To the Specialized Academic Council DF 58.082.059_ID 6307 at the West Ukrainian National University of the Ministry of Education and Science of Ukraine

REVIEW

of the opponent Serhii Oleksiiovych Yakubovskyi,
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on the qualification thesis of Wei Linhai on the topic: "Environmental Sustainability of PRC International Trade", submitted for the degree of Doctor of Philosophy in specialty 292 "International Economic Relations"

Relevance of the topic of the qualification thesis. The development of international trade and environmental sustainability are two important aspects of social survival and economic development, which are closely interconnected. The rapid growth of international trade to a certain extent contributes to the development of environmental protection, and the strengthening of environmental protection encourages businesses to produce and sell environmentally friendly products. As a result, environmental protection has set new standards and requirements for the development of international trade. However, foreign trade that is not based on the principles of sustainable development has a negative impact on the local environment. As a result, the problem of environmental pollution becomes increasingly noticeable and amplifies the growth of ecocentrism. China has adopted the concept of "sustainable development" and is effectively developing in an ecological direction using strategies of "competitive quality", "market diversification", and "technological trade development". As a result, this has allowed China to reduce the amount of consumed resources, minimize environmental damage, and stabilize economic development.

These features highlight the importance of justifying the theoretical foundations of international trade and forming prospects for environmental sustainability in the context of developing an applied model for implementing an environmentally sustainable trade strategy for China.

In view of this, Wei Linhai's dissertation, which aims to scientifically substantiate the theoretical foundations of environmental sustainability of international trade in the context of developing an applied model for implementing China's environmentally sustainable trade strategy, is relevant.

The qualification thesis submitted for defense contains scientific provisions reflected in the materials of applied research of the West Ukrainian National University, in particular: fundamental state budget funding researches "National concept of eco-security of society and inclusion of the circular economy in the conditions of the pandemic" (state registration number 0121U109485); "Concept of recovery and green reconstruction of Ukraine" (state registration number 0124U000003); implementation of the international project (Erasmus+ Module Jean Monnet) "European inclusive circular economy: post-war and post-pandemic module for Ukraine (EICEPPMU)" 2022-2024, registration number 101085640); business funding research on the topic "Transformation of business in conditions of sustainable development of the global economy" (Contract No. MEV-33-2023 dated 05/10/2023); business funding research on the topic "Scientific and professional consulting of the enterprise on issues of social responsibility and organization of recycling" (Contract No. MEV-81-2021 dated 01/10/2021); business funding research on the topic "Formation of the company's ecological brand in foreign markets" (Contract No. MEV-37-2024 dated 25/04/2024), within which the author has improved the theoretical and methodological provisions for implementing an environmentally sustainable trade strategy.

Degree of justification of the scientific provisions, conclusions, and recommendations formulated in the qualification thesis. The qualification thesis contains clearly defined goals and objectives, substantiated methodological approaches to achieving them, a logically constructed structure, generalizations of a theoretical nature, as well as proposals for improving the theoretical, methodological, and organizational foundations of environmental sustainability in international trade. The research and conclusions in Wei Linhai's qualification thesis are presented consistently, enabling the logic of the research to be clearly traced through the chapters of the dissertation. The conclusions and recommendations of the thesis are sufficiently

substantiated and confirmed by the results of the testing of the main provisions of the dissertation. The reliability of the scientific provisions, conclusions, and recommendations is confirmed by the use of a wide informational base on the topic of the qualification thesis.

Various scientific research methods and special methods of cognition were used in the thesis, including analysis and synthesis, induction and deduction, methods of comparative analysis, systematization, abstract-logical, historical-chronological, and statistical analysis. The use of modern scientific research methods allowed for achieving the set goals and solving the research tasks, obtaining important theoretical and practical results. The conclusions drawn in the thesis are logically substantiated, confirmed by real analysis of both theoretical sources and the current state of environmental sustainability in China's international trade.

The main theoretical and methodological provisions of Wei Linhai's qualification thesis have received positive evaluations from the scientific community during the approbation.

The above allows for expressing a positive conclusion regarding the scientific level, the reliability of the material presented in the qualification thesis, the theoretical justifications and arguments put forth for defense, and the practical significance of the conclusions and recommendations derived from Wei Linhai's dissertation.

Structure and volume of the qualification thesis. The qualification thesis is written in English, contains annotations in Ukrainian and English, an introduction, three chapters, conclusions, a list of references, and annexes. The first chapter of the qualification thesis, "Theoretical and methodological basis of the research environmental sustainability of international trade", covers the genesis of international trade theories; establishes the concept of environmental sustainability in the system of international economic relations; and examines the decoupling and impact of natural resource utilization and consumption on international trade. The study adapts Porter's model of competitive advantage to the ecological development of a state. It is confirmed that a nation's competitiveness in a particular sector depends on the industry's ability to innovate and improve, with resources and capabilities of the local market and demand conditions, to which suppliers and producers adapt, playing a key

role (pp. 21-22). It is proven that the development process should focus not only on increasing total capital but also on prioritizing a rational capital structure, avoiding crossing environmental thresholds, and ensuring economic progress within the limits imposed by nature. It is noted that achieving decoupling will require significant changes in state policy, corporate behavior, and public consumption (pp. 42-43).

