

# **Real output, expenditure and terms of trade across countries: an international input-output approach**

Robert Inklaar and Marcel P. Timmer\*  
Groningen Growth and Development Centre  
April 2010  
(First version)

## **Abstract**

In this paper we present a new approach to the derivation of real GDP from the production side. In contrast to Feenstra et al. (2009) we do not rely on international trade unit values to derive PPPs for exports and imports. Instead, we rely on the relationships between prices of goods that can be derived within an international input-output framework. In particular, we make use of the relationship between the output price of a good in an exporting economy, and the import price of the same good by the importing country. In this so-called international input-output (IIO) approach, we use international IO-tables in which imports and exports are broken down by trading partners such that bilateral flows of goods can be distinguished. We show that this new approach delivers estimates for real GDP that are closer to the estimates derived from the output side than those based on unit values.

## **Acknowledgements**

The research on which this paper is based is part of the World Input-output Database (WIOD) project. This project is funded by the European Commission, Research Directorate General as part of the 7th Framework Programme, Theme 8: Socio-Economic Sciences and Humanities (grant Agreement no: 225 281). In addition, financial support from the NSF Project "Integrating Expenditure and Production Estimates in International Comparisons" is gratefully acknowledged. We thank the World Bank for providing the underlying basic heading data from the 2005 ICP round.

\*Corresponding author:  
Marcel Timmer  
IE&B  
Faculty of Economics and Business  
University of Groningen  
P.O. Box 800  
9700 AV Groningen  
The Netherlands  
Phone: +31 50 3633653  
E-mail: m.p.timmer@rug.nl