

A Comparative Study on the Relocation of Chinese Manufacturing Industries to ASEAN, Africa and South Asia

Cheng-Chung Lee*

Jia-Yu Chen**

Li-Hsi Wu***

Ting-Shian Wang ****

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Abstract

This paper explores the differences between China and ASEAN manufacturing environments through the study of the relocation of Chinese manufacturing to ASEAN. In view of the phenomenon of a large number of Chinese manufacturing industries relocating to ASEAN, this paper will analyze the advantages and crises brought by the manufacturing environment of China and ASEAN. This paper interprets it through literature research. The results of the research confirm that China's low-end manufacturing enterprises have already begun an irreversible outflow, and ASEAN is more attractive than Africa and South Asia in terms of land and manpower. Although the manufacturing transfer has certain drawbacks, it is still a win-win situation for China and ASEAN. ASEAN should raise the upper limit of market access, relax financing policies, increase fiscal and taxation support, and provide relevant citizen benefits, while China should also encourage companies to invest and start businesses abroad, so as to achieve positive interactions brought in by going global. The research in this paper can help governments and investors in China and ASEAN to make rational decisions.

Keywords: Chinese manufacturing industry, supply chain relocation, ASEAN, South Asia, Africa.

Corresponding: * Associate Professor, Department of Marketing and Logistic Management, Yu-Da University of Science and Technology, Miaoli Taiwan, Email: cchlee@ydu.edu.tw

** Assistant Professor, Department of Financial, Jinwen University of Science and Technology, New Taipei City, Taiwan, Email: jiaju1128@just.edu.tw

*** Associate Professor, Department of Logistic Management, Jinwen University of Science and Technology, New Taipei City, Taiwan, Email: lihsi@just.edu.tw

**** Doctor of Eng., Department of Resource Engineering, National Cheng Kung University, Tainan, Taiwan, Email: kuki@ms79.url.com.tw

Introduction

The strategic transformation of the manufacturing industry is cyclical and very regular. Since World War II, four waves of industrial transformation have occurred around the world. In the 1950s, American manufacturing was first transferred to Japan, and then Japan was transferred to Taiwan, South Korea, Hong Kong, Singapore, and then to China. Entering the 21st century, especially after 2005, labor costs in China's coastal areas increased, and industries began to transfer to other areas around China (Li, 2013). At the same time, foreign businessmen also began to move from various regions in China to regions outside China. While this shift is normal, it deserves further investigation. Therefore, in this paper, we mainly study the relocation of China's manufacturing industry.

This study will explore the following questions:

1. First, the reasons for the decline of China's manufacturing industry in recent years.
2. What is the status quo of the manufacturing industry in ASEAN, South Asia, and Africa, and what is their ability to undertake the transfer of China's manufacturing industry?
3. In the process of China's manufacturing transfer, what are their own advantages and the risks and opportunities they face?

Literature Review and Hypotheses Proposal

Reasons for the Decline of China's Manufacturing Industry

Only focus on marketing but not on core technology

Most companies spend far more on marketing than they do on core technology research. As a result, there are many impressions that the actual content is far worse than what is presented in advertisements and sales. The after-sales service of various products is poor and there is no sales guarantee. Consumers pay high costs but cannot enjoy high-level services, and in the marketing process, a lot of profits fall into the pockets of capitalists.

Lack of good management rules and systems

Chinese managers know nothing about technology, and their technology and creativity cannot convince consumers and the general public. The employees of the enterprise hate the managers, and the managers lack trust in the employees

The professional quality of purchasing personnel in China is low

The professional quality of Chinese procurement personnel is low, and their procurement behavior and results do not bring any benefits to the company. Often they buy just to make more money for themselves. Therefore, the production of fake and shoddy products is inseparable from the corruption of purchasing personnel.

Insufficient respect for intellectual property rights in China

In China, various pirated and counterfeit products emerge in an endless stream. This not only deceives consumers, but also deceives partners who come to China to invest.

