

# The Impact of FDI on the Export Structure of China's Manufacturing ACFTA Overseas Market: From the Perspective of the OECD (2011) Classification Standard

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## ABSTRACT

In 2020, ASEAN will replace the EU and become China's largest trade partner in goods. The continuous transformation and upgrading of China's domestic industrial structure has attracted worldwide attention. This article uses Asean Stat, ITC and the National Bureau of Statistics of China to analyze the impact of FDI on the export structure of China's manufacturing ACFTA overseas market. The study found that from 2001 to 2010, manufacturing FDI increased year by year. Among the main trade products, the export of Medium-high-technology industries accounted for more than half of the export value, but it showed a downward trend, while the rest of the industry showed an upward trend. From 2010 to 2019, FDI in the manufacturing industry has declined year by year. Among the main trade products, Medium-high-technology, Medium-low-technology and Low-technology industries have shown a slight increase, but High-technology industries have shown a downward trend. Some high-tech manufacturing products, which are not major trade products, have grown rapidly. To a certain extent, FDI has promoted the optimization of ACFTA's export structure in overseas markets. Among the major trade products, although High-technology industries have shown a downward trend after 2010, other non-major trade products have shown a significant upward trend. The enlightenment of this research is that, in the context of the signing of RCEP, it is necessary to promote the development of the manufacturing industry, accelerate the supply-side reform of the high-tech manufacturing industry, and promote the upgrading of the industrial structure to the high-end of the global value chain.

**Keywords:** FDI; export structure; ACFTA; manufacturing upgrade

## 1. INTRODUCTION AND LITERATURE REVIEW

RCEP was formally signed on November 15, 2020. RCEP is the largest free trade agreement in the Asia-Pacific region and even the world. In 2020, ASEAN will replace the European Union and become China's largest trading partner in goods, and China's domestic industrial structure has continued to transform and upgrade. Since China's reform and opening up, China's economy and the global economy are developing together, and benefiting from the opportunity of the adjustment of the world supply chain. According to the factor endowment theory, China vigorously develops labor-intensive industries with its advantages in labor factor endowments, and a large number of low-end manufacturing industries have been transferred to developed countries. At the same time,

China's domestic market lacks purchasing power, and the government adopts an export-oriented trade policy. According to SCIS, the per capita wage in China has risen from US\$55 in 1990 to US\$990 in 2018, and the minimum wage has almost quadrupled, and other traditional cost advantages have declined, although it is quickly embedded in the global supply chain and become a "world processing center", But it will also encounter a bottleneck period of industrial development. Only through industrial transformation and upgrading can China's high-quality economic development be achieved and inject new vitality into the world's economic development.

Judging from the latest research, a large number of studies on the impact of FDI on the manufacturing industry have been done by many scholars. First of all, [1]

through the analysis of the OECD (2018TiVA) database, Cheng Zhonghai and Tu Yanying became the first users. Value-added trade comparative analysis of China and the ten ASEAN countries, Japan, South Korea and other countries' manufacturing industry trade levels, they found that FDI, per capita GDP, the level of industrialization and the quality of infrastructure affect the value-added trade Under the development of intra-industry trade in manufacturing between China and RCEP countries, and these influencing factors have significant industry heterogeneity and spatial differences; [2]to observe the positive and negative effects of cross-border capital flows in the manufacturing industry, Yu Pei and Peng Ge proposed the technical level of the industry It will have a positive impact on the promotion of one-way FDI in promoting the status of China's manufacturing industry in the global value chain. This role will be significantly strengthened by the benign interaction of two-way FDI, but there are significant industry differences in the influencing factors.

