## A Reference on the Experience of Industrial Upgrading of Processing Trade

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### Abstract

Processing trade, a new form of trade, has been booming in South Korea, Hong Kong, China, Taiwan, and other countries and regions, and has been taken after soon by other developing countries. South Korea's export-oriented processing trade and Taiwan's Export Processing Zone are typical forms of this trade. Since 1960s, processing trade in South Korea and Taiwan has been promoted significantly both in terms of structural upgrading and export volume, thus fostering their economic growth. This paper mainly explores the development process and experience in processing of South Korea and Taiwan, analyses into the development regularity embodied in their processing trade and thus inferring relevant experience.

**Key words:** South Korea; Taiwan processing trade; Experience inference

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### 1. THE EXPERIENCE IN RESTRUCTURING AND UPGRADING OF PROCESSING TRADE IN SOUTH KOREA

# 1.1 An Overview of the Development of Processing Trade in South Korea

South Korea's foreign trade is built on the ruins after World War II and the Korean War. Korea's total exports in 1946 were \$ 360,000, in 1960 exports of \$ 33 million, while imports reached \$ 316 million. The main reason for this situation is the lack of natural resources. South Korea's resources come from imports. Therefore, earning foreign exchanges become an important issue.

1960s, Korea's industrialization is a typical patterns of processing trade. South Korea's exports expanded rapidly in a very weak state of the industrial base of machinery and equipment and other production industries and intermediate products. Most of the export commodity is labor-intensive processing and assembly of products (Imported equipment and raw materials and intermediate products from developed countries, processing and assembly and then export). Korean's chemical industry has developed rapidly in the 1970s, but its large-scale machinery and equipment and intermediate goods production base is still very weak, only increasing the exports for the import of production. Therefore, the processing trade is the focus of economic development is the main features of the Korean economy in the 1970s.

In the mid-1970s, economies of the western developed countries into "stagflation" phase, trade protectionism revived gradually. Southeast Asian countries and China and South Korea launched a fierce price competition .South Korea's exports of light industrial products was affected. But South Korea has accumulated a certain amount of capital and has a strong technical force and operating personnel, implemented industrial structure conversion, Only 10 years (1977-1987) completed the transition of the per capita GDP from \$ 1,000 to \$ 3,000. Through the implementation of the strategic policy of "re-industrialization", change key industries to capitalintensive industries such as shipbuilding, automobiles, steel, petrochemical and machinery manufacturing, build the backbone of the export industry, to achieve a rapid and long-term sustainability of the economy.

In the late 1970s, the developed countries maintain a tight policy to curb inflation, which has led to high interest rates, high exchange rate. These policies made the trade imbalance between the Western countries exemplified,

and changed the international division of labor. Thus, countries realized that the above-mentioned problems of the world economic structure will lead the economy continues to shrink, economic structural adjustment become an urgent problem to be solved. To reduce costs, the developed countries transfer labor-intensive assembly processes, low-level products and outdated technology in the electronics industry to abroad. Korea began to use the high-tech transferred by developed countries, continue to develop the iron and steel, shipbuilding, while strengthening the technology of computers, office automation equipment. Throughout the process of industrial development in Korea, we can see its industrial policy is the most important and successful, comply with the requirements of international development.

## **1.2 Industrial Transformation and Upgrading Experience of South Korean**

First, the international environment, the very important aspect of South Korean's industrial transformation and upgrading is to seize the favorable opportunities in a timely manner.

This also means that domestic policies, without the support of the international environment, are difficult to achieve such results such as South Korea. Many scholars have said that Korea's foreign trade pattern can not be replicated. The development of labor-intensive industries, like South Korea in 1960s, depended on the opportunity of transferring labor-intensive industries into developing countries. 1970s, focusing on the development of heavy and chemical industries, but also just the developed countries in their environment, resources, consider the transfer of its low-end chemical. 80s is the first outbreak of South Korea's own accumulated over 20 years. It can be seen, when one country in the development of lowlevel or low end of the industry, industrial development or conversion of industrial structure needs to conform to the international context in order to have better results. When a country has accumulated some capital, technology and talent. Industrial development or industrial structure during the conversion process, more important is the incentives taken by the Government and the role of the local enterprises in the process.