Chinese people's living standards improve and their consumption capacity increases

Luo (2011) believes that the manufacturing industry in China has been unable to earn more profits. Take Shenzhen as an example: According to statistics from the Shenzhen Municipal Bureau of Statistics, Shenzhen's GDP was 80 million yuan in 2008, and rose to 2,243.8 billion yuan in 2017, nearly doubling its GDP in ten years. Per capita income was 26,729 yuan in 2008, compared to 52,938 yuan in 2017. Such a high income has resulted in a substantial increase in local labor costs.

Therefore, it can be seen from the above points that China's manufacturing industry is gradually going into the process of "declining".

Research on the status quo of ASEAN's manufacturing industry

According to Wang (2019) research, Singapore, Malaysia, Indonesia, the Philippines, and Thailand are the five more developed countries in ASEAN, and their economic aggregate and foreign trade volume account for a relatively large proportion in ASEAN.

In 2016, Singapore's foreign trade totaled US\$623 billion, Malaysia's foreign trade totaled US\$357.8 billion, Indonesia's foreign trade totaled US\$280.1 billion, the Philippines' total foreign trade totaled US\$142.2 billion, and Thailand's total foreign trade totaled US\$409.3 billion. Dollar. In 2016, the total foreign trade volume of ASEAN was 2.23 trillion US dollars,

The total foreign trade volume of the above-mentioned five ASEAN countries is 1.82 trillion US dollars, accounting for 81.4% of ASEAN's total foreign trade volume. Statistics show that the import and export volume of merchandise trade between China and the five ASEAN countries accounted for more than half of the country's total merchandise trade, while the manufacturing exports of Singapore, Malaysia and Thailand accounted for more than 60% of the country's merchandise trade exports.

Research on the Current Situation of Manufacturing Industry in South Asia

Yang et al. (2018) stated that in order to get rid of their backward economic conditions, South Asian countries are actively seeking international cooperation in the process of self-reliance. From the perspective of economic development level, South Asian countries such as India, Pakistan and Sri Lanka are middle-income countries, while the other five countries are least developed countries, so their industrialization level is generally low. Except for India and Pakistan, the industrial foundations of other South Asian countries are weak, the products are single, and the industrial output value is at the national low level. Its share in GDP is also low. Therefore, each country in South Asia has a strong demand for industrial development.

Research on current situation of African manufacturing industry

Tang (1985) believed that in terms of production, the manufacturing industries of African countries are not very developed, and they always adopt the trade mode of trading natural resources to meet their own needs.

The role of manufacturing in Africa in economic development over the past few decades can be illustrated by the fact that although manufacturing is growing, its share in the national economy is still small. Africa's manufacturing industry is still in the initial stage of development and is still very fragile. It has not yet gone through a difficult process of going to the modernization stage.

However, Africa has abundant natural resources and abundant labor force. In the process of overcoming the above-mentioned difficulties, they have been trying to give full play to their own advantages, introduce appropriate technologies, and adjust appropriate policies to lay a good foundation for industrial modernization.

Research Methods

Research Framework

The first part is the introduction part. In this part, I will firstly introduce the background of this topic and the significance of choosing this topic; secondly, I will review and briefly describe the related research on the manufacturing trade competitiveness of ASEAN 10 countries and summarize it, and expound the significance of this research.

The second part is the literature review. It includes an analysis of the reasons for the decline of China's manufacturing industry today and literature, as well as the current status of the manufacturing industry in ASEAN, South Asia, and Africa.

The third part is the elaboration of the research method. This part will express the framework, method and main content of the research in this paper, clarifying the regulations for the subsequent research in this paper, and making the content of each part clearer.

The fourth part is the discussion of the research results. First of all, taking the Chinese enterprise Sany Heavy Industry as an example, it expounds the inevitability of the relocation of China's manufacturing industry, and compares and analyzes the current undertaking capacity of ASEAN, South Asia and Africa, and analyzes its competitive advantages and Trends in manufacturing development.

The fifth part is the discussion on the relocation of China's manufacturing industry in the future. This part mainly analyzes the advantages of Chinese enterprises relocating out of the manufacturing industry, the crises they face and the crises they will face in the future.

The sixth part is the conclusions and suggestions, mainly based on the actual situation, to put forward certain coping strategies for the future prospect of China's manufacturing industry, and to improve and maintain the trade competitiveness of China's manufacturing industry, expand China's trade volume, establish a sustainable Continuous and core competitiveness of the value chain to provide targeted advice and recommendations.

