TiVA indicators for services by mode of supply

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Services represent a very significant part of the global economy. In OECD countries, for example, they are responsible for more than two thirds of total value added. Moreover, with technology improving tradability and expanding the array of available products, services are increasingly traded across borders. Between 2010 and 2019, the overall export of services of OECD countries has indeed grown by more than 40%. Understanding where and how services are supplied to foreign customers is therefore crucial for addressing a variety of trade and economic policy issues. Such understanding, however, is difficult to obtain directly from readily available macroeconomic statistics. This is because services are traded through various and often complementary channels. Following a nomenclature introduced in the mid-1990s by the General Agreement on Trade in Services (GATS), services can be traded in four ways (â€˜Modes of Supplyâ€™): cross border supply (Mode 1), consumption abroad (Mode 2), commercial presence (Mode 3), and presence of natural persons (Mode 4). While many countries produce statistical information on at least some of these aspects of service trade, the information is generally scattered across multiple sources (e.g. balance of payments, foreign affiliate statistics) that often use different definitions and classifications.

This paper describes ongoing work at the OECD to construct a coherent database to support the analysis of international trade in services by mode of supply. We build on the experience of two other ongoing long-term projects, the Inter-Country Input-Output (ICIO) tables and Analytical database on the Activities of Multi-National Enterprises (AMNE). The ICIO database is a time series of global multiregional input-output tables covering 77 economies and 45 industries over the period 1995-2020. The Analytical AMNE database expands the ICIO tables using foreign affiliates statistics, as well as other data sources, to identify the role played in each industry by multination firms.

Information on international trade in services by Modes 1 and 4 can be retrieved directly from the ICIO tables. Taken together, these are the transactions that give rise the international trade flows between countries that appear in the parts of the intermediate and final use matrices corresponding to service industries. As there are not enough data to support separate estimation of Mode 1 and Mode 4, at least in an initial stage the two are combined into a single aggregate. The ICIO tables also provide a natural estimate of trade in services by Mode 2, as the final demand matrix distinguishes expenditures of non-resident households from expenditures by residents. Finally, trade by Mode 3 is obtained from the Analytical AMNE database, which contains information on the output of foreign-owned firms. In fact, the Analytical AMNE data also allow us to separate the domestic sales of foreign affiliates from their exports, thus addressing the potential overlap with Modes 1 and 4 (exports of foreign affiliates that are Mode 3 from the point of view of the parent economy and Mode 1 or Mode 4 from the point of view of the host economy).

The resulting database has several desirable features. Firstly, it is an internally coherent dataset that has been adjusted for trade asymmetries and re-exports, is consistent with the national accounts and avoids all potential double counting issues. Secondly, it contains estimates of bilateral trade relations. In this respect, it complements the other existing source of data on service trade by mode of supply, the WTOâ€™s TiSMoS database. The TiSMoS database has indeed no breakdown by partner country, even though its country coverage is broader. Thirdly, our data align perfectly with OECDâ€™s ICIO tables and therefore allow for value-added analysis of trade in services.

After documenting the construction of the database, the paper will present the results of a preliminary analysis of trade in value added (TiVA) indicators by mode of supply.