The second chapter of the qualification thesis, "Research of environmental sustainability of international trade", is devoted to the analysis of trends in international trade development and reshaping; evaluation the status and role of natural resources in international trade; and analysis of the environmental sustainability in international trade. It is argued that for achieving the sustainability of China's international trade, it is important to implement effective resource management and protection strategies, such as promoting the circular economy, supporting resource conservation, and strengthening environmental oversight. It is confirmed that developing economies have significantly benefited from growth due to trade, leading to a reduction in the income gap with developed countries. Thus, trade has exacerbated inequality in developed countries due to increased demand for skilled labor and the urbanization of economic activities (pp. 58-59). At the same time, the integration of developing countries into global environmental value chains and the reduction of trade barriers have contributed to development and income growth (pp. 90-91).

In the third chapter of the qualification thesis, "Prospects of development the environmental sustainability of international trade", the impacts of natural resource utilization and consumption on international trade is forecasted; the ways of developing the environmental sustainability of PRC international trade are proposed; and the model of environmentally sustainable trade strategy for China is developed. It is noted that resource management and exploitation intersect with national interests and security, which can escalate into geopolitical tensions between states (pp. 103-104). It is noted that prioritizing the development of industrial structure and technological innovations, promoting international cooperation and exchanges, and collectively addressing the problem of resource shortages and environmental issues are important steps towards achieving sustainable development in international trade (pp. 119-122). It is established that a sustainable trade strategy for China aligns with several key

political priorities outlined by the Chinese government, including principles such as prioritizing people's welfare, promoting innovation, advancing balanced and sustainable development, and achieving social harmony (pp. 125-127).

The structural composition of Wei Linhai's qualification thesis meets qualification criteria; the style of presentation and delivery of research material is logical, consistent, and unified in its objective orientation. The qualification thesis contains a sufficient number of tables, diagrams, figures, and graphs, which are presented directly in the main part of the dissertation and in the appendices. The language of the qualification thesis is concise, correct, and understandable. In terms of structure and formatting, the thesis complies with the current requirements for design of dissertation, approved by the Ministry of Education and Science of Ukraine's Order dated January 12, 2017, No. 40 "On approval of Requirements to design of dissertation".

The collection of scientific provisions, conclusions, and recommendations outlined in the qualification thesis, and their practical significance, allow for the conclusion of the completeness, integrity, and structuring of Wei Linhai's qualification thesis.

Assessment of the scientific novelty of the provisions and results obtained in the qualification thesis. The results justified in the qualification thesis have theoretical and practical significance and determine the scientific novelty of the dissertation as follows:

- —a model of an environmentally sustainable trade strategy for China has been developed for the first time. This model is based on ecological, political, and social factors influencing trade, conditions for resource conservation, directions of resource diplomacy, and trade policy. It includes proposals for the ecological restructuring of the economy and ways for China to engage in international cooperation. It also covers vectors for promoting technological innovations and conditions for using economic incentives for environmental sustainability (pp. 130-133);
- the concept of environmental sustainability in the system of international economic relations has been improved through the analysis of a closed and linear economic system; the justification of the advantages of the material balance model of

an economically open circular subsystem; and the development of types of sustainability in conditions of the substitution of natural and industrial capital (pp. 31-33);

- terminology has been improved, particularly the main characteristics of "environmental international trade", aspects of "decoupling"; classifications of international trade theories through the development of methodological approaches to the environmental component of international trade; and the adaptation of Porter's competitive advantage model to the ecological development of a state (p. 22);
- the evaluation the status and role of natural resources in international trade has been refined by comparing indicators such as the production and consumption of primary energy in China, mining production, the value of agricultural products, and resource availability in the overall share of imports and exports (pp. 72-74);
- the main properties and characteristics of decoupling have been further developed; results of the impact on international trade from the use and consumption of natural resources have been updated; methods of resource use and consumption have been clarified; and the contribution of international trade to reducing extreme poverty has been justified (pp. 42-43);
- the analysis of trends in international trade development and reshaping has been further developed; the impact of fragmentation on economic convergence has been assessed; a correlation analysis of trade openness and conflict probability has been conducted; the impact of technological improvements on reducing CO₂ emissions and their coverage has been evaluated (pp. 62-66); and a regression analysis between trade openness and readiness for environmental changes has been performed (pp. 81-83);
- opportunities and prospects for the environmental sustainability of China's international trade have been further developed; this has outlined paths to environmental sustainability and identified components of China's sustainable trade strategy (pp. 120-122).

