World Journal of Economics and Business Research
Print ISSN: 2960-0073
Online ISSN: 2960-0081
DOI: https://doi.org/10.61784/wjebr3116

EXPORT PERFORMANCE AND TRADE COMPETITIVENESS EVALUATION OF NORTHEAST RICE

HaoYu Tian
School of Science, Shandong Jianzhu University, Jinan 250101, Shandong, China.

Abstract: This paper evaluates the export performance of Northeast rice by reorganizing the selected section on national export performance. The analysis focuses on market structure, major partners, export categories, global production and trade patterns, regional production advantages, and the change in the trade competitiveness index. The source section shows that Northeast rice is a core category of China's rice exports, with export partners covering more than 80 countries and regions. Asian markets account for more than 75% of trade volume, and RCEP members remain the dominant export destinations. From 2015 to 2023, total import and export trade volume rose from 350,000 tons to 680,000 tons, while total trade value increased from USD 420 million to USD 820 million. In 2024, Japan, South Korea, Malaysia, Vietnam, Singapore, Russia, Hong Kong, the United Arab Emirates, Thailand, and Saudi Arabia ranked among the top destinations. Vacuum-packed fresh rice and prepackaged convenience rice maintained stable demand, while sushi rice and high-quality japonica categories showed strong export potential. The global comparison indicates that Northeast rice occupies a core position in the high-quality japonica rice market. Its trade competitiveness index increased from 0.82 in 2015 to 0.90 in 2023, reflecting an overall upward trend.
Keywords: Northeast rice; Export performance; Trade partner; Product category; Competitiveness index

1 INTRODUCTION

Northeast rice is presented in the source section as one of China's core high-quality rice export categories. The selected text links its export performance with a wider food-supply background, the expansion of trade partners, and the continued growth of demand for high-quality japonica rice. China is described as an important producer of high-quality rice, while Northeast rice is emphasized as a representative export product supported by production scale, product quality, regional brands, and increasingly complete industrial-chain conditions. The section also notes that the Belt and Road initiative and transport-facility improvement have supported the outward development of Northeast rice, while RCEP implementation has strengthened trade connections with Vietnam, Malaysia, Singapore, Japan, South Korea, and other markets[1-2].

The problem raised in this paper is how to evaluate the export performance of Northeast rice using the data and evidence contained in the selected section. The original text does not treat export performance as a single figure, but as a combined result of market scale, partner distribution, product composition, global comparison, regional production capacity, and trade competitiveness[3-5]. The data show that export partners cover more than 80 countries and regions, that Asian countries account for more than 75% of trade volume, and that RCEP markets remain the main export destinations. Total trade volume rose from 350,000 tons in 2015 to 680,000 tons in 2023, while total trade value increased from USD 420 million to USD 820 million. These changes indicate that the section is suitable for constructing a focused export-performance evaluation[6-8].

The research scheme of this paper follows the source section step by step. The market analysis is first translated and reorganized to describe the steady rise of Northeast rice trade and the change in total trade volume and value. The main partner structure is then examined through the 2015-2024 partner table, covering Japan, South Korea, Malaysia, Singapore, Vietnam, Russia, America, the United Arab Emirates, and Hong Kong, China. The export-category analysis is retained through the six product categories, including ordinary japonica rice, sushi rice, frozen prepared rice, high-end customized rice, vacuum fresh rice, and prepackaged convenience rice. The global comparison further explains China's position in high-quality japonica rice exports and the import structure of major destination regions. The final part evaluates production-region selection and trade competitiveness by using output, production value, certified planting area, mechanization, processing intelligence, policy support, and the competitiveness index. The figures and tables are used as direct evidence for each analytical layer, so the discussion remains traceable to the selected section. This route keeps the original evidence unchanged while making the section usable as an independent academic article. It also avoids introducing information outside the current PDF, so the conclusions are limited to the data, figures, and tables supplied by the selected text[9-10].

