

Nitra, 25 April 2025

Dr.h.c. prof. Dr. Ing. Elena Horská

Professor of Management and Marketing

Habilitation Doctor Degree in Economics and Management
of Agriculture, Food-processing Industry and Forestry

Expertise: international business and marketing, consumer behaviour, creative marketing

Slovak University of Agriculture in Nitra

Faculty of Economics and Management

Institute of Marketing, Trade and Social Studies

Tr. A. Hlinku 2

949 76 Nitra

Slovak Republic

Review of the doctoral dissertation of **Mr. Mehran Najmaei, PhD** entitled
**„Sustainable product attributes and export performance of German manufacturing
SMEs from the international entrepreneurship perspective “**
written under the scientific supervision of prof. dr hab. Krzysztof Wach
at the Krakow University of Economics
in the scientific discipline of economics and finance.

1. Legal basis for the review

The basis for reviewing Mehran Najmaei's doctoral dissertation entitled „Sustainable product attributes and export performance of German manufacturing SMEs from the international entrepreneurship perspective,“ prepared under the scientific supervision of the supervisor prof. dr hab. Krzysztof Wach, is a letter marked with the reference number RDC.600.50P.3.2025 Krakow, 19 March 2025, signed by Prof. dr hab. Stanisław Popek, Director of the Doctoral School of the Krakow University of Economics.

By the resolution of the Council for Academic Discipline of Economics and Finance of March 17, 2025, I was appointed as a reviewer of the doctoral dissertation. The review report was prepared based on the Act of July 20, 2018 on academic degrees and titles and on degrees and titles in the field of art (Journal of Laws of 2023, item 742) and the Law on Higher Education and science (Journal of Laws of 2018, item 742). pos. 1669). The procedure for conferring the doctoral degree on Mr. Mehran Najmaei was initiated on 5 March 2025 in the discipline of Economics and Finance.

2. Evaluation of the relevance of the thesis

In his doctoral dissertation, Mr. Mehran Najmaei addressed the issue of the impact of sustainable product attributes and export performance of German manufacturing SMEs from the international entrepreneurship perspective. The choice of this topic, connected also with actual global movements in the world and current challenges of the multidimensional nature of sustainability, I consider as a very relevant in the field of economics and finance.

SMEs account the backbone of all European economies, including Germany. They contribute significantly to value added creation, export performance and employment. This indicates the importance of SMEs in national economic growth and internationalization as well. Sustainability and socially responsible attributes become the important part of business and marketing strategies, so the aspect of sustainable product attributes is properly selected as a part of dissertation research. Author of the thesis also perceives that there are not enough studies on the link between sustainability as a new trend and export market orientation. Overall, I believe that selected topic is a relevant issue worth taking up in a doctoral thesis and can contribute to better academic understanding.

3. Evaluation of the research assumptions - aim of the work, research hypotheses, research method

The main aim of the thesis is to identify key internal determinants within Entrepreneurship Orientations (EO), Sustainable Product Attributes (SPA), and Export marketing Orientation (EMO) that contribute to the successful export performance of German SMEs in manufacturing through the application of empirical methods. The aim is clearly defined and shows different sections of research and practical implications interconnected in dissertation research. They were 4 research questions and 8 research hypothesis defined they pay attention to manager's satisfaction, export performance and sustainable product attributes as follows (page 14, 16):

- RQ1. How does German manufacturing SMEs' financial and strategic performance influence managers' satisfaction?
- RQ2. How does German manufacturing SMEs' sustainable product attributes influence its export's performance?
- RQ3. How does German manufacturing SMEs' entrepreneurial orientation influence its export's performance?

- RQ4. How does German manufacturing SMEs' export market orientation influence its sustainable product attributes.

H1: SMEs' financial performance impact on satisfaction with export operation in the German manufacturing industry.

H2: SMEs' strategic performance impact on satisfaction with export operation in the German manufacturing industry.

H3: Sustainable product attributes impact on financial performance in the German manufacturing industry.

H4: Sustainable product attributes impact on strategic performance in the German manufacturing industry.

H5: Sustainable product attributes impact on general satisfaction with export operation in the German manufacturing industry.

H6: Entrepreneurial orientation impacts on financial performance in the German manufacturing industry.

H7: Entrepreneurial orientation impacts on strategic performance in the German manufacturing industry.

H8: Export market orientation impacts on the SMEs' SPA in German manufacturing industry.

A survey of 178 German manufacturing SMEs was used as the basis for this doctoral dissertation. I appreciate the logical explanation of methodological assumption of the research in table 1 where author shows what kind of knowledge gap is in the centre of research. Study used the Structural Equation Modelling (SEM) technique to test the research hypotheses and report findings. Methodological part explains in detail all variables implemented in the model including current theoretical background. I can state that proper statistical methodology was used to reach overall and partial research objectives.

