

IARIW-ESCoE Conference

“Measuring Intangible Assets and Their Contribution to Growth”

The Supply-Use tables for the Digital Economy in Japan: an update

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1. Introduction

This October, ESRI, Economic and Social Research Institute of Cabinet Office, Government of Japan, launched our first estimate of the Supply-Use tables (SUTs) for the Digital Economy in Japan, based on the 2015 Economic Census. They describe the whole structure of digitalization of Japanese economy according to the OECD literatures such as OECD (2018) and OECD (2020). First, digital industries, covering digitally enabling industries, intermediary platforms and firms depending on them, E-tailors and digital only firms providing financial and insurance services, generated 7.0% of the domestic value-added in 2015, which exhibited a bit of modest value compared to the U. S. estimation of 8.7% of their value-added in 2015, and revealed we had been left behind the U.S. in digitalization. Second, as well as industries, we estimated the digital products ranging from ICT goods to services and non-digital products significantly affected by digitalization based on the definition of OECD (2020). We found that the non-digital products significantly affected by digitalization amounted to 13% in total output and almost 60% of them was consumed in household sector, which showed prevailing digitalization might more affect to the household sector than business sector.

This snapshot of our economy’s digitalization attracting strong interests of policymakers as well as researches, now we review the technical details in this preliminary estimate and are trying to update to the 2018 values. The sequence of revision will be finished by next May, hence we will show you the up-to-date snapshot of digitalization in Japanese economy at the IARIW-ESCoE conference. We convince our initiative to publish a revised Digital SUTs accelerate the followings of many countries and clarify the world-wide structure of prevailing digital economy.

2. Selected Literature Review

Ahmad and Ribarsky (2018) developed a framework of the satellite account of the System of National Accounts (SNA) based on the collective work by the OECD Advisory Group on Measuring GDP in a Digital Economy etc.. Flowing their works, OECD (2018) proposed a comprehensive framework to estimate Digital SUTs, and over a year discussions and coordination, this proposal have been authorized as the guideline, OECD (2020) which also clarified the key concepts such as “the non-digital products significantly affected by digitalization” to capture the developing digitalization over the currently non-digitalized products.

3. Methodology

ESRI (2020) summarizes the methodology to estimate the Digital SUTs based on the Japanese official statistics, and also exhibits some challenges for further research. We have already launched the research project to resolve these challenges and update the tables to 2018 values. For example, we excluded the estimation of online-game industry in the published tables. Here we found a wide discrepancy between the administrative data of the market size of online game industry and the estimated result of the corresponding product in our Digital SUTs. The former could be twice as large as the latter. This industry has complicated money flow because of the many intermediaries and complicated business models. And there could be unlisted start-up firms with large scale. Therefore, comparison between financial statements and individual responses to the Economic Census may be helpful to resolve this discrepancy.

Regarding the update to 2018 values, we utilize the detailed commodity flow data to estimate annual national accounts. Remaining some methodological issues such as the estimation of E-tailors, cloud computing and digital intermediately services, we are making much efforts to settle them.

To examine methodologies and procedures, we set up an advisory board composed by four SNA experts, who have long careers in national accounting analyses, and had already rigorous discussions on these issues. We may also have twice meetings with them to resolve the remaining issues until the end of this fiscal year.

4. Timeframe

The project will be finished by next May.

References

Ahmad, N. and J. Ribarsky (2018), "Towards a framework for measuring the digital economy", presented at the 35th IARIW General Conference, Copenhagen, Denmark, August 20-25, 2018.

ESRI (2020), "Preliminary report on the estimation results of the OECD digital SUT (updated version)", presented at the 4th meeting of the Informal Advisory Group on measuring GDP in the Digital Economy, 29 June 2020, Meeting held virtually.

OECD (2018), "A proposed framework for digital supply-use tables", paper presented at a meeting of the Informal Advisory Group on measuring GDP in a digitalised economy, Paris, 9 November 2018.

OECD (2020), "Guidelines for Supply-Use tables for the Digital Economy", paper presented at a meeting of Working Party on National Accounts, Paris, 9 January 2020.