2 NATIONAL EXPORT PERFORMANCE

2.1 Northeast Rice Market Analysis

China is an important producer of high-quality rice in the world, and Northeast rice is a core category of China's rice

exports. The report proposed to establish a broad food concept, develop facility agriculture, and build a diversified food supply system. The Northeast rice industry occupies a key position in ensuring food security and enriching the food supply system. It is also an important 'small and beautiful' project under the Belt and Road initiative, and the transport-facility convenience brought by the project supports the export development of Northeast rice. From the perspective of export trade partners, the 'circle of friends' of Northeast rice has continued to expand and remain stable, covering more than 80 countries and regions. Since 2015, with the signing and promotion of the Regional Comprehensive Economic Partnership (RCEP), China's rice trade with RCEP members has become increasingly close. These countries include Vietnam, Malaysia, and Singapore in Southeast Asia, as well as Japan and South Korea in Northeast Asia, which together constitute one of the main markets for Northeast rice exports. At the same time, China also maintains stable trade relations with some European and American countries, especially Russia and the United Arab Emirates. Demand for high-quality japonica rice in these regions continues to grow, providing broad overseas development space for the Northeast rice industry. Among them, trade volume exported to Asian countries occupies a dominant position, accounting for more than 75%.

2.1.1 Northeast rice trade rises steadily

As the core production area of high-quality japonica rice in China, Northeast China produced 26 million tons of rice in 2023, of which high-quality commodity grain accounted for more than 60%. Northeast rice exports accounted for more than 85% of China's total rice exports. At present, Northeast rice trade is 'mainly export-oriented and supplemented by imports.' According to customs statistics, from January to December 2023, China's Northeast rice and products accumulated exports of USD 820 million, while imports were less than USD 10 million. Northeast rice products showed a significant surplus trend, and compared with 2015, the total import and export value of Northeast rice products maintained rapid growth at an average annual growth rate of 7.2%. In the first seven months of 2024, the top ten countries or regions by export value of China's Northeast rice and products were Japan, South Korea, Malaysia, Vietnam, Singapore, Russia, Hong Kong, the United Arab Emirates, Thailand, and Saudi Arabia, accounting for 82.1% of China's export value of this product. Among them, Japan, South Korea, and Malaysia ranked as the top three export destinations for Northeast rice.

According to the total import and export trade volume and total trade value from 2015 to 2023, the overall trend was upward and had great potential. Total trade volume increased from 350,000 tons in 2015 to 680,000 tons in 2023. From 2019 to 2021, growth slowed under the influence of the global trade environment; in 2022, the growth rate of import and export trade volume rebounded to 12%, and it rose gently in 2023. In terms of total import and export trade value, the figure increased from USD 420 million in 2015 to USD 820 million in 2023. By stages, import and export trade value was USD 420 million in 2015 and rose to USD 610 million in 2018. From 2018 to 2020, affected by trade barriers and other factors, total import and export trade value fell from USD 610 million to USD 530 million. After 2020, with favorable policies such as the entry into force of RCEP, trade value rose from USD 530 million to USD 850 million in 2022, and then declined slightly to USD 820 million in 2023. Overall, Northeast rice showed an upward trend in both total import and export trade volume and total import and export trade value.

From the perspective of the 'value curve,' commodity exchange is based on value quantity and follows equivalent exchange, while price fluctuates around value. In the long-term trend, although affected by trade barriers and policies, the continuous improvement of product quality of Northeast rice, such as more than 15 million mu of green and organic certification area, an increasingly complete whole industrial chain, and continuously enhanced international competitiveness, gives it continuously rising value in import and export trade.

Figure 1 further visualizes this stage-based evolution: both the trade-volume bars and the trade-value bars rise from 2015 to 2023, while the temporary fluctuation around 2019-2021 and the rebound after 2022 indicate that policy support and product-quality upgrading helped restore export momentum.

Figure 1 Total Import and Export Trade Volume and Value of Northeast Rice in China from 2015 to 2023

2.1.2 Main cooperation partners in the Northeast rice market

In 2024, Northeast rice export trade partners covered more than 80 countries and regions, and the global market layout continued to expand. RCEP agreement countries have always been the most important export market for Northeast rice and China's most important rice trade partners. The trade share of Northeast rice exported to them has remained stable at more than 65% for many years, forming an absolute dominant advantage.

China's export layout in Southeast Asia is particularly important and has great market potential. From 2015 to 2024, China's total exports of Northeast rice to Vietnam reached USD 1.82 billion, with an average annual share of 15.3%; Thailand was the second largest trade partner for Northeast rice in Southeast Asia, with China's Northeast rice exports to it reaching USD 1.25 billion and an average annual share of 10.5%; Malaysia's export-value share was 8.2%, and China's Northeast rice exports to it contributed an average of USD 760 million annually.

