REPORT OF THE SUB-COMMITTEE

FOR

CONSTANT PRICE ESTIMATES

FOR THE BASE YEAR REVISION OF GDP
(2011-12 to 2022-23)

NATIONAL ACCOUNTS DIVISION
NATIONAL STATISTICS OFFICE
MINISTRY OF STATISTICS & PROGRAMME IMPLEMENTATION
GOVERNMENT OF INDIA
NEW DELHI

Acknowledgement

As a Chairman of the Sub-Committee on Constant Price Estimates of the Advisory Committee on National Accounts Statistics (ACNAS) and on behalf of the Sub-Committee, I place on record my sincere gratitude to the Ministry of Statistics and Programme Implementation (MoSPI) for entrusting the responsibility of reviewing and recommending methodologies for the compilation of constant price estimates in the revised base year series of National Accounts Statistics.

I am grateful to all the members of the Sub-Committee for their valuable contribution during the deliberations in the meetings. The diverse expertise brought in by members have significantly enriched the deliberations and outcomes of the Sub-Committee.

On my personal behalf and on behalf of the Sub-Committee, I wish to offer my deep appreciation and thanks to Dr. Saurabh Garg, Secretary, MoSPI for valuable suggestions in the course of various meetings.

I place my warm appreciation to Shri N. K. Santoshi, Director General (Central Statistics) and Shri Siddhartha Kundu, Addl. Director General for enriching the fruitful deliberations.

I am indebted to recognise the dedicated efforts of Deputy Director Generals, Directors and staff of the National Accounts Division (NAD), National Statistics Office, MoSPI for their dedicated efforts in organizing the meetings, undertaking analytical exercises, and bringing background of earlier methodologies. I extend my special thanks to each one of them.

Finally, I gratefully acknowledge the contribution of Shri Vishal Kumar, Member Secretary of the Sub-Committee. Without his consistent hard work and logistical support, this Report would not have taken shape on time.

On behalf of the Sub-Committee, I submit the Report on compilation of constant price estimates in the revised base year series of National Accounts Statistics.

Bngoldar

(Prof. Bishwanath Goldar)
Chairman of the Sub-Committee
20/02/2026
New Delhi

Preface

The revision of the base year of National Accounts Statistics is a critical exercise aimed at ensuring that macroeconomic indicators remain relevant, robust, and reflective of the evolving structure of the economy. In this context, the Advisory Committee on National Accounts Statistics (ACNAS), constituted by the Ministry of Statistics and Programme Implementation (MoSPI), decided in its first meeting held on 20th August 2024 to revise the base year of National Accounts Statistics from 2011–12 to 2022–23.

Recognising the magnitude and technical complexity of the base year revision exercise, ACNAS constituted five Sub-Committees to deliberate on specific thematic areas. The Sub-Committee on Constant Price Estimates was entrusted with the task of reviewing the methodologies used for estimating constant price measures of macroeconomic aggregates and recommending suitable improvements in line with data availability, international best practices, and national requirements.

The estimation of constant price aggregates is central to meaningful economic analysis, as it enables the measurement of real growth by eliminating the impact of price changes. With advancements in data systems, improved coverage, and availability of new indicators, there exists a scope for moving towards conceptually superior approaches such as double deflation and volume extrapolation, wherever feasible. Accordingly, the Sub-Committee undertook a comprehensive review of existing practices across sectors of the economy, covering both Annual National Accounts (ANA) and Quarterly National Accounts (QNA).

The Sub-Committee held eight meetings between December 2024 and November 2025, during which sector-specific methodologies were examined in detail. The recommendations contained in this report reflect a careful balancing of conceptual rigor, empirical stability, data availability, and operational feasibility. Efforts have also been made to ensure consistency between annual and quarterly estimates, as well as alignment with the latest international guidelines, including the System of National Accounts.

This report presents the recommendations of the Sub-Committee with respect to the compilation of constant price estimates for production-side and expenditure-side aggregates in both ANA and QNA. It is hoped that the recommendations will contribute to enhancing the quality, transparency, and credibility of India's National Accounts Statistics in the revised base year series.