Literature survey

Comparative research

Contents of the comparative study

Results

Not only internal reform and innovation, but also continue to promote the internationalization strategy, hoping to actively explore foreign markets by taking advantage of the "One Belt, One Road" strategic opportunity to hedge against the pressure of declining sales in the domestic market. In addition, Sany Heavy

Industry is also trying to diversify its operations, getting involved in military industry, housing industrialization, finance and other fields. In order to improve product quality, Sany Heavy Industry also promotes intelligent manufacturing and technological innovation (Alice, 2017). Through the remote control system, it is possible to accurately locate the machinery in the hands of distant customers, monitor the operating status, and improve the company's sales performance from the side.

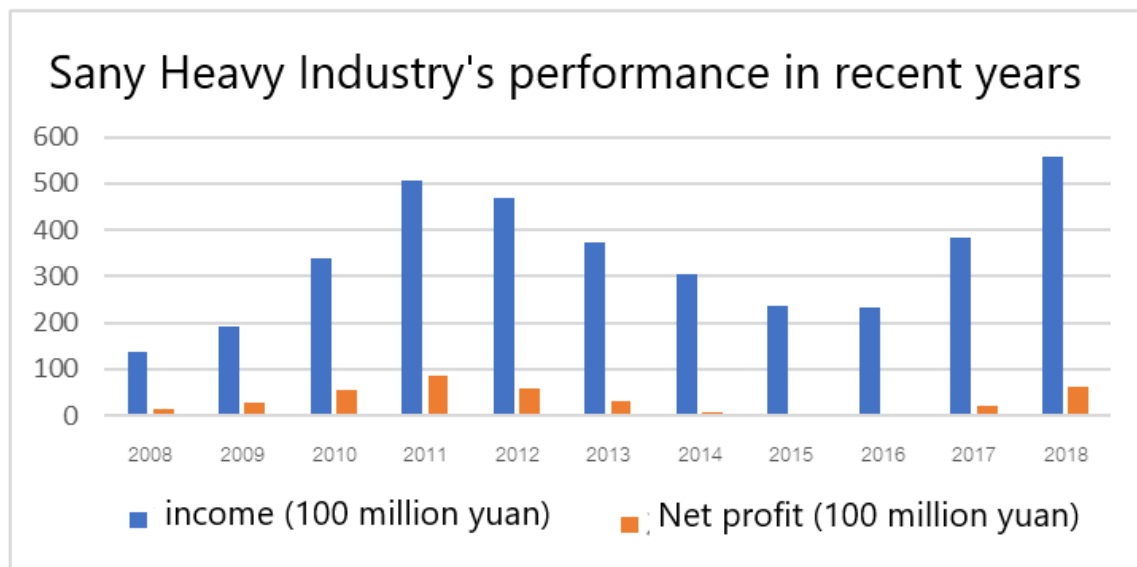


Figure 1 Performance of Sany Heavy Industry in recent years

Data source: Oriental Fortune Choice data

The figure 1 illustrates the performance of a company in recent years. In 2016, Sany Heavy Industry's operating income began to rise continuously. Relying on the previous profits, optimized and innovative products, and solid company fundamentals, the market share has continued to increase. In this round of industry recovery, Sany Heavy Industry's performance is far more flexible than other companies. With the increase in cash flow and revenue, the profit side will gradually be released (Li, 2017). Currently, Sany Heavy Industry's overseas sales account for 45% of its total revenue, and its products have been sold to more than 100 countries and regions around the world. Sany Heavy Industry vigorously promotes "big data" and has become a representative of the transformation and upgrading of China's traditional manufacturing industry to "intelligent manufacturing". In the future, Sany Heavy Industry will further enhance the level of internationalization.

Although the relocation of the manufacturing industry will have a certain impact on a country's economy, it will also provide more favorable conditions for the upgrading of China's domestic industrial structure. After the relocation of the enterprise, other enterprises can reuse the land resources of the original enterprise, which alleviates the local human resources to a certain extent.

