

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 IN ESTIMATES DUE TO FRESH/ REVISED DATA

The First Revised Estimates (FRE) and the estimates of macro-economic aggregates for the previous years and their disaggregated components published in NAS 2020 have undergone revision due to fresh/ revised data becoming available. Sources of data utilized in NAS 2021 for preparing estimates for the years 2017-18, 2018-19 and 2019-20 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 2018-19, final estimates of major crops, namely cereals, pulses, oilseeds, sugars and fibres released by the Directorate of Economics and Statistics, Ministry of Agriculture & Farmers Welfare 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 2019-20, fourth advance estimates of major Crops released by the Directorate of Economics and Statistics, Ministry of Agriculture & Farmers Welfare and third advance estimates for horticulture crops released by Horticulture Statistics Division, Ministry of Agriculture and Farmers' Welfare have been used. For 2017-18, 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 2017-18 and 2018-19, the latest area under crops released by the Ministry of Agriculture & Farmers' Welfare for some crops and that received from Directorate of Economics and Statistics (DESs) of States/ UTs for remaining crops have been used.
- 1.3 Prices data – For 2017-18 and 2018-19, updated prices of agricultural commodities received from DESs of States / UTs have been applied. For 2019-20, where price data were not available, WPI has been used.

2 Livestock

- 2.1 For 2019-20, final estimates of production of Milk, Egg, Meat and Wool released by Department of Animal Husbandry, Dairying & Fisheries 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 2019-20 were not received, corresponding WPI has 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.
- 2.4 Latest Indian Livestock Census (ILC) data have been used.

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 2019-20 were not received, corresponding WPI has 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 and DESs of States / UTs have been used for all the years. In a few cases, where prices for 2019-20 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 Latest available updated Mineral Production from “Monthly Statistics of Mineral Production”, published by Indian Bureau of Mines (IBM).
- 5.2 Annual Reports of the Mining Companies in Public Sector Enterprises.
- 5.3 Latest data from the Ministry of Corporate Affairs (MCA).
- 5.4 Latest deductible rate 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 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 the Ministry of Corporate Affairs.
- 6.4 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 on Private Corporations received from MCA.
- 7.3 Budget Documents of the Departmental Enterprises.
- 7.4 Number of Bio-gas plants from the Ministry of New & Renewable Energy.
- 7.5 Number as well as production of Bio-gas plants installed by 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. 1 and 6.
- 8.2 Latest data from budget documents and annual reports of public sector undertakings.
- 8.3 Data on production of cement (from information on 8 core industries) from the office of Economic Adviser.
- 8.4 Latest data on Private Corporations received from MCA.

9 Trade, Repair, Hotels and Restaurants

- 9.1 Latest data from budget documents and annual reports of public sector undertakings.
- 9.2 Latest data on Private Corporations received from MCA.
- 9.3 Sales figure of motor vehicles from Society of Indian Automobile Manufacturers (SIAM).
- 9.4 WPI from the Office of Economic Adviser, Ministry of Commerce & Industry.
- 9.5 TTM Index.

10 Transport by other means

- 10.1 Latest data from budget documents and annual reports of public sector undertakings.
- 10.2 Latest data on Private Corporations received from MCA.
- 10.3 Sales trends figure of motor vehicles from SIAM.
- 10.4 WPI from the Office of Economic Adviser, Ministry of Commerce & Industry.
- 10.5 CPI (Transport & Communication) from Ministry of Statistics & P.I.
- 10.6 Cargo Traffic Handled at Major and Minor Ports from the Ministry of Shipping.
- 10.7 Rate of growth of Airlines Passenger Traffic and Cargo Handled from Directorate General of Civil Aviation (DGCA).

11 Railways, Storage, Communication, Public administration and Defence

- 11.1 Budget documents for the year 2020-21 giving actual figures for the year 2018-19 and Revised Estimates for 2019-20.
- 11.2 Annual Accounts of public and private corporations.

