‘Measuring India’s GDP Growth,’ by R. Nagaraj and T.N. Srinivasan – some comments on the paper
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July 12, 2016
WHAT THE PAPER CONTAINS

- A detailed, comprehensive discussion on the new National Accounts series – methodology and the on-going debate on the reliability of estimates.
- Weaknesses of the methodology being adopted for the estimation of GDP in the new series are pointed out.
- Some recommendations for improvement are made.
- It is a valuable and welcome contribution to the relevant literature.
Main conclusion of the paper and overall assessment

- “Is it really worthwhile pursuing the new series as is? In our view, no.”
- Substantial changes are needed, after a statistical audit of the new National Accounts series is done.
- “The principal problem has been the use of the MCA-21 database.” The problem is arising because the MCA database is based on the responses of self-selected companies; hence, the bias caused by self selection needs to be contained/ corrected for.
- Some might feel that the use of MCA-21 data is a major advantage of the new series. The paper holds this to be the biggest problem.

The paper should have devoted much greater attention to: what needs to be done to improve the new national accounts series. Also, for a balanced evaluation, there should be adequate appreciation of the methodological improvements that the new series has introduced.
At certain places, the critical evaluation of methodology of new series could have been made more insightful and useful – especially where the growth figures differ greatly between the new and old National Accounts series.

Consider the case of trade. The growth rate in real GVA in trade, repair, and hotel and restaurant in the new series far exceeds that in the old series.

- 2012-13: 11.0% as against 4.36%
- 2013-14: 7.2% as against 1.0%
- 2014-15: 10.7% (growth in old series, NA)
- This is mainly traceable to trade.
Trade is predominantly in the unorganized sector. The benchmark GVA for 2011-12 is being moved over time by using sales tax revenue as an indicator.

It would have been insightful to discuss what was the indicator for extrapolation in the previous series. Is the use of ‘sales tax revenue’ for extrapolation an improvement over the indicator being used earlier?

If the answer is no, and ‘sales tax revenue’ is judged to be a poorer indicator than what was being used earlier, then the reasons could have been provided.

Is the high rate of growth in real GVA in trade observed in the new National Accounts series essentially due to the use of sales tax revenue as an indicator for extrapolation? This could have been investigated.
HOUSEHOLD SECTOR VERSUS UNORGANIZED SECTOR

- At several places, it is stated in the paper that the relative size of the unorganized sector in the new National Accounts series has gone down.
- On page 14: “..in terms of institutional categories, size of PCS has got enlarged by 11 percentage points of GDP, with a corresponding reduction in the size of household or unorganised sector (relative to GDP).” PCS refers to corporate.
- There is no publically available data to compare meaningfully GVA of unorganized sector in the new series with that in the old series. Hence, it is doubtful if a good basis can be provided for the claim that the GVA share of the unorganized sector has gone down.
Consider unorganized manufacturing. In the previous National Accounts Statistics (NAS) series, GVA in manufacturing was being split into registered (=organized) and unregistered (=unorganized).

- At current prices, for 2011-12 (Rs 000 crore): registered, 886 and unregistered, 351.

In the new series, a part of the unregistered (units maintaining accounts, or quasi corporations, QCs) has been taken out and merged with the other group.

- At current prices in the new series, for 2011-12 (Rs 000 crore): PCS, 1089 and household, 180.

Unless the estimate for QC portion is available separately (split into ASI and non-ASI), the size of the unorganized (unregistered) portion of manufacturing between the two series cannot be compared.

Providing separate tables for unorganized component of QCs in NAS reports would be useful. Possible recommendation.
NEED TO RECOGNIZE ADEQUATELY HOW THE NEW SERIES HAS SOLVED CERTAIN PROBLEMS IN THE OLD SERIES

- One problem with the 2004-05 series is that the use of IIP for computing growth rate in manufacturing GDP has often caused an underestimation of manufacturing GDP growth for the most current year, which used to get corrected later when ASI data become available.
  - Example: GDP mfg growth in 2011-12: initially 2.7%, later 7.4%; aggregate GDP growth, 2011-12: initially 6.2%, later 6.7%.

- In the new series, this problem has largely been solved.
- The paper does not adequately acknowledge this improvement that has taken place in the new NAS series.
MCA-21

- The use of MCA-21 data is a major change in the new series – use of much bigger sample of companies than being done in the previous National Accounts series. From 2500 companies to 5.24 lakh non-financial private companies.
- The paper notes that the GVA estimate is based on data for companies that are reporting, and an adjustment for non-reporting companies is being done based on the paid-up capital (PUC).
- A valid point made in the paper is that the blowup factor is too simplistic. The blowup factor should be built by taking into account the self-selection process – the possibility that the companies performing poorly are more likely to be the ones that are not reporting.
- How this can be done is a moot question. The paper suggests that income tax data could be utilized. This is a promising line, but the computational procedure may be quite complicated and burdensome/difficult.
MCA-21

