

Divining India's True Economic Growth

PART I

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About the Author

Dr. Anantha Nageswaran is an angel investor. He has invested in several Indian startups directly as well as through Aavishkar India Micro Venture Capital Fund, a vehicle co-founded by him. He sits on the boards of –

- a. TVS Logistics – an international logistic service solutions provider.
- b. Drishtee Skill Development Center Private Limited.
- c. Torp Control Systems, a premier EPC service provider for Solar photovoltaic systems.
- d. Kerala First Health Services – a healthcare provider in the Ayurvedic space, and,
- e. Aparajitha Corporate Servcies - end-to-end HR solution provider to various business across India.

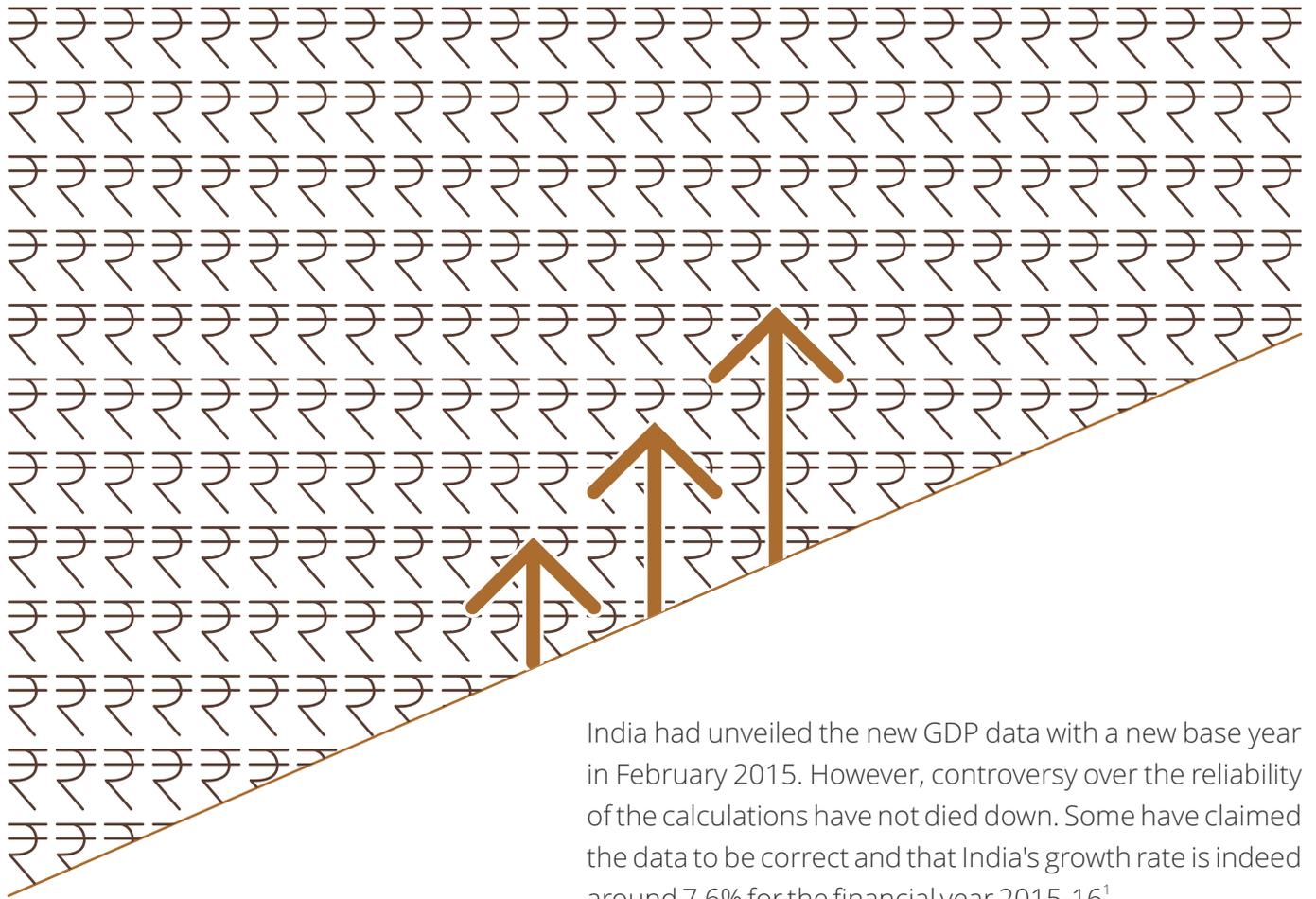
His other associations include the NPS Indian International School in Singapore, where he is a Director.

