REVIEW
of the official reviewer for dissertation work
Rakhmetulina Aigerim Abayevna on the theme "Development of Logistics infrastructure and supply chains of agri-food products in the Republic of Kazakhstan" presented for the degree of Doctor of Philosophy (PhD)
in the educational program "8D04101 – Economy"

№	Criteria	Eligibility (one of the options must be checked)	Justification of the position of the official reviewer
1.	The topic of the thesis (as of the date of its approval) corresponds to the directions of development of science and/or state programs	1.1 Compliance with priority areas of science development or government programs:	
		1) The thesis was completed within the framework of a project or target program financed from the state budget (indicate the name and number of the project or program) 2) The thesis was completed within the framework of another state program (indicate the name of the program) 3) The dissertation corresponds to the priority direction of the development of science, approved by the Higher Scientific and Technical Commission under the Government of the Republic of Kazakhstan (indicate the direction)	1) The dissertation was completed within the framework of the grant funding of the Ministry of Higher Education of the Republic of Kazakhstan "AP19677634 Development of logistics infrastructure and sustainable supply chains of perishable food products in Kazakhstan (2023 - 2025)" 2) The topic of the dissertation corresponds to the direction of scientific research determined by the Higher Scientific and Technical Commission under the Government of the Republic of Kazakhstan, and also corresponds to a number of state documents, including: "State Program for the Development of Trade of the Republic of Kazakhstan for 2021-2025"; "Concepts for the Development of the Agro-Industrial Complex of the Republic of Kazakhstan for 2021 - 2030; "Concepts for the Development of the Transport and Logistics Potential of the Republic of Kazakhstan until 2030", etc.
2.	Importance for science	The work **makes**/does not make a significant contribution to science, and its importance is **well disclosed**/not disclosed	The research provides a significant contribution to the field of logistics infrastructure and supply chain management, especially in the context of increasing the competitiveness of the economy of Kazakhstan. By introducing a multi-stage methodological approach that

			integrates cluster analysis, factor analysis, and optimization models, the study enhances decision-making in logistics planning. The incorporation of advanced technologies such as IoT, blockchain, and remote monitoring strengthens the transparency and efficiency of cold chain logistics. Furthermore, the research proposes a public-private partnership (PPP) model for wholesale distribution centers (WDCs), offering a scalable and investment-attractive solution for infrastructure development. The findings address key challenges such as high transport costs, inefficient cold chains, and the lack of centralized regulatory oversight, providing structured recommendations to improve food security, economic competitiveness, and supply chain sustainability. Overall, this study makes a well-founded and practical contribution to both academic research and policymaking, offering applicable solutions for logistics development in Kazakhstan and beyond.
3.	The principle of independence	Self-reliance level: **1) <u>High;</u>** 2) Medium; 3) Low; 4) No independence	The author conducted the research independently, as demonstrated by the work carried out within the dissertation and her contributions as the corresponding author in each publication. She developed a unique methodological approach for evaluating logistics service quality at different levels and conducted multiple empirical studies using both primary and secondary data.
4.	The principle of inner unity	4.1 Justification of the relevance of the thesis: **1) <u>Justified;</u>** 2) Partially justified; 3) Not justified.	This thesis is highly relevant as it addresses critical challenges in Kazakhstan's agri-food logistics, including high transport costs, inefficient cold chains, and regulatory gaps. It develops a comprehensive methodology using cluster analysis, regression analysis, and the center of gravity method to optimize logistics infrastructure, while integrating IoT and blockchain for greater transparency and efficiency.

			Conducted within the framework of the Concept for the Development of the Transport and Logistics Potential of Kazakhstan until 2030 (Resolution No. 1116, December 30, 2022), this research supports national policies on supply chain modernization. Its findings contribute to reducing inefficiencies, enhancing economic growth, and improving food security, making it both theoretically and practically significant.
		4.2 The content of the thesis reflects the topic of the thesis: **1) Reflects;** 2) Partially reflects; 3) Does not reflect	Content of the thesis closely reflects its topic. The structure systematically develops the research objectives, beginning with theoretical and methodological foundations, followed by an analysis of the current state of logistics infrastructure and supply chains, and concluding with proposed priorities and economic mechanisms for development. The inclusion of methodological approaches, factor analysis, and case studies (e.g., wholesale distribution centers) ensures a comprehensive examination of logistics infrastructure in the agri-food sector.
		4.3. The purpose and objectives correspond to the topic of the thesis: **1) <u>correspond;</u>** 2) partially correspond; 3) do not correspond	Yes, the purpose and objectives of the dissertation fully correspond to its topic. The research is focused on developing recommendations and an organizational-economic mechanism for improving logistics infrastructure and sustainable supply chains for agri-food products. This directly aligns with the broader goal of enhancing Kazakhstan's economic competitiveness in domestic and international markets. Each research objective logically supports the overall purpose, covering theoretical analysis, international benchmarking, assessment of current conditions, development of logistics infrastructure models, and evaluation of economic efficiency. The inclusion of public-private partnership mechanisms and wholesale distribution centers (LWDCs) further reinforces the study's practical relevance. Overall, the purpose and objectives are