Abbreviations

ACNAS	Advisory Committee on National Accounts Statistics
ANA	Annual National Accounts
ASI	Annual Survey of Industries
CE	Compensation of Employees
CFC	Consumption of Fixed Capital
CIS	Change in Stock
CNG	Compressed Natural Gas
CPI	Consumer Price Index
DOBS	Dwelling & Other Buildings Structures
EGWR	Electricity, Gas, Water Supply & Remediation
FISIM	Financial Intermediation Services Indirectly Measured
GDP	Gross Domestic Product
GFCE	Government Final Consumption Expenditure
GFCF	Gross Fixed Capital Formation
GST	Goods and Services Tax
GVA	Gross Value Added
GVO	Gross Value of Output
IBM	Indian Bureau of Mines
ICI	Index of Eight Core Industries
IIP	Index of Industrial Production
IPD	Implicit Price Deflator
IPP	Intellectual Property Products
LPG	Liquefied Petroleum Gas
MCA	Ministry of Corporate Affairs
MoSPI	Ministry of Statistics and Programme Implementation
NDE	Non-Departmental Enterprises
NVA	Net Value Added
PFCE	Private Final Consumption Expenditure
PLFS	Periodic Labour Force Survey
PNG	Piped Natural Gas
PPI	Producer Price Index
QNA	Quarterly National Accounts
RBI	Reserve Bank of India
SNA	System of National Accounts
SUT	Supply-Use Table
TTM	Trade and Transport Margin
UVI	Unit Value Index
WPI	Wholesale Price Index

Table of Contents

Chapter 1: Introduction- Constitution, Terms of Reference

1.1 Ministry of Statistics and Programme Implementation (MoSPI) vide its Gazette Notification dated 27.06.2024 **(Annexed at the end of the report)**, constituted the Advisory Committee on National Accounts Statistics (ACNAS) under the Chairmanship of Prof. Bishwanath Goldar to advise MoSPI, among other things, on inclusion of new data sources for improving the estimates of National Accounts, on the methodology for compilation and presentation of National Accounts Statistics for purposes of economic analysis and policy, and on implementation of latest UN standards.

1.2 The ACNAS in its first meeting held on 20th August, 2024, decided to revise the base year of National Accounts Statistics from Financial Year 2011-12 to 2022-23. As the base year revision is a voluminous and complex exercise, the ACNAS also decided to constitute following 5 Sub-Committees to simultaneously deliberate upon specific subjects:

i. Sub-Committee for Incorporation of New Data Sources, Rates and Ratios
ii. Sub-Committee for Methodological Improvement
iii. Sub-Committee for Constant Price Estimates
iv. Sub Committee on Regional Accounts
v. Sub-Committee for SNA 2025 Update

Constitution and Composition of the Sub Committee for Constant Price Estimates

1.3 The Sub-Committee for Constant Price estimates of ACNAS was constituted vide OM No. F.No.-U-11014/9/2023-NAD-2B dated 27.09.2024 **(Annexed at the end of the report)** with the following compositions:

i. Prof. Bishwanath Goldar (Retd.), IEG – Chairperson
ii. Sh. Asit Kumar Sadhu, NSC
iii. Prof. Partha Ray, NIBM
iv. Dr. Chetan Ghate, IEG
v. Dr. Subrata Guha, JNU
vi. Principal Adviser, DEPR, RBI
vii. DDG, DPIIT
viii. DDG, Labour Bureau
ix. DDG, PSD
x. Director, DES, Odisha
xi. DDGs from NAD
xii. Sh. Vishal Kumar, Director, NAD - Member Secretary

Terms of Reference (TOR) of the Sub-Committee

1.4 Terms of Reference of Sub-Committee were as follows:

i. To review the deflators being used in estimation of various macro-economic aggregates.

ii. Exploring use of double deflation or volume extrapolation as second best alternative and the level of disaggregation at which they may be applied.
iii. Aligning the compilation of constant price estimates in Quarterly and Annual Accounts wherever possible.
iv. Documentation and writing of report of the Sub-Committee.
v. To advise on any other relevant matter referred to the Sub-Committee by the Committee.

