Chapter 8

Is China Gaining from Triangular Trade? An Analysis based on Asian International Input-Output Tables

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"Triangular trade" between East Asia and the US has been observed to have increased rapidly in recent years. This term refers to a trade structure mainly involving multinational companies operating in the machinery sector, in which key components are manufactured in Japan, South Korea, Taiwan and the ASEAN nations, assembly is conducted in China, and the majority of finished products are sold to the US. The profits are then used by East Asian nations to purchase US bonds. The IDE conducted an analysis using the 1995 and 2000 Asian International Input-Output Tables in order to determine whether this trade pattern actually existed. The results indicated that 1) Expansion of US demand results in increased exports from China centering on machinery, but also results in a rapid increase in imports to China from Japan, South Korea and Taiwan, and 2) This trend increased in strength between 1995 and 2000.

1. Methodology

The change in the regional total production vector, dx^U, generated by change in the final demand vector of regional country U, df^U, can be determined by solving the following formula:

(1) $$Adx^U + df^U = dx^U$$

where A is the intermediate input factor matrix. Formula (1) can be rewritten as:

(1)' $$dx^U = (1-A)^{-1} df^U = Bdf^U$$

here, B is the inverse matrix.

As Table 1 shows, when the US is substituted for country U, a 1% increase in final demand (against 2000 figures) with a total value for other regional countries of 97.55 billion dollars, results in an increase of approximately 0.5% in total regional production (2000).

2. Main Results

We found that 1) Expansion of US demand results in increased exports from China centering on machinery, but also results in a rapid increase in imports of parts and components to China from Japan, South Korea and Taiwan, and 2) This trend increased in strength between 1995 and 2000.