			well-structured, relevant, and fully aligned with the dissertation topic.
		4.4 All sections and provisions of the thesis are logically interconnected: 1) **completely interconnected;** 2) the interconnection is partial; 3) there is no interconnection	All sections and provisions of the dissertation are logically and completely interconnected, demonstrating strong internal integrity and coherence. The work is presented in precise scientific language, ensuring clarity and academic rigor. Each subsection seamlessly transitions to the next, creating a cohesive narrative that supports the overall research objectives. The relationship between sections and the sequential stages of the study is clearly defined, reinforcing the systematic approach of the research.
		4.5 The new solutions (principles, methods) proposed by the author are reasoned and evaluated in comparison with the known solutions: **1) there is a critical analysis;** 2) partial analysis; 3) the analysis does not represent one's own opinions, but quotes from other authors	This research introduces innovative solutions for logistics infrastructure and sustainable agri-food supply chains in Kazakhstan. It refines logistics frameworks by enhancing integration across procurement, supply, storage, and delivery. A data-driven approach using cluster, regression, factor analysis, and the center of gravity method optimizes wholesale distribution center (WDC) locations. Addressing cold chain management gaps, it advocates for a centralized regulatory body and the adoption of blockchain and IoT for transparency. Additionally, a structured public-private partnership (PPP) model is proposed to secure investment and enhance operational efficiency in logistics infrastructure.
5.	Scientific novelty principle	5.1 Are the scientific results and provisions new? 1) completely new; 2) **partially new (25-75% are new);** 3) not new (less than 25% are new)	The scientific results and provisions are partially new. In general, the degree of novelty can be estimated at 75%. Result 1. "Systematization and clarification of the elements and structure of logistics infrastructure, leading to the development of a structural model of transport and logistics infrastructure and a classification of logistics infrastructure in the context of building effective and sustainable supply chains" is given - partially new, as it relies on the results of similar previous studies.

			Result 2. "A methodological approach to the formation and development of logistics infrastructure and agri-food supply chains" - new, since the author assessed the state of the logistics infrastructure and existing logistics supply chains of perishable products, factors influencing their development, methodological solutions for the formation of logistics wholesale distribution centers for agri-food products based on the author's methodology Result 3. "Scientifically substantiated proposals for prioritizing the development of logistics infrastructure and agri-food supply chains, along with measures for their implementation " - new, since a survey of participants in the supply of perishable products was carried out to assess the state of the logistics infrastructure and supply chains in the regions of Kazakhstan, based on foreign and domestic experience, priorities for the development of logistics infrastructure and supply chains of agri-food products were proposed, and a set of measures for their implementation was developed based on the identified determinants. Result 4. "A model and organizational-economic mechanism for the functioning of logistics infrastructure for agri-food products" is partially new, since it deepens and generalizes world experience on the problem under study with its adaptation to Kazakhstani conditions.
		5.2 Are the dissertation findings new? 1) completely new; **2) partially new (25-75% are new);** 3) not new (less than 25% are new)	The originality of the work lies in refining the definition of logistics infrastructure by integrating procurement, supply, storage, and delivery for better coordination. A multi-stage methodology for optimizing wholesale distribution center (WDC) placement combines cluster analysis, regression analysis, factor analysis, and the center of gravity method to reduce inefficiencies.
		5.3 Technical, technological, economic or management decisions are new and	The research introduces three new and well-founded decisions in technical, technological, economic, and

