

The 2005 ICP Benchmark World Implications for PWT

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Discussion in Outline

- I. Review of 2005 Benchmark Highlights
- II. Discuss 2005 Differences from Previous Benchmarks and Derivations-WDI&PWT
- III. The China and large-versus-small country issue
- IV. Implications for PWT

I. Review of 2005 Benchmark Highlights - PC GDP

	2005 ICP	2005 WDI	2005 PWT63	Exchange Rate
China	4091	6760	6637	1721
India	2126	3452	3536	707
Japan	30290	30736	27726	35604
US	41674	41674	41674	41674

I. Review of 2005 Benchmark

The China-India Anomaly 1

Because of their importance in the world economy the revised perceptions of China and India caught media attention. Maddison-Wu are more similar to WDI and PWT.

The results were wrongly interpreted to mean that the distribution of income across countries deteriorated. Not a real change but a change in methods, more recent data and the like.

Poverty levels affected too: Prasada, Angus, and Erwin will be solving that problem next week.

Also perceptions of size of world regions, OECD up and Africa and Asia down.

I. Review of 2005 Benchmark

The China-India Anomaly 2

Beginning with any snapshot year compared to India or the US, official growth of China rates produce implausible results going very far forward or backward. One problem with earlier estimates.

Skepticism about Chinese growth rates is met with well reasoned support of official statistics, so this is not a settled issue. Leave further discussion to Harry Wu.

India benchmarks in 1980s and China basis even weaker, so presumption is that 2005 is a major improvement over Kravis-Rouen, etc.

II. Differences of 2005 from Earlier Estimates-WDI&PWT

- a. Better monitoring of item qualities and price collection within regions
- b. Very thorough validation of Ring country prices by Global Office
- c. Different Methods of Linking Regions
- d. Use of country or Region in aggregation
- e. Differences with PWT in terms of Net Foreign Balance and Aggregation

Ila. Better monitoring of item qualities and price collection within regions

1. Item specification and monitoring of price submissions has been thorough in the EU and the OECD in earlier benchmarks but not so in countries in other regions.
2. In 2005, non-OECD regional monitoring of price collection was significantly better than earlier rounds.
3. Further, a framework has been established to make product specification simpler in future ICP comparisons. Standard Product Description.

Iib. Validation of Ring country prices by Global Office

1. In contrast to Regional prices, all Ring Country prices were made available to the GO and quite thoroughly reviewed.
2. In fact one concern was that relative prices of Ring countries within a region were not always the same as shown in the Ring.
3. In retrospect, some countries did not turn out to be very satisfactory, though it is not clear if this introduced any clear bias in the results.

IIC. Different Methods of Linking Regions

1. Use of 18 Ring Countries (Core Countries in 1980) in contrast to Linking through one country (e.g., Japan in 1985), or other Star systems. However, star used for CIS and OECD.
2. Basic Heading Level linking improved as per Erwin
3. However, fixity constraint retained.
4. Further, government, housing, health and education were not treated the same in each region, an issue for the next slides.

Iic. Regional Treatments of Non-priced Services

Many services in the health, education and government service sector are not sold in the market and by convention are valued at the cost of inputs.

In ICP comparisons past practice has been to use the ratio of input prices as the PPP. Salaries of grade school teachers with a college degree might be the PPP for primary education.

For lack of an alternative, it has been assumed that labor productivity in the same occupation is comparable across countries..

With a much more diverse set of countries, Asia, Africa and W. Asia chose to make a productivity adjustment based on capital per worker for the whole economy. This productivity adjustment or PA, was applied within education, health and general government.

Within regions, this could have the effect of reducing the range of pc GDPs across countries by 10 to 20% compared to the practice of not making a PA as in previous benchmarks, the WDI and PWT.

Iic. Rental Services from Residential Housing

Plan was for countries to either assume a. rents from a survey represented services from owner occupied dwellings or b. make quality adjusted. quantity comparisons across countries or both.

Again, Asia did not follow this approach but assumed per capita housing volume of housing was the same as the rest of consumption.

Latin America used volumes, Africa followed Asia, and W. Asia and OECD/CIS did volumes and rentals.

This dis-similarity of treatment of housing across regions has no predictable bias. However, it means that volumes cannot be meaningfully compared between LA and OECD/CIS and the other Regions.

