METRO: The OECD’s Trade Model

What is METRO?

In 2015, the OECD launched a new global computable general equilibrium (CGE) trade model, known as METRO (Modelling Trade at the OECD). CGE models are computer simulation models that use data to explore the economic impact of changes in policy, technology and other factors. They show how different sectors inside one economy are linked and how multiple economies are connected to each other, and how resources such as labour, capital and natural resources are best allocated across all economic activities. The METRO model builds on the GLOBE model developed by Scott McDonald, Karen Thierfelder and Therrie Walmsley (2013).

The METRO database currently covers 61 economies across 57 economic sectors. It is based on the GTAP (Global Trade Analysis Project) database, and uniquely incorporates recent OECD statistical developments. METRO allows users to analyse global value chains (GVCs) by drawing on the OECD-WTO Trade in Value Added (TiVA) database, providing a platform to more fully integrate structural policy issues in the analysis of trade policy. METRO also features an extensive library of trade-related policies, including current border tariff rates, export restrictions, as well as domestic taxes and support. Using METRO, it is now possible to track trade flows by their use (i.e. intermediate, household, government and investment) in addition to the bilateral links between source and destination markets. This will greatly enhance the ability to model movements of goods and services, especially along global value chains.

How is it being used?

OECD analysts are using METRO to trace how a given policy can affect outcomes such as prices, production and employment by sector and across countries. Identifying important indirect and flow-on effects through these linkages is a crucial part of assessing the net impacts of a policy change on growth and jobs. The model has already been used to highlight the impact that local content requirements have on intermediate inputs and the development of GVCs. It showed, for instance, that countries are in fact worse off when they impose export restrictions on their own steel and steel-related raw materials, due to the ensuing effects across critical supply chains. Most recently, the model was used to showcase the losses in production and jobs that were caused from the protectionist measures that G20 countries have implemented since the onset of the global financial crisis.

What’s next?

Development of the model is one of the OECD Trade and Agriculture Directorate’s public good investments, intended to further improve the analysis that informs policy recommendations. Work is currently underway to incorporate the OECD’s Services Trade Restrictiveness Index (STRI) and Trade Facilitation Indicators (TFIs) into the model in order to provide a stronger foundation for analysing the effects of trade liberalisation. The OECD is also working to ensure METRO is accessible to analysts outside of the organisation. To find out how you can get involved and to stay abreast of the latest developments, we invite you to contact the Secretariat through the details below.

Further Reading

- Metro v1 Model Documentation
  http://oe.cd/metrodoc
- Emerging Policy Issues: Localisation Barriers to Trade
  http://oe.cd/localisation
- Export restrictions in raw materials trade
  http://oe.cd/export-restrictions
- Report on G20 Trade and Investment Measures
  http://oe.cd/g20-investment