

Global MRIOs - which to use for what?



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This course provides an applied, research-oriented overview of the major public global MRIO/ICIO databases and the methodological choices that drive differences in results. The course situates MRIOs in contemporary work on global value chains (GVCs), trade in value added (TiVA), and footprint accounting, we will compare the design philosophies, coverage, and extensions of the principal databases, then will explain how construction choices (e.g., SUT-to-IOT transformations, trade reconciliation, “Rest of World” estimation, price concepts, margins, re-exports) translate into indicator divergence and introduces a practical framework for uncertainty-aware database selection, validation, and reporting.

Prerequisites: basic input–output analysis, familiarity with national accounts concepts, statistics and comfort with matrix notation.

Learning outcomes (participants will be able to):

1. Identify which MRIO/ICIO database is most appropriate for a given research question and unit of analysis.
2. Diagnose how sector/country resolution, balancing, trade linking, and price/margin conventions shape results.
3. Apply uncertainty analysis: plausibility checks against SNA aggregates, sensitivity to aggregation, and transparent reporting of database/version choices.
4. Interpret inter-database differences using established comparison approaches.

Outline

Session 1: MRIO logic for GVC, TiVA, and footprints—what is being measured?

Purpose: Align participants on MRIO structure, core accounting identities, and the indicator families that motivate database choice.

Session 2: The global MRIO/ICIO landscape—coverage, philosophy, and extensions

Purpose: compare the main public databases in terms of intended use, granularity, time coverage, and extension availability, highlighting trade-offs.

Session 3: How MRIOs are built—why construction choices matter

Purpose: Explain mechanisms that generate cross-database divergence, so participants can interpret results rather than treating outputs as interchangeable.

Session 4 : Comparability and uncertainty—validation, sensitivity, and reporting

purpose: Provide a practical workflow for (i) assessing plausibility, (ii) quantifying/communicating uncertainty, and (iii) choosing a database defensibly.