- But, simply on the basis of the above consideration, it does not seem justified to assert that the use of MCA-21 data is the biggest problem in the new NAS series. [by that logic, was not the use of 2500 companies data for making estimates for services the biggest flaw in the earlier series]

- The MCA data set has dominant coverage – about 85% in terms of PUC. The blow up factor is about 1.15. If it is assumed that the non-reporting companies have zero GVA, the blow up factor would be 1.0. If allowances are made for self selection, the blow up factor will be less than 1.15, say 1.10.
MCA-21

- If a slightly lower (presumably correct) blow up factor is used, it may impact the level of GVA slightly, but why should that impact (reduce) the estimated growth rate in GVA. This needs discussion in the paper.
- Since several critics feel that the new series is overstating growth, one may ask why should the bias caused by self selection in MCA data always push up the measured growth rate.
An important question is whether there is something inherent in the MCA-21 data base that will cause over-estimation of GVA growth. A detailed examination of this issue should have been done in the paper.

Is it because the growth rate achieved by non-financial corporate sector firms is applied to QCs? How large is this impact?

- To make an assessment, a comparison can be made between GVA growth rate in QCs within and outside ASI with that for PCS within manufacturing.
MCA-21

- An important change that has occurred is that GVA estimate for organized manufacturing in the old series was based on data on ‘establishments’, it is now based on data on ‘enterprises.’ Manufacturing enterprises may have services establishments. This is now getting counted in manufacturing.

- This probably explains why the share of ‘manufacturing’ in GDP has gone up, as includes services provided by manufacturing enterprises.

Trade carried out by manufacturing companies, which has now become part of “manufacturing”, was earlier covered in “trade” because of establishment approach. CSO, 2015
The fact that manufacturing enterprises now include services could push up the growth rate inasmuch as growth in services activities is higher than that in manufacturing activity.

One difficulty is that while manufacturing establishments can easily be classified into two-digit NIC, for companies / enterprises this is difficult, especially when one is working with a very large number of firms. The paper has not paid attention to this problem being faced in the new series. This may impact the estimates of manufacturing GVA at disaggregate level.
RELIABILITY OF GDP GROWTH NUMBERS FOR 2015-16

In discussing the reliability of GDP growth figures, the paper has mostly confined itself to the data till 2014-15. However, it is the growth figures for 2015-16 that has come under criticism lately – views have been expressed that these growth figures are exaggerated.

Consider the growth estimate for manufacturing. According to the new NAS series, the growth rates in manufacturing real GVA in 2012-13, 2013-14 and 2014-15 were 6.0, 5.6 and 5.5 percent, respectively.

According to the CSO press release of May 2016, the growth rate in real GVA in manufacturing in 2015-16 was 9.3 percent.
RELIABILITY OF GDP GROWTH NUMBERS FOR 2015-16

- Is the sharp acceleration in the growth rate in manufacturing real GVA from 5.5 percent in 2014-15 to 9.3 percent 2015-16 realistic?
- Since the GVA figure for 2015-16 is PE and that for 2014-15 is 1\textsuperscript{st} RE, one will have to wait till the time better data (bigger coverage) for 2015-16 become available (refer Rajkumar, 2016, June 25).
- The fact that IIP-manufacturing growth rate in 2014-15 was 2.3\% and that in 2015-16 was 2\% does not preclude the possibility of a marked acceleration in manufacturing GVA growth as IIP data are known to be grossly understating manufacturing growth.
GROWTH IN CREDIT FLOW

- One piece of empirical evidence that is consistent with the acceleration in growth in GVA manufacturing in 2015-16 is that there has been a significant acceleration also in growth in credit flow (adjusted for inflation) (Source RBI).
- The graphs in the next slide show growth rates in non-food credit and gross flow of credit from commercial banks in different years after deflation is done by the WPI (and by WPI excluding crude and petroleum products).
- It is evident that credit flow growth significantly accelerated in 2015-16.
Does this mean that growth in credit flow is unconnected in manufacturing sector growth? Or, should we infer that manufacturing growth has indeed accelerated in 2015?

The growth in credit flow graph in the paper should take into account inflation, which is not done.
ESTIMATION OF PRODUCTION FUNCTION FOR ESTIMATING MARGINAL PRODUCTIVITY OF DIFFERENT CATEGORIES OF WORKERS

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<tr>
<th>Recommendation</th>
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<tbody>
<tr>
<td>Use nested CES function instead of nested Cobb-Douglas; this can be done for checking robustness of the estimates</td>
<td>This could have been done for checking robustness. However, nested CES would be difficult to estimate as it involves non-linear estimation with many parameters.</td>
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<tr>
<td>Deflate value added and capital for estimation of production function.</td>
<td>Probably there is no pooling of data for different NSS rounds. Instead, estimates are being made separately for different rounds. Deflation of value added and capital data is therefore not necessary.</td>
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THANK YOU