		reasonable: 1) completely new; **2) partially new (25-75% are new);** 3) not new (less than 25% are new)	management aspects. These three decisions are crucial for improving Kazakhstan's logistics infrastructure and agri-food supply chains. Optimizing WDC location selection through a multi-stage methodology reduces transportation costs, prevents underutilization, and enhances market access. The author's methodology for selecting locations for the distribution center for storage, distribution and trade can be recommended for state planning of the development of the logistics infrastructure of the country's regions, as well as for large companies when deciding to invest in the logistics industry. Establishing a regulatory framework for cold chain logistics ensures food safety, minimizes supply chain inefficiencies, and encourages investment in modern storage and transportation solutions. The structured public-private partnership (PPP) model attracts private investment, enhances operational efficiency, and ensures sustainable infrastructure development. Together, these measures create a more resilient, transparent, and efficient logistics system, fostering economic growth and competitiveness.
6.	The validity of the main findings	All main **conclusions are**/are not based on scientifically significant evidence or **well-grounded** (for qualitative research and areas of training in the arts and humanities)	The main conclusions of the thesis are based on scientifically significant evidence, as they rely on established analytical methods and empirical data. The optimization of WDC locations is supported by a multi-stage methodology combining cluster analysis, regression analysis, factor analysis, and the center of gravity method, ensuring data-driven decision-making. The proposed regulatory framework for cold chain logistics is grounded in industry best practices and the need for structured oversight, validated by case studies and market analysis. The structured PPP model is justified through economic feasibility studies and global examples of successful infrastructure development. These elements confirm that

			the research findings are not only theoretically sound but also practically applicable.
7.	The main provisions for the defense	It is necessary to answer the following questions for each provision separately: 7.1 Is the provition proven? 1) proven; 2) rather proven; 3) rather not proven; 4) not proven 7.2 Is it trivial? 1) yes; 2) no 7.3 Is it new? 1) yes; 2) no 7.4 Application level: 1) narrow; 2) medium; 3) wide 7.5 Is it proven in the article? 1) yes; 2) no	The author identifies 4 scientific provisions: **1. Systematization and clarification of the elements and structure of logistics infrastructure, leading to the development of a structural model of transport and logistics infrastructure and a classification of logistics infrastructure in the context of building effective and sustainable supply chains.** 7.1 Is the provision proven? **1) proven;** 7.2 Is it trivial? **2) no** 7.3 Is it new? **1) yes;** 7.4 Application level: 2**) medium;** 7.5 Is it proven in the article? **1) yes;** Articles 1. Рахметулина А.А., Раимбеков Ж.С., Кулмаганбетова А.С. Қазақстанның көлік-логистикалық жүйесін корреляциялық талдау // Вестник Каргу.-Караганда, 2024. - Т.29. - №1 (113). - С.171-180. 2. Rakhmetulina A.A., Abylaykhanova T.A. Main trends in the development of transport infrastructure: Kazakhstan and international experience // Вестник университета «Туран». -Алматы, 2023. - №2 (98). - С. 259 - 271. 3. Rakhmetulina A.A. Digitalization of Kazakhstan's transport and logistics system // Сборник материалов VIII РНПК «Интеграция образования-науки-бизнеса:

			проблемы и перспективы». - Өскемен: С. Аманжолов ат. ШҚУ «Берел» баспасы, 2022. - С. 420 - 423. 4. Рахметулина А.А. Развитие транспортной инфраструктуры Казахстана // Сборник трудов МНПК «Увалиевские чтения – 2022» на тему «Актуальные проблемы науки и образования в условиях современных вызовов». - ВКУ им. С. Аманжолова, 2022. - С. 321 - 324. 5. Rakhmetulina A.A. Experience in the development of foreign transport systems // Сборник материалов XVIII МНПК «Ǵylym jáne bilim – 2023». - ЕНУ им.Л.Н.Гумилева, 2023. - С.3596 – 3600. 6. Rakhmetulina A.A. Analysis of transport systems in different countries of the world //Сборник трудов МНПК «Новая реальность: экономика, менеджмент, социальные коммуникации». - ФГБОУ ВО Новосибирский государственный педагогический университет, 2023. - С.169 - 176. 7. Rakhmetulina A.A., Abylaikhanova T.A. Transport infrastructure development // Сборник трудов IX РНПК студентов, магистрантов, докторантов и молодых ученых «Интеграция образования-науки-бизнеса: проблемы и перспективы».- ВКУ им. С.Аманжолова, 2023.-С.575-579. 8. Рахметулина А.А., Раимбеков Ж.С. Научный проект «Развитие транспортно-логистической системы Казахстана». Свидетельство о внесении сведений в государственный реестр прав на объекты, охраняемые авторским правом № 42478 от 30.01.2024г. **2.A methodological approach to the formation and development of logistics infrastructure and agri-food**

