Improving the confidentiality treatment in the production of inter-country supply, use, and input-output tables: The FIGARO experience

Topic: Input-Output Theory and Methodology (6)
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FIGARO (Full International and Global Accounts for Research in input-Output analysis) provides annual inter-country supply-use and input-output tables for 50 economies, including the European Union countries, their major trading partners and a â€˜Rest of the Worldâ€™ region. Aligned with national accounts main aggregates (GDP components), these tables constitute a key resource for economic analysis and policy evaluation in domains such as globalisation, trade dependencies and vulnerabilities. However, the underlying data collected from national statistical institutes may contain confidential information that cannot be directly published.
This paper describes the methodology developed by Eurostat and the European Commissionâ€™s Joint Research Centre to produce a public-use version of the FIGARO supply-use tables while safeguarding confidentiality. The approach begins with pre-masking national accounts main aggregates and product totals flagged as confidential by countries. A controlled tabular adjustment technique is then applied, formulated as a linear programming problem with pre-determined adjustment directions. The method aims to minimise changes to non-confidential cells while ensuring that all published values comply with confidentiality requirements and maintain the accounting identities of supply-use tables.
The method is applied across all FIGARO countries and years, evaluating the extent of adjustments to confidential cells while minimising changes to non-confidential data. Additionally, cases where the linear program initially fails to converge are analysed, demonstrating how targeted relaxation of protection levels for dominant cells resolves infeasibility.