Aiming at the influencing factors of manufacturing exports, [3] using China's industrial enterprise database and customs trade database analysis to estimate the domestic value-added rate of manufacturing enterprises' exports, Li Nan, Shi Beibei and Bai Dongbei pointed out that economic agglomeration has significantly promoted the domestic exports of manufacturing enterprises. The value-added rate plays an important role, and its effect is more obvious in areas with high economic agglomeration;[4] Mao Risheng and Chen Yaowen analyzed China's customs multi-dimensional and subdivided product data from 2000 to 2015, and explored through the KSW method and the BF method The export quality upgrade status of the segmented manufacturing industry is calculated, and the impact of the RMB exchange rate change on the export quality upgrade of China's manufacturing industry through various channels is calculated. Finally, it is proposed that the industry export quality upgrade is significantly affected by the exchange rate appreciation and the export and import exchange rate changes have an impact on the industry exports.

The above-mentioned scholars have done a lot of research on the factors affecting FDI and manufacturing exports. But at present, RCEP is the largest free trade agreement in the Asia-Pacific region and even the world. In 2020, ASEAN will replace the EU and become China's largest trading partner in goods, and the continuous transformation and upgrading of China's domestic industrial structure has attracted worldwide attention. Under this macro background, not only Focusing on the impact of FDI on the manufacturing industry and changes in the export structure must be combined to clarify the impact of FDI on the export structure of China's manufacturing ACFTA overseas market.

## **2. DATA AND ANALYSIS**

### **2.1 Data**

The data in this article uses the data compiled by Asean Stat from 2003 to 2019 from the ten ASEAN countries from China and the world, (2001-2018) ) The Statistical Yearbook of the National Bureau of Statistics, the China Foreign Investment Statistical Bulletin compiled by the Ministry of Commerce of China, and the Trade Map from 2001 to 2019 compiled by the ITC. In order to analyze the needs, in accordance with the OECD (2011) manufacturing classification standards, the 11 manufacturing sectors are further divided into the characteristics of technology types: High-technology industries (Aircraft and spacecraft, Pharmaceuticals, Office, accounting and computing machinery, Radio, TV and communications equipment Medical, precision and optical instruments), Medium-high-technology industries (Electrical machinery and apparatus, Motor vehicles, trailers and semi-trailers, Chemicals excluding pharmaceuticals, Railroad equipment and transport equipment, Machinery and equipment), Medium-low-technology industries (Building and repairing of ships and boats, Rubber and plastics products, Coke, refined petroleum products and nuclear fuel, Other non-metallic mineral products, Basic metals and fabricated metal products) and Low-technology industries (Manufacturing, Recycling, Wood, pulp, paper, paper products, printing and publishing, Food products, beverages and tobacco, Textiles, textile products, leather and footwear). This will help us to further analyze FDI's impact on ACFTA overseas markets the impact of export structure.

### **2.2 Analysis method (2014-2019)**

Due to the lack of purchasing power in the domestic market at the initial stage, the government adopted an export-oriented trade policy, and most of the manufacturing industries, especially labor-intensive manufacturing industries, were aimed at overseas markets. According to statistics, the exports of foreign direct investment enterprises account for about half of China's exports, so FDI will inevitably have a greater impact on China's exports. Secondly, ASEAN countries are largely export-oriented economies. China and ASEAN have a complex industrial chain and have deep economic intersections. ASEAN has been one of China's most important trading partners over the years. Therefore, we will explore the impact of FDI on ACFTA's overseas markets. The impact of manufacturing product exports.

**3. FDI**

**3.1. 2001-2010 Foreign Direct Investment in Manufacturing**

**Table 1.** 2001—2010 Manufacturing FDI

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
2001—2010 Manufacturing FDI	9	-6.259907089000000	22.097270950000000	5.869021084111111	10.755394187892780
Valid N (listwise)	9				

From 2001 to 2010, foreign investment in the manufacturing industry showed an upward trend, from 309.47 million U.S. dollars in 2001 to 49,959.58 million U.S. dollars in 2010. Among them, due to the financial crisis from 2018 to 2019, manufacturing FDI in 2019 showed a significant decline, but overall manufacturing

FDI showed an upward trend, maintaining an average growth rate of 5.87%.

