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ФАКТОРИ ВПЛИВУ ТА ПЕРСПЕКТИВИ КИТАЙСЬКИХ ЗОВНІШНІХ ПРЯМИХ ІНОЗЕМНИХ ІНВЕСТИЦІЙ В СІЛЬСЬКЕ ГОСПОДАРСТВО

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INFLUENCING FACTORS AND PROSPECTS OF CHINESE AGRICULTURAL OUTWARD FOREIGN DIRECT INVESTMENT

Анотація. На тлі тенденції до економічної та торговельної інтернаціоналізації, прямі іноземні інвестиції Китаю за кордон демонструють стабільне зростання протягом останніх років. Зокрема, Китай співпрацює у сільськогосподарській сфері з понад 100 країнами, ставши провідним донором прямих іноземних інвестицій у сільське господарство та п'ятим за величиною імпортером сільськогосподарської продукції у світі. У цій статті розкрито структуру китайських прямих іноземних інвестицій у сільське господарство з метою узагальнення етапів їх розвитку та факторів впливу. Дослідження використовує дані про прямі іноземні інвестиції Китаю за період з 2014 по 2023 роки для оцінки етапу інвестицій та аналізу майбутніх тенденцій розвитку сільськогосподарської торгівлі Китаю. Результати дослідження свідчать, що, незважаючи на певний спад у 2021 та 2022 роках, прямі іноземні інвестиції Китаю в сільське господарство перебувають на етапі швидкого розвитку. Можна зробити висновок, що рівень розвитку сільського господарства, його державна підтримка та сільськогосподарські технології покращилися. Однак на структуру суттєво впливають глобальні зовнішні фактори, хоча загальна тенденція залишається сприятливою і має значний потенціал для подальшого розвитку. Результати також можуть мати важливе практичне значення для подальшого сприяння зростанню масштабів сільськогосподарських інвестицій за кордоном та підвищення міжнародної конкурентоспроможності сільського господарства Китаю.

Ключові слова: прямі іноземні інвестиції, сільське господарство, розвиток сільських територій, факторний аналіз, Китай.

Abstract. Against the backdrop of global economic and trade internationalization, China's outward foreign direct investment has exhibited consistent growth over the years. Notably, China has engaged in agricultural cooperation with over 100 countries, becoming the global leading donor of foreign direct investment in agriculture and the

world's fifth-largest importer of agricultural products. This paper reveals the structure of Chinese agricultural outward foreign direct investment to summarize their developmental stages and influencing factors. The study utilizes relevant data on China's foreign direct investment from 2014 to 2023 to assess the investment stage and analyze the future development trends in China's agricultural trade. The research results indicate that currently, despite some decline in 2021 and 2022, China's agricultural foreign direct investment is in a stage of rapid development. It can be concluded that the levels of agricultural economic development, national policy support for agriculture, and agricultural technology have all improved. However, the structure is significantly influenced by global external factors, although the overall trend remains favorable, with significant potential for advancement. The results could also have important practical significance for further promoting the growth of the scale of agricultural foreign investment and enhancing the international competitiveness of China's agriculture.

Key words: foreign direct investment, agriculture, rural development, factor analysis, China.

JEL codes: F21, Q17.

Problem setting. In recent years, China's agricultural outward foreign direct investment (OFDI) has experienced rapid development, characterized by expanding investment scale, increasingly diverse investment fields, global investment presence, and varied investment modes. Against the backdrop of the "Belt and Road" initiative, agricultural OFDI in China is aligned with three major objectives: constructing a global industrial chain, enhancing agricultural investment standards, and fostering competitive multinational enterprise groups [3, 8]. This approach has significantly boosted the efficiency of agricultural OFDI, particularly since 2017 when China's agricultural outward direct investment showed an accelerating growth trend. The key manifestations of this trend are outlined as follows:

Overall Scale: According to the Ministry of Commerce of China, China's outbound investment stock reached US \$34.84 billion in 2019, decreasing to US \$30.2 billion in 2020. Despite the challenges posed by the epidemic, China remains a leader in global agricultural imports and exports. China's agricultural OFDI demonstrates a trend of recovery and accelerated growth. Over the past decade, the average tariff on China's agricultural products has consistently remained low, at only 39 % of the average level observed in developed countries.