Meetings of the Sub-Committee

1.5 The Sub-Committee had eight meetings respectively on 24.12.2024, 24.04.2025, 04.06.2025, 04.07.2025, 11.08.2025, 19.09.2025, 13.10.2025 and 13.11.2025 under the chairmanship of Prof. Bishwanath Goldar to discuss and provide recommendations on the issues pertaining to it. Copies of minutes of all the meetings are **annexed** at the end of the report.

Report Structure

1.6 The report comprises of five chapters. The first chapter gives the composition and terms of references of the Sub-Committee on Constant Price Estimates. The second chapter of the report describes the methodology recommended for compilation of Constant Price Estimates of production-side estimates (industry-wise Gross Value Added and product taxes & subsidies) of Gross Domestic Product in the Annual National Accounts (ANA). The third chapter details about the recommended methodology for constant price estimates of Expenditure components in ANA. The fourth and fifth chapters of the report covers the recommendations with respect to volume measures & use of deflators in production-side and expenditure-side estimates of Quarterly National Accounts (QNA), respectively.

1.7 The Sub-Committee reviewed the methodologies being used in the current national accounts series with base 2011-12 for compilation of constant price estimates across all sectors of the economy. A shift from single deflation to volume extrapolation or double deflation has been recommended by the Sub-Committee wherever data availability and stability of estimates permit. Sector-specific volume indicators have been identified to reduce volatility and improve conceptual soundness. Efforts have been made to align ANA and QNA methodologies.

Chapter 2: Constant Price Estimates of GDP in Annual National Accounts (Production approach)

2.1 Agriculture, Livestock, Forestry and Fishing

2.1.1 Crops and Livestock:

2.1.1.1 In the 2011–12 base year series, Gross Value Added (GVA) at constant prices for Crops and Livestock sub-sectors under Agriculture and Allied Activities were estimated using current year production and base year prices. Under this approach, both output and input volumes of the current year were separately revalued using respective base year (2011–12) prices. Since outputs and inputs were estimated at base prices, the methodology already conforms to best international practices for estimating real GVA.

2.1.1.2 Sub-Committee noted that the existing methodology is conceptually robust and statistically sound, and agreed to the proposal to continue with existing method of compiling constant price estimates for these two sub-sectors.

2.1.2 Forestry:

2.1.2.1 **Existing Methodology (2011–12 Series):** In the Forestry sub-sector, constant price estimates in the 2011–12 series were compiled as follows:

- For major forest products, namely industrial wood and fuelwood, for which production data are available, State-wise values of output at constant prices were obtained by valuing current year quantities at base year prices (2011-12).
- The same approach was adopted for estimating value of output of fodder from forests.
- Wholesale Price Index (WPI) was used as a deflator to derive constant price estimates of 'Minor forest products' since direct values are reported by States.
- On the input side, constant price estimates were derived using a fixed input–output ratio in the 2011–12 series.

2.1.2.2 **Recommendations of the Sub-Committee:** Sub-Committee accepted the proposal of adopting volume/single extrapolation method for estimating constant price GVA of the Forestry sub-sector in the new series, as detailed below:

(i) Major Forest Products and Fodder from Forests: For industrial wood, fuelwood, and fodder from forests, State-wise quantum indices will be constructed using available State-level production/quantity data. Base year constant price estimates will be extrapolated using these quantum indices to arrive at GVA at constant prices for subsequent years.

(ii) Non-Timber Forest Products (NTFPs): For NTFPs, where States generally report only value data and information on quantities and prices is not available, a quantum index will be derived by deflating the current year value of output using the relevant WPI. This quantum index

will then be used to extrapolate base year GVA at constant prices to obtain constant price GVA for subsequent years.