			supply chains. 7.1 Is the provision proven? **1) proven;** 7.2 Is it trivial? **2) no** 7.3 Is it new? **1) yes;** 7.4 Application level: **3) wide** 7.5 Is it proven in the article? **1) yes;** articles 1. Raimbekov Zh., Syzdykbayeva B., Rakhmetulina A., Rakhmetulina Z., Abylaikhanova T., Ordabayeva M., Doltes L. The impact of agri-food supply channels on the efficiency and Links in supply chains // Economies. – 2023. - Vol.11 (8). - pp. 206. https://doi.org/10.3390/economies11080206 2. Raimbekov Zh., Syzdykbayeva B., Rakhmetulina A., Rakhmetulina Z., Abylaikhanova T., Kinasheva Zh., Doltes L. Designing and improving the efficiency of placement of logistics infrastructure for storage, distribution and trade of agri-food products // Journal of Industrial Engineering and Management. - 2024. - Vol. 17. - №3. - pp. 777-808, https://doi.org/10.3926/jiem.6081 3.Раимбеков Ж.С., Сыздыкбаева Б.У., Рахметулина А.А., Абылайханова Т.А. Қазақстанда азық түлік тауар өткізгіш тізбектің жұмыс істеуінің тұрақтылығына тәуекел факторларының әсері // Вестник университета «Туран». - Алматы, 2024. - №2 (102). - С. 395 - 411. 4. Раимбеков Ж.С., Сыздыкбаева Б.У., Рахметулина А.А. Повышение эффективности функционирования и развития инфраструктуры холодовой цепи поставок скоропортящейся продукции // Мемлекеттік аудит –

			государственный аудит. -Астана, 2024.- №2 (63). - С. 171-182. **3. Scientifically substantiated proposals for prioritizing the development of logistics infrastructure and agri-food supply chains, along with measures for their implementation.** 7.1 Is the provision proven? **1) proven;** 7.2 Is it trivial? **2) no** 7.3 Is it new? **1) yes;** 7.4 Application level: **3) wide** 7.5 Is it proven in the article? **1) yes;** Articles 1. Raimbekov Zh., Syzdykbayeva B, Rakhmetulina A., Rakhmetulina Z., Abylaikhanova T. International Trade and Logistics of Kazakhstan and Its Trading Partners: Contribution to Economic Growth and Distribution of Trade Flows // Journal of Distribution Science.- 2023.- Vol. 21(9).- pp. 67-79. https://koreascience.kr/article/JAKO202326343287224.pdf 2. Raimbekov Zh., Syzdykbayeva B, Rakhmetulina A., Rakhmetulina Z., Kinasheva Zh. Assessment of the impact of international trade intensity on logistics efficiency: a case study of the EAEU countries // Journal of Logistics, Informatics and Service Science. - 2024. - Vol. 11.- №1.- pp. 163-180. DOI:10.33168/JLISS.2024.0111 3. Rakhmetulina A.A. Analysis of the impact of LPI on the

			international trade of the EAEU and central Asian Countries // Сборник трудов X МНПК «Сучасні інноваційно-інвестиційні механізми розвитку національної економіки в умовах євроінтеграції» - Полтавська політехніка ім. Юрія Кондратюка, 2023.- pp. 183-186. **4. A model and organizational-economic mechanism for the functioning of logistics infrastructure for agri-food products.** 7.1 Is the provision proven? **1) proven;** 7.2 Is it trivial? **2) no** 7.3 Is it new? **1) yes;** 7.4 Application level: **3) wide** 7.5 Is it proven in the article? **1) yes;** Articles 1. Raimbekov Zh., Syzdykbayeva B, Rakhmetulina Z., Rakhmetulina A. Development of domestic infrastructure for the cold supply chain of perishable products // Вестник Торайгыров университета. - Павлодар, 2024. - №2. - С. 308-319. 2. Рахметулина А.А., Дубина И.Н. Развитие оптово-распределительных логистических центров сельскохозяйственной продукции Казахстана // Сборник трудов МНПК «Развитие цифровизации и формирование институциональной среды электронной коммерции: тренды, проблемы и пути решения». - Астана, 2024. - С. 265 - 270. 3. Raimbekov Zh., Syzdykbayeva B., Rakhmetulina A.

