

NOTES ON METHODOLOGY AND REVISIONS IN THE ESTIMATES

The new series on National Accounts Statistics (NAS) was introduced through a Press Release on January 30, 2015 with base year 2011-12 in place of previous series with base year 2004-05. Later, a brochure titled “Changes in Methodology and Data Sources in the new series of National Accounts (base year 2011-12)” was released on 26th June, 2015 incorporating details of both the database and the methodology employed in estimation of various aggregates. The estimates presented in this issue of NAS are based on the methodology given in the above-mentioned brochure.

The present issue on NAS contains statements on macroeconomic aggregates including sectoral analysis, accounts for Non-Financial Corporations, Financial Corporations, General Government, Households and Rest of the World. Besides these, it also includes aggregates by economic activities and disaggregated statements.

REVISION OF ESTIMATES DUE TO FRESH/ REVISED DATA

The first revised estimates and the estimates for the previous years of macro-economic aggregates and their disaggregated components published in NAS 2019 have undergone revision due to fresh/revised data becoming available. Sources of data utilized in NAS 2020 for preparing estimates for the years 2016-17, 2017-18 and 2018-19, which have contributed the most in revision of the estimates, are given below:

A: Output and Value Added

1 Crops

- 1.1 Production estimates - For 2017-18, final estimates of major Crops, namely cereals, pulses, oilseeds, sugars and fibers released by the DESAg for all States/UTs and final estimates for horticulture crops, namely fruits and vegetables, condiments and spices, released by Horticulture Statistics Division, Ministry of Agriculture and Farmers’ Welfare for most of the States/UTs have been used. For 2018-19, fourth advance estimates of major Crops released by the DESAg and final estimates for horticulture crops released by Horticulture Statistics Division, Ministry of Agriculture and Farmers’ Welfare have been used. For 2016-17, final estimates of State specific crops like banana, potato, onion etc., received from DESs of States/UTs, have been used.
- 1.2 Land use Statistics – For the years 2016-17 and 2017-18, the latest area under crops released by the Ministry of Agriculture & Farmers’ Welfare for some crops and that received from DESs of States/UTs for remaining crops have been used.
- 1.3 Prices data – For 2016-17 and 2017-18, updated prices of agricultural commodities received from DESs of States/UTs have been applied. For 2018-19, where price data were not available, corresponding WPIs have been applied on prices of 2017-18.

2 Livestock

- 2.1 For 2018-19, final Estimates of production of Milk, Egg, Meat & Wool released by Department of Animal Husbandry & Dairying (DAHD), Ministry of Fisheries, Animal Husbandry & Dairying have been used.
- 2.2 Revised data on prices of Livestock products received from DESs of States/ UTs have been used for all the years. In a few cases, where prices for 2018-19 were not received, corresponding WPIs have been used.
- 2.3 For all the years, the latest updated hatching rates received from DESs of States/UTs have been used to estimate production of poultry meat.

3 Forestry & Logging

- 3.1 Latest data on production and price of Industrial Wood & Non-Timber Forest Products and data on prices of Fuel wood received from DESs of States/UTs have been used for all the years. In a few cases, where prices for 2018-19 were not received, corresponding WPIs have been used.

4 Fisheries

- 4.1 Latest data on production and price of Marine Fish, Inland Fish & Prawns received from State Fisheries Departments; Department of Fisheries (DoF) Ministry of Fisheries, Animal Husbandry & Dairying and DESs of States UTs have been used for all the years. In a few cases, where prices for 2018-19 were not received, corresponding WPIs have been used. Latest data on curing activities, received from the State DESs have also been used.

5 Mining and Quarrying

- 5.1 Updated Mineral Production from “Monthly Statistics of Mineral Production”, published by Indian Bureau of Mines (IBM) in March every year.
- 5.2 Annual Reports of the Mining Companies in Public Sector Enterprises.
- 5.3 Latest data from Ministry of Corporate Affairs.
- 5.4 Latest input data of Minerals received from IBM.
- 5.5 Production of minor minerals other than sand from State Geological Departments.
- 5.6 Data on salt production and prices from the office of the Salt Commissioner.
- 5.7 Results of CBRI study and the value of material inputs used in the construction sector for the estimation of sand.

6 Manufacturing

- 6.1 Latest data on Annual Survey of Industries from Ministry of Statistics & P.I.
- 6.2 Annual Reports of the Manufacturing Companies in Public Sector Enterprises.
- 6.3 Latest data from Ministry of Corporate Affairs.
- 6.4 Latest data from Budget Documents of the Departmental Enterprises, including those of Railway Workshops.