Dr. Nageswaran graduated with a postgraduate diploma in management from the Indian Institute of Management, Ahmedabad (IIM-A) in 1985. Thereafter, he went on to earn a Doctoral degree in Finance from the University of Massachusetts in 1994 for his work on the empirical behaviour of exchange rates.

A well-respected figure in the investment finance industry, he has worked at UBS and Credit Suisse in Switzerland, and later headed the Research for Asia at Bank Julius Baer & Co. in Singapore. He also served as the Chief Investment Officer of the bank for a while.

Presently, he teaches International Economics, Exchange Rates, and Financial Markets at leading B-Schools in Singapore as well as India.

Dr. Nageswaran regularly writes for his Tuesday column in Mint, an Indian daily business newspaper. He is also a regular commentator on global and regional economies in Bloomberg, Reuters and CNBC.



India had unveiled the new GDP data with a new base year in February 2015. However, controversy over the reliability of the calculations have not died down. Some have claimed the data to be correct and that India's growth rate is indeed around 7.6% for the financial year 2015-16¹.

Some of the critics suggested² that, under the new method, the Indian GDP growth figure exceeded that of China's - as though that constituted both necessary and sufficient proof for the numbers to be suspect. The fault in that rationale stems from overestimating China's growth, which in actuality is at best, at a rate of 4%. Even if India were not growing at 7.6%, even the most conservative evaluation would peg the figure at 5% to 6%. Therefore, skepticism on the numbers notwithstanding, India's GDP growth rate does exceed China's.

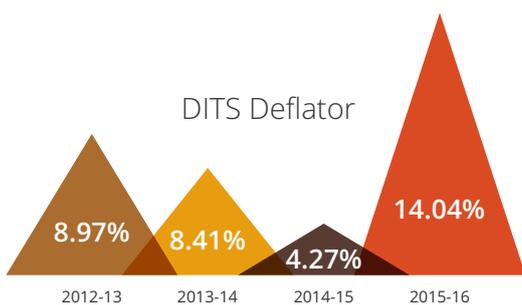
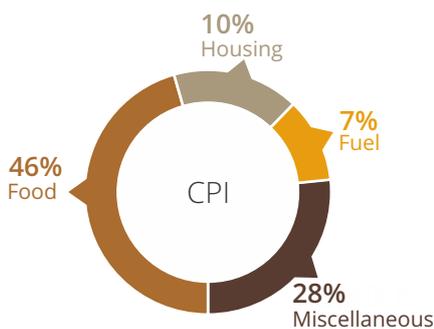
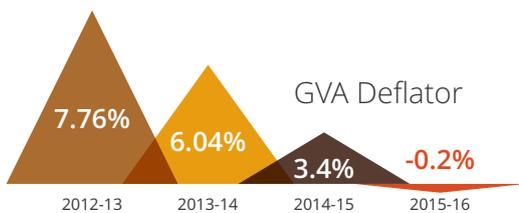
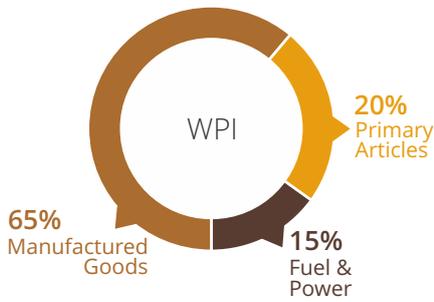
As per the provisional estimates of annual national income released by the Ministry of Statistics and Programme Implementation (MoSPI) on May 31, 2016, India's nominal GDP has crossed the coveted USD2-trillion mark. Here is how: the USDINR exchange rate average for the year 2015-16 approximately being 65.00, the expected USD nominal GDP for FY16 will be USD2.075trn. This is calculated as projected nominal GDP divided by average exchange rate. However, real GDP using 2011-12 prices will only be USD1.734trn. There are many intricacies to understanding the GDP growth numbers.

