

Comparative Analysis of China's Industrial Transfer to the Midwest and ASEAN

Wang Yuqing

College of Economics, Guangxi University, Nanning, Guangxi, China
w2418931557@163.com

Keywords: Industrial transfer; Transfer the status quo; Driving factors

Abstract: Industrial transfer is a unique industrial development model in the development of regional economic integration and an inevitable result of economic laws. Based on the theory of industrial transfer, this paper makes a comparative analysis of China's industrial transfer to the central and western regions and ASEAN countries. Firstly, it analyzes the current situation of China's industrial transfer to the central and western regions and ASEAN countries, and then makes a comparative analysis of the factors driving the transfer from the aspects of transfer cost, policy, financing environment and international environment. Finally, it puts forward some policy suggestions from the perspective of low-end industries and high-end industries.

1. Introduction

Industrial transfer is an economic behavior and process that a country or region transfers the production, sales, research and development and even corporate headquarters of industries in different stages of development, such as innovation, maturity or recession, to another country or region in order to realize its own industrial progress after the changes in resource supply or product demand conditions. In recent years, the speed of industrial transfer has been accelerated, and many industries in China have been accelerated, mainly in the central and western regions of China and ASEAN countries. The outbreak of COVID-19 epidemic has had a great impact on the fast industrial chain in China, and some countries have called for reducing their dependence on China's manufacturing industry. In addition, the Sino-US trade war has caused an increase in domestic factor costs, which has accelerated some multinational companies and Chinese-funded enterprises to transfer some industries to ASEAN countries and the central and western regions of China. The 14th Five-Year Plan proposes to promote the orderly transfer of industries in China. In this context, exploring the driving factors behind industrial transfer and comparing the resource endowments and comparative advantages of different regions will help to better serve the orderly transfer of industries in China, promote regional coordinated development and build a new development pattern^[1].

2. The theory of industrial transfer

In the book *Evolution of International Economic Order*, Arthur Lewis analyzed the phenomenon that developed countries transferred labor-intensive industries to developing countries. Based on this,

the "labor-intensive industry transfer theory" is put forward. He believes that labor-intensive industries are the main body of industrial transfer. Because of the low population growth rate, insufficient labor force and high labor costs in developed countries, they will choose to transfer industries to developing countries with lower labor costs for production. Then import labor-intensive products from developing countries and accelerate the upgrading of domestic production structure.

Flying-geese model was first put forward by Japanese economist Kaname Akamatsu in the article Comprehensive Principles of China's Economic Development. Kaname Akamatsu used the flying geese model to compare the process of Japanese domestic industrial growth, and thought that this process included the generation, import, domestic production and export of the domestic market, and represented these stages by graphs, just like yan zhen flying. Based on this, Kaname Akamatsu put forward the typical industrial development model theory of the emerging countries-the theory of industrial development in the form of flying geese.

For different countries, there are great differences in resource endowment, geographical conditions and economic development foundation. At the same time, the technological innovation ability and level of different countries are also greatly different. As a result, different industrial gradients have been formed, that is, there are obvious stepped differences in the industrial structure levels of various countries (regions). According to the gradient transfer theory, each country and region can be divided into corresponding economic development gradients according to certain standards. Most logarithmic innovation activities originated in high gradient areas, and then with the change of product life cycle, some industries will gradually shift from high gradient to low gradient areas. For the region where the industry is located on a high gradient, innovation is the main driving force for its development, and only in this way can it maintain its leading position in the region. In areas with low gradient, priority can be given to the development of labor-intensive industries and primary industries with cost advantages, and the rapid development of industries can be realized by actively introducing foreign capital and learning technology from advanced regions, and then climb up from the lower economic development gradient and finally enter the ranks of developed regions.

3. The analysis of the current situation of China's industrial transfer

3.1. The eastern coastal industries transferred to the central and western regions

Since China implemented the policy of reform and opening up, developed countries have gradually transferred labor-intensive industries to the eastern coastal areas of China, which has promoted the formation of coastal economic belts in the eastern coastal areas and promoted the development of the eastern coastal areas of China^[2]. Through years of development, the developed eastern coastal areas of China have now entered the middle and late stage of industrialization, and the economic development is close to the developed level of emerging industrial countries in the world.