7 Electricity, Gas, Water Supply and Remediation

- 7.1 Data from latest annual reports of Public Sector Companies.
- 7.2 Latest data from Ministry of Corporate Affairs.
- 7.3 Latest data from Budget Documents in respect of Departmental Enterprises.
- 7.4 Number of Bio-gas Plants from the Ministry of Non-Conventional Energy.
- 7.5 Value of Production from Khadi and Village Industries Commission.
- 7.6 Latest data on Annual Survey of Industries from Ministry of Statistics & P.I.

8 Construction

- 8.1 Sources listed at Serial No. 3 and 6.
- 8.2 Data on area of plantation Crops from State DESs.
- 8.3 Data on production of Cement (from information on 8 core industries) from the office of Economic Adviser.
- 8.4 Latest data from Budget Documents and Annual Reports of Public Sector Undertakings.
- 8.5 Latest data of Non-Government Companies from Ministry of Corporate Affairs.

9 Trade, Repair, Hotels and Restaurants

- 9.1 Latest data from Budget Documents and Annual Reports of Public Sector Undertakings.
- 9.2 Revised data on Private Corporations received from MCA
- 9.3 Sales figure of Motor Vehicles from SIAM.

10 Transport by other means

- 10.1 Latest data from Budget Documents and Annual Reports of Public Sector Undertakings.
- 10.2 Revised data on Private Corporations received from MCA.
- 10.3 Production trends figure of Motor Vehicles from SIAM.
- 10.4 Cargo traffic handled at Major and Minor Ports from the Ministry of Shipping.
- 10.5 Rate of growth of airlines passenger traffic and cargo handled from DGCA.

11 Railways, Storage, Communication, Public administration and Defence

- 11.1 Latest data from Budget Documents.
- 11.2 Annual Accounts of Public and Private Corporations.

12 Financial services

- 12.1 The NAS 2020 estimates for certain sub-sectors, including Cooperative Banks, POSB, PLI, NBFIs, Central and State Finance Corporations, financial auxiliaries have been updated based on analysis of latest available Annual Reports of these enterprises and latest available data on Credits and Deposits Published by the RBI in December 2019. Further, the estimate of the

Financial Sector, in Constant Prices, uses the ratio of Current and Constant Price estimates (unadjusted for FISIM) in the Non-Financial Sectors as one of the Deflators. The changes in these ratios for the years 2016-17 and 2017-18 have resulted in modifications in the Constant Price estimates for the Financial Services and Sub-sectors within it.

13 Real Estate, Ownership of Dwellings, Professional Services

- 13.1 Latest data on Budget Documents and Annual Reports of Public Sector Undertakings.
- 13.2 Latest data from the Ministry of Corporate Affairs.
- 13.3 Latest data on Repairs & Maintenance of ownership of dwellings based on NSS 70th Round on AIDIS (2012-13).
- 13.4 Number of dwellings from Population Census 2011.

14 Other Services

- 14.1 Latest Budget Documents and Annual Reports of Public Sector Undertakings.
- 14.2 Latest data from Ministry of Corporate Affairs.
- 14.3 Data on estimated number of persons and MPCE (Non-Food items) from the 61st & 68th (Medical & Others) and 64th & 71st (Education) Rounds of Consumer Expenditure Survey.

B: Private Final Consumption Expenditure, Saving and Capital Formation

15 Private Final Consumption Expenditure

- 15.1 Estimates have been revised from 2016-17 onwards due to availability of fresh/ revised data of Output, Change in Stocks, Export & Import etc. The sources are as listed at Sl. No. 1 to 14, 17.7 and 17.8.

16 Saving

- 16.1 Data received from RBI on Net Deposits, Investments in Shares and Debentures, Net Claims etc. for Household Sector.
- 16.2 Estimates of saving in Physical Assets in respect of Household Sector and Quasi Corporate.
- 16.3 Latest data on saving of Private Corporate Sector.
- 16.4 Saving of Administrative Departments from Budget Documents, Public Sector Savings, Data from Annual Accounts of RBI etc.

17 Capital Formation

- 17.1 Sources mentioned at Serial Nos. 6 & 8, Annual Reports of NDEs and Budget Documents.
- 17.2 Latest data on Annual Survey of Industries from Ministry of Statistics & P.I.
- 17.3 Data on Private Corporations received from MCA.
- 17.4 Capital Formation of Public Sector revised data.
- 17.5 WPI from the Office of Economic Adviser, Ministry of Commerce & Industry.
- 17.6 Index of Industrial Production (IIP) - Ministry of Statistics & P.I.