12 Financial services

- 12.1 The NAS 2021 estimates for certain sub-sectors, including cooperative banks, Post Office Saving Banks (POSB), Postal Life Insurance (PLI), Non-banking Financial Institutions (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, deposits published by the RBI in December 2020. Further, the estimate of the financial sector, at 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 2017-18 and 2018-19 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 CPI (Miscellaneous services)/CPI (General)/CPI(Housing) from Ministry of Statistics & P.I.
- 13.4 WPI from Office of Economic Advisor.

14 Other Services

- 14.1 Latest budget documents and annual reports of public sector undertakings.
- 14.2 Latest data from the Ministry of Corporate Affairs.
- 14.3 CPI (Education), CPI (Health), CPI (Recreation) and CPI (Miscellaneous services) from Ministry of Statistics & P.I.

B: Private Final Consumption Expenditure, Saving and Capital Formation

15 Private Final Consumption Expenditure

- 15.1 Estimates have been revised from 2017-18 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 Revised data on net deposits, investments in shares and debentures, net claims, insurance funds etc. for household sector received from RBI.
- 16.2 For revision in estimates of saving in physical assets, please see Serial No. 17.
- 16.3 Revised data on saving of private corporate sector.
- 15.2 Saving of Public Sector revised from 2017-18 to 2019-20 due to availability of additional/revised/fresh data in respect of Departmental Enterprises and Administrative Departments from budget documents, annual accounts of RBI and subsequent revision of Consumption of Fixed Capital estimates.

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 Latest 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 Ministry of Finance.
- 15.3 Export-Import Data Bank, DGCIS, Ministry of Commerce & Industry.

18 Consumption of Fixed Capital

- 15.4 Estimates of consumption of fixed capital (CFC) have been revised due to revision of estimates of gross fixed capital formation as mentioned at serial no. 17.

Reasons of revision in growth rate in GVA- 2019-20 (at 2011-12 prices) between the Provisional Estimates (PE) released in May-2020 and the estimates released in National Accounts Statistics (NAS)-2021

S.No.	Item	PE	NAS-21	REASON FOR VARIATION in NAS 2021
1	Agriculture, forestry and fishing	4.0	4.3	Fourth advance estimates of major Crops released by the Directorate of Economics and Statistics, Ministry of Agriculture & Farmers Welfare and third advance estimates for horticulture crops released by Horticulture Statistics Division, Ministry of Agriculture and Farmers' Welfare have been used. Final Estimates of major livestock products as per Department of Animal Husbandry and Dairying (DAHD) and latest Indian Livestock Census (ILC) data have been used. Projected production Industrial Wood (IW) / Trees outside Forest (TOF) / Non-Timber Forest Product (NTFP) as per latest data used. Final data on production of fisheries as supplied by Department of Fisheries (DoF) used.
2	Mining and quarrying	3.1	-2.5	FRE is based on actual data received from sources whereas PE was indicator based.
3	Manufacturing	0.03	-2.4	FRE is based on actual data received from sources whereas PE was indicator based.
4	Electricity, gas, water supply & other utility services	4.1	2.1	FRE is based on actual data received from sources whereas PE was indicator based.
5	Construction	1.3	1.0	FRE is based on actual data received from sources whereas PE was indicator based.
6	Trade, repair, hotels, restaurants, transport, storage, communication & services related to broadcasting	3.6	6.4	Data from source agencies along with detailed analysis of DE, NDE and Private Corporate sectors have been used for compilation of estimates for NAS-21 whereas Provisional Estimates were indicator based.
7	Financial services, Real estate, ownership of dwelling & professional services	4.6	7.3	(1) For Financial Services, FRE based on annual reports and data released by RBI, NABARD and other financial regulators, whereas the PE has based on benchmark indicator method. (2) For real estate, ownership of dwelling & professional services, data from source agencies along with detailed analysis of NDE and Private Corporate sectors have been used for compilation of estimates for NAS-21 whereas provisional estimates were indicator based.