For example, in China's southeast coastal areas, many low-end manufacturing industries have relocated out, which has relieved the pressure on the local labor force to a certain extent and freed up more

local resources for redistribution and utilization. Using the basic equipment left by previous enterprises, after certain transformation and improvement, can be used to attract investment and introduce high-tech enterprises. For some enterprises with high pollution and high energy consumption, relocation can greatly reduce the pressure on the local environment.

Current Capacity of ASEAN

Table 1 Population of ASEAN countries in 2017

	2017population (10 million)	Chinese provinces with similar populations in 2017
ASEAN	64.737	46.6% of China's total population
Indonesia	26.4	Guangdong + Henan + Jiangxi
the Philippines	10.49	Shandong
Vietnam	9.554	Sichuan
Thailand	6.904	Hunan
Myanmar	5.337	Anhui
Malaysia	3.162	Chongqing
Cambodia	1.6	Tianjin
Laos	0.686	Ningxia
Singapore Phi	0.561	Qinghai
Brunei	0.043	Tibet

Table 2 GDP and per capita GDP of ASEAN countries in 2017

	GDP (billion USD) (USD)	GDP per capita (USD)
Indonesia	10155.39	3846
Thailand	4553.21	6593
Singapore Phi	3239.07	57714
Malaysia	3145.00	9944
the Philippines	3135.99	2988
Vietnam	2238.64	2343
Myanmar	693.22	1298
Cambodia	221.58	1384
Laos	168.53	2457
Brunei	121.28	28290
ten ASEAN countries	27670.91	/

The population of South Asia is about 1.69 billion, and the total population of China and South Asia is 3 billion. It not only has a large population and a huge market, but also is the fastest growing region in the world and the largest emerging market in the world. It has huge cooperation potential and space for cooperation. An important area to promote the "One Belt, One Road" strategy (Xiao and Yang, 2018). In the short term, China and South Asia's manufacturing capacity cooperation presents asymmetrical mutualism, and in the long

run, it presents symmetrical mutualism. In order to realize the mutual benefit and symbiosis of China and South Asia's production capacity cooperation, the following tasks should be focused on. See Figure 2.

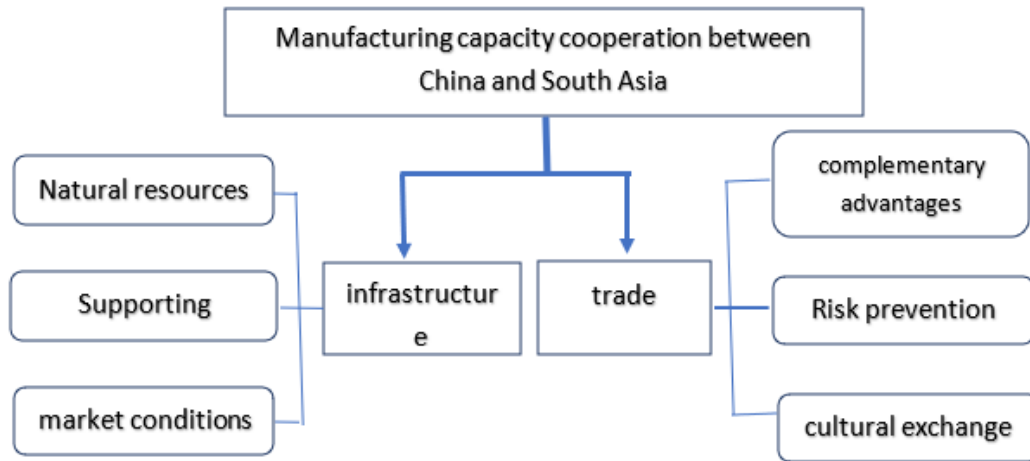


Figure 2 Key tasks of China-South Asia manufacturing capacity cooperation

Chinese industrial products have advantages in the international market due to their high cost performance. South Asia provides a huge market for Chinese industrial products. Collaboration with South Asian manufacturing capabilities can ease the saturation of China's domestic market. For example, most countries in South Asia are traditionally large agricultural countries, but the level of agricultural automation is not high. China's export of agricultural machinery and equipment to South Asian countries can improve the level of local agricultural automation and can also drive China's infrastructure related products such as roads, railways, and ports, as well as export power supplies such as thermal power, hydropower, and nuclear power. Equipment manufacturing, survey and design products and output of upstream and downstream industry products.