4. Evaluation of the structure of the PhD thesis

Chapter 1 (Internationalization from theoretical perspective) presents and discusses the main ideas and theoretical concepts of firm-level internationalization and sustainability in empirical research. Main message is that no single model fully explains SME internationalization today, but combination is needed. Stage models (e.g., Uppsala) are outdated for tech-driven SMEs. In the chapter we see the heavy reliance on Western theories and limited attention to emerging

markets or sector-specific differences. Internationalization today demands agility, sustainability, and strategic use of networks. Traditional theories need to evolve to reflect digitalization, globalization asymmetries, and the rise of born global and innovative SMEs. Question is which model fits the best current situation.

Chapter 2 (Determinants of Small and medium-sized enterprises' export performance) presents and discusses the theoretical concepts of export performance, sustainable product attributes, entrepreneurial orientation and export market orientation. The review is mostly descriptive. When sustainable products attributes and customer orientation are in the centre of interest, the cultural dimensions and their impact on local acceptance of imported products should be discussed, too.

Chapter 3 (Research methodology linking sustainability and export performance of SMEs) discusses how empirical research frameworks are developed by linking sustainable product attributes, entrepreneurial orientation and export marketing orientation (independent variables) to different dimensions of export performance including financial, strategic and managers' satisfaction (dependent variables), through the conceptual model.

Chapter 4 (Empirical findings linking sustainability and export performance of German SMEs) provides the results of statistical analysis to determine the relationship between sustainable product attributes, entrepreneurial orientation and export marketing orientation and the dependent variables such as SMEs' financial, strategic performance and managerial general satisfaction.

The document presents a very detailed empirical study on the relationship between sustainability and export performance among German SMEs. It covers all essential stages of empirical research, from sampling and data collection (business events) to structural model validation and hypothesis testing. The descriptive results are presented clearly, with detailed breakdowns of firm types, respondent positions, and key export performance indicators. Indirect relationships are also analysed, adding an extra layer of depth to the model interpretation.

Majority of respondents comes from manufacturing and industrial sphere. It is positive that majority of respondents states that they meet customer needs and wants, even they are

improving it, but it would be interesting to know in which area (e.g. product parameters, customer services, or payments and delivery, etc.), or in which sector/branch. I appreciate the results of questionnaire, analysed in part 4.2.5 that are related to sustainability issues (environmental issues, packaging materials, certificates, health issues, reducing emissions, CSR issues, product labelling, etc.) that is a core part of the thesis. Also, division based on different branch/sectors would be appreciated (including food products). Deeper critical reflection in this part would be very useful. In next part the individual hypotheses were confirmed. Some parts, especially the hypothesis explanations and questionnaire results in text and table, repeat information that could be summarized more concisely.

Chapter 5 (Discussion of empirical results) make a deep dive in the findings and provide discussion around the empirical findings. The chapter explores the implications of the results, verifies them with existing literature and highlights impact of current geopolitical movements on export performance (e.g. tariffs). Conclusions include a discussion of empirical findings, limitations, recommendations for future research, and final conclusions.

5. Formal comments and editing of the work

The reviewed doctoral dissertation by Mr. Mehran Najmaei has been prepared with great editorial care. Structure of the thesis is logical, well structured. Figures and tables are correctly titled, numbered and sourced.

6. Final conclusions

The discussion and comments quoted in the review do not diminish the values of the reviewed PhD dissertation and my positive assessment. The PhD candidate, Mr. Mehran Najmaei, demonstrated erudition in research area of the PhD dissertation.

The PhD candidate, Mr. Mehran Najmaei, presented skills in independently designing research based on secondary data and their econometric analysis, interpreting research results and the ability to verify hypotheses. The above elements provide grounds for recognizing the PhD student's maturity and constitute a good forecast for his further scientific development. Based on the above opinions, I conclude that the dissertation of Mr. Mehran Najmaei meets the formal and substantive requirements for doctoral theses and justifies awarding Mr. Mehran Najmaei with a doctoral degree in the field of economics and finance.

Therefore, I request that the doctoral dissertation to be accepted and that the PhD candidate Mr. Mehran Najmaei be allowed to proceed to the next stages of the doctoral thesis and to publicly defend the dissertation.

A handwritten signature in blue ink, appearing to be 'E. H.' followed by a stylized flourish.

Dr. h. c. prof. Dr. Ing. Elena Horská

Nitra, 25. 04. 2025