Korea-Japan Workshop on the Industrial Productivity Database

# Annual Input-Output Tables and the Supplementary Tables of the JIP Database

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#### 1. Data Sources

- Every five years, the relatively reliable linked IO table is available. Therefore we chose the years 1970, 75, 80, 85, 90, 95 and the final year 98 as our benchmark years.
   Major data sources for our annual IO tables for the benchmark years are
- 1970-1975-1980 Linked Input-Output Tables, Management and Coordination Agency;
- 1980-1985-1990 Linked Input-Output Tables, Management and Coordination Agency;
- 1985-1990-1995 Linked Input-Output Tables, Management and Coordination Agency;
- 1998 Extended Input-Output Tables, Research and Statistics Department, Economic and Industry Policy Bureau, Ministry of Economy, Trade and Industry.
- For other years we used METI's extended IO tables for every year.

#### 2. Compilation Process 1

- Among the above IO tables, there are some differences in the rule of compilation and concepts. We adjusted these differences. The lease industry's physical capital, which is rented to other industries, is treated as capital input in the lease industry. The cost of R&D in each sector is included in the production cost of that industry. The JIP Database is based on the 1968 SNA. Therefore, software investment is not included in investment. And depreciation of government capital is not included in the consumption expenditure of the government.
- Next, we constructed converters to make adjustments for changes in industry classifications over time and aggregated the IO data into our 84 sectors.
- The number of industries is limited by the fact that the data of fixed capital investment (Fixed Capital (investment) Matrices) is available only at this disaggregated level.

#### 2. Compilation Process 2

 We compiled IO tables in real terms (1990 prices) in the following way. 1970-1975-1980 IO tables contain real IO tables at 1980 prices. Similarly, 1980-1985-1990 IO tables contain real IO tables at 1980 prices. We linked these two real IO tables at year 1980. The second and the third IO statistics are linked at year 1990. The third and the forth IO statistics are linked at year 1995.

### 3. Real Output and Implicit Prices of the SNA Statistics and the JIP database 1

- The real values in linked IO tables are created by using price statistics such as the wholesale price index and the business service price index of the Bank of Japan in a way similar to the real values in the SNA statistics.
- Therefore, real values of output and intermediate input and implicit deflators in the JIP Database have basically similar characteristics as the corresponding SNA statistics of except for the treatment of the base year.
- Japan's long-term SNA statistics are based on a price vector of a single year. In the case of the JIP Database, real values and implicit deflators are created by linking real values of different base years.

## 3. Real Output and Implicit Prices of the SNA Statistics and the JIP database 2

- In the case of public medical services, public education, and some other services, input cost is used as an output deflator.
- In the case of Japan's SNA statistics it is rare to use production index for estimation of real output.
- In the case of commerce, WPI and CPI of commodities traded are used as an output deflator.
- In the case of some financial services for business,
  WPI of capital goods is used as an output deflator.
- In the case of whole sale price index (corporate goods price index) of some IT products, hedonic pricing method is recently introduced. But the coverage of such treatment is still narrow.

## 4. On Future Revision of the JIP I-O Tables

- 2000 Input-Output Tables, Management and Coordination Agency is scheduled to be published on March 1, 2004.
- 1990-95-2000 Linked Input-Output Tables,
  Management and Coordination Agency is scheduled to be published in May of 2005.
- Japanese government stopped to publish Extended Input-Output Tables, Research and Statistics Department, Economic and Industry Policy Bureau, Ministry of Economy, Trade and Industry on "basic" industry classification (3digit level) base from 2000. From 2000 tables of 71 industries became to be the most disaggregated extended I-O tables. Within METI there exists nominal output data at 3 digit level.
- 2003 extended I-O table will be available by October of 2004.