It appears that quantity comparisons, which are essentially unit values with very rough groupings by quality, overstate housing volumes compared to market surveys for low versus high income countries.

IId. Use of Country or Region as Unit in Aggregation 1

1. Regions in the past have been linked through individual countries, allowing volume comparisons at the basic heading level only; these are no longer made public, though are available for research.
2. In 2005, the unit of aggregation was the Region. That is the sum each heading across the countries for each basic heading was the unit of aggregation. Using regions directly produces linking factors across the regions, factors that were previously derived from individual country results. Indirect 60% vs Direct 40% in EKS:
3. In this approach, the relationship between countries in different regions makes no direct use of country information, e.g., Brazil, Russia and China

IId. Use of country or Region as Unit in Aggregation 2

4. When individual countries enter the aggregation their relative prices directly affect the final comparison with countries outside their region. On reflection, this seems to be of increasing importance in understanding the world economy and important countries like the BRICs. If the OECD ultimately includes the BRICs, this point may be moot.
5. When Regions have non-comparable treatments of major headings like housing, health, education and general government, the case for using countries as the unit of aggregation seems even more important.
6. In any event as the detailed BH data are made available we can better evaluate the merits of the both approaches.

Paasche-Laspeyere Spreads in Upper and Price Similarity Indexes in Lower Diagonal

Region	Asia	LAC	Africa	OECD	CIS	W.Asia
Asia	1.00	1.28	2.06	1.60	1.74	1.34
LAC	.935	1.00	1.42	1.62	1.71	1.42
Africa	.922	.938	1.00	3.00	3.17	2.13
OECD	.824	.867	.790	1.00	1.07	1.76
CIS	.794	.847	.764	.979	1.00	1.67
W.Asia	.898	.929	.891	.857	.857	1.00

Ile. Differences with PWT in terms of Net Foreign Balance and Aggregation

PWT separately values the NFB at the PPP for Domestic Absorption (C+I+G), while the 2005 ICP uses the XR. Clearly the Feenstra,et.al. proposal of separate PPPs for X and M is still better, though not quite there. Effect depends on PPP and sign of NFB, e.g., China, India and Ireland

We can say something about the different aggregation procedures as given in the next slide. Results are given for 6 Regions, where Egypt is in Africa and Russia in the CIS.

Regional Shares of Population and World Output Using Alternative Aggregations Methods

Region	Pop	ExRate	EKS	G-K
Africa	13.5	1.9	3.3	3.6
Asia/Pacific	54.6	11.0	21.9	23.4
CIS	4.0	2.2	4.1	4.4
OECD	20.1	79.9	63.2	61.5
S. America	6.0	3.6	5.6	5.2
W. Asia	1.8	1.4	1.9	1.9
Total	100.0	100.0	100.0	100.0

Ile Aggregation Comments

EKS is done over 5 regions and CIS broken out later.

G-K is done over the 146 individual countries...Egypt and Russia?

Note exchange rate conversion does not depend on methods of PPP estimation or expenditure detail for basic headings

Difference of exchange rate and EKS or GK much more than between EKS and GK

III. Rural-Urban and Regional Price Differences in PPP Studies-1

1. In principle countries collect national average prices, usually adjusting collected urban prices by group factors from benchmarks
2. Most differences in services and housing, not commodities
3. The differences between rural and urban prices obtained for the 11 cities in China was very low
 - In the US, differences are less between rural and urban than by regions, a range of 80-130. Expectation is that the range would be as large in China.
 - However, is not really a China problem. For China at least, we know where the prices were collected, but it is not clear that their prices necessarily represent national prices.

III. The large country problem for price collection and comparison-2

4. Most large countries do not try to cover their countries in the CPI because prices move in step over time. The US for example uses 38 urban areas, Brazil about 18, and India perhaps 40.
5. Large countries in the EU collect all prices except rents in urban areas
6. S. America was only urban
7. India attempts to obtain rural prices as do most African countries
8. Problem is that the CPI coverage is national in HK, Luxembourg but far from it large countries where site rents drive service prices.

IV. Implications for PWT

- Will produce a 2005 update on old benchmarks for those doing replications.
- Put together a 2005 PWT based on new benchmark when detailed results become available, with explanation of differences in treatment including fixity
- Offer official and other version of China's growth rates
- Consider alternative aggregations and growth rates
- Exports and Imports?
- Production side?
- Breakdowns of consumption?