- 17.7 Import and Excise Duties – Statistics of Customs & Revenue Collection of the Indian Union from Tax and Research Unit, Ministry of Finance.
- 17.8 Export-Import Data Bank, DGCI&S, Ministry of Commerce & Industry.

18 Consumption of Fixed Capital

- 18.1 Estimates of Consumption of Fixed Capital (CFC) have been revised due to revision of estimates of Gross Fixed Capital Formation (GFCF) as mentioned at Serial No. 17.

Reasons for revision in Growth Rate in GVA- 2018-19 (at 2011-12 prices) between the Provisional Estimates(PE) released in May-2019 and the estimates released in National Accounts Statistics (NAS)-2020				
S.No.	Item	PE	NAS-20	REASON FOR VARIATION in NAS 2020
1	Agriculture, Forestry and Fishing	2.9	2.4	<p>Fourth Advance Estimates of major Crops released by the DES Ag. and final estimates for Horticulture Crops released by Horticulture Statistics Division, Ministry of Agriculture and Farmers' Welfare have been used.</p> <p>Final Estimate of major Livestock Products as per DADF, Ministry of Fisheries, Animal Husbandry & Dairying has been used. Projected production of IW/TOF/NTFP as per latest data used. Final data on production of Fisheries as supplied by DoF, Ministry of Fisheries, Animal Husbandry & Dairying used.</p>
2	Mining and Quarrying	1.3	-5.8	In NAS-20; the Private Corporations (PC) and NDE estimates are based on Books of Accounts/common companies' Growth Rates whereas Provisional Estimates were based on smaller sets of Corporate filings or were indicator based.
3	Manufacturing	6.9	5.7	In NAS-20, DE estimates are based on the detailed analysis of Budget Documents of Central and State Governments and Local Bodies and PC and NDE estimates are based on Books of Accounts/common companies' Growth Rates whereas Provisional Estimates were based on smaller sets of Corporate filings or were indicator based.
4	Electricity, Gas, Water Supply & Other utility Services	7.0	8.2	In NAS-20, DE and GG estimates are based on the detailed analysis of Budget Documents of Central and State Governments and Local Bodies and PC and NDE estimates are based on Books of Accounts/common companies' Growth Rates whereas Provisional Estimates were based on smaller sets of Corporate filings or were indicator based.
5	Construction	8.7	6.1	In NAS-20, data from source Agencies have been used whereas Provisional Estimates were indicators based.
6	Trade, Repair, Hotels, Restaurants, Transport, Storage,	6.9	7.7	Data from source Agencies along with detailed analysis of DE, NDE and Private Corporate Sectors have been used for compilation of estimates for NAS-

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S.No.	Item	PE	NAS-20	REASON FOR VARIATION in NAS 2020
	Communication & Services related to Broadcasting			20 estimates whereas Provisional Estimates were indicator based.
7	Financial Services, Real Estate, Ownership of Dwelling & Professional Services	7.4	6.8	<p>(1) For Financial Services, first RE is based on Annual Reports and data released by RBI, IRDA and other Financial Regulators, whereas the PE is based on benchmark indicator method</p> <p>(2) For Real Estate, Ownership of Dwelling & Professional Services, data from source Agencies along with detailed analysis of DE, NDE and Private Corporate Sectors have been used for compilation of estimates for NAS-20 whereas Provisional Estimates were indicator based.</p>
8	Public Administration, Defence and Other Services	8.6	9.4	<p>(1) For Public Administration and Defence, in NAS - 20, results of detailed analysis of Budget Documents (Centre and State Governments) have been used for compilation of estimates whereas PE were based on indicators derived from Total Revenue Expenditure of the Centre and States.</p> <p>(2) For Other Services, data from source Agencies along with detailed analysis of DE, NDE and Private Corporate Sectors have been used for compilation of estimates for NAS-20 whereas Provisional Estimates were indicator based.</p>
9	Total GVA at basic prices	6.6	6.0	

Reasons for revision in Growth Rate in GVA 2017-18 (at 2011-12 prices) between the estimates released in National Accounts Statistics-2019 and the estimates released in National Accounts Statistics-2020

