The IMF Multi-Analytical Regional Input-Output Model - MARIO

Topic: Global Input-Output Accounts (GIANT): a collective initiative to harmonise input data entering ICIO tables published by international organisations (II)
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Input-output tables represent a unique source of information to understand the relationships between producers and consumers within an economy and their interconnection with: a) the environment through emissions of CO2, other pollutants, the use of land and natural resources, b) energy and physical accounts; c) employment; d) tax gaps as well as fiscal policies related to climate change adaptation and mitigation; e) income distribution; f) trade in value added, and so on. The IMF has started developing a Multi-Analytical Regional Input-Output model (MARIO) to provide a powerful analytical tool and a source of harmonized granular data to better understand the inter-relationships between economies, their impact on climate change, and their economic and social development. Linking domestic input-output tables together in a consistent multi-regional model will help improve data consistency within and across economies. MARIOâ€™s development will take advantage of already available data from different global input-output tables initiatives; statistical offices; and international organizations, including official source data collected by the IMF from its member countries. This will reduce the amount of missing data encountered in the estimation of multi-regional input-output models. The IMF is in a unique position to develop a model with global geographic coverage while also improving cross-country and global data consistency. Through cooperation with other international organizations, under the GIANT initiative, Â MARIO will cover the years from 1990 to 2022 and 212 economies, including all IMF members. The model will encompass 178 products and 144 industries, providing sufficient granularity to perform detailed analysis on themes related to climate change and the environment and will capture international spillovers providing the ability to analyze the energy transition, emissions, material flows, and other questions of strategic importance.