However, the factor capital in the eastern coastal areas is relatively saturated, and it is difficult for the local market to meet the needs of capital appreciation. With the rising cost of land, labor and other factors, coupled with the high business cost of enterprises and the increasingly prominent contradiction between resources and environment, the marginal income of some industries in the eastern coastal areas, especially labor-intensive industries, has declined, and the pressure of industrial upgrading and transformation and the demand for industrial transfer have increased day by day^[3]. Industrial restructuring and transformation and upgrading in the eastern region have become inevitable, and the pace of transfer of some labor-intensive industries to the central and western regions with lower factor costs has accelerated. For example, relying on the advantages of labor, transportation and policies, Henan Province attracted Foxconn to settle in Henan in 2010, and by 2018, Henan has become the world's largest iPhone production base. Chongqing integrates all the upstream industrial chains and foundries of notebook computer manufacturing industry into

Chongqing through cluster investment, and promotes Chongqing to become the largest notebook computer manufacturing base in the world. In recent years, the structure of transferring industries from the east to the central and western regions has also been continuously upgraded, from small scale to complete industrial chain, and the transfer industry has also shifted from labor-intensive to capital-intensive and technology-intensive industries such as machinery manufacturing, electronic information and biomedicine.

3.2. China's industry shifts to ASEAN countries.

In 2020, ASEAN will be the second largest economy of China's foreign direct investment. In 2020, China's direct investment in ASEAN reached US\$ 16.063 billion, up 23.3% year-on-year, accounting for 10.4% of the total flow in that year.

In terms of industries, manufacturing is currently the largest industry for China to invest in ASEAN. In 2020, China's investment flow in ASEAN manufacturing industry is the largest, with a total flow of US\$ 6,337.96 million, accounting for 39.5% of the total investment flow, including footwear, garment and textile industry and electronic manufacturing industry^[4].

At the same time, some foreign-funded enterprises have transferred their industrial chains to ASEAN countries or accelerated their overseas distribution. For example, Samsung will transfer all its mobile phone business in China to Vietnam, Hyundai Motor will gradually transfer its assembly business to the Philippines, Sony and other electronics companies will gradually move their factories in China overseas, Apple plans to move its hardware production capacity from China by 15%-30%, and many American companies will transfer their supply chains in China to Mexico. According to the China Business Report of American Chamber of Commerce in Shanghai in 2021, although most American enterprises indicated that they would continue to take root in China market, by 2020, 2% of them had moved part of their supply chains to the United States, and 12% of them had moved their industrial chains to other regions. At the same time, in order to reduce production costs and avoid risks, some Chinese-funded enterprises have also transferred some industrial chains and increased overseas investment^[5]. For example, the production capacity of textiles and garments such as Bosideng is constantly shifting to ASEAN countries. By 2019, the spinning capacity invested by China in Vietnam accounted for 32% of the total spinning capacity in Vietnam.

4. The comparative analysis of the driving factors of industrial transfer to the central and western regions and ASEAN

4.1. Analysis of the driving factors of industrial transfer to overseas in the eastern coastal areas

First, it is superior geographical location and trading environment. The first is the convenient maritime traffic conditions. ASEAN countries are the "meeting point" between the Pacific Ocean and the Indian Ocean. Vietnam, Indonesia and other countries have many ports and are close to Singapore, which makes trade easier and shortens the mileage of goods transported to Europe through the Straits of Malacca. Second, there are higher priority policies. ASEAN is not easily affected by the trade pressure of developed countries, and at the same time, it has signed a number of free trade agreements with foreign countries, reducing tariffs on thousands of import and export commodities to zero. Among them, China-ASEAN FTA will reduce the cost of bilateral trade and make it easier for enterprises to transfer manufacturing to ASEAN countries^[6].