**3.2. 2010-2019 Foreign Direct Investment in Manufacturing**

**Table 2.** 2010—2019 Manufacturing FDI

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
2010—2019 Manufacturing FDI	9	-14.096178170000000	22.885383270000000	-3.143605716222222	11.362181351223061
Valid N (listwise)	9				

From 2011 to 2019, foreign investment in the manufacturing industry showed a downward trend, from US\$521.05 million in 2011 to US\$353.722 million in 2019. Among them, it is worth noting that in 2018, manufacturing FDI increased by 22.89% year-on-year, and its manufacturing output that year accounted for 28% of the world's total.

**4. CHINA'S EXPORTS TO ASEAN**

**4.1. From 2001 to 2010, China's main exports to ASEAN (counted by export value)**

**Table 3.** 2001—2010 Growth rate of export structure

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
High-technology industries	9	-16.937737220000000	51.530893180000000	7.850256487222222	20.673372749112072
Medium-high-technology industries	9	-6.725836542000000	2.352110229000000	-1.972091720666666	3.410679144407505
Medium-low-technology industries	9	-7.531847199000000	16.629908810000000	3.549019942333334	8.254292828550355
Low-technology industries	9	-17.088807520000000	28.650782830000000	3.371205319888889	14.660535330148436
Valid N (listwise)	9				

From 2001 to 2010, the export value of major products showed an upward trend. The export value of Medium-high-technology industries is relatively large.

From the trend, Medium-high-technology industries are showing an upward trend. Among them, the average export value of Electrical machinery and others (HS85)

is as high as US\$16,394,199, up from US\$4,719,597 in 2001. It rose to US\$2822951.2 billion in 2010 and maintained an average growth rate of 23.36%. From the proportion of Medium-high-technology industries, although Medium-high-technology industries accounted for a large proportion and the average proportion was 62.07%, However, its proportion has declined year by year and maintained an average decline rate of 1.97%, from 62.07% in 2001 to 55.9% in 2010. The export value of High-technology industries has maintained an upward trend. Among them, the export value of optical, photographic and others (HS90) has shown a significant increase, from US\$345,157 thousand in 2001 to US\$4615389 thousand in 2010, maintaining an average annual growth rate of 36.95%. In terms of the proportion of High-technology industries, the proportion of High-technology industries has shown an upward trend and maintained a growth rate of 7.85%. It is worth noting that the proportion of High-technology industries has increased substantially in 2005. The growth rate is as high as 51.53%. The export value of Low-technology industries and Medium-low-technology industries has

shown an upward trend. Among them, Ships, boats and floating structures of Medium-low-technology industries have increased significantly, from US\$149,099 thousand in 2001 to US\$6,275,262 in 2009. The US dollar has an average annual growth rate of 64.54%, while the Low-technology industries' Furniture and others (HS94) has also shown a substantial increase, from US\$11,5785,000 in 2001 to US\$40,655,529 in 2010, maintaining an average annual growth rate of 50.19%. In terms of the proportion of exports, the proportion of Low-technology industries and Medium-low-technology industries has increased year by year. Medium-low-technology industries maintained an average annual growth rate of 3.55% and Low-technology industries maintained an average annual growth rate of 3.37%. The growth rate, it is worth noting that the growth rate of Low-technology industries in 2005 was as high as 28.65%.