¹ <http://indianexpress.com/article/opinion/columns/no-proof-required-believe-it-gdp-data-is-right/>

² <http://www.thehindu.com/opinion/lead/why-76-growth-is-hard-to-square/article8224204.ece>



Deflator



- One such complicating parameter is the Gross Value Added (GVA) deflator. It appears that CSO typically uses Wholesale Price Index (WPI) as the basis for GVA calculation (from nominal to real). That needs explanation: WPI assigns 20% weight to Primary Articles, 65% to manufactured goods and 15% to Fuel & Power.

- As per the Ministry of Statistics and Programme Implementation (MoSPI), GVA weights for Primary, Secondary and Tertiary sectors are 20%, 27% and 53% respectively for the year ending 2014-15³. WPI weights do not give importance to the Services (Tertiary) Sector as GVA does. India's WPI index has been rising slowly, if at all, because of the steep fall in the prices of mined and manufactured goods. Hence, using WPI as the basis to deflate GVA overstates the real GVA figure.

GVA Deflator-based calculation of inflation has been pegged at 7.76%, 6.04%, 3.4% and -0.2% for the FY13, FY14, FY15, and FY16 (estimated). Yes, it looks like a deflation trend in the prices of the economy!

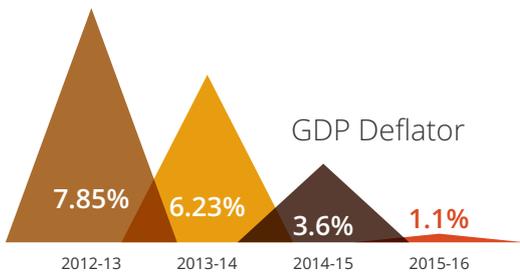
- CPI is not a proper basis either. CPI weights are roughly 46% for Food, 10% for Housing, 7% for Fuel and 28% for miscellaneous items. It is unclear if CPI captures the prices of the Tertiary Sector correctly and accords it the weight that it carries in GVA calculations. One guesses not.

- Then, there is the Deflator for 'Indirect Taxes Less Subsidies' (DITS or the Difference between Indirect Taxes less Subsidies). $GDP = GVA + DITS$. Hence, $GDP\ deflator = GVA\ deflator + DITS\ deflator$. Please note that the weights for GVA and DITS are not equal. GVA is slightly over 90% of GDP.

The deflator for DITS has been rising at the rate of 8.97%, 8.41%, 4.27% and 14.04% for the years mentioned in (2) above. There is not much information on the DITS deflator, however, from CSO.

³http://mospi.nic.in/Mospi_New/upload/nad_PR_29jan16.pdf

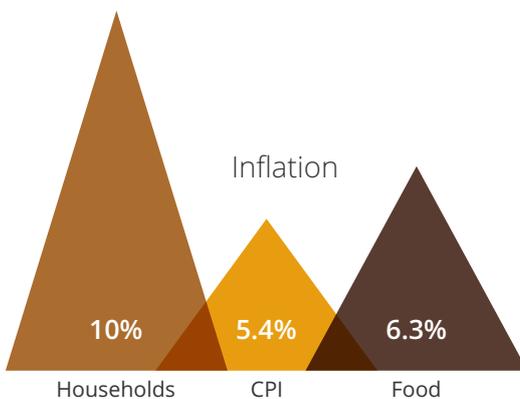
- Hence, inflation as per the GDP deflator is 7.85%, 6.23%, 3.6%, and 1.1% for the years leading up to 2015-16. So, as per the Central Statistics Organisation calculations, the Indian economy has barely avoided deflation with a 1.1% inflation rate. Therefore, as per these estimates, India's expected nominal GDP growth rate for 2015-16 at 8.7% and the real GDP at 7.6%.