Significance of the research results for science and practice. The theoretical significance of the thesis lies in solving the scientific problem and developing proposals for key directions in the development of environmental sustainability of

international trade and ways to implement China's environmentally sustainable trade strategy.

The practical significance of the dissertation results is that the main theoretical provisions of the study on ways to develop the environmental sustainability of China's international trade and the directions for implementing China's environmentally sustainable trade strategy can be used in the practical activities of business entities, in further scientific developments, as well as in the educational process when training higher education applicants. The presented research results, developed into practical findings and recommendations, are confirmed by the certificate of implementation and participation in scientific research work of West Ukrainian National University (certificate No. 21/70.2024 dated June 28, 2024) regarding participation in the execution of research thesis.

Completeness of the presentation of scientific provisions, conclusions, and recommendations formulated in the dissertation in published papers relevant to the dissertation topic. The main provisions of the qualification thesis, which have scientific novelty, are substantively and argumentatively disclosed in the published papers. According to the main results of the dissertation thesis, 11 scientific papers have been published, including 1 article in a publication indexed in international scientometric databases Scopus and Web of Science, 3 articles in Ukrainian scientific specialized editions, and 7 publications of an approbatory nature.

The published scientific papers by Wei Linhai, which are accounted for the dissertation topic, comply with the current procedure for awarding the degree of Doctor of Philosophy. The number and volume of printed papers give the author the right to defend the dissertation publicly.

Absence (presence) of violations of academic integrity. The scientific results of the dissertation were obtained by the author personally. Of the scientific papers published in co-authorship, only those ideas and provisions that were obtained by the author personally were used in the dissertation.

No violations of academic integrity were found in Wei Linhai's dissertation. The dissertation contains references to relevant sources of information, provides reliable information on the methods used and the results of the research conducted, and

complies with the copyright and related rights legislation. All this allows us to conclude that the author of the dissertation adhered to the requirements and rules of academic integrity.

Discussion points and remarks on the dissertation. Evaluating Wei Linhai's qualification thesis, which is performed at a sufficiently high scientific level, some remarks can be made that may form the basis for discussion during the defense:

- 1) the thesis demonstrates that trade significantly contributes to global economic convergence and poverty reduction (pp. 58-60). However, it does not specify the role of environmental sustainability in this progression;
- 2) the author examined the volume of bilateral trade between China and Ukraine and its impact on Ukraine's economic development index (pp. 95-97). However, this analysis did not find practical application in the model of China's environmentally sustainable trade strategy;
- 3) while researching the impact of the use and consumption of natural resources on international trade, the author noted the balance between economic progress and environmental preservation (p. 112). However, the study insufficiently addresses the process of balancing international trade development and environmental protection;
- 4) the author noted that the Chinese government promotes the development of environmentally friendly industries by offering political incentives, financial assistance, and implementing a green trade certification system to motivate enterprises to adopt environmentally friendly practices and improve the environmental standards of their products (p. 123). However, it is worth describing in more detail the ways of government stimulation of business in the use of more environmentally sustainable practices;
- 5) the research established that China's sustainable trade strategy aligns with principles such as prioritizing people's well-being, fostering innovation, promoting balanced and sustainable development, and achieving social harmony (p. 125). However, it does not adequately address the main challenges China will face in achieving environmental sustainability in international trade.

The mentioned remarks and discussion points indicate some controversial aspects of the research. However, overall, they highlight the relevance, complexity, and

multifaceted nature of the chosen topic, its practical significance, and do not significantly affect the qualitative characteristics of the qualification thesis.

General conclusion and evaluation of the qualification thesis

The qualification thesis of Wei Linhai on the topic "Environmental Sustainability of PRC International Trade" is a comprehensive scientific study that results in a scientific justification of the theoretical foundations of international trade and the formation of prospects for its environmental sustainability in the context of developing an applied model for implementing China's environmentally sustainable trade strategy.

In terms of content and professional orientation, the qualification thesis meets the specialty 292 "International Economic Relations" of the field of knowledge 29 "International Relations". It also meets the quality and level of theoretical and practical developments expected of a qualification thesis for obtaining a PhD degree, offering a unique authorial approach to solving the scientific task.

Overall, the qualification thesis "Environmental Sustainability of PRC International Trade" meets the requirements of the Resolution of the Cabinet of Ministers of Ukraine dated January 12, 2022, No. 44 "On the Approval of the Procedure for Awarding the Degree of Doctor of Philosophy and the Cancellation of the Decision of a One-time Specialized Academic Council of a Higher Education Institution, Research Institution on Awarding the Degree of Doctor of Philosophy" in terms of content, substantiation of scientific provisions and recommendations, and level of scientific novelty. The author, Wei Linhai, deserves to be awarded the degree of Doctor of Philosophy in the specialty 292 "International Economic Relations".

Official Opponent:

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