S.No.	Item	NAS-19	NAS-20	REASON FOR VARIATION in NAS 2020
1	Agriculture, Forestry and Fishing	5.0	5.9	
1.1	Crops	3.8	4.4	Final estimates of production of major Crops, namely Cereals, Pulses, Oilseeds, Sugars and Fibers released by the DES Ag for all States/UTs and final production estimates for Horticulture Crops, Fruits and Vegetables, Condiments and Spices, released by Horticulture Statistics Division, Ministry of Agriculture and Farmers' Welfare for most of the States/UTs have been used. Latest CCS rates of by-product have been used. Area and Production of State/UT specific Crops have been updated as per latest data received from DESs of some States/UTs.
1.2	Livestock	7.0	7.4	Revision of Milk production and use of latest updated Hatching Rates from DESs of States/UTs to estimate production of Poultry Meat.
1.3	Forestry and Logging	2.1	6.2	Final Estimates of production of Industrial Wood and Minor Forest Product as per DESs of States/UTs have been used. Latest Production data for TOF also have been used.
1.4	Fishing and Aquaculture	11.9	14.7	Latest data on production and curing activities, received from the State DESs have also been used.
2	Mining and Quarrying	5.1	4.9	Use of updated data of Private Corporations from M/o Corporate Affairs, NDE & Minor Minerals estimates, Use of Input Rate of 2015-16 received from IBM.
3	Manufacturing	5.9	6.6	Use of ASI (Provisional Result) 2017-18, Use of updated data of Private Corporations from M/o Corporate Affairs and Revised Estimate of DE and NDE.
3.1	Food Products, Beverages and Tobacco	4.7	4.6	Use of updated data of Private Corporations from M/o Corporate Affairs, ASI Non-Corporate estimates and HH estimates.
3.2	Textiles, Apparel and Leather Products	-1.0	5.1	Use of updated data of Private Corporations from M/o Corporate Affairs, ASI Non-Corporate estimates and HH estimates.
3.3	Metal Products	2.2	10.7	Use of updated data of Private Corporations from M/o Corporate Affairs, ASI Non-Corporate estimates and HH estimates.

Reasons for revision in Growth Rate in GVA 2017-18 (at 2011-12 prices) between the estimates released in National Accounts Statistics-2019 and the estimates released in National Accounts Statistics-2020

S.No.	Item	NAS-19	NAS-20	REASON FOR VARIATION in NAS 2020
3.4	Machinery and Equipment	6.6	11.8	Use of updated data of Private Corporations from M/o Corporate Affairs, ASI Non-Corporate estimates and HH estimates.
3.5	Other Manufactured Goods	9.3	3.2	Use of updated data of Private Corporations from M/o Corporate Affairs, ASI Non-Corporate estimates and HH estimates.
4	Electricity, Gas, Water Supply & Other utility Services	8.6	11.2	Use of updated data of Private Corporations from M/o Corporate Affairs, Revised Estimate of DE, NDE and General Government.
5	Construction	5.6	5.0	Revision in value of output of Construction Sector due to use of updated ASI results in compilation process, use of updated data of Private Corporations from M/o Corporate Affairs and Annual Accounts of NDEs.
6	Trade, Repair, Hotels and Restaurants	10.0	10.0	
6.1	Trade & Repair Services	10.4	10.4	No Change
6.2	Hotels & Restaurants	5.9	5.7	Minor revision in NDE and Private Corporate data.
7	Transport, Storage, Communication & Services related to Broadcasting	3.6	3.3	
7.1	Railways	7.8	7.0	Revision is due to use of 2017-18 actual data from the Budget Documents of the Ministry of Railways instead of 2017-18 RE, which was used in NAS 2019 for Departmental Enterprises (DEs) and updated information from Non-Departmental Enterprises (NDEs) and Private Corporate.
7.2	Road transport	6.1	6.0	Minor revision in DE, NDE, Private Corporate data.
7.3	Water transport	6.6	6.5	Minor revision in Private Corporate data.
7.4	Air transport	17.6	17.5	Minor revision due to NDE
7.5	Services incidental to Transport	7.5	7.3	Combined effect of Road, Water and Air Transport.