Investment Entities: China has signed free trade agreements with 26 countries and regions, with trade volume with its free trade partners accounting for approximately 35 % of the total trade volume. According to data from China's Ministry of Agriculture and Rural Affairs, by the end of 2019, China had established 983 overseas companies. Among them, 440 companies were engaged in both primary and secondary business activities, accounting for 44.8 % of the total. Specifically, 440 companies were solely involved in the processing link, with 39 engaged in processing enterprises, 21 in scientific research, and 24 in brand management. The main investors in China's agricultural OFDI are both state-owned (dominant) and private enterprises. State-owned enterprises exhibit a large investment scale due to their robust economic strength and policy support, while private enterprises show significant development potential in terms of investment quantity and field diversification, owing to their flexible operational approach and market sensitivity.

Investment Field: China's agricultural OFDI primarily encompasses traditional agricultural sectors such as agriculture, forestry, animal husbandry, and fishing, as well as modern agricultural sectors like food processing and agricultural science and technology. Among these, food processing commands the largest investment scale, followed by agricultural science and technology. By the end of 2019, the investment stock in the planting industry, animal husbandry, forestry, fishery, agricultural materials, and other related fields amounted to US \$16.88 billion, US \$3.28 billion, US \$1.20 billion, US \$270 million, and US \$12.29 billion, respectively. These figures represent 48.45 %, 9.42 %, 3.45 %, 2.62 %, 0.77 %, and 35.29 % of the total investment, respectively.

Investment Area: China's agricultural OFDI is mainly distributed globally, with a focus on developing countries in Asia, Africa, and Latin America. In 2020, the top five countries in terms of China's agricultural FDI stock were Australia, Singapore, Israel, the Netherlands, and Indonesia, covering regions such as Asia, Oceania, Europe, Africa, and North America.

Investment Hotspots: In recent years, the main investment hotspots for China's agricultural OFDI have centered on actively participating in the development of modern agricultural industrial parks, agricultural industrial towns, advantageous and characteristic industrial clusters, and the promotion of green agricultural products, organic agricultural products, and agricultural products with geographical indications. There is also an emphasis on encouraging private capital to engage in overseas agricultural investment and cooperation, constructing national investment and management projects related to grain, cotton, oil, sugar, rubber, livestock, fishing, processing, storage, and logistics in the "Belt and Road" initiative, and establishing overseas agricultural cooperation parks to supplement domestic agricultural production [4].

Literature review. The issues of agricultural outward FDIs are primarily addressed in reports published by the Food and Agriculture Organization (FAO), the International Monetary Fund (IMF), national Ministries of Commerce, and other relevant institutions. The discussions regarding China's involvement in FDI flows within the agricultural sector could be grouped into several areas. Some researchers concentrate their attention on the aspects of national food security [1, 9]; others focus on the pattern of FDI in agriculture [2, 6, 11]; the third group highlights the role of state policy [5, 12]. Besides, Jia [7] investigates how China's agricultural trade pattern is affected by overseas agricultural resources. However, post-Covid research in the area are rather rare.

Methods. This study examines the framework of China's agricultural outward foreign direct investment, aiming to outline its developmental phases and factors that influence it. It utilizes case study analysis and normative analysis methodologies to offer conceptual perspectives on the pattern of China's agricultural outward direct investment. The research draws upon pertinent data concerning China's foreign direct investment spanning from 2014 to 2023 to evaluate the investment stages and forecast future development trends in China's agricultural trade.

Unsolved parts. Despite the available research in the field of China's foreign direct investment pattern, they are mainly focused on the quantitative aspects and dynamics. While the qualitative features and efficiency of investment processes were not very often considered. Particularly there is a lack of research in post-Covid period.

The purpose of the paper is to present a study, focusing on statistical analysis and examination of factors influencing the pattern of agricultural outward direct investments of China. Through this analysis, we aim to uncover the future trends in international agricultural trade involving China.

