'Differences between two GDP series minimal'

The back series data of GDP released recently by a panel of experts has evoked sharp reactions among political circles and experts. **N R BHANUMURTHY,** professor of economics at the National Institute of Public Finance and Policy, and the author of the series, presented in a report to the National Statistical Commission, explains to **Abhishek Waghmare** various aspects of the methodology. Edited excerpts:

The methodology you have used to formulate the back series has sparked a heated political debate. Is it an appropriate methodology?

As discussed in the committee report, this is just one of the three suggested methods. Ideally, one would have gone back to the actual databases used for calculating the new series, which CSO is already attempting. In the meantime, we have used the second best possible method, this is, the production shift approach.

Q&A

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As base year changes, some items become irrelevant in the economy, while some become more and more important. So the change, or difference, in the two series (2004-05 and 2011-12) is the value added by the addition of new items and deletion of old and irrelevant items. We have taken this value as the reference, and assumed that this value has been added gradually from 1993-94 till 2011-12, and using a simple equation, we have redistributed this value in each year.

How robust are these numbers at the aggregated and sectoral levels?

The difference between new and old series for value added in 2011-12 is the highest in 2011-12. The redistribution gradually reduces as we go backwards in time for every year. In other words, the contribution of new items is assumed to be zero at beginning of period (1993-94) and it increases over time.

Further, under the new GDP series, there has been reallocation of a few items from one sector to another, from services to manufacturing sectors. Hence, there could be an increase in the volatility in the growth at the sub-sector but at aggregate levels, such volatility would not show up.

How is it different from the CSO approach?

As far as I know, in the past, the Central Statistics Office (CSO) used to do both: generate immediate past GDP from the original data sources. Beyond a certain point, they use a simple method called splicing by retaining the same growth rate.

Here the problem is, as the growth rates are retained, the contribution of the new items in the beginning of the period (1993-94, in this case) would be larger, which may not be logical!

We all know, in the new GDP calculations, the CSO is using MCA-21 (Ministry of Corporate Affairs) data to calculate GDP with 2011-12 as its base. But MCA-21 data is available only for the years after 2006-07, and they propose to use other existing databases to get the revised up to 2004-05. Beyond that, my guess is that they may use the simple splicing method, which could be a problem. In any case, we have to wait and see how that series would look like.

This is the first-ever GDP back series for 2011-12 that has been put in public domain. What are the biggest takeaways from it?

Researchers working on Indian macroeconomics have been looking for the back series for more than three years. I am told such delay had not happened during the past revisions. Based on our aggregate numbers, one can safely suggest that the differences between the two series is minimal and within the +/- 5% standard deviation we allow for any estimations. It is certainly less than the extent of revisions that MoSPI suggested for 2012-13 and 2013-14.

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In the absence of the back series, one could imagine the difficulty in, say, forecasting GDP for the current year.

What are the limitations of the production shift approach you have used?

One of the reasons for this is that as we adjust the difference asymptotically backwards and it has some systematic volatility, it adds up to the already in-built volatility in the old series.

Further, this is also due to reallocation of some of the economic activities between industrial and services sector in the new series. We are also superimposing these definitional changes (on which the new series is based) backwards, using a simple formula. Thus, the sectoral or disaggregated new series is comparable to the old series with this limitation, while at the aggregate level these definitional changes even out.

What could be the alternatives to devise a methodology to obtain a back series?

The alternative methodologies are discussed in the report. One is to get into relevant databases used in the new GDP calculations, which CSO is attempting. And others being simple splicing method and converting the new series consistent with old base year. We will look forward for the official estimates.