Medium and long-term production capacity cooperation will first realize the smooth flow of "five links", and correspondingly increase the degree of trade openness and trade facilitation, so that future trade activities will develop rapidly and provide new impetus for China's economic growth. By setting up industrial parks overseas to gradually transfer the manufacturing industry, make full use of the low-cost labor force in South Asia, provide a large number of local employment opportunities, and focus on the development of R&D design and high value-added activities. Terminal equipment manufacturing. Promote the transformation and upgrading of China's manufacturing industry (NCBS et al., 2018).

Current Capacity of Africa

There are many issues involved in the selection of industries for China's direct investment in Africa. The selection of industries plays a pivotal role in the investment process. Whether the selection of industries is correct and reasonable directly affects the effect and benefits of China's investment in Africa (Li & Zhou, 2012). Choosing a reasonable industry during the investment process is conducive to further developing the African market and achieving a win-win situation for the economic development of China and Africa. According

to the statistics in the report "China's Foreign Direct Investment in 2014", in 2014, the top five industries in China's investment in Africa according to the stock of direct investment were construction, mining, finance, manufacturing and in the scientific research and technical service industry, the manufacturing industry accounted for 16.35%, and the above-mentioned industries accounted for 83.4% of China's direct investment in Africa.

If only greenfield investment in Africa is counted, between 2003 and 2014, China invested in 77 projects in the manufacturing sector, with a total investment of US\$13.3 billion, ranking first among all investment fields in Africa. A number of financial institutions stated in their research reports that the cumulative annual growth of China's manufacturing investment in Africa was around 10%. From 2003 to 2014, the manufacturing sector accounted for the largest proportion of new projects built by Chinese companies in Africa. The pie chart of China's investment in Africa in 2014 is as follows:

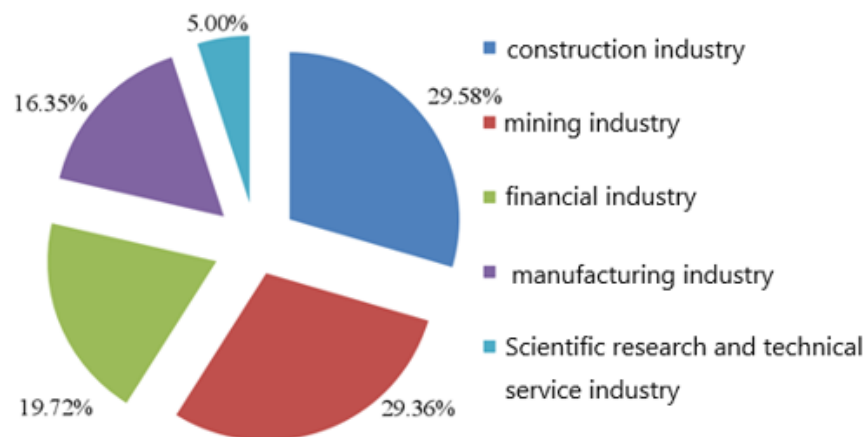


Figure 3 The proportion of China's investment in Africa in 2014

In 2019, the trade volume between China and Africa was 187.5 billion US dollars, a year-on-year increase of 0.7%, which was 3.1 percentage points higher than the growth rate of China's foreign trade, and continued the growth trend since 2017. Among them, China's exports to Africa were US\$100.9 billion, a year-on-year increase of 5.6%; imports from Africa were US\$86.5 billion, a year-on-year decrease of 4.5%. South Africa, Angola, Nigeria, Egypt, and Algeria have been among the top five trading partners for seven consecutive years. In addition, China's direct investment in the entire African industry reached US\$2.8 billion, an increase of 4.6% against the trend. Zambia, Nigeria, Angola, Kenya and Congo (Kinshasa) are China's top five investment destination countries. Construction, manufacturing, leasing and business services, mining, wholesale and retail are the top five industries for Chinese investment in Africa. During the year, China's non-manufacturing investment increased by 172.8%, accounting for more than 20%.