Second, from a development perspective, Science and technology R & D and industrialization will always play an important role in a country's long-term development.

In the 1960s and 1970s, Korean technology policy role in promoting South Korea's industrial development or the conversion of the industrial structure and technological R & D is limited. The one hand, Korea's major industries or enterprises on the demand for these technologies are not strongly, advanced technology on the importance of the development of enterprises do not show it at the time. The other hand, from a low of Korea, Korea's overall technological level has notably lagged behind the international advanced level, these factors all affect the technology to play its role. But the South Korean government has always invested a lot of manpower, material and funds to develop technological. Facts have proved that these accumulations play an essential role in the 1980s' South Korea successful transformation. Therefore, the technological level is very important for a country or a region, can not measure the role of science and technology to economic performance in the moment, should insist that the large-scale technological innovation and the introduction of technology.

Third, rational application of industrial policy.

In the late 1970s,, the developed countries maintain a tight policy to curb inflation, this policy has led to high exchange rate. In 1980s, the trade imbalance between the Western countries become serious, the international division of labor expanded. All of these made the economic structural adjustment become an urgent problem to be solved. To reduce costs, the developed countries transfer labor-intensive assembly processes, low-level products and outdated technology in the electronics industry to abroad. Korea began to use the high-tech transferred from the developed countries, continue to develop the iron and steel, shipbuilding, while strengthening the technology of computers, and laid the foundation for the next industrial upgrading. Throughout the process of industrial development in Korea, we can see its industrial policy is the most important and successful, comply with the requirements of international development.

## 2. EXPERIENCE AND ENLIGHTENMENT OF PROCESSING TRADE UPGRADING IN TAIWAN

# 2.1 The Specific Process of the Transformation and Upgrading in Processing Trade in Taiwan

Taiwan Area of processing trade began in the late 1960s, from the process point of view of the history of the development of processing trade in Taiwan, changes and evolution of the form of processing trade, reflected mainly through the export processing zone. The development of export processing zones provided some ideas for research to undertake the development of international industrial transfer path. Taiwan Area of processing trade has experienced the following transformation and upgrading course.

#### (1) The First Transition (1984 - 1995)

Processing trade in Taiwan began to enter a new adjustment in transition from the mid-1980s. During this period, although the investment in export processing zones to maintain a steady growth trend, other indicators of employment, the number of firms has been in a downward phase. The amount of investment jumped from \$ 459 million in 1986 to \$ 968 million by 1995.

While employment dropped from the 1987's 91004 to 41936 in 1995, the number of enterprises entering the zone from 252 down to 233, This shows that the Export Processing Zone investment towards capital-intensive and technology-intensive industries, and the development of large-scale. The technology industry is greater than 62%, Labor-intensive industries in addition to the garments outside almost completely phased out.

#### (2) The Second Transition (1996 - 2000)

During this period, with internationally renowned manufacturers doing OEM production, And gradually establish a competitive advantage in certain technical content industry links, such as IC design and processing, motherboard production, Taiwan Area of processing trade has now entered a new course. The Taiwan region has become a core technology and its own brand of world production base. Taiwan authorities to attract hightech multinational companies in Taiwan to build the Development Research Center, which give a positive policy support. This stage, high-tech and capital-intensive industries accounted for as much as 80% of the entire industry. The products also add digital optical products and IC and computer combination.

#### (3) Third Transformation (Since 2001)

Taiwan's economy has been the severe impact of the Asian financial crisis, in Taiwan's industrial structure is faced with the deep-level adjustment. The development of knowledge-based economy of Western developed countries indicate the forward direction for further industrial upgrading. The Taiwan authorities have begun the implementation of knowledge-oriented "development strategies", and to develop knowledge-intensive service industry, actively promote the innovation and R & D and high value-added, gradually replaced by the manufacturing sector to become a new driving force of Taiwan's economic development. Taiwan's service industry rose by 73.3% in 2005. In this context, the export processing zone transition again, trade in services accounted for more than 60% of exports, while the hightech manufacturing accounted for less than 40%.

