

Some background on the moving ICP benchmark results to other years

Participants from TAG including practitioners, EU-OECD,
academics, Heston on PWT, and Prasada Rao on Queensland
and Davis Efforts



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Early ICP reconciliation exercises

1. Some background on extrapolation in the first ICP and its predecessors.
2. The 1st ICP reports in 1975 and 1978 attempted to reconcile benchmarks in two ways.
 1. Comparing 1970 results with Gilbert-Kravis estimates for the OEEC in 1958.
 2. Comparing 1970 with 1967 prices for 6 of the 10 countries.
 3. In 1970 BH parities were extrapolated to 1973 to integrate with an additional 6 countries for whom 1973 was the reference year



Evolution of the Penn World Table or PWT

- The ICP took on its regional organization and Penn was retired from the exercise in 1980
- Even before that Bob Summers with Sultan Ahmad tried expanding the 1970 results to non-benchmark countries, eventually 100 being published.
- There were 34 countries in ICP 1975 and Summers and I began worrying about other years when the results were finally published in 1980!



New data, men of affairs and old methods

1. In 1968 Irv Kravis would refer to “Men of Affairs” whose judgment would count on ICP, as a new type of data. Kravis assured us that “Men of Affairs” wanted the additivity feature of G-K as well as fixed base indexes over time.
2. So the natural way that Summers and I moved data over time was adopting a reference year as base for weights. In fact, we worked with 3 components plus the foreign balance. In later versions of PWT we used a chain version.
3. But times change and “Men of Affairs” began to take on a different meaning.



Growth Theory, technology and PWT

1. In the 1980s Barro and others renewed interest in determinants of economic growth, with a twist.
2. Now there was a readily available technology (then, floppy disks) that made a data set available with which to empirically test growth theories on a panel of country data with 30+ years of data. No matter how dodgy the data or the theories, PWT was the only wheel in town at the time.
3. Another factor favorable to both ICP and PWT was the adoption by the IMF of PPP based weights in the WEO.
4. And the adoption of PWT for classroom use and econometric assignments encouraged more problematic uses.



An Inconvenient Truth

- As PWT grew there were humorous uses, as in tests of cricket and baseball countries, more serious uses and some abuses.
- And there were a number of sensible criticisms, especially the work of Simon Johnson and colleagues. They tested published articles based on earlier versions with those of later versions and found some conclusions were not robust as between say PWT 6.0 and 6. Papers using long intervals OK but annual data quite questionable.
- Attempts have been made to reduce the sensitivity of results to the PWT vintage with modest success, but more fundamental changes in methodology are required.



Another Inconvenient Truth

1. One problem recognized early on in ICP and PWT is that the foreign trade sector is not handled well. Detailed price comparisons should be made and separate PPPs estimated for Exports and imports. Future PWTs will provide estimates.
2. The same problem occurs in moving ICP results over time but is in some ways worse because often import and export price indexes are of low quality.
3. However, a claim can be made that moving PPP estimates over time at the GDP level are less reliable than moving PPP estimates for Domestic Absorption, and treating exports and imports or the net foreign balance separately.



Summary of present PWT methods

1. PWT recommended series in reference year prices, currently 2005, is to move domestic absorption forward and backward by the growth rate of domestic absorption.
2. The exports and imports converted at the PPP for DA are similarly moved by their respective real growth rates and a current net foreign balance in reference year prices is added to DA.
3. Another difference between PWT and other series is that a current price estimate is made for each year. At present this involves estimating a current price parity for AIC, I and government using respective deflators relative to the reference country. A new aggregation is then carried out for each year.
4. The resulting PPP for DA is used to convert the NFB and that is added to DA to obtain GDP. Price levels are provided at each level of aggregation allowing users to analyze trends.