Measuring GDP: Confusion worse confounded

A closer analysis of the MCA-21 data will give us a better picture of manufacturing and GDP growth

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A recent paper by Arvind Subramanian has once again racked up the issue of India's GDP estimation methodology as well as the databases used. In his paper, first Arvind computes the correlations between GDP growth and 17 'real' indicators for the two periods 2001-2011 and 2012-18 and shows how these correlations have changed from one period to another giving rise to a prima facie ground for doubting the estimates of growth.

One can go along with him up to this point. He then moves from correlations to causation and gets into some cross country and cross-sectional as well as panel regressions. With this, he comes to the conclusion that India's GDP growth is overestimated by 2 to 2.5 percentage points.

Arvind is not the first one to raise this issue. But where he overstretched himself is that by using these regressions he put a number on the overestimation of growth, which naturally hit the headlines. Following this, many have criticised the findings, some of them rightly while some being very personal. We also have our reservations on the regressions used by Arvind. But what is needed is to find out where and how the over estimations have emerged.

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Changes in estimation

First of all, the impact of the revision in the GDP methodology was on levels and in nominal terms and the growth rates are by-product of these levels. Indeed, for the readers who are not tracking this issue from the beginning, the new series (2011-12) actually under estimated the GDP in levels. For the year 2011-12, there was an underestimation of about 2.3 percentage points (from 83.9 lakh crore in the old series to about 82 lakh crore in the new series).

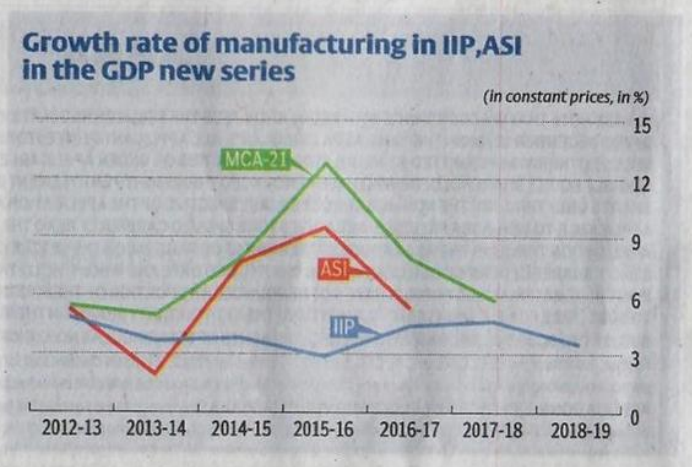
There were also definitional changes that resulted in rise in the share of manufacturing by about 4 percentage points while the share of Trade, hotels & restaurant declined. Further, with the change of databases used as well as due to change in the rates and ratios (especially with the use of results of NSSO's Unincorporated Enterprise Survey) used for estimation of unorganised sector's contribution, there are difficulties in comparing the estimates of 2011-12 series with that of old series.

Concerns over regressions

Where Arvind seems to have missed out is that drivers of GDP growth are time varying and if one looks at what determines the GDP, the indicators could be very different from what he has used in panel estimations. In fact the independent variables in the regression equations are not really the determinants of growth. The cross country regressions are even more of doubtful value. For example; a production function approach will emphasise on the role of capital and its productivity.

Be that as it may, we are still not clear about how robust are our GDP estimations. One constraint in answering this is the non-availability of MCA-21 data, which are used for estimating both organised manufacturing and certain services output. MCA data replace ASI data that have long been used for estimating manufacturing output. The Ministry could do well in releasing the MCA data so that researchers can work on them. A comparison of the MCA manufacturing output growth with ASI numbers will be rewarding. We look a little more closely at the performance of the manufacturing sector because it is in relation to this sector, the methodology of estimation has undergone a big change.

Measuring manufacturing output has led to conetitous debates in the country REUTERS



Behaviour of manufacture growth

The graph and table given below show that the growth of manufacturing output based on MCA-21 show a higher growth rate compared to the numbers based on ASI. We think this seems to be one critical issue that needs greater attention. We are not against using MCA data. We are also conscious of the problems associated with ASI data as well as the rates and ratios used.

Some more research on MCA-21 data would help in removing ambiguities in manufacturing and therefore GDP estimations. In the past, manufacturing output was estimated initially using Index of Industrial Production (IIP). Estimates from IIP on manufacturing growth show no relationship with ASI or MCA estimates. The MCA and ASI data show growth rates above IIP based growth rates. This raises a question of the usefulness of IIP data.

Estimation of GDP and its growth rate is extremely important and these are important indicators of the performance of the economy. Ambiguities and doubts on these are not desirable. Indirect methods as one adopted by Arvind are not that meaningful. We need to take a close look at the new databases that are being used such as MCA 21 and see whether they need cleaning up.

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