**4.2. From 2010 to 2019, China's main exports to ASEAN (counted by export value)**

**Table 4.** 2010—2019 Growth rate of export structure

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
High-technology industries	8	-12.110879870000000	6.076266179000000	-4.109323129374999	6.404526062364146
Medium-high-technology industries	8	-5.041361683000000	3.881011986000000	.353194293125000	3.016560062377429
Medium-low-technology industries	8	-4.105090656000000	4.838486280000000	.041251176125000	3.303866074387205
Low-technology industries	8	-6.683614905000000	29.798013070000000	2.097039460625000	12.605445449605972
Valid N (listwise)	8				

From 2010 to 2019, the export value of major products mostly showed an upward trend. The export value of Medium-high-technology industries is still large. From the trend, the products of Medium-high-technology industries are showing an upward trend. Among them, the average export value of Electrical machinery and others (HS85) is as high as 55,835,853 thousand U.S. dollars, from 32,404,698 in 2011. Thousands of U.S. dollars rose to 87,375363 billion U.S. dollars in 2019 and maintained an average growth rate of 13.64%. From the proportion of Medium-high-technology industries, although Medium-high-technology industries accounted for a large proportion and the average proportion was 50.99 %, but its proportion has not increased much and maintained an average growth rate of 0.35%, rising from 52.59% in 2011 to 53.92% in 2019. The export value of High-technology industries has maintained an upward trend.

Among them, the export value of optical, photographic and others (HS90) has shown an upward trend, rising from US\$5,737,671 in 2011 to US\$8,504,482 in 2019 and maintaining an average annual growth rate of 5.64%. However, from the proportion of High-technology industries, the proportion of High-technology industries has shown a downward trend and maintained an average decline rate of 4.11%. The export value of Medium-low-technology industries maintained an upward trend, among which Ceramic products of Medium-low-technology industries showed a clear upward trend, from US\$1,404,675 thousand in 2011 to US\$5,761,754 in 2019, maintaining an average growth rate of 22.83%. However, Ships, boats and floating structures of Medium-low-technology industries show a downward trend, from US\$6862264 thousand in 2011 to US\$5124948 thousand in 2019, maintaining an average

annual decline rate of 0.74%. In terms of the proportion of Medium-low-technology industries' exports, the proportion of Medium-low-technology industries' products did not fluctuate significantly and maintained an average growth rate of 0.04%. The export value of Low-technology industries mostly maintained an upward trend. Among them, Articles of apparel and clothing accessories (HS62) showed a significant increase with an average growth rate of 26.98%. In terms of the proportion of exports, the proportion of exports of Low-technology industries has shown an upward trend and maintained a growth rate of 2.10%.

#### ***4.3. 2001-2019 High-tech manufacturing products that are not major trade products***

In terms of growth rate, high-tech manufacturing products Aircraft, spacecraft, and parts thereof have shown a significant increase, from US\$21,350 thousand in 2001 to US\$63,536,000 in 2019 and maintaining an average growth rate of 61.82%. Medium-low-technology The average annual growth rate of industries products Nickel and articles thereof is as high as 116.88%. Although in terms of export value, the export value of these non-main trade products is not large, but it maintains a relatively high growth rate.

### **5. CONCLUSIONS ON THE IMPACT OF FDI ON THE EXPORT STRUCTURE OF ACFTA OVERSEAS MARKETS**

From 2001 to 2010, China and ASEAN have not yet signed a free trade agreement. Manufacturing FDI has increased year by year. Among the main trade products, Medium-high-technology industries accounted for more than half of the export value, but it is showing a downward trend. High-technology Industries, Medium-low-technology industries and Low-technology industries are showing an upward trend. From 2010 to 2019, when the ACFTA was officially implemented, manufacturing FDI declined year by year. Among the main trade products, Medium-high-technology industries still accounted for about half of the export value and showed a slow upward trend. Medium-low-technology industries products Shows a small increase, Low-technology industries products show an increase, but High-technology industries products show a downward trend. Some high-tech manufacturing products that are not major trade goods have grown rapidly. For example, high-tech manufacturing products Aircraft, spacecraft, and parts thereof have shown a significant increase. To a certain extent, FDI has promoted the optimization of ACFTA's export structure in overseas markets. Among the major trade products, although High-technology industries have shown a downward trend after 2010, other non-major trade products have shown a significant upward trend.

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