

Analysis of IO-based Annual Supply and Use Tables for the development of QNA - Japanese Paradox between 1968 SNA and updated SNA

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This paper reports the conceptual analysis of Annual Supply and Use Tables (ASUT) in consistency with the Annual National Accounts(ANA) and Input-Output Table(IO) to use Japanese data. For the consistency of 1968SNA and 1993SNA, Japanese and some Asian cases are complex. If a country can estimate IO directly, how should the country calculate the consistent supply and use tables? If IO of the country is fixed in advance, there will be not the balancing system of SUT in the country. It is practical for the statisticians of the country to keep the IO and the core system of national accounts, and to develop the consistent SUT at the next stage to introduce 1993 SNA or 2008 SNA. It is necessary for some Asian countries to search the break-through to maintain the IO and make consistent SUT. Thus countries that can estimate directly the IO cannot make the consistent SUT according to 1993 SNA or 2008 SNA. We suppose we can call this topic Japanese (or Asian) Paradox. Some Asian countries introduce Japanese-type IO-SNA system. They estimate the detail IO table at the first step. They use the IO for the calculation of the national accounts as data sources at the second step. In this paper, I introduce the Japanese case as a typical example.

Government of Japan makes the largest IO of benchmark year in the world, which is products (Lokal KAU Lokal kind of activity unit) by products, every 5 year in the world since 1955. IO in benchmark include only V Table (a kind of supply table in the frame of 68SNA). Japanese Annual National Accounts (ANA) depends on the IO every 5 year as the benchmark estimation.

Though ANA and IO included 1993 SNA in 2000, ASUT are only make and use tables, called V Table and U Table, according to 1968 SNA now. These tables in benchmark year are calculated from IO as Product-based Technology. There is a balancing system only in IO for the consistency of accounts, not internal accounts of ANA.

ANA without ASUT restricts strictly the performance of the official statistics. Recently, as the statistical discrepancy expands, it is necessary to analyze inconsistent numbers in ANA. But Japan have neither the consistent SUT (balanced) nor the systematic analysis process in a core system of the national accounts.

On the other hand, though ESRI publishes only quarterly GDP(Expenditure), Quarterly National Accounts (QNA) in Japan don't include GDP (Output or Income) and the other series (ex. Household saving) now. It is increasingly important to improve JSNA for the purpose of the expansion of QNA. SUT is the effective tool to improve for the future of Japanese SNA. There are some solutions to solve the paradox. It is efficient to pair ASUT and the existent benchmark IO as one of the choices. Because the combination will allow to improve the core system of Japanese National Accounts depended to IO, and to develop the consistent time series of ASUT.

There are three purposes to develop the ASUT. First, ANA can have the system to analyze the statistical discrepancy with ASUT. Second, if JSNA have the ASUT, the actual work of National

Accounts will be vastly improved. For example, ESRI may be able to measure the fixed GDP without the discrepancy in a three years time. Third, ASUT will be necessary for QNA and Quarterly Supply and Use Tables.

This paper principally covers the concept and some issues for the development of ASUT(unbalanced, balanced) and the balancing system. Supply Table (unbalanced) is transposed V table with the import matrix. Use Table (unbalanced) is mostly unified table between a use matrix and the existent tables of the expenditure series.

There are some issues to analyze ASUT such as balancing methods, the consistency of Product-Flow Methods, the frames of ASUT and so on in Japan. Though many concepts are difficult to estimate strictly in this trial estimation, the new frame of ASUT will allow JSNA to have many choices to improve the actual measurement.