8	Public administration, defence and Other services	10.0	8.3	(1) For public administration and defence, in NAS - 2021, 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. (2) For other services, data from source agencies along with detailed analysis of data for General Government (GG), NDE and Private Corporate sectors have been used for compilation of estimates for NAS-21 whereas provisional estimates were indicator based.
9	TOTAL GVA at basic prices	3.9	4.1	

Reasons of revision in growth rate in GVA 2018-19 (at 2011-12 prices) between the estimates released in National Accounts Statistics-2020 and the estimates released in National Accounts Statistics-2021

S.No.	Item	NAS 20	NAS 21	REASON FOR VARIATION in NAS 2021
1	Agriculture, forestry and fishing	2.4	2.6	
1.1	Crops	-1.0	-1.6	Final estimates of production of major Crops, namely cereals, pulses, oilseeds, sugars and fibres released by the Directorate of Economics and Statistics, Ministry of Agriculture & Farmers Welfare 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 Cost of Cultivation Study (CCS) rates of by-products have been used. Latest consumption of electricity in the Agriculture sector has been updated as per the latest data received from Central Electricity Authority.
1.2	Livestock	8.1	8.5	Revision in production data as received for States/UTs have been used. Inclusion of the ILC 2019 report resulted in revision of input and output estimates.
1.3	Forestry and logging	0.4	7.9	Updated production estimate 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 as per India State of Forest Report (ISFR) 2019.
1.4	Fishing and aquaculture	12.0	9.0	Latest data on production and curing activities, received from the State DESs have also been used.
2	Mining and quarrying	-5.8	0.3	Revision in Private Corporate, NDE & Minor Minerals estimates.
3	Manufacturing	5.7	5.3	Use of latest available ASI 2018-19 data, MCA21 2018-19 data and revised estimates of NDE and DE.
3.1	Food products, beverages and tobacco	8.7	18.9	Use of latest available ASI 2018-19 data, MCA21 2018-19 data and revised estimates of NDE and DE.

3.2	Textiles, apparel and leather products	4.5	5.2	Use of latest available ASI 2018-19 data, MCA21 2018-19 data and revised estimates of NDE and DE.
3.3	Metal products	2.1	1.4	Use of latest available ASI 2018-19 data, MCA21 2018-19 data and revised estimates of NDE and DE.
3.4	Machinery and equipment	7.2	12.3	Use of latest available ASI 2018-19 data, MCA21 2018-19 data and revised estimates of NDE and DE.
3.5	Other manufactured goods	5.8	-1.0	Use of latest available ASI 2018-19 data, MCA21 2018-19 data and revised estimates of NDE and DE.
4	Electricity, gas, water supply & other utility services	8.2	8.0	Availability of revised NDE estimates and reclassification of non-financial private corporate companies.
5	Construction	6.1	6.3	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, budget documents and Annual Accounts of NDEs.
6	Trade, repair, hotels and restaurants	8.5	8.8	
6.1	Trade & repair services	8.5	8.8	Revision in DE, NDE, Private Corporate data.
6.2	Hotels & restaurants	7.7	9.3	Revision in NDE and Private Corporate data.
7	Transport, storage, communication & services related to broadcasting	6.2	3.8	
7.1	Railways	5.0	3.9	Revision is due to a) use of 2018-19 actual data from the budget documents of the Ministry of Railways in place of revised estimates of 2018-19, which were used in NAS 2020 for Departmental Enterprises (DEs) b) updated information from Non-Departmental enterprises (NDEs) and Private. Corporate.

7.2	Road transport	6.8	5.3	Revision in DE, NDE, Private. Corporate data.
7.3	Water transport	5.8	5.9	Revision in NDE & Private corporate estimates.
7.4	Air transport	12.3	12.2	Revision in Private corporate estimates.
7.5	Services incidental to transport	7.3	5.5	Combined effect of Road, Water and Air Transport.
7.6	Storage	3.5	5.6	Revision in NDE and Private Corporate data.
7.7	Communication & services related to broadcasting	5.0	-0.6	Revision in DE, NDE and Private Corporate data.
8	Financial services	4.7	4.7	Revision is due to use of latest data of Cooperative Banks, POSB, NBFIs, financial auxiliaries, PLI, moneylenders received from respective financial corporations/ credit and deposit data from RBI and use of updated price deflator based on non-financial sector.
9	Real estate, ownership of dwellings & professional services	7.6	8.1	Revision in NDE and Private Corporate data.
10	Public administration and defence	9.2	6.8	Revision is on account of a) use of 2018-19 actual data from the budget documents of the Central and State Governments in place of revised estimates of 2018-19 used for NAS-2020. b) Use of revised and additional data on Local bodies and Autonomous Institutions.
11	Other services	9.5	7.9	Revision in GG, NDE and Private Corporate data.
12	TOTAL GVA at basic prices	6.0	5.9	