In its budget for 2015-16 presented in February 2015, it is useful to note that the Government had originally assumed a nominal GDP growth rate of 11.5% in the budget for FY16. In absolute terms, the CSO now projects a nominal GDP of 13,576,086 crores for the year 2015-16 against the BE of 14,108,945 crores. Of course, the government had still managed to meet its fiscal deficit ratio for the year thank, mainly, to levies on fuel products.

The fact that nominal GDP expectation is low need not be a problem of deflator but it could be. It all depends on the prices used to calculate value (Volume x Price). If WPI prices are used as proxies, then, it can understate nominal GDP too. However, surely, the use of WPI does have the effect of overstating real GDP growth.

We do not have much information from the CSO on the GDP deflator, in two of its recent press releases dated 29 January 2016 and 8 February 2016.



- RBI has flagged the issue of various deflators (Box II.3: 'GDP and GVA Deflators') and the various inflation readings they send out, in its September 2015 Monetary Policy Statement⁴. This note merely elaborates on it, with the aim of explaining it better.

- Finally, with inflation expectations of Indian households remaining at just below 10%⁵, with CPI inflation at 5.4% and the food inflation rate at 6.3%⁶, it is hard to imagine that the inflation rate as per India's GDP deflator is just over 1%.

- India needs a good, robust and reliable GDP Price Index that mirrors the GDP sectors and weights.

⁴<https://www.rbi.org.in/scripts/PublicationsView.aspx?id=16691#BI13>

⁵See <https://www.rbi.org.in/Scripts/PublicationsView.aspx?id=16827> for the Survey of Households on inflation expectations conducted in the quarter ending March 2016.

⁶Both figures are annual inflation rates in April 2016



Gross Value-Added from Manufacturing

As per CSO, the share of manufacturing (in current prices) was only 27%

- We should remember that, as per CSO, the share of manufacturing (in current prices) was only 27% and hence, even if its estimate of real growth in Value Added in Manufacturing is 9.5%, it does not fully explain the 7.6% real growth projection for the whole economy for 2015-16.
- Since its methodological revisions, the CSO has decided to use the Index of Industrial Production only to proxy the manufacturing output from the organized sector with a weight of 30%. The remaining 70%, from the Organized Sector, is from its expanded corporate database of the Ministry of Corporate Affairs (MCA). Perhaps, they had explained the rationale for not using IIP for the calculation of Manufacturing Value-Added in total, at the time of announcing the methodological changes.

Nevertheless, it is hard to know how many of companies file returns on time thereby enabling CSO to calculate their output value. Sandeep Dixit of Nest Egg Capital stated, in a private correspondence on a different matter, that only 5000 companies had filed returns for 2014-15 in February 2016! It was 29% of the number of companies. He was basing it on the database at [Ace Analyser](#). Hence, it is somewhat inconceivable that we have even reasonably reliable information from Indian companies on their Value-Addition in Manufacturing for 2015-16.

Only 5000 companies had filed returns for 2014-15!

- Surjit Bhalla had calculated Value-Added from Manufacturing at 9.5% (nominal) based on 90% share for labour compensation, which was rising at 8.5%, and profit growth of 18% (with a 10% share) based on a sample of 120 manufacturing companies from BSE 500 Stock Index. Using these weights and growth rates, he arrives at a growth of nominal value-added from manufacturing of 9.5%. That is actually inconsistent with the 8.1% growth reported by CSO as GVA from Manufacturing in nominal terms.

