

Measurement Error in International Comparable Incomes

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Abstract:

The theory of real GDP comparisons across countries and over time provides the framework to construct purchasing-power-parity (PPP) exchange rates. In practice this involves a harmonisation between prices collected (sporadically) across countries at a given time period (as part of the International Comparisons Program - ICP), and the annual movement of prices within domestic economies (measured by GDP deflators). Both sources are measured with errors. The new generation PWT (see Fenestra et al (2015), AER) reconciles these by assuming ICP measurements are exact and adjust the implied domestic price movement between any two ICP measures. Rao et al (2010)-RRD proposed an econometric based method that produces a time series of PPP for each country by treating both sources as measured with error. Fenestra et al (2015) indicates the PWT methodology is a special case of RRD. One of the advantages of an econometric based method is that it provides a venue to study alternative forms of these measurement errors and the evaluation of the robustness of the resulting time series of PPPs to alternative assumptions. This is the objective of this paper. A range of possible forms of these measurement errors are studied and evaluated.