Results. According to the 2023 FAO report, China emerged as the predominant contributor to foreign direct investment outflows in the agricultural sector, covering activities such as crop cultivation, farm equipment, inputs, food processing, and logistics from 2013 to 2022. Throughout this period, China maintained an annual average investment of USD 1.71 billion, a figure that exceeded that of any other country by at least threefold. The peak in 2017 can be primarily attributed to the initial public offering (IPO) of Syngenta, the world's largest producer of agricultural chemicals and seeds based in Switzerland. ChemChina, a state-owned enterprise, acquired 98 % of Syngenta's shares, marking the largest foreign acquisition ever undertaken by China [10].

We could highlight the following stages of China's agricultural OFDI (Table 1).

Table 1

STAGE CHARACTERISTICS OF CHINA'S AGRICULTURAL OFDI

	Embryon stage (1978–2000)	Initial stage (2001–2012)	Deepening stage (2013 – present)
Investment management	Examination and approval management system	Approval system	Record is the priority, approval is auxiliary
Investment property	Forestry and fisheries	Crop farming	Planting industry, animal husbandry, forestry, fishery, agricultural materials
Investment link	Production link	Production and processing links	Production, processing, warehousing, logistics, scientific research and brand links
Subject of investment	State-owned enterprises	State-owned enterprises as the main enterprises, the competitiveness of private enterprises enhanced	Central government enterprises, state-owned enterprises, private enterprises and other diversified entities to participate
Investment area	In Africa, America, and Oceania	Mix of states	Developed states

Source: Rural Discovery in China, by Qiu Hanguang [9]

The scale of China's agricultural outward direct investment is gradually expanding, and its investment fields and destinations are continually broadening, playing an increasingly significant role in international agricultural investment. This paper will utilize empirical methods to analyze the relevant factors influencing China's foreign direct investment in agriculture.

Among the factors influencing China's agricultural foreign direct investment are:

1. *Agricultural policy support.* The government has implemented a series of policies to encourage foreign direct investment in agriculture, such as the "going

global" strategy and the establishment of free trade zones, creating a favorable investment environment for China's agricultural enterprises. Since 2017, documents like the Vision and Action for Jointly Promoting the Belt and Road Construction of Agricultural Cooperation and the 14th Five-Year Plan for International Agricultural and Rural Affairs Cooperation have marked China's agricultural outward direct investment entering a phase of rapid development, supported by policies. In recent years, to adapt to the new context of economic globalization, China has pursued a more proactive opening strategy in agricultural policy, hastened the transformation of agricultural foreign trade and foreign investment modes, and upheld the coordinated development of export and import, agricultural goods trade, service trade, and foreign investment utilization. From 2013 to 2021, the number of Chinese enterprises investing overseas in agriculture increased from 443 to 1,120, representing a 1.53-fold increase. Concurrently, the role of private enterprises in agricultural OFDI has strengthened, forming a pattern of agricultural OFDI involving central enterprises, state enterprises, and private enterprises.

2. *Trade barriers.* Some countries have erected trade barriers to China's agricultural exports, such as technical barriers, standard barriers, quality barriers, and more, which have had various impacts on China's agricultural exports and affected the process of China's agricultural foreign direct investment. These barriers make it challenging for Chinese agricultural products to enter these markets, reducing the export volume of agricultural products. Moreover, they necessitate agricultural products meeting diverse standards and certifications, further escalating export costs. Due to differing policies and standards across countries and regions, Chinese agricultural export markets are somewhat limited in achieving market diversity.

3. *Demand for agricultural development.* Despite the numerous constraints on China's OFDI, the progression of economic globalization remains unhindered, offering a broad market and opportunities for China's agricultural OFDI. Developing countries constitute the primary area of enterprise overseas investment, characterized by inadequate agricultural infrastructure, low levels of scientific and technological development, limited labor expertise, and imperfect infrastructure. China also faces resource shortages and an unbalanced industrial structure. Agricultural foreign direct investment can help alleviate domestic and foreign resource pressures, capitalize on complementary advantages and disadvantages, and foster the mutual development of global livelihoods.

The sectoral and geographical structure of China's OFDI is shown in Figure 1 and Table 2.