Among the top ten companies of BSE 500, only two are classified under 'Industrials'



- His numbers raise several other questions. If labour compensation was growing at 8.5%, it is puzzling that the sector had growth in nominal value-added of only 8.1% (nominal) while the real value-add growth rate was 9.5%. It does not make sense. With wage growth of 8.5% and profit growth of 18%, how did the sector experience a rate of deflation of 1.4% in Gross Value-Added?
- Further, it is not clear if BSE 500 index has 120 manufacturing companies. For example, among the top ten companies of BSE 500, only two are classified under 'Industrials'.
- IIFL, with its coverage of 182 companies, reported that 'Industrials' sector had Profit After Tax (PAT) growth rate of 2.6% y/y in the quarter ending September 2015 and just 0.1% y/y in the quarter ending December 2015. It is difficult, if not impossible, to imagine 18% profit growth for manufacturing companies in 2015-16.



MCA Database

A detailed analysis⁷ of the problems with the new MCA database was made by Prमित Bhattacharya, in July 2015:

What he wrote about the MCA database is reproduced below:

Many companies which are registered with MCA are inactive, or are shell companies, or they do not file returns

The earlier series derived the corporate sector estimates based on a sample survey of companies conducted by RBI. This sample consisted of only a few thousand companies, and hence the estimates were blown up (or multiplied) in proportion to the coverage of the paid-up capital of sample companies to the total number of companies registered with the ministry of company affairs (MCA). The problem with such estimation lay in blowing up the sample estimates because it was widely noted that many companies which are registered with MCA are inactive, or are shell companies, or they do not file returns.

A sub-committee appointed by the CSO to examine the methodology suggested the use of a new database, MCA-21, to construct the new GDP series. But instead of using the estimates generated from the database directly, as agreed upon by the sub-committee, CSO scaled up even these estimates to account for non-reporting companies, which had declared returns in earlier years. This was done on the advice of an advisory committee. This change has been questioned by an independent member of the sub-committee, R. Nagaraj, economist and professor at the Indira Gandhi Institute of Development Research, Mumbai. Higher growth in 2013-14 is largely on account of the discredited scaling up methodology, wrote Nagaraj in a May EPW article.

The lack of detailed data for the larger set of small companies makes it difficult to trust the corporate sector estimates

Agreeing with Nagaraj, former RBI official Subbarao pointed out that although the MCA-21 database is much larger than the sample covered by RBI, detailed accounts are available for only a small set of companies. The MCA-21 database consisted of half a million companies but detailed accounts were available only for around 30,000 firms. The lack of detailed data for the larger set of small companies makes it difficult to trust the corporate sector estimates, argued Subbarao. He pointed out that the new database seems to suggest that the savings-income ratio for unlisted firms was higher than the savings-income ratio for listed firms (which include most big firms in India), which does not appear convincing.

We should note that he has relied on Prof. Nagaraj's work which had appeared in Economic & Political Weekly earlier.

⁷See <http://www.livemint.com/Opinion/RX0mViNtHnUwmLbYMzXsDI/Why-Indias-GDP-controversy-refuses-to-die.html>



Tailpiece

As for the GDP growth data for earlier years, it is pertinent to recall the work⁸ of Andy Mukherjee and his key finding, cited by Primit Bhattacharya:

As an analysis of 189 nations over 33 years by Reuters columnist Andy Mukherjee showed, never has any large economy had such a handsome improvement in growth even while recording a big improvement in external balances as India claimed to have had in fiscal 2014.

⁸<http://in.reuters.com/article/india-gdp-breakingviews-idINL4N0VC1R420150202>



In Conclusion

India is growing faster than China, regardless of skepticism over India's growth estimate

India is unable to report GDP growth rate for 2011-12

India's true economic growth is unlikely to be as high as 7.6% for the year ending March 2016. Even if it were subsequently revised lower to 7.2%, it would be still high.

India is growing faster than China, regardless of skepticism over India's growth estimate. If India's estimates are bad, China's growth numbers are worse.

CSO has work to do on GDP, GVA and DITS deflators. Or, if they have done the work, they should share it with the public.

