

Incorporating Aichi Prefecture into a Global CGE Model

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May 11, 2021

Abstract

There has been growing interest in sub-regional economic impact of mega-FTAs (Free Trade Agreements), such as the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) and the Regional Comprehensive Economic Partnership (RCEP). Our aim in this presentation is to explore the linkage between a sub-region and global economy, by incorporating a sub-region of Japan into a global computable general equilibrium (CGE) model of international trade. We take Aichi prefecture in Japan as a sub-region to be introduced to the Global Trade Analysis Project (GTAP) database, and we modify the database and the comparative static GTAP model to accommodate this alternation. Input-Output (IO) tables of Aichi and Japan provide a starting point for our modification process. Industrial sectors from these IO tables are aggregated to 50 sectors to match with the same classification obtained from the GTAP database. The IO linkage between production, international trade, and consumption is split by distinguishing Aichi prefecture from the rest of Japan. In the modified model, we add a new module of domestic inflows and outflows of goods and services within Japan. To illustrate sub-regional impact of national trade policy change, we experiment a set of trade liberalization scenarios of RCEP.

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