

# Quarterly GDP Estimation

## Can It Pick Up Demonetisation Impact?

R NAGARAJ

The latest quarterly estimates of gross domestic product by the new National Accounts Statistics methodology are once again in the news for the wrong reasons. With inadequate accurate information available on a quarterly basis, the estimates hardly represent the state of the economy and reflect the effects of demonetisation over the October–December 2016 period.

In principle, demonetisation—which in the recent case meant sucking out 86% of the value of cash in circulation, leading to a sharp contraction in money supply—would reduce economic activity in the short run. As critics of demonetisation have argued, it has led to a massive retrenchment of workers and reduction in production, particularly in the unorganised (or informal) sector accounting for over 90% of employment and over half of domestic output and which is also a sector in which transactions are almost entirely based on cash. Demonetisation's proponents, however, have contended that it would cleanse the economy of black money, make transactions more formal and digital, hence improve tax collection, and enhance long-term growth prospects.

Since the demonetisation on 8 November 2016, numerous news reports and some quick surveys have demonstrated its widespread adverse impact most of all on daily wage workers. Many large consumer goods firms (such as Nestlé) and industry associations (such as the one of cement producers) have also reported a steep decline in quarterly sales. Financial brokerages and credit rating agencies have variously forecasted 1%–2% fall in domestic output in the third quarter (Q3), that is October–December 2016, as a result of the policy shock. Dismissing such claims as anecdotal, the government took credit for speedy replenishment of the new currency notes, reportedly restricting economic loss and hardship for the poor.

According to the Central Statistics Office's (CSO) 28 February press release in Q3, in real terms, gross domestic product (GDP) grew at 7% along with a 11.2% rise in private final consumption expenditure (PFCE or consumption for short) (over corresponding estimates in

the previous year). The Q3 growth rate is only marginally lower than that in Q2, but consumption expenditure witnessed a huge jump. These numbers surprised (or baffled) many with predictable responses: the government claiming vindication of its policy stance with critics questioning the official estimates. Many now predict that the true effect of the demonetisation will be evident in the next quarter's (Q4) estimates. The Chief Statistician of India has said results of one quarter are inadequate to judge the effect of the policy.

Undoubtedly, demonetisation was a severe macroeconomic shock that occurred at a time when growth in bank credit had decelerated sharply, turning negative for some sectors such as manufacturing. Demonetisation's impact was only marginally cushioned by a spike in card-based and digital transactions, mostly in urban areas. So the puzzle is: in Q3, how could a cash- and credit-starved economy clock a growth rate of 7% and consumption growth of an incredible 11%? Is the methodology underlying the quarterly estimation appropriate to pick up the ground reality?

National income is estimated by three different methods—output (value added), expenditure, and income—all of which, in principle, should yield identical values of domestic output. Ideally (or, simplistically speaking), if all enterprises followed a double entry bookkeeping method, and periodic household income and consumption survey results are available, then estimating domestic output would be pretty straightforward.

But the real world is messy, especially a developing country, with households engaged both in production and consumption in self-employed enterprises; with a large informal sector where enterprises do not (or cannot) maintain audited books of account, and where workers are under-employed or disguisedly-unemployed. In the national accounts, output of this sector is estimated indirectly, as balance-sheet data are unavailable for a direct estimation of output. The indirect method of estimation

R Nagaraj ([nag@igidr.ac.in](mailto:nag@igidr.ac.in)) is with the Indira Gandhi Institute of Development Research, Mumbai.

is, in simple terms, the product of benchmark estimates of value added per worker (based often on dated sample surveys) and an estimate of the number of workers employed in a year (or a quarter). The recent revision of the National Accounts Statistics (NAS), which has sought to improve upon this method, still remains an indirect method.

