

## **Methodology**

### **Overview**

We construct Tornqvist or translog price indices and implicit quantities of agricultural outputs and inputs for each country. The data on the value of the economic aggregates are reported in national currencies. To convert to a common currency (i.e. US dollars), we construct translog multilateral price indices (see Caves, Christensen and Diewert, 1982; Ball et al., 1997) These price indices are referred to the literature as purchasing power parities (PPP). The dimensions of the PPP are the same as exchange rates. However, unlike exchange rates, the PPP reflect the relative prices of the goods and services that make up farm sector's outputs and inputs in each country. These are relative prices in each country expressed in terms of national currencies per dollar. We divide relative prices by the exchange rate to translate the PPP into relative prices into US dollars at constant price. This allows us to decompose nominal values into price and quantity components. The result is a true panel dataset that can be used in cross-sectional or time series analysis.