East Asian countries or regions are the core market for Northeast rice exports. From 2015 to 2024, China's cumulative Northeast rice exports to Japan reached USD 3.28 billion, and the single-year export value in 2024 was USD 410 million, ranking first in the East Asian market. Exports to South Korea reached USD 2.85 billion, with an average annual share of 12.3%. Imports by Hong Kong, China reached USD 1.56 billion, and the combined share of the three reached 38.1%. By comparison, China's export share to European and American countries was relatively low: Northeast rice exports to Russia reached USD 520 million, exports to America reached USD 380 million, and exports to the United Arab Emirates reached USD 290 million, with a total average annual share of 8.7%. Table 1 summarizes the export value and product composition of major trade partners.

Table 1 Export Value and Main Product Display of Major Trade Partners of Northeast Rice in China from 2015 to 2024

Partner	Total export	Annual export	Annual share	Product 1	Product 2	Product 3	Product 4	Product 5	Product 6
Japan	32.8	4.1	28.35	07123200 (55.36)	20039010 (18.48)	20039090 (6.59)	07095930 (6.54)	07095990 (5.69)	07123400 (3.34)
Korea	28.5	3.5	14.7	20039010 (58.94)	07123200 (22.48)	20039090 (6.52)	07123300 (3.71)	07123400 (2.82)	20031019 (1.98)
Malaysia	15.3	1.9	8.8	07123200 (47.20)	07123300 (15.73)	07095990 (13.58)	20039090 (5.45)	07123400 (4.86)	20039010 (4.59)
Singapore	12.1	1.5	8.24	07123200 (23.44)	07095910 (18.28)	20039010 (10.33)	06029010 (9.58)	20031019 (9.29)	20031011 (8.20)
Vietnam	18.2	2.3	7.53	20039010 (37.36)	07123200 (21.83)	20031011 (12.53)	20039090 (5.75)	07095990 (5.11)	20031019 (3.47)
Russia	8.5	1.1	4.4	20031011 (38.65)	20031019 (29.65)	20039010 (21.38)	07123200 (3.61)	07123300 (2.08)	07095990 (1.55)
America	6.2	0.8	3.12	06029010 (36.47)	07123200 (23.02)	07095990 (14.77)	07123400 (5.65)	20031011 (2.31)	07123950 (2.26)
UAE	5.8	0.69	3.04	07108040 (35.78)	07115919 (23.09)	07115119 (18.17)	07123950 (16.62)	07123200 (1.33)	07123400 (1.29)
Hong Kong, China	15.6	2.1	1.57	20031011 (62.37)	20039090 (14.49)	07123200 (10.74)	20031019 (2.44)	07095930 (2.43)	20039010 (2.01)

2.1.3 Export categories and export situation

From the perspective of trade time, in 2024, Northeast rice exports showed the characteristics of 'balanced throughout the year and concentrated in the peak season.' Vacuum-packed fresh rice and sushi rice exports were concentrated in the second half of the year, while ordinary japonica rice exports were mostly concentrated in the first half of the year. First-quarter exports accounted for 30%, especially in January and March. Compared with 2021, exports of various Northeast rice categories were more evenly distributed across months. The share of fresh rice in the second half of the year increased by 8 percentage points, and part of the japonica rice export trade shifted from the fourth quarter to the first quarter, becoming more concentrated in monthly distribution.

Table 2 Export Value Share of Six Rice Categories in China from 2017 to 2024

Category	2017	2018	2019	2020	2021	2022	2023	2024
Ordinary japonica rice	3.21	3.52	3.80	4.11	4.53	5.20	5.80	3.1
Sushi rice	5.1	6.53	7.44	7.52	9.09	12.18	12.29	10.04
Frozen prepared rice	2.17	2.78	2.92	2.54	2.7	2.46	2.18	1.37
High-end customized rice	3.8	3.5	3.0	3.06	3.06	2.85	2.57	1.64
Vacuum fresh rice	45.78	42.75	44.98	46.41	32.78	20.88	19.6	29.89
Prepackaged convenience rice	42.42	43.74	39.56	37.33	50.3	56.83	59.27	55.45