4. *Scientific and technological innovation.* Scientific and technological innovation is the key driving force of China's agricultural development. Foreign direct investment in agriculture contributes to the introduction of foreign advanced foreign technologies. Through innovation of production technology, equipment, seeds, fertilizer, informatization and other technologies, countries learn from each other and improve together. (1) The improvement in the field of agricultural mechanization can improve the production efficiency of farmers and reduce the labor intensity. (2) The improvement of agricultural intelligence level and the optimization of configuration can better help crops to use big data to analyze and predict the growth, weather, market information and other links. (3) The international unified quality management and certification system can expand the diversified market, increase the added value of agricultural products and strengthen international cooperation.

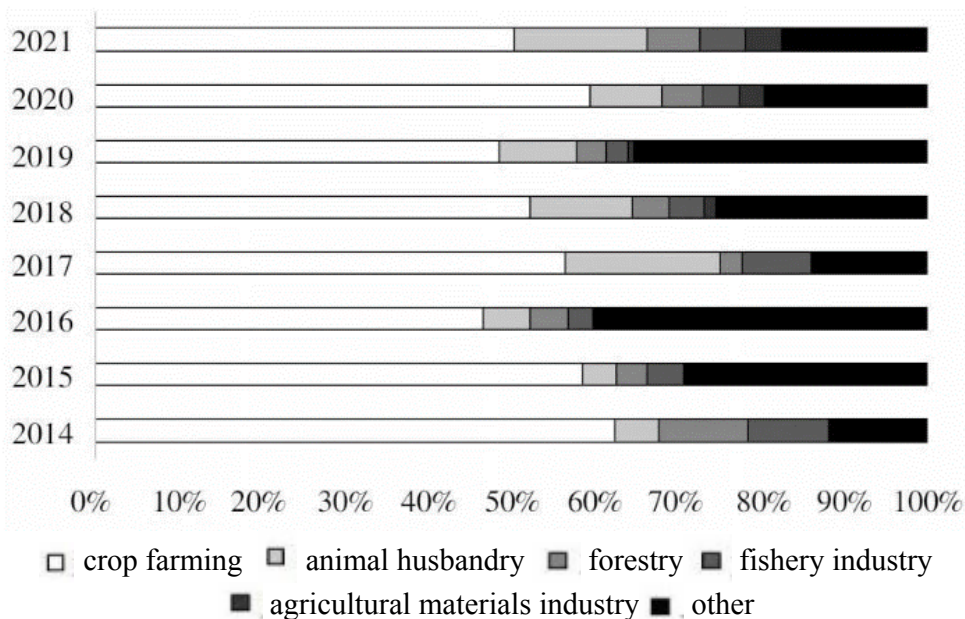


Figure 1. Distribution of China's outbound investment stock from 2014 to 2021

Source: own calculations based on Analysis Report on China's Agricultural Foreign Investment Cooperation (2022).

Table 2

DISTRIBUTION OF STOCK OF CONTINENTS AND MAJOR INVESTMENT COUNTRIES

Continent	Investment stock by 2021 (US \$100 million)	States stock / total stock of (%)	Major investment countries	Investment stock by 2021 (US \$100 million)	National stock / continent stock (%)
Asia	116.98	43.14	Indonesia	22.62	19.34
Europe	76.02	28.04	Switzerland	54.04	71.09
Oceania	38.30	14.13	Australia	19.88	51.91
Africa	17.50	6.45	Mauritania	2.73	15.6
South America	17.00	6.27	Baxi	13.93	81.94
North America	5.35	1.97	America	2.3	42.99

Source: own calculations based on Analysis Report on China's Agricultural Foreign Investment Cooperation (2022).

Among the development prospects and trends of China's agricultural foreign direct investment, we can distinguish several key points:

1. *Adjustment of agricultural industrial structure*: Global import and export trade of agricultural products are influenced by numerous factors, such as market demand, natural disasters, and trade policies. Considering China's current domestic resources,

supply, and demand situation, there is a need to deeply adjust China's agricultural industrial structure from a global perspective in the future. This adjustment will involve leveraging a variety of domestic and foreign resources to meet the demand for domestic agricultural products. It also entails building a global industrial supply chain encompassing production, processing, logistics, trade, and consumption to fulfill domestic agricultural product demands and promote the export of competitive agricultural products.

In 2023, due to increased demand for agricultural products in the global market, some countries have adopted more open agricultural trade policies. According to data from the National Bureau of Statistics, China's grain output in 2023 reached 695.41 million tons (13908 billion jin), marking a 1.3 % year-on-year increase. Additionally, in 2022 and 2023, the export volume of grain was 3.22 million tons and 2.62 million tons, respectively, showcasing notable achievements and the rationality of industrial structure adjustments.