			Studying the impact of restrictions and risk factors on the sustainability of the functioning of the food distribution chain: using the example of perishable products in Kazakhstan // TheIIER International Conference on Social Science and Economics. - London, 2024.- pp. 38 - 45.
8.	The principle of reliability Reliability of sources and information provided	8.1 Choice of methodology - is justified or the methodology is described in sufficient detail **1) yes;** 2) no	The choice of methodology is justified as it integrates multiple analytical approaches to address key logistics challenges in Kazakhstan. The combination of cluster analysis, regression analysis, factor analysis, and the center of gravity method ensures a comprehensive and data-driven approach to optimizing WDC placement, preventing inefficiencies, and improving supply chain performance. The proposed regulatory framework for cold chain logistics is based on a thorough assessment of existing gaps and international best practices, ensuring its relevance and feasibility. The structured public-private partnership (PPP) model is grounded in economic and management principles, balancing investment security with operational efficiency. This methodological approach provides scientifically sound and practical solutions for sustainable logistics development.
		8.2 The results of the thesis were obtained using modern methods of scientific research and methods of processing and interpreting data using computer technologies: **1) yes;** 2) no	The results of the thesis were obtained using modern scientific research methods, data processing, and interpretation techniques supported by computer technologies. The optimization of WDC locations was conducted using advanced analytical tools, including cluster analysis, regression analysis, factor analysis, and the center of gravity method, ensuring precision and reliability. The research also leveraged digital modeling and simulation techniques to assess logistics efficiency and cold chain management.
		8.3 Theoretical conclusions, models, identified relationships and patterns have	The research's theoretical conclusions, models, and identified relationships have been proven and confirmed

		been proven and confirmed by experimental research (for areas of training in pedagogical sciences, the results have been proven on the basis of a pedagogical experiment): **1) <u>yes;</u>** 2) no	through experimental research. The multi-stage methodology for optimizing WDC placement has been validated using real-world data, demonstrating its effectiveness in reducing inefficiencies and improving logistics network performance. The proposed regulatory framework for cold chain logistics is supported by case studies and comparative analysis, confirming the necessity of centralized oversight. The structured public-private partnership (PPP) model has been tested through scenario analysis, proving its viability for securing investments and ensuring sustainable logistics infrastructure development. These findings reinforce the study's scientific validity and practical applicability.
		8.4 Important statements are **confirmed** / partially confirmed / not confirmed by references to current and reliable scientific literature	Key statements are supported by references to current, reliable scientific literature. The bibliography includes 126 sources cited throughout the dissertation, with primary scientific literature from the past five years (2019–2024).
		8.5 Used literature sources **are sufficient**/not sufficient for a literature review	The literature sources used in this study are sufficient and relevant, providing a comprehensive foundation for the research. They cover key theoretical and empirical studies, ensuring a well-rounded understanding of the topic. Additionally, the selected sources include recent publications and authoritative works, which enhance the credibility and depth of the analysis
9	Practical value principle	9.1 The thesis has theoretical value: **<u>1) yes;</u>** 2) no	The study expands theoretical and methodological approaches to the analysis of logistics infrastructure and product supply chains. The theoretical significance of the dissertation research is revealed by the following provisions: the current state and development trends of the logistics infrastructure and supply chains of agri-food products were studied through bibliometric analysis with the specification of the terms of the logistics infrastructure;

			scientific approaches to the study of supply chains in the agro-industrial complex were streamlined to develop a scientific base and enrich the methodological tools; a classification of logistics infrastructure was given; interviews were conducted to assess the current state of the logistics infrastructure and supply chains of agricultural products; an assessment was made of the current state and functioning of the distribution system of agricultural products, factors influencing the development of the logistics infrastructure and the supply chain of products were considered. The inclusion of modern approaches to the optimization of transport and logistics processes, the development of wholesale distribution centers (WDC) and the improvement of organizational and economic mechanisms for the functioning of supply chains allows to increase the scientific validity of logistics development strategies. The solution to the problem of optimal placement of the wholesale distribution center makes it possible to implement the Concept of the state program for the development of trade in the Republic of Kazakhstan for 2021-2025 and the Concept for the development of the agro-industrial complex of the Republic of Kazakhstan for 2021-2030, to determine long-term investments in the development of the wholesale distribution center in the regions of Kazakhstan. The methodological and conceptual provisions included in the study can be used in further scientific developments aimed at increasing the efficiency of logistics infrastructure, optimizing supply chains and strengthening the competitive positions of the national economy in the global market.
		9.2 The thesis is of practical importance and there is a high probability of applying the results obtained in practice:	The practical significance of the dissertation research is as follows: bibliometric analysis of scientific publications reflects the main areas of research in the field of logistics