Second, ASEAN countries have obvious labor advantages, but their labor quality is insufficient. In 2019, the minimum wages in Thailand, Cambodia and the Philippines were 1,667 yuan, 1,285 yuan and 1,637 yuan respectively. By the end of 2020, the average monthly income of service industry and industry in Vietnam was 2016 yuan and 1867 yuan respectively. The minimum monthly wage in

Indonesia is about 1200 yuan. The labor wages in ASEAN countries are much lower than those in China, but the labor quality and technical ability are not as good as those in China.

Third, ASEAN countries have outstanding advantages in exchange rate and tax burden. First of all, the exchange rates of ASEAN countries are falling, which makes them very attractive to foreign investment. Generally speaking, the depreciation of a country's exchange rate helps to maintain the price competitiveness of its foreign trade products in international trade. Compared with the gradual rise of RMB exchange rate, the exchange rates of many ASEAN countries continue to fall. Secondly, the preferential tax policies of ASEAN countries have advantages. Vietnam, Indonesia, the Philippines and other countries have continuously increased their investment in China, reduced or exempted the income tax of foreign enterprises for 2 to 15 years, and granted various tax incentives. The income tax rate of foreign-funded enterprises in China is 15%, and the income tax rate of domestic ordinary companies is higher.

Fourth, Sino-US trade friction has accelerated the transfer of China's low-end industries to ASEAN. Since May 2019, the tariff rate imposed by the United States on 200 billion US dollars of list goods imported from China has increased from 10% to 25%, and Sino-US trade friction has escalated. In the past two years, influenced by the tariff imposed by the United States on China's imports, the export structure and industrial chain pattern of China's commodities have changed significantly. First, increase tariffs to increase export costs. After the Sino-US trade friction broke out, the orders of China's US-related export enterprises all declined to varying degrees, and some enterprises shifted some production capacity overseas to avoid tariff increases. Second, the United States blocked high-tech enterprises in China, threatening the safety of the industrial chain. The risk aversion of enterprises will promote the outward transfer of industries. Thus, China's trade with the United States is declining in labor-intensive goods, and ASEAN countries' goods will gradually make up for the gap, and the industrial chain with low added value will gradually adjust from China to ASEAN countries.

4.2. China's central and western regions have good industrial capacity

First, the rising factor cost promotes the transfer of industries to the central and western regions. First of all, the relatively low rent and housing prices in the central and western regions make them more attractive to cost-sensitive enterprises. Because the location of enterprises requires high conditions of "being suitable for business and living", both land rent and house price will affect industrial transfer. From 2010 to 2020, housing prices in first-tier cities or industrial cities such as Suzhou and Tianjin rose by more than 100%, and housing prices in some cities rose by more than 200%, much higher than those in the central and western regions. Second, the labor price advantage in the central and western regions is obvious. From 2005 to 2019, the average annual income of manufacturing workers in eastern China generally increased, but the wage growth in the central and western regions was slow. Third, the price of hydropower in the central and western regions was generally low. In the eastern developed areas, the large industrial electricity prices in Shanghai, Tianjin, Zhejiang and other places mostly exceed 0.6 yuan/kWh, and the electricity prices of 1-10kV are close to 0.7 yuan/kWh. In contrast, the electricity prices of Chongqing, Sichuan, and other large industries are all lower than those of the eastern advanced provinces, and the difference in electricity prices of some provinces exceeds that of 0.1 yuan.

Second, the consumption market in the central and western regions has great growth potential, which will help to drive industries to move inland. On the one hand, from the perspective of market dependence, enterprises in coastal areas are highly dependent on the developed markets in the east, and the main market in the future will still be in the east. On the other hand, the rapid economic development and huge consumption space in the central and western regions are increasing the

attractiveness of industrial migration in the east, which is also an important factor affecting industrial migration in recent years.

Third, the attraction of tax incentives and supporting services in the central and western regions to industrial transfer has increased. In recent years, the central and western provinces have announced a series of supporting policies to accelerate industrial transfer, including increasing the supply of land use indicators, providing tax relief, and improving the level of infrastructure. In contrast, the index of construction land in the eastern region is tight, the fiscal and tax preferential policies are weak, and the market space is relatively saturated, which is not conducive to enterprises to expand investment and production scale^[7].