Reasons of revision in growth rate in GVA-2017-18 (at 2011-12 prices) between the estimates released in National Accounts Statistics-2020 and the estimates released in National Accounts Statistics-2021

S.No.	Item	NAS 20	NAS 21	REASON FOR VARIATION in NAS 2021
1	Agriculture, forestry and fishing	5.9	6.6	
1.1	Crops	4.4	5.4	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. Input data have been updated as per latest reports available from different data sources.
1.2	Livestock	7.4	7.9	Inclusion of the ILC 2019 report resulted in revision of estimates.
1.3	Forestry and logging	6.2	5.4	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	14.7	15.2	Latest data on production of Marine Fish, Inland Fish & Prawns received from State Fisheries Departments, Department of Fisheries and DESs of States/UTs have been used.
2	Mining and quarrying	4.9	-5.6	Reclassification of non-financial private corporate companies, use of revised sand estimates and other minor minerals and use of revised NDE estimates.
3	Manufacturing	6.6	7.5	Use of final result of ASI 2017-18 and revised estimates of NDE.
3.1	Food products, beverages and tobacco	4.6	5.6	Use of final result of ASI 2017-18 and revised estimates of NDE.
3.2	Metal products	5.1	7.6	Use of final result of ASI 2017-18 and revised estimates of NDE.
3.3	Machinery and equipment	10.7	12.0	Use of final result of ASI 2017-18 and revised estimates of NDE.
3.4	Other manufactured goods	11.8	12.4	Use of final result of ASI 2017-18 and revised estimates of NDE.
3.5	Other manufactured goods	3.2	3.6	Use of final result of ASI 2017-18 and revised estimates of NDE.

4	Electricity, gas, water supply & other utility services	11.2	10.6	Availability of revised NDE estimates and reclassification of non-financial private corporate companies.
5	Construction	5.0	5.2	Due to use of final ASI results in the compilation process.
6	Trade, repair, hotels and restaurants	10.0	12.9	
6.1	Trade & repair services	10.4	13.2	Upward revision in Private Corporate sector estimates due to reclassification.
6.2	Hotels & restaurants	5.7	9.2	Upward revision in Private Corporate sector estimates due to reclassification.
7	Transport, storage, communication & services related to broadcasting	3.3	5.7	
7.1	Railways	7.0	7.0	No Change
7.2	Road transport	6.0	9.4	Revision in NDE & Private Corporate sector estimates.
7.3	Water transport	6.5	39.0	Revision in Private Corporate sector estimates due to reclassification.
7.4	Air transport	17.5	16.7	Revision in Private Corporate sector estimates due to reclassification.
7.5	Services incidental to transport	7.3	-2.9	Combined effect of Road, Water and Air Transport.
7.6	Storage	9.2	112.7	Revision in Private Corporate sector estimates due to reclassification.
7.7	Communication & services related to broadcasting	-5.4	-2.7	Revision in Private Corporate sector estimates due to reclassification.
8	Financial services	4.8	4.7	Revision is mainly due to updated price deflator based on non-financial sector and use of updated data of NBFIs/ financial auxiliaries/Moneylenders.

9	Real estate, ownership of dwellings & professional services	4.6	0.6	Revision in Private corporate sector estimates due to reclassification.
10	Public administration and defence	10.0	10.1	Revision is on account of use of updated analyzed State Budget Data and revised data on Local bodies.
11	Other services	9.8	6.9	Revision in Private corporate sector estimates due to reclassification.
12	TOTAL GVA at basic prices	6.6	6.2	