Also, CSO has to create the time-series of nominal and real GDP with 2011-12 as the base year. As things stand, India is unable to report GDP growth rate for 2011-12, the year of the changeover.

Greater transparency on the MCA database and the calculation of Manufacturing Output is needed.

In short, many questions still remain unanswered. That they remain unanswered nearly a year after the CSO unveiled the new GDP methodology and data revisions is actually disappointing, if not troubling.

In this instalment of the two-part series, we focused on the growth estimates for 2015-16. In Part II, we will see if the revisions made by CSO for the UPA years 2012-13 and 2013-14 were appropriate, by examining several other macro indicators.

Below, some tables based on the press releases put out by the CSO on [January 29](#) and on [February 8](#), are presented.

All figures in Rupees Crores					
	Year Ending March				
	2012	2013	2014	2015	2016
Gross Value Added (current prices)	8,106,656.0	9,210,023.0	10,380,813.0	11,472,409.0	12,279,410.0
Gross Value Added (constant prices)	8,106,656.0	8,546,552.0	9,084,369.0	9,727,490.0	10,427,191.0
Deflator	1.000	1.078	1.143	1.179	1.178
		7.76%	6.04%	3.21%	-0.15%
GVA (current prices) Growth		13.61%	12.71	10.52%	7.03%
GVA (constant prices) Growth		5.43%	6.29%	7.08%	7.19%
GDP at current prices	8,736,039.0	9,951,344.0	11,272,764.0	12,488,205.0	13,576,085.0
GDP at constant prices	8,736,039.0	9,226,879.2	9,839,433.8	10,552,150.4	11,350,248.0
GDP Deflator	1.000	1.079	1.146	1.183	1.196
		7.85%	6.23%	3.30%	1.07%
GDP at current prices - Growth		13.91%	13.28%	10.78%	8.71%
GDP at Constant prices - Growth		5.62%	6.64%	7.24%	7.56%
GVA / GDP current prices	92.80%	92.55%	92.09%	91.87%	90.45%
GVA / GDP constant prices	92.80%	92.63%	92.33%	92.18%	91.87%

Note: Numbers for 2015-16 incorporate the provisional estimates of annual national income for 2015-16 released by the Ministry of Statistics and Programme Implementation on 31st May 2016.

