

**For Plenary Session 3: The Impact of Globalization**

**World Input-Output Database:  
construction, challenges and applications**

**Author**

Marcel P. Timmer  
Groningen Growth and Development Centre  
Faculty of Economics and Business  
University of Groningen  
The Netherlands  
[m.p.timmer@rug.nl](mailto:m.p.timmer@rug.nl)

**Abstract**

This paper describes the contents and construction of a new database to analyze the effects of globalization on socio-economic and environmental trends at the country and global level. This database called WIOD (World Input-Output Database) is constructed by linking national supply and use tables with statistics on international trade. In this way it is feasible to estimate e.g. the use of Chinese paint in German cars bought by Japanese consumers. This international input-output table is firmly grounded in national accounts statistics and complemented with additional socio-economic accounts on the use of various types of labour (skilled/unskilled) and capital (ICT and on-ICT assets). It also includes various environmental indicators such as greenhouse gas emission. The database will include the major economies in the world covering 90% of world GDP and provide time series from 1995 onwards. In the paper I will discuss the various statistical challenges arising in constructing such a database and draw lessons for international statistical practice. In addition I include a number of illustrative applications in the area of outsourcing and its impact on global inequality, and on ecological footprints. The database is currently being constructed by a consortium of eleven research institutes in the WIOD-project ([www.wiod.org](http://www.wiod.org)) and the paper reports on the first phase of this project.