2.1.3 Fishing:

2.1.3.1 Existing Methodology (2011–12 Series): In the 2011–12 series, constant price estimates for the Fishing sub-sector were compiled by valuing the current year production of marine fish, inland fish, and subsistence fish at base year prices. A similar approach was followed for output from curing activities. On the input side, fixed proportions of operational costs and repairs & maintenance relative to total output were applied to estimate GVA at constant prices.

2.1.3.2 Recommendations of the Sub-Committee: In the new series, volume extrapolation method will be adopted for the estimation of constant price GVA in the Fishing sub-sector. Accordingly:

- State-wise production data will be used to construct State-wise quantum indices, separately for marine fishing, inland fishing, subsistence fishing, and other disposal-related items.
- Base year GVA estimates will be extrapolated using these quantum indices to arrive at GVA at constant prices for subsequent years.

2.2 Mining & Quarrying

2.2.1 **Methodology in the 2011–12 Base Year Series:** In the 2011–12 base year series, the constant price GVA of Fuel Minerals under the Mining & Quarrying sector was estimated by deflating current price GVA using the relevant Wholesale Price Index (WPI). For other major minerals and minor minerals, information on production, prices, and input rates—as received from the Indian Bureau of Mines (IBM)—was used to derive appropriate deflators. These derived deflators were then applied to estimate constant price GVA for these mineral categories.

2.2.2 The Sub-Committee observed that in the current 2011–12 series, the real GVA of the Mining & Quarrying sector was being compiled using the single deflation method. Alternative approaches of volume/ single extrapolation and double deflation were examined with a view to moving away from single deflation. After assessing data availability, quality, and inter-temporal consistency, the Sub-Committee recommended a revised methodology for estimating constant price GVA of the Mining & Quarrying sector in the new series, as detailed below.

2.2.3 Fuel Mineral (Coal)

2.2.3.1 The Sub-Committee examined the following five alternative approaches based on volume extrapolation for compiling constant price GVA of Coal:

(i) Using Coal Index published under the Index of Eight Core Industries (ICI). The index excludes lignite.

(ii) Unweighted Index compiled using production of Coal (excluding lignite) in quantity terms as published in Coal Directory by M/o Coal. The volume Index is based on quantity produced.

(iii) Unweighted Index compiled using production of Coal (including lignite) in quantity terms, published in Coal Directory by M/o Coal.

(iv) Weighted Index compiled using weights from the Index of mineral production for Coal published by IBM with base year 2011-12 along with quantity data in Approach (iii).

(v) Using the weighted Index of coal production (base year 2011-12) compiled by IBM and provided for compilation of Index of Industrial Production (IIP) Mining.

2.2.3.2 The movements in indices under all five approaches were broadly similar over time. Compared with the existing method of deflating current price GVA using WPI (Coal), the use of volume extrapolation based on volume indices resulted in a reduction in volatility in the growth rates of real GVA for Coal. Moreover, data on mineral-wise input items used in mining are not available for all minerals and for those minerals wherein these data are available, there were issues pertaining to the stability of their use in carrying out double deflation as the resultant estimates were found to be volatile. In short run, the key assumption underlying volume extrapolation—namely, that input–output technical coefficients remain broadly unchanged ensures stability of constant price GVA and therefore volume extrapolation is technically better than use of single deflation.

2.2.3.3 The feasibility of applying volume extrapolation separately for different categories of coal—such as raw coal, middling coal, washed coal, and lignite—was also examined. However, this approach was not found feasible due to the non-availability of category-wise GVA estimates, arising from the lack of disaggregated information on inputs used for each coal category in the available data sources including Annual Reports of Non-Departmental Enterprises (NDE) and the Ministry of Corporate Affairs (MCA) database.