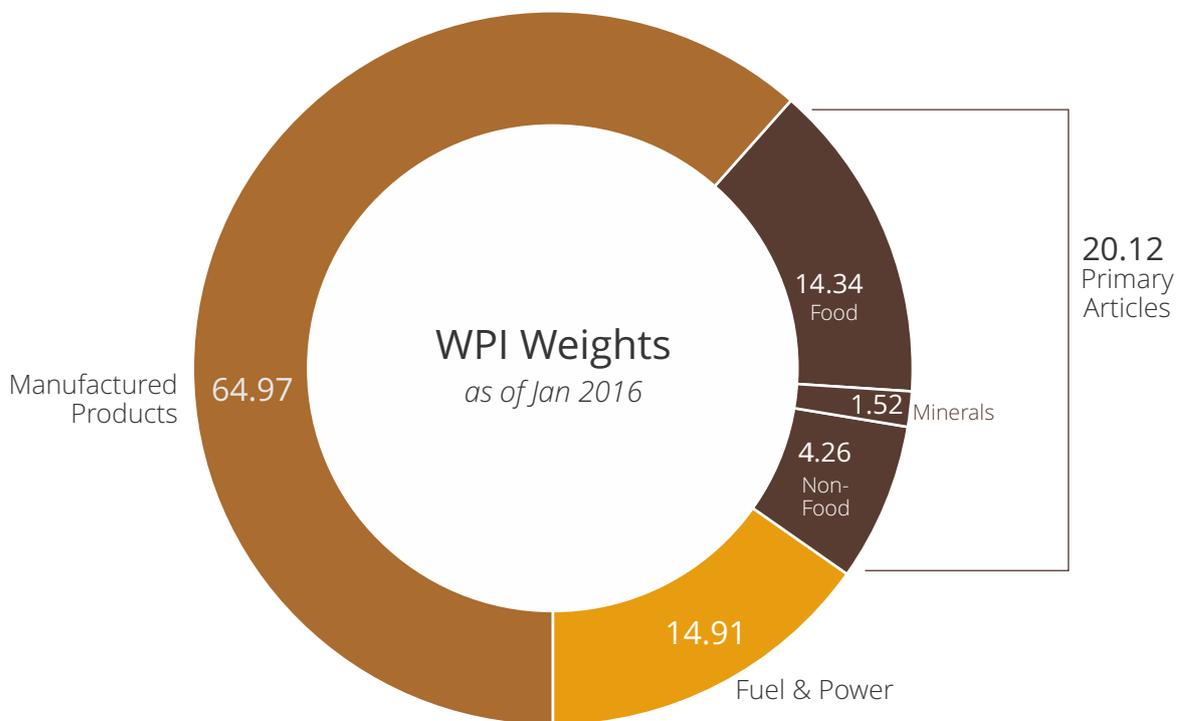
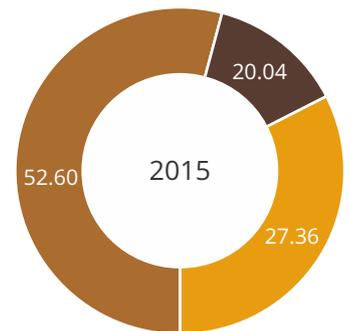
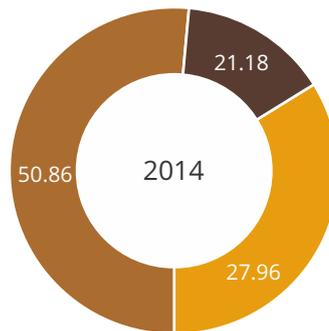
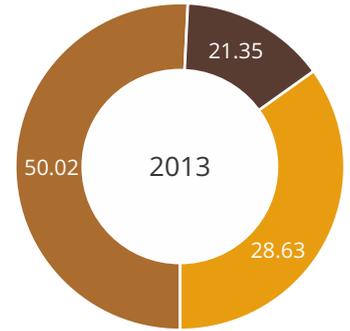
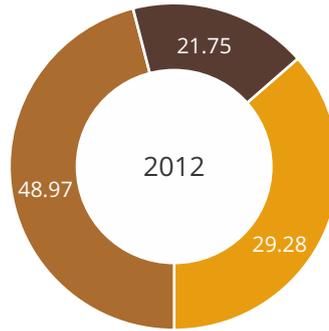
All figures in Rupees Crores					
	Year Ending March				
	2012	2013	2014	2015	2016
At 2011-12 Constant Prices					
Taxes on Products	890,060.0	9,74,172.0	1,025,799.0	1,108,339.0	1,190,986.0
Less Subsidies On Products	260,677.0	293,844.8	270,734.2	283,678.6	267,929.0
DITS	629,383.0	680,327.2	755,064.8	824,660.4	923,057.0
Annual Growth in real DITS		8.09%	10.99%	9.22%	11.93%
At Current Prices					
Taxes on Products	890,060.0	1,057,977.0	1,201,322.0	1,350,361.0	1,612,197.0
Less Subsidies On Products	260,677.0	316,656.0	309,371.0	334,565.0	315,522.0
DITS	629,383.0	741,321.0	891,951.0	1,015,796.0	1,296,675.0
	1.00	1.09	1.18	1.23	1.40
DITS Deflator		8.97%	8.41%	4.27%	14.04%
Annual Growth in nominal DITS		17.79%	20.32%	13.88%	27.65%

Note: Numbers for 2015-16 incorporate the provisional estimates of annual national income for 2015-16 released by the Ministry of Statistics and Programme Implementation on 31st May 2016.