Similarly, there is no direct estimation of household consumption in NAS. Therefore, production is taken as a proxy for consumption (after netting out consumption by other sectors), by what is known as “commodity flow approach.” This is evident from *NAS—Sources and Methods 2012*, a book of methodologies underlying the various estimation procedures, which clearly states the following:

1.91 Private Final Consumption Expenditure (PFCE): The basic data on output and prices utilized in the estimation of private final consumption expenditure are mostly the same as those used in the preparation of GDP estimates and as such the improvements/changes in data sources and coverage etc in GDP estimates are included in the estimates of PFCE. (CSO 2012: 14)

Matters get worse for the quarterly estimates as there are no quarterly primary data that go into such estimation; these are mostly derived from the annual estimates, based on some advance information and assumptions. The press note released on 28 February 2017 clearly states this:

The approach for compiling the advance estimates is based on benchmark-indicator method. The Sector-wise estimates are obtained by extrapolation of indicators like (i) Index of Industrial Production of first 9 months of the financial year, (ii) financial performance of listed companies in the private corporate sector available up to quarter ending December, 2016, (iii) Second advance estimates of crop production, (iv) accounts of Central & State Governments, information on indicators like sales tax, deposits & credits, passenger and freight earnings of railways, passengers and cargo handled by civil aviation, cargo handled at major sea ports, sales of commercial vehicles etc available for first 9/10 months of the financial year. (CSO 2017)

*NAS—Sources and Methods 2012* also offers the following details on the

“benchmark indicator approach,” mentioned above:

The production approach is used for compiling the QGDP estimates, in terms of gross value added (GVA) and is broadly based on the benchmark-indicator method. In this method, for each of the industry-groups ... a key indicator or a set of key indicators for which data in volume or quantity terms is available on quarterly basis, are used to extrapolate the value of output/value added estimates of the previous year. ... In general terms, quarterly estimates of GDP are extrapolations of annual series of GDP. The estimates of GVA by industry are compiled by extrapolating value of output or value added with relevant indicators. (CSO 2012: 298)

From the foregoing, it is abundantly clear that quarterly GDP estimates really lack suitable primary data, and hence may not truly reflect the ground reality. This could be a possible reason for the recent Q3 growth estimates failing to pick up the potential effect of demonetisation.

There are apparently more reasons for the scepticism. Some of the “fresh” data that go into Q3 GDP estimation could have other shortcomings as well. For instance, in the new NAS series with 2011–12 as the base year, (i) Index of Industrial Production (IIP) figures are used for the non-corporate manufacturing sector and quasi-corporations in the non-financial private corporate sector, and (ii) the Ministry of Corporate Affairs’ (MCA) quarterly corporate financial results for estimating corporate sector GDP.

As the IIP is based on production data of relatively large factories, can it be deemed appropriate for quasi-corporate enterprises, which are not registered under the Companies Act, but are said to maintain books of account? Whether the IIP data is a suitable proxy output of tiny proprietary and partnership firms is worth questioning.

Similarly, the quality and veracity of MCA database has been too widely debated to bear repetition here (see, for instance, Nagaraj 2015). It suffices here to raise a simple empirical query. As the press release shows, GDP grew at 12% in real terms during Q3, which seems way too high compared to what most corporate quarterly results show. To illustrate, ICRA, the credit rating agency, has reported Q3 sales growth of a mere 4.4% in nominal terms for about 1,100 (relatively

large) companies, implying very meagre output expansion in real terms. How credible are the GDP estimates which are based on seemingly shaky numbers obtained from the MCA database? Perhaps it is worth pondering.

## Conclusions

Domestic output (GDP) in Q3 of 2016–17 was 7% and PFCE was 11.2%, over the same quarter, the previous year. These estimates are expected to show the impact of demonetisation announced on 9 November 2016. The rosy growth rates for Q3 have elated the ruling dispensation, but left the critics and the financial firms (which anticipated a fall in the growth rate) wringing their hands. Both the expressions are perhaps unwarranted (or misplaced) for the simple reason that the quarterly GDP estimates are not based on quarterly primary data on output, and consumption (as widely assumed), hence the Q3 growth estimates may in fact not reflect the ground reality. The reasons for it are the following.

In the NAS, for lack of primary data, no direct estimates of production and consumption are available on a quarterly basis. The only significant “moving parts” in the quarterly estimates are (i) the IIP used for estimating output of quasi corporations and household manufacturing, and (ii) the quarterly (unaudited) corporate results as aggregated in the MCA database, hence can (and do) undergo serious revisions subsequently. Therefore, the much debated Q3 estimates for assessing the impact of demonetisation remain hypothetical since the methodology underlying the estimation of quarterly data is seriously flawed and may not pick up the underlying reality of production and consumption.

## REFERENCES

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