Table 2 shows that vacuum fresh rice and prepackaged convenience rice have relatively stable demand in the international trade market and occupy an absolute leading advantage in Northeast rice export trade. In terms of export value share, high-quality japonica rice such as Wuchang rice and Panjin rice, together with rice processed products such as sushi rice and convenience-rice raw-material rice, constitute the main export categories of Northeast rice, accounting for about 75% of total annual export value. Among them, sushi rice exports increased significantly from USD 80 million in 2017 to USD 520 million in 2024, with export value increasing 5.5 times and export volume increasing 3 times, accounting for 28% of the total export value and ranking as the first export category. In terms of export volume, vacuum-packed fresh rice and sushi rice together accounted for 45% of total export volume, and the export volume of vacuum-packed fresh rice fluctuated relatively little, while its annual unit price rose by 6% and its export value

fluctuated more significantly. Ordinary japonica rice exports also showed a steady upward trend, and changes in export volume had a relatively small impact on total export volume.

From the perspective of export price, Wuchang rice ranked highest. From 2019 to 2024, the average export price was USD 2.8 per kilogram. After customs codes were subdivided in 2021, it was divided into vacuum fresh rice flower fragrance and organic rice flower fragrance categories. Among them, the average export price of organic rice flower fragrance reached USD 3.5 per kilogram, and the average export price of Wuchang high-end customized rice reached USD 4.2 per kilogram. From the perspective of high-end japonica rice, its higher unit price and quality advantages of 'black-soil planting and ecological traceability' require strict regulation of seed selection and processing processes and the establishment of a whole-process quality control system from the field to the port to ensure stable product quality.

When developing, Northeast rice enterprises should pay attention to a differentiated layout of export categories: fresh rice needs strengthened preservation technology, japonica rice needs to optimize the processing resistance of raw rice, and RCEP trade facilitation measures should be used to shorten customs clearance time and improve export efficiency.

2.2 Selected Product Performance

2.2.1 Overview of Northeast rice producing and importing countries

From the global high-quality japonica rice market, the main countries that produce and export high-quality japonica rice are China, Japan, Thailand, and America. In terms of high-quality japonica rice export value, China, with Northeast rice as its core export, ranked first globally, with export value reaching USD 820 million in 2024. Japan, with Koshihikari rice as its main export, ranked second, at about USD 560 million. Thai japonica rice ranked third in export value, at about USD 380 million. In terms of high-quality japonica rice export volume, China's Northeast rice accounted for 32.1% of total global high-quality japonica rice exports, Japan accounted for 18.5%, and Thailand accounted for 12.3%. China's export volume ranked first globally. Whether measured by export value or export volume, China's Northeast rice occupied a core advantage in the global high-quality japonica rice market.

Figure 2 Global Rice Export Volume and Export Value in 2024

Figure 2 presents the comparison of global rice export volume and export value in 2024, showing the relative position of China, Japan, Thailand, America, and other exporters in the high-quality japonica rice market.

The top ten countries and regions importing high-quality japonica rice globally were Japan, South Korea, Malaysia, Vietnam, Singapore, Russia, the United Arab Emirates, America, Hong Kong, China, and Thailand. Asia was the main import region, including Japan and South Korea in Northeast Asia and Malaysia and Vietnam in Southeast Asia. Japan, as the country with the largest import volume of high-quality japonica rice in the world, imported 690,000 tons in 2024 and had strong market consumption capacity. South Korea followed closely, with import volume of about 300,000 tons in 2024. Among RCEP members, Japan, South Korea, Malaysia, Vietnam, Singapore, and Thailand were included. Japan ranked first in import volume, while Thailand ranked last, but Thailand's import value of high-quality japonica rice ranked fourth among RCEP members, reaching USD 210 million, indicating that its market preferred high-quality and high-value-added japonica rice categories and had higher requirements for rice taste and quality.

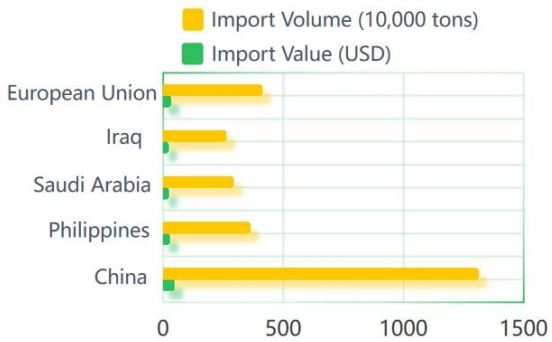

Figure 3 Global Rice Import Volume and Import Value in 2024

Figure 3 compares global rice import volume and import value in 2024, reflecting the import structure of major destination regions and the quality-oriented demand of some RCEP markets.