Discussion on China's Future Manufacturing Relocation

Advantages and crises of trends

Grasp the industrial structure reform and enter a new production mode

The demographic dividend has helped South Asia modernize the manufacturing sector, especially labor-intensive industries. With the increase in production and labor income, the demographic dividend will also help to expand the consumer market. Foreign investment is attracted by the demographic dividend of the ASEAN region, and the speed and scale of joining ASEAN is expected to increase in the next decade. Demographic changes in Southeast Asian countries are still in their infancy, and the benefits of the demographic dividend will continue to be felt for decades to come. In 2012, China's labor force declined for the first time. Not only has the absolute number of China's labor force declined, but labor costs have also risen, and the trend of manufacturing bases migrating to South Asia has begun to emerge. While the relocation of a portion of China's manufacturing to South Asia has certain implications in some areas, it will be beneficial for both parties if Chinese manufacturing seizes the opportunity to move up-market and create a division of labor among labor-intensive industries in Southeast Asia. The development of Southeast Asia has also brought new opportunities to China.

The development of the manufacturing industry is not only affected by demographic factors, but also by infrastructure, investment environment, governance, political stability and vocational training. China has great potential to cooperate with Southeast Asian countries in these fields. Southeast Asian countries differ significantly from developed and other middle-income countries in terms of education spending and education quality. There is a huge gap between Southeast Asian countries and developed countries in terms of the share of GDP that the government spends on education. In order to take full advantage of the demographic dividend, Southeast Asian countries must increase investment in education and improve the quality of education. The impact of the demographic dividend depends on the economy's ability to use more labor. For example, some countries in Southeast Asia have benefited from a demographic dividend due to higher savings and investment rates, thereby accelerating the accumulation of physical capital and increasing the productive capacity of the labor force, in line with rapidly growing populations. Demographic dividends in developing countries should also be seen as a benefit, not necessarily from a favorable demographic structure, but as a potentially favorable opportunity that requires investment in physical and human capital, and Ensure that social, economic and political systems reflect the demographic dividend.

While some well-known Chinese manufacturers have started operations in Africa, few companies surveyed see Africa as their favorite investment destination, and large companies are generally more likely than smaller companies to expand or shift their production chains to foreign. Only 8% of foreign-invested enterprises tend to relocate abroad, but this is still four times the number of domestic and foreign private enterprises in China. Compared with private enterprises, foreign-funded enterprises in the Pearl River Delta have accumulated overseas investment experience. At the same time, in order to make full use of the low labor cost - overseas labor cost, only enterprises with a certain scale, overseas management experience, overseas

vertical supply chain and overseas operation risks can carry out overseas industrial transfer and fully benefit from it. Generally speaking, small companies are small in scale, only face the Chinese market, have weak anti-risk capabilities, have not been well integrated into the global industrial chain, lack preparation and ability, and are even more hesitant.

As China's working-age population decreases year by year, land resources are in short supply, and the demographic dividend decreases, economic growth must shift from being highly dependent on factors and resources to highly dependent on technological progress and improving the quality of the labor force. Building a strong manufacturing country and developing advanced manufacturing are not only the development needs of China's post-industrial era, but also the inevitable requirements of the global industrialization trend, especially the new round of technological and industrial revolution. After the international financial crisis in 2008, developed countries launched a re-industrialization strategy. At the same time, a new round of technological and industrial revolution characterized by manufacturing informatization, intelligence, and service has begun. From the perspective of challenges, under the background of a new round of technological and industrial revolution, the brutal development model of China's manufacturing industry is unsustainable, and it must turn to an innovation-oriented high-quality development model. From the perspective of opportunities, the new round of industrial technological revolution provides a technological and economic foundation for the innovation and modernization of China's manufacturing industry and guides the direction of development. As the world's largest manufacturing country, China must seize the historical opportunity of this technological and industrial revolution, greatly improve the quality of manufacturing development, and accelerate the construction of a manufacturing powerhouse.

The regional economy is also developing towards a positive level

Economic growth in Southeast Asia is expected to climb as global growth weakens, according to the latest forecast from the Asian Development Bank (Asian Bank). This is possible because of the generally stable development environment, heavy investment in infrastructure and industrial restructuring in South Asian countries, which are positive factors that uniquely provide the region with a unique way to attract investment, develop manufacturing, stimulate trade and domestic demand. Opportunity. As one of the most dynamic regions in the world economy, many Southeast Asian countries have increased investment in infrastructure development in recent years, adjusted their industrial structures, and used their advantages to make progress in global value chains.

