

# Chapter 6

## Long-term Changes in the Global Trade Structure and East Asia

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The Standard International Trade Classification (SITC) has been revised three times, and thus fail to provide continuity. Therefore, trade analysis has to be limited to the short term. The United Nations has launched a service allowing on-line searches of the UN Comtrade Database trade data, enabling access to trade statistics from 1962 by SITC-R1 to 2003. However, a weak point of this classification is that new articles that were newly added in SITC-R3 are missing. These statistics are not suited the analysis of individual articles because there was an increase in the articles included in Article 7, covering machinery. In spite of these problems, trade statistics based on SITC-R1 have enormous importance for the long-term analysis of developing countries.

In this chapter, I analyze structural changes in trade for East Asia (Japan, NIES, China, ASEAN4), India, the US, EU and examines the utility of trade statistics for the long term. The article is divided into 23 categories for analysis. In the meeting to plan the study, I initially used an article classification based on input-output analysis, using one digit of the SITC classification. However, this did not permit the explanation of mutual connections in trade structural changes in trade, trade competitiveness and the division of labor. Therefore I divided SITC-R1 into 23 classifications comprising of materials,

intermediate goods, and final goods, and analyzed the connections between trade structure, trade competitiveness, and the division of labor. By doing this, I was able to clarify the process of evolution of the global trade structure, using this classification to give weight to products ranging from primary products to machines.

### 1. Structural Changes in Trade

From 1962 to 2003, global trade, as measured by imports and exports, increased to 65 times. The total share of exports of the EU, US, and Japan fell from a level exceeding 70% of 1962 to 56% in 2003. In the 1970s, this share was mainly taken by the petroleum exporting countries as a result of the rise in oil prices, but later it was the East Asian NIES, ASEAN 4 and China. Changes in imports show a similar tendency. East Asia became a center of global trade. The world export structure shifted from materials and other primary products to durable consumer goods, machinery and chemicals. The export share of material primary products fell sharply from 14.64% in 1962 to 3.76% in 2003 and that of artifacts primary products increased in the 1980's, but then stagnated. As a whole, the share of primary products decreased, but shifted from materials to artifact.

As for light industrial products, there was no major change in intermediate goods, but the share of final goods doubled. For the share of chemicals, iron and steel and non-iron metals remained nearly unchanged, as they have importance as input goods. The shares of durable consumer goods and capital goods increased together, and the machine industry pulled world exports. The import share of primary products deteriorated, while those of durable consumer goods and the capital goods increased. There was a significant increase in the global trade shares of the US, EU, Japan and East Asia, and, in addition, trade between object countries has tended to pull global trade. While the exports of others countries increased slightly from 1962 to 2003, their imports fell significantly, and in 2003 the object countries occupied 77.65% of world exports and 74.70% of imports. In addition, import and export between object countries rose from 45.76% to 58.14, and 74.87% of the total exports of object countries in 2003 were mutual trade between them.

In the EU, the share of mutual trade was overwhelmingly, and the share of mutual trade between the EU and US was large. Mutual trade in East Asia, and mutual trade between East Asia and the EU, between East Asia and the US, grew between 1962 and 2003. The share of mutual trade in East Asia in total global trade rose from 2.66% in 1962 to 13.17% in 2003, and the ratio of mutual trade in East Asia among East Asia's total exports increased from 30.43% to 49.22%. In addition, the ratio held by final goods and intermediate goods in global trade were essentially balanced at beginning of the 1960, but the ratio of final goods gradually increased. The ratio of final goods and intermediate goods in world imports and exports became approximately 6:4.

The share of world imports and exports

occupied by intermediate goods of object countries in 2003 was 80%, and that of final goods was about 70%. The reason why the share of intermediate goods was high is that the share of those in East Asia (object Asian countries except India) was high.

## 2. Changes in Trade Competitiveness

I added the import RCA (revealed comparative advantage) to export RCA and examined the characteristics of the structure of comparative advantage. The import RCA shows a situation of comparative advantage, if it is equal to or less than 1. I measured the import and export RCA for 23 classifications and drew a scatter diagram which assumed the standard for import and export RCA to be 1. The meaning of each quadrant is as follows. In the first quadrant, both the import and export RCA is greater than 1. There is both a comparative advantage and a comparative disadvantage, indicating that this industry has both large imports and exports, and is an export-oriented type.

The second quadrant shows a comparative advantage, where the export RCA is greater than 1.

In the third quadrant, import and export RCA are both smaller than 1, showing that the trade dependence is small.

The fourth quadrant shows a comparative disadvantage with the import RCA being greater than 1.

I examine the number of industries (among the 23 classifications) where both import and export RCA are than 1. The EU has nine industries where both the import and export RCA are greater than 1, nine industries where the import and export RCA are both near 1, and 18 industries with an export orientation. The EU has a number of countries, with a division of labor, so the imports and exports have

grown together.

A similar result can be seen in measurements of RCA in East Asia. The NIES have seven export-oriented type industries, and eight nearly so. Most of these are machine industries, reflecting the industrialization strategy of the NIES, where industry was developed depending on trade.

The US has five export-oriented industries, and seven that are nearly so. Because it was primary industry and device industry that that was all for export RCA 1, India produced an export oriented type in such a field. Japan has two export- oriented type industries, and four that are nearly so. Japan increased its foreign direct investment in the machine industry after the middle of the 1980's, and there is no significant dependence on imports, so that the import RCA is less than 1.

However, the intensification of trade competitiveness in the machine industries of neighboring Asian countries may lead the industry in Japan to become an export oriented type. This supports the expectation that Japan and other Asian countries are shifting to a horizontal division of labor.

### **3. Development of an Intra-industry**

#### **Horizontal division of labor**

Mutual trade has expanded within East Asia, the US, EU, and the NIES. This signals the rise of an inter-industry horizontal division of labor for manufacturing products, and an intra-industry

horizontal division of labor for machinery industries.

The 2.89 trillion dollars of exports of instruments, added to durable consumer goods and capital goods, held 43.88% of world exports in 2003. The object countries made up 80% of the world exports of durable consumer goods and capital goods together, and 72% of imports.

The EU held a large share, but those of Japan, the US, NIES, and China became significant on a world scale as well. The EU area has the greater level of mutual trade, but the mutual trade level of the object countries, including India, makes up 52.09% of global trade. As for trade in machinery, nearly half took place between the EU, Japan, US, East Asia, and the object countries exported 30% to other countries and make up 80% of the total world exports. In addition, mutual trade between Japan, the NIES, China, and the ASEAN 4, constituted 9.64%, and 33.32% of East Asia machine export were destined for this area.

The trade in such instruments was mutual, and an intra-industry horizontal division of labor was gradually developed.

A development strategy to intend development in international division of labor to continue as above to NIES, ASEAN 4, China, and India promoted the development of a division of labor mainly in machines, and ranked with the developed nations. As for the division of labor in East Asia, it is certain that the further development of the machine industry will further raise this local division of labor.