2.2.2 Selection of Northeast rice production regions and changes in the trade competitiveness index

China's Northeast rice output performed well. In 2024, the total rice output of the three northeastern provinces reached 28 million tons, an increase of 5% over the previous year; total output value reached RMB 120 billion, an increase of 8.5%, accounting for more than 22% of China's total rice output. The output and output value of Northeast rice were both in a leading position in China. While annual total output value exceeded RMB 100 billion, the scale of high-quality production capacity continued to expand. High-end varieties such as Wuchang rice and Panjin rice are mainly produced in Heilongjiang, Jilin, and Liaoning. Northeast rice has high recognition and demand in domestic and international markets because of its excellent quality. These rice varieties are favored for their low chalkiness, moderate amylose content, high gel consistency, soft and fragrant taste, and rich nutrients such as B vitamins and minerals. In particular, geographical-indication varieties such as Wuchang rice have become distinctive agricultural products that earn foreign exchange through exports because of their unique black-soil planting environment and traditional planting techniques.

The three northeastern provinces have unique agricultural geography and climatic conditions. The black-soil areas of Heilongjiang, Jilin, and Liaoning have high organic matter content, large day-night temperature differences, and long rice growth cycles, laying the foundation for high-quality and high-yield Northeast rice. According to agricultural statistics, the cultivated land area suitable for planting high-quality rice in Northeast China exceeds 60 million mu, and the perennial rice planting area remains stable at about 50 million mu. The rice produced has rich varieties, covering round-grain, long-grain, fragrant rice, and other series. Wuchang rice alone in Wuchang City has a planting area of 2 million mu and an annual output of about 1 million tons. These abundant rice varieties provide diverse choices for domestic and international markets, among which Wuchang rice, Panjin rice, and Jilin Xiaoting rice are well known at home and abroad.

After years of development, the Northeast rice industrial system has become relatively complete. From breeding, planting, processing, to sales, the whole industrial chain has strong market competitiveness. For example, in the planting link, the popularization rate of large-scale mechanized operation exceeds 85%; in the processing link, the intelligence rate of polished-rice processing equipment exceeds 70%. These provide solid support for the market competitiveness of Northeast rice and make it an important choice for domestic rice exports.

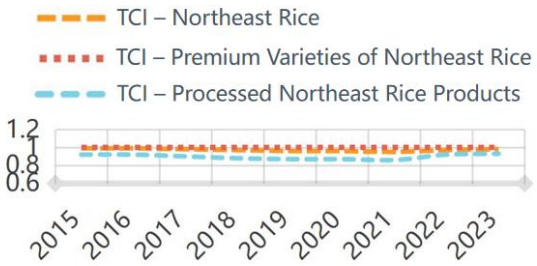

Figure 4 Change in the Trade Competitiveness Index of Northeast rice in China from 2015 to 2023

Figure 4 provides direct evidence of this competitiveness change: the index remains at a high level throughout 2015-2023, dips slightly around 2021 under external market fluctuations, and then recovers to 0.90 in 2023, indicating improved export resilience.

From 2015 to 2023, China's Northeast rice trade competitiveness index showed a good trend. The export trade competitiveness index of Northeast rice was 0.82 in 2015, rose to 0.88 in 2020, and fell slightly to 0.85 in 2021 due to international market fluctuations. In response to challenges, the Chinese government and local governments in the three northeastern provinces introduced a series of support policies in a timely manner to help the Northeast rice industry enhance international competitiveness. These policies focused not only on stable production capacity, but also on quality upgrading and industrial-chain improvement. For example, the government increased investment in rice breeding research and supported institutions such as the Heilongjiang Academy of Agricultural Sciences in developing high-quality varieties. At present, Northeast China has cultivated dozens of high-quality and high-yield rice varieties, such as the Longdao series, Jijaponica series, and Liaojaponica series, and the coverage rate of high-quality varieties exceeds 90%. At the same time, quality supervision over rice production and processing has been strengthened, and green food and organic food certification has been promoted. The green and organic certification area of Northeast rice exceeds 10 million mu, ensuring that products meet international standards and the quality requirements of importing countries. In addition, the government actively promotes the development of the Northeast rice industry toward scale, branding, and digitalization by building modern agricultural industrial parks, creating regional public brands such as the Northeast rice regional brand with a value of more than RMB 80 billion, and developing new business forms such as e-commerce live streaming. These measures optimize resource allocation, improve production efficiency, and expand sales channels. A series of measures helped the trade competitiveness of Northeast rice rebound to 0.87 in 2022 and further rise to 0.90 in 2023, showing an overall positive development trend.