The pattern of China's imported grain in 2023 is shown in Figure 2 with a domination of beans.

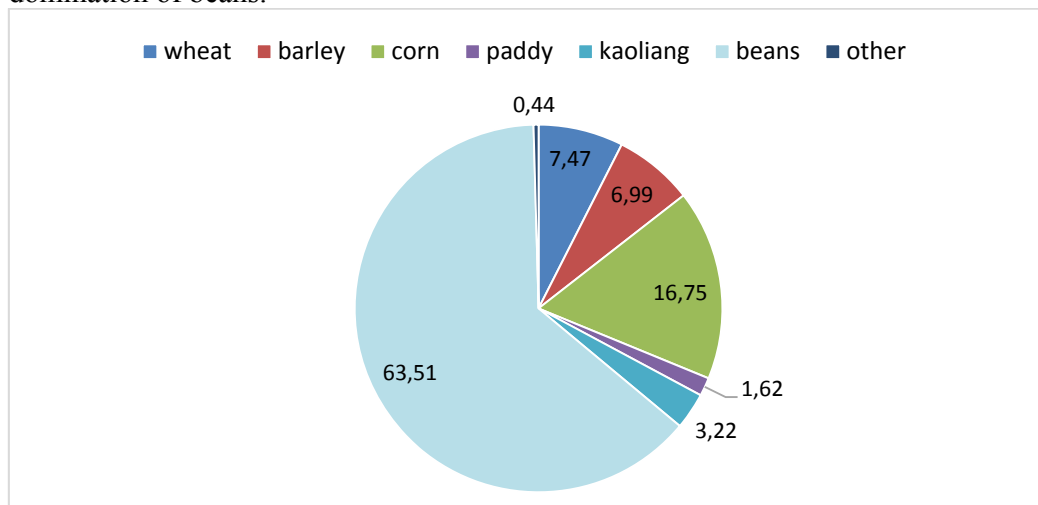


Figure 2. China's imported grain quantity (%) in 2023

Source: own calculations based on Analysis Report on China's Agricultural Foreign Investment Cooperation (2022).

2. *Optimization of agricultural science, technology, and equipment level.* By enhancing the level of agricultural science, technology, and equipment, China is introducing intelligent agricultural technologies from developed agricultural countries. For instance, Iowa inventor David Dorhout's research and development of the farming robot Prospero, the Swiss company ecoRobotix's field weeding robot, and joint research and development efforts such as the harvest robot from BGU (Ben-Gurion University) and the intelligent monitoring system PlantVillage by American biologist David Hughes and plant pathologist Marsel Saras. These technologies are well-suited to the advancements in intelligent agriculture. Considering the diverse characteristics of different regions and crops, China is selecting suitable local

advanced technologies for promotion to help farmers adopt new methods and technologies, ultimately enhancing agricultural production efficiency. Additionally, there is a strong emphasis on developing technologies like the Internet of Things, big data, and artificial intelligence to strengthen technology-intensive enterprises in the agricultural materials industry and animal husbandry sector. Through initiatives like personnel training, technology introduction, and production technology enhancement, China aims to adjust the internal investment structure of the planting industry, guiding enterprises to prioritize investments in key agricultural products. Currently, China is collaborating in areas such as improved seed cultivation, high-yield cultivation techniques, animal and plant disease prevention and control, facility agriculture, agricultural machinery and equipment, and dryland agriculture.

3. *Investment risks, environmental protection, cultural differences, etc.* Based on the comparative advantages and development needs of different regions in terms of cultivated land, climate, and technology, China's agricultural OFDI (outward foreign direct investment) is globally distributed to mitigate investment risks such as cultural differences in various countries. China adopts an approach that fully integrates government officials, experts, and agricultural overseas investment enterprises to strengthen the assessment of the overseas investment environment at the country, industry, and link levels. This involves establishing a potential rating system for foreign agricultural investment, including factors like infrastructure development, agricultural product importance, investment market potential, and investment risks, facilitating dynamic monitoring of agricultural foreign direct investment potential. China has become deeply involved in the international agricultural market, with its agricultural exports reaching US \$98.93 billion in 2023, marking a 0.9 % increase from 2022, while global agricultural import trade continues to grow.