Fourth, the infrastructure conditions in the central and western regions are constantly improving. First, the gap between the transportation conditions in the central and western regions and the eastern region is narrowing^[8]. The inland river shipping mileage of Jiangsu and Guangdong is dominant, and the inland river shipping of Hunan, Hubei, Sichuan and other central provinces also has a certain scale. At the same time, the mileage of railways and highways in the central and western regions is not less than that in the eastern provinces.

4.3. Comparative analysis of the driving factors of industrial transfer

Comparing the industrial development conditions in the eastern, central and western regions of China, it is found that the eastern coastal region has obvious advantages in location, communication conditions and technical level, but the central and western regions are superior to the eastern region in land prices, labor prices and water and electricity prices, and the infrastructure in the central and western regions is constantly improving and the market potential is deep. The central and western provinces are actively building demonstration zones for industrial transfer, providing greater financial subsidies, taxes and land concessions, which are increasingly attractive to the transfer of low-end industries in the east.

Comparing the industrial development conditions of central and western China and ASEAN countries, the market size, industrial supporting capacity, infrastructure, business environment, labor quality and social environment in central and western China are obviously stronger than those in ASEAN countries, while ASEAN countries are better than those in central and western China in location, port convenience and labor cost. This shows that the industries that ASEAN countries can undertake are mainly primary processing and manufacturing, but their ability to undertake China's industrial transfer on a large scale is limited.

5. Conclusions and suggestions

5.1. For the transfer of low-end industries

Industrial transfer is an important way for enterprises to seek a better development environment and maximize profits. It is also the inevitable trend of industrial development and international division of labor. Low technology, low profit margin and cost sensitivity are the characteristics of low-end manufacturing. Due to the rising cost of wages and land prices, it is inevitable and reasonable that the middle and low-end industries located in the east of China will move to low-cost areas. At the same time, the Sino-US economic and trade conflict and the rise of trade protectionism have led foreign trade enterprises to transfer their industries to ASEAN countries. Therefore, we should respect the law of industrial development and guard against the risks caused by industrial transfer to the stability of the industrial chain. At the same time, we should also see that the central and western regions of China have the conditions and needs to undertake the transfer of low-end industries, so we should also take active actions to guide the orderly transfer of low-end manufacturing industries such

as electronic products and spare parts industries to the central and western regions. It is necessary to further improve the industrial development environment in the central and western regions and drive low-end industries to serve the domestic economy more.

First, continue to implement the institutional tax reduction policy and guide the orderly transfer of low-end manufacturing industries to the central and western regions. On the one hand, further control the rising costs of housing prices, taxes, labor, logistics, water and electricity. Strictly implement the real estate control policy, curb the excessive rise in housing prices, and provide enterprises with a development environment suitable for business and living. Strengthen tax incentives for small and micro enterprises, continue to implement fee reduction measures, reduce the insurance rates for work-related injuries and unemployment in stages, and rectify all kinds of illegal fees charged by enterprises. Strengthen the construction of labor employment platform and promote the balance between labor supply and demand. On the other hand, the eastern manufacturing industry should be encouraged to transfer to the central and western regions. At the same time, the central and western regions should create better conditions to undertake industrial transfer in the east, build and improve demonstration zones to undertake industrial transfer, and give enterprises more preferential policies in land use, electricity consumption and tax reduction and exemption.

Second, the central and western regions should optimize the industrial layout, improve the business environment and enhance their ability to undertake industrial transfer. First, the central and western regions should reasonably introduce relevant industries according to the local industrial base and resource endowment, and strengthen the introduction of industrial clusters and key supporting enterprises based on the gaps and weak links in the existing industrial chain to improve the level of industrial cooperation. The second is to actively create a business environment ruled by law, internationalization and marketization. We will further build and improve the functional construction of inland ports such as bonded warehouses and port operation areas, strengthen institutional reform and mechanism innovation, and improve the local opening concept, service awareness and international service level. Continue to strengthen the construction of soft environment, benchmark international standards, popularize practical experience in the eastern region, and improve administrative efficiency.