3 CONCLUSION

This paper reorganized and translated the selected section on national export performance into an independent article. The study examined the export performance of Northeast rice from market growth, partner structure, product categories, global comparison, production-region advantages, and trade competitiveness. The selected evidence shows that Northeast rice exports are mainly directed to Asian and RCEP markets, with Japan, South Korea, Malaysia, Vietnam, and Singapore playing important roles. From 2015 to 2023, both total trade volume and total trade value increased, although some stages were affected by trade barriers and the global trade environment. The product structure shows that vacuum fresh rice and prepackaged convenience rice maintain stable demand, while sushi rice and high-end japonica rice categories have strong growth potential. The production foundation of the three northeastern provinces, including output scale, planting area, mechanization, processing intelligence, and brand construction, supports continued export competitiveness. The trade competitiveness index rose to 0.90 in 2023, indicating an overall improving trend. The limitation of this paper is that the analysis remains based on the descriptive statistics and charts supplied by the selected section, and it does not introduce additional econometric testing. Future research can further combine longer time-series data, partner-level trade data, and product-level quality indicators to evaluate export performance with more detailed quantitative models.

COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

REFERENCE

[1] Kotin F T. Determinants of coffee market outlet choice in Wollega Zones, Oromia regional state, Ethiopia. Journal of Sustainable Business, 2026, 11(1): 9.

[2] Nikam R Y, Shendage N P, Shedge V R, et al. Performance of India's Basmati Rice Exports: Growth, Instability and Share Analysis. Journal of Experimental Agriculture International, 2026, 48(2): 240-248.

[3] Ballesteros A A M, Ninaquispe M C J, Otazú C D C, et al. Sustainability Through Diversification and Competitiveness: An Analysis of Global Maize Exports. Sustainability, 2026, 18(3): 1227.

[4] Arsha N, Zadran J, Majumder A, et al. Antiphospholipid Syndrome-Associated Lemierre's Syndrome With Extensive Cervicothoracic Venous Thrombosis Mimicking Thoracic Outlet Syndrome. Journal of investigative medicine high impact case reports, 2026: 1423247096261452328.

[5] Yuan S, Flor J R, Kumar V, et al. Improving crop management can help Cambodia become a major rice exporter. Field Crops Research, 2026: 337110238.

[6] Hu J, Lazarski C A, Li K K F, et al. Cryo-EM analysis of the Staphylococcus aureus phenol-soluble modulin exporter PmtCD apo form in detergent micelles, nanodiscs and peptidiscs. Communications Biology, 2025, 8(1): 1576.

[7] Chadi K, Belghar N, Lachi M, et al. Numerical study of the optimization of the thermal and flow characteristics of a collector design of microchannels with two inlets and outlets, containing a nanofluid and a water-based fluid. Numerical Heat Transfer, Part A: Applications, 2025, 86(22): 8049-8063.

[8] Nguyen T C, Morales E L, Hoang N, et al. How Integrated Are Rice Markets in Asia? Effects of Crises and Rice Export Quality on Price Shock Transmission. Australian Journal of Agricultural and Resource Economics, 2025, 69(4): 960-973.

[9] Simonič M, Klančnik S. Temporal and Statistical Insights into Multivariate Time Series Forecasting of Corn Outlet Moisture in Industrial Continuous-Flow Drying Systems. Applied Sciences, 2025, 15(16): 9187.

[10] Ghidode S, Pathak H. Trade Dynamics of Non-basmati Rice Export from Chhattisgarh, India. Journal of Scientific Research and Reports, 2025, 31(8): 901-908.