which not only increase productivity but also contribute to environmental protection. The main contribution to the scientific field can be stated in the summaries and presentation of knowledge on sustainability in the context of company performance in the coffee industry in developing countries. This knowledge can serve as an information database for further research and educational purposes, thereby contributing to the development of the scientific field.

e) Formal arrangement of the doctoral thesis and its language level

The formal level of the dissertation aligns with the requirements for this type of final thesis. The author presented own findings and arguments with appropriate tabular and graphical visualization. Precisely defined professional terminology, commonly used in the given field, is evident in the text. The linguistic and stylistic level of the submitted work meets the required standards

f) Publication activity of the student

During his studies, the results of Mr. An Tran Van Nguyen's scientific work were published in 2 journals (Polish Journal of Management Studies, registered in the Web of Science and Scopus databases). He is the main author in one of them. A total of 2 publications are registered in conference proceedings (Peradeniya University International Management Research Sessions). In the collections of contributions from international conferences, there is 1 recorded output co-authored with his supervisor. The number and quality of the outputs (5 in total) provide a sufficient basis for proving the skills of independent scientific work and presentation of the student's results.

Discussion questions:

1. *How can the current tariffs imposed by the United States administration affect the economic growth of the coffee industry in Vietnam?*
2. *What are the main challenges and opportunities for Vietnamese coffee producers in transitioning to sustainable farming methods in the context of rising land prices and certification?*
3. *What other modern agricultural technologies (besides the already mentioned smart irrigation systems and soil sensing technology) can improve the sustainability and productivity of coffee farming in Vietnam?*

Final statement

I confirm that the submitted doctoral thesis meets the requirements for the specified type of qualification work. Mr. An Tran Van Nguyen has demonstrated proficiency in basic scientific methods and a comprehensive understanding of the subject under investigation. **I recommend the submission of the doctoral thesis for defense. Upon successful completion, I propose that Mr. An Tran Van Nguyen be awarded the academic title of 'philosophiae doctor' (Ph.D.) in the Degree programme of Economics and Management.**

April 8, 2025



Prof. Marek Potkány, PhD.

Technical University in Zvolen

The Department of Economics, Management and Business