Singapore focuses on innovation-led economic development; Malaysia seeks to establish regional economic hubs; the Philippines thrives on service outsourcing; Cambodia strives to improve the technological content of manufacturing; These are good illustrations of the economic dynamics of Southeast Asia. The ASEAN Economic Community was announced on December 31, 2015, and a region with a population of over 620 million and a gross domestic product (GDP) of US\$2.6 billion offers tremendous opportunities. A study conducted by the Malaysian Ministry of International Trade and Industry showed that as many as 83% of market participants believe that the establishment of the ASEAN Economic Community will have a positive impact. By

China should speed up the construction of a national demonstration zone for the deep integration of industrialization and information, encourage enterprises to increase investment in "machine-to-human" and "e-commerce-to-market", and use digitization and intelligence to transplant and upgrade traditional manufacturing. The focus of machine substitution is to crack the excessive dependence on labor and replace cheap labor with advanced equipment. E-commerce market exchange aims to eliminate over-reliance on traditional markets and actively use e-commerce to expand the market. Enterprises can also promote the deepening of economic transformation, and China must also strive to promote the construction of industrial clusters, focusing on areas such as better location selection, solid industrial foundation, more comprehensive supporting functions, integrated production, and concentration of high-end elements.

The modernization process of Southeast Asia will be accelerated, and the development will be accelerated

The Crisis to Come

Taking the clothing manufacturing industry as an example, the environmental pollution that clothing can produce can be divided into two categories. The first category is in the process of garment production and processing, namely textile, printing and dyeing, printing and dyeing wastewater, textile noise, cutting corner waste, etc. (Qiu et al., 2007) According to statistics, the discharge of textile printing and dyeing wastewater accounts for about 35% of the total industrial wastewater discharge. About 600 million to 700 million tons of textile printing and dyeing wastewater are discharged into water bodies in China every year.

pregnant women. severely affected. The second category is the environmental pollution caused by the formation of a large amount of garbage after discarding clothes, especially the formation of chemical fiber clothes. The damage to the environment caused by this kind of pollution is often not environmental governance, but environmental protection can be restored. Cause irreversible damage to the tourism industry in Southeast Asia, which is famous for its environmental landscape.

China's low-end labor force has nowhere to export, bringing a large number of unemployed groups

Oversupply of labor, migrant workers who cannot meet development needs, and an increasingly unfavorable trade environment are the three main reasons for the wave of unemployment. Unemployment is sometimes not caused by the unemployed themselves, but the poor psychological quality of the unemployed may lead to extreme behavior and revenge on society. Unemployment will also stimulate family conflicts, and the divorce rate will also increase. People without jobs will turn their resentment against society and the government to family members, leading to alcoholism, domestic violence, etc. The widening gap between the rich and the poor caused by unemployment will also aggravate social conflicts.

The situation of high salary and low energy will appear on a large scale

With the development of manufacturing in Southeast Asia, the demand for labor will increase, and the resulting labor gap will also increase. In order to make up for the labor gap, high-paying employment will appear. The situation of high salary and low energy will also appear. Because the development of the manufacturing industry is too fast, the development of the education industry and the level of education of the workers are slowly improving.

The transfer of Southeast Asia's manufacturing industry has the risk of insufficient core competitiveness.

At present, the relocation of manufacturing industries to Southeast Asia has brought practical benefits to Southeast Asia, but there is no core technology in these manufacturing industries. In the 1900s, it was possible in China, in the 10s, in Southeast Asia, and in the 20s in Africa. Once the manufacturing industry flees again, Southeast Asia without core competitiveness will face the risk of "collapse" if it relies on the development of the manufacturing industry.

Conclusion

There are many factors for the relocation of manufacturing industries, which can be roughly divided into internal and external factors. As far as China itself is concerned, the first is that China should strive to improve high-end manufacturing strategically. The second is to focus on and encourage the upgrading of low-

References

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