



INPUT-OUTPUT ANALYSIS

Asian Development Bank

Central Asia Regional Economic Cooperation (CAREC) Institute

Virtual Workshop

04-April to 08-April 2022

13:00 – 16:00 (Beijing time, UTC +08:00)

The input-output (IO) framework is essential to many macroeconomic analyses, such as economic impact assessments. Input-output tables (IOTs) depict production, consumption, and trade activities attributable to any given economy. Statisticians use the IO framework to estimate key macroeconomic aggregates such as GDP, GDP growth rate, value added, consumption, investment, imports and exports.

Economic analyses and econometric models based on IOTs provide a deeper understanding of the state, functioning and evolution of an economy and its various sectors. Multiregional input output tables (MRIOTs) capture the various economic connections among countries. In today's world of economic globalization wherein industrial linkages are now spreading beyond national borders, internationally articulated IOTs are essential to discern the local and global economic implications of various phenomena. Thus, the input output (IO) framework, models and analysis effectively facilitate evidence-based policymaking by providing high quality data-driven insights on economic issues.

In order to provide solutions into the increasingly complex issues of IO analyses, the ADB and the CI propose to organize a five-day virtual workshop on IO analysis from 04-April to 08-April 2022. The main objective of the workshop is to provide a comprehensive foundation of IO economic concepts and theory. The workshop will also provide training materials on IO models and analytical methods. The sessions will be pre-recorded and will be made available through the CAREC Institute E-learning Platform that is accessible to all users across the CAREC region and beyond.

Agenda

DAY 1 (04-April-2022)	
12:50 pm - 01:00 pm	VIRTUAL CONNECTION AND INTRODUCTION OF WORKSHOP
01:00 pm - 01:15 pm	WELCOME AND OPENING REMARKS Syed Shakeel Shah , Director, The CAREC Institute Mahinthan Joseph Mariasingham , Senior Statistician, ADB
01:15 pm - 01:30 pm	INTRODUCTION OF FACILITATORS AND HOUSE RULES Julian Thomas Alvarez , <i>Senior Input Output Specialist, ADB</i>
01:30 pm - 02:45 pm	THE BASIC FRAMEWORK OF IO ANALYSIS <i>From Supply Use Table to Input-Output Table</i> <i>Structure of Input-Output Table</i> <i>Application</i> Anurag Agarwal , <i>Economic and Statistical Analyst, ADB</i> Ridhima Bahl , <i>Economic and Statistical Analyst, ADB</i>
02:45 pm - 04:00 pm	BASIC LEONTIEF OUTPUT MODEL <i>Open and Closed Input-Output Models</i> <i>Application</i> Arushi Gupta , <i>Economic and Statistical Analyst, ADB</i>
DAY 2 (05-April-2022)	
01:00 pm – 02:00 pm	GENERAL STRUCTURE OF MULTIPLIER ANALYSIS <i>Output Multipliers</i> <i>Income / Employment Multipliers</i> <i>Value-added Multipliers</i> <i>Application</i> Gieneen Antonio , <i>Economic Research Analyst, ADB</i>
02:00 pm – 04:00 pm	INPUT OUTPUT MODELS AT THE REGIONAL LEVEL <i>Many-Region Models: The Interregional Approach</i> <i>Many-Region Models: The Multiregional Approach</i> <i>Application</i> John Arvin Bernabe , <i>Economic Research Analyst, ADB</i> Julian Thomas Alvarez , <i>Senior Input Output Specialist, ADB</i>
DAY 3 (06-April-2022)	
01:00 pm – 02:00 pm	INTRODUCTION TO ADB MRIO DATABASE <i>Structure of ADB MRIO Tables</i> <i>Application</i> Anna Monina Sanchez , <i>Research Analyst, ADB</i>
02:00 pm – 04:00 pm	MULTIPLIERS IN THE REGIONAL MODELS

	<p><i>Output multiplier decomposition</i> <i>Interregional effects and intraregional effects</i> <i>Application</i> Ma. Charmaine Crisostomo, Economic Research Analyst, ADB</p>
DAY 4 (07-April-2022)	
01:00 pm – 02:00 pm	<p>SUPPLY-SIDE IO MODELS</p> <p><i>Ghosh Model</i> <i>Re-interpretation as a Price Model</i> <i>Application</i> Jahm Mae Guinto, Economic Research Analyst, ADB Jessica Ann Jola, Economic and Statistical Analyst, ADB</p>
02:00 pm – 03:00 pm	<p>LINKAGES IN IO MODELS</p> <p><i>Backward vs. Forward Linkage</i> <i>Normalized linkages</i> <i>Application</i> Christian Jabagat, Research Analyst, ADB</p>
03:00 pm – 04:00 pm	<p>HYPOTHETICAL EXTRACTION, CONTRACTION, AND EXPANSION METHOD</p> <p><i>Hypothetical Extraction and Contraction Model</i> <i>Hypothetical Expansion Model</i> <i>Application</i> Elyssa Mariel T. Mores, Economic Research Analyst, ADB</p>
DAY 5 (08-April-2022) – Hands-on Exercises	
01:00 pm – 01:30 pm	GENERAL INSTRUCTIONS
01:30 pm – 03:30 pm	APPLICATIONS AND EXERCISES
03:30 pm – 04:00 pm	<p>SYNTHESIS</p> <p>Julian Thomas Alvarez, Senior Input Output Specialist, ADB Dale Maverenz Lim, Research Analyst, ADB Jessica Ann Jola, Economic and Statistical Analyst, ADB</p>

Materials and templates for exercises will be made available in the e-learning platform. Certificate of participation will be given to attendees who accomplished the exercises within two weeks since posting of the exercises.

Exercises should be submitted to the facilitators on or before 22-April. These will be reverted to the participants a week after. Suggested answers will be posted in the e-learning platform on 23-April.