Reasons for revision in Growth Rate in GVA 2017-18 (at 2011-12 prices) between the estimates released in National Accounts Statistics-2019 and the estimates released in National Accounts Statistics-2020

S.No.	Item	NAS-19	NAS-20	REASON FOR VARIATION in NAS 2020
7.6	Storage	9.9	9.2	Revision in NDE & Private Corporate data.
7.7	Communication & Services related to Broadcasting	-4.8	-5.4	Revision in DE, NDE, Private Corporate data.
8	Financial Services	4.2	4.8	Revision is due to use of latest data of Cooperative Banks, POSB, NBFIs, Financial Auxiliaries, PLI received from respective Financial Corporations and use of updated Price Deflator based on Non-Financial Sector.
9	Real Estate, Ownership of Dwellings & Professional Services	7.0	4.6	Revision in NDE and Private Corporate.
10	Public administration and defence	11.4	10.0	Revision is on account of a) use of 2017-18 actual data from the Budget Documents of the Central and State Governments (NAS-19 was on the basis of 2017-18(RE)). b) use of revised and additional data on Local Bodies and Autonomous Institutions.
11	Other services	12.3	9.8	Revision in GG, NDE and Private Corporate data.
12	Total GVA at basic prices	6.9	6.6	

Reasons for revision in Growth Rate in GVA-2016-17 (at 2011-12 prices) between the estimates released in National Accounts Statistics-2019 and the estimates released in National Accounts Statistics-2020				
S.No.	Item	NAS-19	NAS-20	REASON FOR VARIATION in NAS 2020
1	Agriculture, Forestry and Fishing	6.3	6.8	
1.1	Crops	5.0	5.3	Area and production of State/UT specific Crops have been updated as per latest data received from DESs of some States/UTs. Latest CCS rates of by-product have been used.
1.2	Livestock	9.9	10.0	Latest updated Hatching Rates received from State/UT DESs have been used to estimate production of Poultry Meat.
1.3	Forestry and Logging	1.4	5.5	Latest data on production of Industrial Wood and Non-Timber Forest Products received from DESs of States /UTs have been used. Latest Production data for TOF also have been used.
1.4	Fishing and Aquaculture	10.0	10.4	Latest data on production of Marine Fish, Inland Fish & Prawns received from State Fisheries Departments, Department of Fisheries, Ministry of Fisheries, Animal Husbandry & Dairying and DESs of States/UTs have been used.
2	Mining and Quarrying	9.5	9.8	Due to the revised estimates of Minor Minerals and NDE data. Use of Input Rate 2015-16 received from IBM
3	Manufacturing	7.9	7.9	No change.
3.1	Food Products, Beverages and Tobacco	10.4	10.8	Use of ASI final result
3.2	Metal products	1.9	0.8	Use of ASI final result
3.3	Machinery and Equipment	26.4	26.6	Use of ASI final result
3.4	Machinery and Equipment	9.5	10.4	Use of ASI final result
3.5	Other Manufactured Goods	3.4	3.0	Use of ASI final result
4	Electricity, Gas, Water Supply & Other utility Services	10.0	10.0	No change
5	Construction	6.1	5.9	Due to use of final ASI results in the compilation process.

Reasons for revision in Growth Rate in GVA-2016-17 (at 2011-12 prices) between the estimates released in National Accounts Statistics-2019 and the estimates released in National Accounts Statistics-2020				
S.No.	Item	NAS-19	NAS-20	REASON FOR VARIATION in NAS 2020
6	Trade, Repair, Hotels and Restaurants	10.1	10.1	
6.1	Trade & Repair Services	10.3	10.3	No change
6.2	Hotels & Restaurants	8.7	8.8	Minor Revision in NDE data.
7	Transport, Storage, Communication & Services related to Broadcasting	3.4	3.5	
7.1	Railways	-3.9	-3.9	No Change
7.2	Road transport	5.6	5.6	No change
7.3	Water transport	5.8	5.9	Minor revision in FISIM data
7.4	Air transport	18.5	18.5	No change
7.5	Services incidental to Transport	7.0	7.0	No change
7.6	Storage	-2.9	-2.3	Revision in NDE data.
7.7	Communication & Services related to Broadcasting	1.0	1.3	Revision in Service Tax data.
8	Financial Services	3.6	3.4	Revision is mainly due to updated Price Deflator based on Non-Financial Sector and use of updated data of NBFI/ Financial Auxiliaries.
9	Real Estate, Ownership of Dwellings & Professional Services	10.8	10.8	No change
10	Public Administration and Defence	8.6	8.7	Revision is on account of use of revised and additional data on Local Bodies and State Autonomous Institutions.
11	Other Services	9.7	9.8	Minor revision in GG and NDE data.
12	Total GVA at basic prices	7.9	8.0	