		1) yes; 2) no	of food supply chains; a systematic methodological approach allows assessing the state and potential of the logistics infrastructure and complements the methodological tools; a questionnaire allows obtaining direct feedback from participants in the supply chains of agricultural products and trade; the proposed measures for the development of logistics infrastructure and the organizational and economic mechanism for the development of effective supply chains in the Republic of Kazakhstan represent a practical tool. The results of the dissertation research were reflected in the applied research in priority areas for the state, in the project within the framework of grant funding from the Ministry of Higher Education of the Republic of Kazakhstan "AP19677634 Development of logistics infrastructure and sustainable supply chains of perishable food products in Kazakhstan (2023 - 2025)" (Appendix B)
		9.3 Are the practice suggestions new? 1**) completely new;** 2) partially new (25-75% are new); 3) not new (less than 25% are new)	The proposals for practice in the dissertation are new, as they include the development of an organizational and economic mechanism for the functioning and methodological approaches to the formation and development of logistics infrastructure and supply chains for agri-food products, testing of methodological solutions for the formation of logistics wholesale distribution centers. These recommendations and proposals will help increase the competitiveness of the economy of Kazakhstan in the domestic and international markets. The proposals for practice are based on the analysis of the scientific foundations and methodologies for studying the wholesale distribution centers, taking into account their applicability and effectiveness in the regions of Kazakhstan.
10.	The quality of writing and design	Academic writing quality: **1) high;**	The dissertation is written in a clear and well-structured academic style, making the content accessible and

		2) average; 3) below average; 4) low.	comprehensible. Both the content and formatting align with the requirements for a PhD thesis. While there are some typographical and formatting errors, they do not significantly affect the overall quality of the work.
11.	Notes on a thesis		The dissertation work of Rakhmetulina A.A. is assessed as a completed scientific study. It has been prepared at a high competence level. The results of the dissertation research are novel and of practical significance. Nevertheless, along with the undoubted advantages of the work, the following comments on the content of the dissertation can be made. 1. Table 16 presents grouped and generalized characteristics of the logistics infrastructure depending on the six identified clusters of the Republic of Kazakhstan. But the dissertation does not provide information on which of these 204 districts belong to which cluster. 2. Some technical errors have been made, for example, in the text of the dissertation (p. 60) it is indicated that the average values of the F1, F2, and F3 criteria were used to select the storage center, and in Table F.2, Appendix F it is written (F1 + F3 + F5) / 3. Which of them is correct? 3. The value of the work would increase if the analysis of the efficiency of using the WDC also took into account private specific indicators in supply chains, such as the level of stocks, costs of purchasing, transportation, storage, and distribution. However, the listed shortcomings do not detract from the merits and the overall qualitative level of the research conducted by the applicant.
12.	Scientific level of the doctoral student's articles on the topic of research (in case of defense of the dissertation in the form of a series of articles, the official		The results of the scientific research have been published in 4 articles in journals indexed in the Scopus database, including 3 articles in the Web of Science Core Collection database, 5 articles in journals recommended by the Committee for Control in Education and Science of the

	reviewers comment on the scientific level of each article of the doctoral student on the topic of research)		Republic of Kazakhstan, 8 articles presented at international conferences. The scientific level of each doctoral student's article on the research topic meets the requirements for the defence of doctoral dissertations.
13.	Decision of the official reviewer (pursuant to paragraph 28 of the present Model Regulations)		to award a Doctor of Philosophy (PhD) or doctoral degree in the field of study

Rakhmetulina Aigerim Abayevna deserves to be awarded the degree of Doctor of Philosophy (PhD) in the educational program "8D04101 - Economics".

Official Reviewer:
Candidate of Technical Sciences,
Professor, Dean of the Faculty
of Engineering and Information Technology,
Kazakh-German University
(place of work, academic title)



(signature)

Zhandos Kegenbekov Kadyrkhanovich