4. *Cultivation of large multinational agriculture-related enterprises.* Considering the current landscape of China's agriculture-related enterprises, there has been the formation of several multinational agriculture-related enterprises with substantial scale, robust development foundations, experience in foreign agricultural investment and development, and strong economic capabilities. These enterprises provide critical support and aim to cultivate large multinational enterprises with international competitiveness. In terms of enterprise distribution, China has invested in 246 enterprises specializing in cash crops overseas, including 4 in South America (1.63 %) and 13 in North America (5.28 %). This investment includes 243 central enterprises, national enterprises, and national key leading enterprises (21.7 %), accounting for 67.69 % of the total investment flow, and 877 other enterprises (78.3 %), with an investment flow of USD 537 million, accounting for 32.31 % of the total flow.

Conclusions. Given the development situation in the global economy and trade integration, China's outward direct investment has seen a steady increase over the years. However, significant contradictions remain apparent. For instance, the overseas investment sector is overly concentrated in the planting industry, which hampers corporate profit improvement. Additionally, foreign investment projects often do not align with domestic scarce agricultural products, hindering supply guarantees. Moreover, outbound investment tends to focus on Asia and Europe, with a concentration within the continent, which limits the utilization of various regional comparative advantages and fails to disperse risks effectively.

To address these factors influencing China's agricultural outward foreign direct investment (OFDI), several measures can be taken. These include strengthening the quality management and certification system, expanding into diversified markets, increasing the added value of agricultural products, and enhancing international cooperation. Through these actions, China can better navigate new trade barriers, improve the competitiveness of agricultural products, and ensure sustainable development in exports. It is essential to actively participate in agricultural services exports, integrate related production factors, offer problem-oriented integrated solutions, and drive global expansion in agricultural materials, machinery, and product processing. China should also engage in constructing high-quality development bases for international agricultural trade and pilot agricultural opening and cooperation zones. Innovating agricultural economic and trade cooperation models, aligning with relevant rules and standards, developing export agricultural product brands, establishing international marketing and promotion networks, and fostering new advantages in international agricultural competition are crucial steps in this process.

References

1. Cui, Y. (2020). Analysis of the current situation of China's agricultural FDI. *Times of Economy and Trade*, (12), 8-9.
2. Du, W., Lishchynskyy, I. (2023). Development of Agriculture in Chinese Peripheral Rural Regions. *Herald of Economics*, 4, 94–103. DOI: <https://doi.org/10.35774/visnyk2023.04.094>
3. Gao D. (2020). Analysis of the location determinants of Chinese enterprises' overseas agricultural investment. *China Rural Economy*, 11, 113-130.
4. Gao, Q. (2019). Research on the driving force and location factors of China's agricultural FDI. Huazhong Agricultural University.
5. Guo, L. (2018). Review and prospect of China's FDI in the past 40 years of reform and opening up. *Asia Pacific Economy*, (4), 111-121.
6. Chen, X. (2021). Ensuring the security of national food supply. *Issues in Agricultural Economics*, (6), 4-7.
7. Jia P. (2019). The change of China's agricultural trade pattern and the strategies for the utilization of overseas agricultural resources. *Journal of Natural Resources*, 7, 1357-1364.
8. Lishchynskyy, I., Lyzun, M., Kuryliak, V., Savelyev, Y. (2019). The Dynamics of European Periphery. *Management Theory and Studies for Rural Business and Infrastructure Development*, 41(4), 527-536. doi: 10.15544/mts.2019.43
9. Qiu, H. (2022). Theoretical analysis of China's food security in the new era. *China Rural Economy*, (7), 2-17.
10. Yu, M. (2018). The current situation and strategies of China's soybean industry "going global". *Agricultural Outlook*, (11), 91-95.
11. Zhan L. (2020). Research on the location choice of China's agricultural enterprises for FDI in countries along the Belt and Road. *Issues in Agricultural Economics*, 3, 82-92.
12. Zhang, Y. (2016). Research on policy-based financial support for China's agricultural FDI. Shanxi University of Finance and Economics.