Percentage share in GVA at current prices

- Primary
- Secondary
- Tertiary

Source:
http://mospi.nic.in/Mospi_New/upload/nad_PR_29jan16.pdf

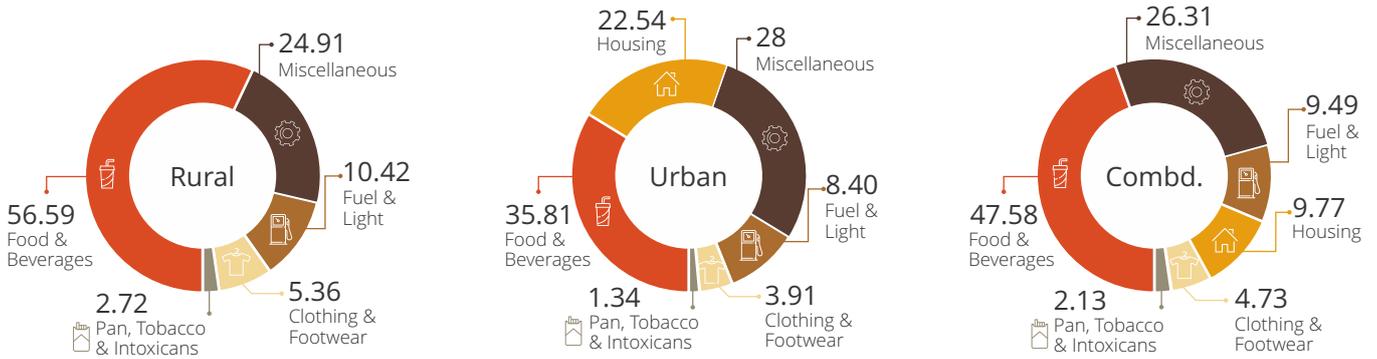


Note: As far as I could calculate, the components added up to more than 65%.

Source: <http://www.eaindustry.nic.in/cmonthly.pdf> (for Jan. 2016 - accessed on 25.2.2016)

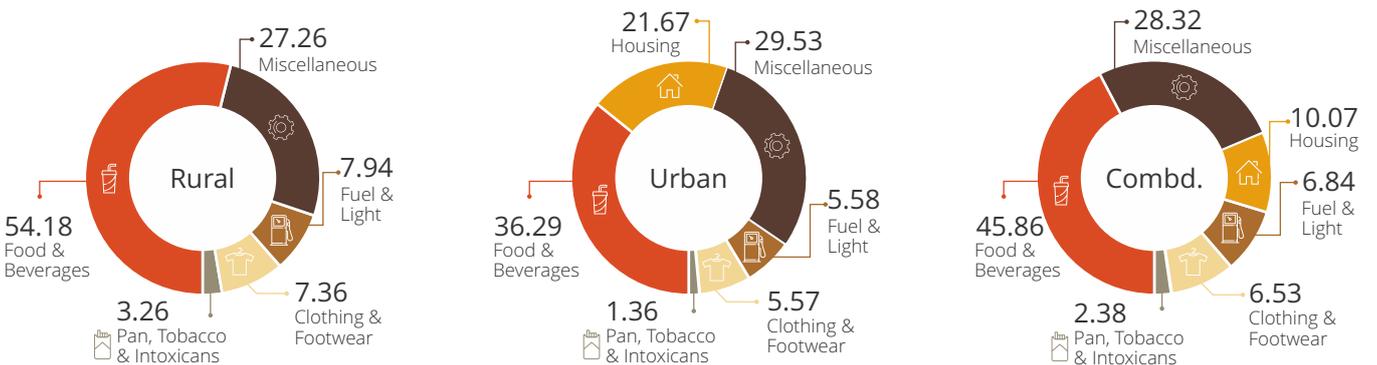
Existing Series of CPI

Weights computed on basis CES 2004-05



Revised Series of CPI

Weights computed on basis CES 2011-12



Source: http://mospi.nic.in/Mospi_New/upload/BaseYearRevision22jan15.pdf