## 2.2 The Experience and Inspiration in Taiwan Upgrading of Processing Trade

First, transformation and upgrading of processing trade in mod

From the above analysis can be summed up, Transformation and upgrading of processing trade is basically following in Taiwan by the labor and resource intensive - labor-intensive semi-skilled intensive and technology-based - technology, capital-intensive-Knowledge service-oriented model of development, the transformation and upgrading is a step-by-step process. It is worth mentioning is the processing of the Taiwan area gradually emerging from the low-end position in the industry value chain in international trade through the transformation and upgrading, With the horizontal development in the industrial chain, vertical leap out of the economic path of a low-cost, high-tech sustainable development, It showed that the processing trade has strong vitality and good development prospects in a trade situation type.

Second, the transformation and upgrading of processing trade in the Taiwan region to adapt to changes in the international market situation.

Taiwan's processing trade was concentrated in laborintensive industries such as leather, clothing, Later, due to the two oil crises have serious implications for the regional economy of Taiwan, Inflation, shortage of resources led to the production costs continue to increase, coupled with the rise of international trade protectionism, and some other developing countries, labor-intensive processing trade, the labor advantage of Taiwan region is increasingly weak, processing trade is gradually transferred to the direction of technology-intensive. The first goal of steering is relatively low-tech primary electronic products (such as capacitors resistors, radio, etc.); Turned to technology with higher levels of capital-intensive industries (such as optical products, computer combination) in a mature and well-funded technology development period. At the same time, the processing trade step by step into the raw material procurement, design and development, marketing and brand maintenance of high value-added links. With the development of knowledge economy of the Western developed countries, the processing trade in Taiwan is gradually involve the knowledge service industry.

Third, the Taiwan government has played a very important role in the process of upgrading of processing trade.

In the process of transformation and upgrading of processing trade in Taiwan, the Taiwan government attaches great importance is an important driving force for the transformation and upgrading process. Early stages of development in the context of the price of labor in developed countries rise in the prevalence of daily necessities in short supply, the Taiwan authorities make full use of labor something great efforts to develop labor-intensive industries. Due to the two oil crises have serious implications for the regional economy of Taiwan, Inflation, shortage of resources led to the production costs continue to increase, coupled with the rise of international trade protectionism, and some other developing countries, labor-intensive processing trade, the labor advantage of Taiwan region is increasingly weak. In this case, the Taiwan authorities promptly formulated and promulgated the "Measures for the Administration to promote industrial upgrading" (1991). Encourage the upgrading of processing trade, on technology, and formulated preferential policies in tax in time to seize the multinational global professional opportunities to attract high-tech industries, which made the processing trade further transferred to the technology-intensive industries. Into the 21st century, the

development of knowledge-based economy in developed countries, gives a further chance of industrial upgrading of Taiwan. Taiwan authorities promulgated the "Knowledge Economy Development Plan" (2000) and the "Services Program of Action and programs" (2004) and other economic rules, vigorously develop the knowledge-based services, create a favorable policy environment for further transformation and upgrading of processing trade.

Fourth, the soft environment for enterprise development is the material basis for upgrading of processing trade.

The healthy development of processing trade enterprises is a key factor in the success of the transformation and upgrading. Government must be the creation of the enterprise, supporting business innovation and create favorable conditions and good environment. Encourage enterprises to attach importance to and strengthen the R & D investment; awareness to guide the related enterprises to the formation of groups, and build a complete industrial ecology; fostering international science and technology company, guide the rapid development of the technology industry. At the same time, the government should create an environment for human capital, attract a large number of talents engaged in high-tech industries, Strengthening the training of employees in these industries in order to improve the quality of employees throughout the industry.

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