5.2. For the transfer of high-end industries

Industries with long industrial chains and high technical requirements should not be blindly transferred to ASEAN countries. On the one hand, the industrial base of ASEAN countries and regions is insufficient and the industrial chain is not perfect. On the other hand, there are many heavy industry bases and regional characteristic industrial clusters in China, such as Wuhan optoelectronic information industry, Xi'an high-end manufacturing industry, Northeast pharmaceutical industry, etc. These regions are rich in scientific research resources and special industrial bases, which are conducive to the transfer of high-end industries to the advantageous industrial clusters in the central and western regions^[9]. But at the same time, we should guard against the blind transfer of high-end industries and avoid repeated layout and excessive investment in homogenization projects in the central and western regions.

To cope with the transfer of foreign-funded high-end industries to foreign countries, firstly, we should strengthen international industrial coordination and cooperation, drive the return of foreign-funded high-end industries and increase investment in China. Actively cooperate with developed countries and countries along the "the belt and road initiative", build a multi-level and multi-channel intergovernmental cooperation mechanism, and strengthen cooperation in characteristic industries, technologies and talents. Focus on the new generation of information technology and high-end equipment, actively introduce international enterprises and R&D institutions to set up branches and

R&D centers in China, and guide foreign investment in emerging key industries. At the same time, the domestic industrial chain should moderately "go global", strengthen technical innovation cooperation at the short-board level, and achieve complementary advantages and win-win development. Second, strengthen the layout of domestic industrial planning and overall coordination, and promote the chain to be solid, complementary and strong. Promote the transformation and upgrading of manufacturing industry and scientific and technological innovation, promote the development of high-end manufacturing industry, and improve industrial added value and international competitiveness. First, improve the establishment of inter-provincial coordination mechanism to undertake industrial transfer, drive the rational distribution of transfer industries in central and western provinces, guide the transfer industries and projects to gather in industrial parks, and further enhance the stability and competitiveness of the industrial chain supply chain. The second is to improve the automation and intelligence level of manufacturing industry, and promote the improvement of production efficiency and the relative reduction of costs; Promote product innovation, management innovation, process innovation, marketing innovation and market development by means of digitalization and networking. The third is to make full use of scientific research resources and strengthen key core technologies. Relying on the abundant scientific research resources, talent technology and financial resources of first-tier cities, we will make cutting-edge breakthroughs and cooperate with Industry-University-Research to promote high-tech innovation and industrialization, and help upgrade the industrial base and modernize the industrial chain.

References

- [1] Wang Haiquan, Wu Dejin, Chen Yanhe. *Study on the Motivation, Influence and Trend of China's Industrial Transfer to ASEAN* [J]. *Fujian Forum (Humanities and Social Sciences Edition)*, 2021, (12):100-110.
- [2] Zheng Tao, Jian Zuo, Han Nan. *The impact of the "the belt and road initiative" strategy on the economic development of the central and western regions under the background of industrial transfer* [J]. *Industrial Technology Economy*, 2015, 34(09): 147-153.
- [3] Liu Tianen, Cao Yang, Cheng Zhenfeng. *Study on the Inter-regional Industrial Transfer Mode in the Southeast Coast* [J]. *Commercial Economic Research*, 2015, (13):131-134.
- [4] Zhang Youyi. *Analysis of China's direct investment in ASEAN countries* [J]. *Productivity Research*, 2020, (12):121-126.
- [5] Yang Yixuan. *China's direct investment in ASEAN's home country industrial structure optimization effect research* [D]. *Hebei University of Economics and Business*, 2021.
- [6] Yan Nan. *Analysis of conditions, laws and countermeasures of domestic labor-intensive industries transfer* [J]. *economic research guide*, 2014,(03):25-26.
- [7] Zhang Xue. *Research on the environmental effect of undertaking industrial transfer in central and western regions* [D]. *Yangtze University*, 2021.
- [8] Cheng Nai. *On the industrial transfer strategy from the developed areas in eastern China to the central and western regions* [J]. *New Economy*, 2016, (21):39.
- [9] Yang Meiyi. *China enterprises' country choice of industrial transfer to ASEAN countries* [D]. *Guizhou University of Finance and Economics*, 2021.