2.2.3.4 **Recommendations of the Sub-Committee:** After evaluating all alternative approaches, the Sub-Committee concluded that the weighted Index of coal production compiled by IBM and used for IIP (Mining) is technically the most appropriate indicator for volume extrapolation. This index is comprehensive, includes lignite, and is appropriately weighted. Accordingly, the Sub-Committee recommended the adoption of Approach (v) for estimating constant price GVA of coal in the new Gross Domestic Product (GDP) series.

2.2.4 **Fuel Mineral (Petroleum and Natural Gas)**

2.2.4.1 The Sub-Committee examined the following three alternative approaches based on volume extrapolation for compiling constant price GVA of Petroleum and Natural Gas:

(i) Using combined Indices of Crude Oil and Natural Gas published under the ICI derived as per the weights of these two products available in the ICI.

(ii) Weighted Index compiled using production data for Petroleum (Crude) and Natural Gas provided by M/o Petroleum and Natural Gas and then combining these two Indices using weights from the Index of mineral production for Petroleum (Crude) and Natural Gas, published by IBM.

(iii) Using the weighted Index of Petroleum and Natural Gas production compiled by IBM and provided for compilation of IIP Mining.

2.2.4.2 The movements in indices under all three approaches were broadly similar over time. Compared with the existing methodology of single deflation, the use of volume extrapolation based on volume indices resulted in a reduction in volatility in the growth rates of real GVA for of Petroleum and Natural Gas. It was further observed that the GVA-to-GVO ratio (and correspondingly, the input–output ratio) at current prices for Petroleum & Natural Gas were not that stable as in case of Coal.

2.2.4.3 Instead of using composite index for volume extrapolation, feasibility of using volume extrapolation separately for GVA of Petroleum (Crude) and that of Natural Gas was also explored. Since, ratio of inputs that goes into production of Petroleum (Crude) and Natural Gas was not available, it was suggested to consult M/o Petroleum and Natural Gas for the input data for bifurcation of inputs.

2.2.5 Major Metallic and Non-Metallic Minerals

2.2.5.1 The Sub-Committee examined the following four alternative approaches based on volume/ single extrapolation for compiling constant price GVA of Major Metallic and Non-Metallic Minerals:

(i) Using mineral-wise quantum index compiled by deflating Gross Value of Output (GVO) at Current Prices by relevant WPI.

(ii) Using mineral-wise quantum Index compiled using quantity produced as reported by IBM.

(iii) Using mineral-wise quantum Index compiled by deflating GVO (Current) by implicit deflator obtained from data provided by IBM [(current year production in quantity terms x current year prices) / (current year production in quantity terms x base year prices)].

(iv) Using mineral-wise Index of Mineral Production of IBM provided for IIP

2.2.5.2 In the first approach, wherever mineral specific WPI was not available (in case of metallic minerals), overall WPI of metallic minerals (composite index of bauxite, chromite, zinc

concentrate, manganese ore, iron ore, copper concentrate and lead concentrate) was used. Similarly, wherever, mineral specific WPI was not available in case of non-metallic minerals, overall WPI of other minerals (composite index of phosphorite, limestone, garnet and sillimanite) was used. The Sub-Committee also observed that mineral-wise Index of Mineral Production published by IBM and provided for IIP Mining, was available for most of the major metallic and non-metallic minerals except for silver, flint stone, iolite and a few other minerals like moulding sand, perlite, salt (rock) and siliceous earth whose production found to be negligible since 2017-18.

2.2.5.3 There were wide variations in real GVA for FY 2022-23 and 2023-24 using above four approaches and that the estimates of real GVA using approach (iii) and (iv) were close to each other. Feasibility of using double deflation method using the relevant WPI was also explored. It was observed that the growth rates arrived using double deflation was volatile compared to volume extrapolation using mineral-wise index of production compiled by IBM and currently used in IIP (Mining). Besides, for constant price estimates of GVA of Salt Mining, volume extrapolation based on quantity of salt produced has been proposed to be used.

2.2.5.4 Recommendations of the Sub-Committee: After evaluating all alternative approaches and with the objective to maintain the consistency with the methodology for constant price estimates of GVA of Fuel Minerals and also to maintain consistency with Quarterly National Accounts, it was recommended to adopt volume extrapolation method **using approach (iv)** for constant price estimates of GVA of major metallic and non-metallic minerals**.** Similarly, for constant price estimates of GVA of Salt Mining, it was recommended to use volume extrapolation based on quantity of salt produced.

2.2.6 Minor Minerals

2.2.6.1 The data on minor minerals are not available with any central agency and are to be sourced from State/UT Geological Departments. Most of the States/UTs are providing data on both quantity and value for these minor minerals. The Sub-Committee recommended that year-wise data on quantity produced would be requested from all States/UTs and then the minor mineral-wise quantum Index would be compiled and used as volume extrapolation indicator for deriving the real GVA.

2.3 Manufacturing

2.3.1 Methodology in the 2011–12 Base Year Series: In the 2011–12 base year series, GVA of the Manufacturing sector at constant prices was estimated using the single deflation approach. Under this method, compilation category-wise GVA at current prices was deflated using the relevant WPI. Thus, the same price index was implicitly applied to both output and intermediate consumption, without explicitly accounting for differential price movements between inputs and outputs.

2.3.2 In the new series, an attempt has been made to estimate constant price GVA of the Manufacturing sector using the double deflation method, which is conceptually superior as it separately deflates output and intermediate consumption. Using Annual Survey of Industries (ASI) 2022-23 data, the basket of goods inputs and service inputs, as well as their respective weights were derived separately for each of the 30-compilation category (level of disaggregation at which GVA is published for manufacturing in the National Accounts Statistics). Relevant item-wise WPI for domestic goods input, deflator from National Accounts Statistics for services input and price index for imported items (compiled using median per unit price reported for these items in ASI over the years) were used for constructing a composite deflator for intermediate consumption for each of the compilation category. The output was deflated using WPI based index as used in single deflation approach in the current series. Based on the deflated output and intermediate consumption, GVA estimates at constant price was compiled for each of the compilation category. In order to test the sensitivity of results for the double deflation exercise and compare with the results based on single extrapolation, estimates compiled for GVA of overall manufacturing and each of the 30 compilation categories were examined initially using following six methods:

I. **Method 1:** Double Deflation with input basket consisting of indigenous goods, imported goods and services used as inputs.

II. **Method 2:** Double Deflation with input basket consisting of indigenous goods and services used as inputs but excluding imported goods.

III. **Method 3:** Double Deflation with input basket consisting of indigenous goods only and excluding imported goods and services used as inputs.

IV. **Method 4:** Double Deflation with input basket consisting of top 85% in terms of share in value terms of the indigenous goods.

V. **Method 5:** Single Extrapolation using Compilation Category-wise IIP.

VI. **Method 6:** Single Extrapolation using quantum index constructed by deflating compilation category-wise GVO at current prices by relevant compilation category-wise WPI.

2.3.3 While growth rates for overall manufacturing obtained using double deflation were found to be relatively stable, significant volatility was observed in some compilation categories. Accordingly, for such categories, further refinements were examined as follows:

I. Instead of fixing the item basket for inputs and therefore the weights based on results of ASI 2022-23 for each compilation category, the item basket for both input (from Block H) as well as output (from Block J) and their corresponding weights have been derived every year using the results of corresponding year ASI. This will address the dynamic changes in the input and output mix for each of the compilation category.

II. Imported inputs as well as services related items available from Block I and F respectively of ASI have also been used.

III. Items accounting for 85% of the total output and input (in value terms taken in descending order) have been considered while deriving year-wise item basket using ASI.

IV. The compilation category-wise output from National Accounts Statistics is bifurcated using the item-wise weights derived from Block J of ASI. The item/product wise output is then deflated using corresponding item-wise WPI. The item-wise deflated output is then summed up to arrive at GVO at constant prices.

V. Similar exercise using results from ASI (Block H, I and F) has been carried out to arrive at input at constant prices.

VI. The GVA at constant prices is then arrived at, using difference of deflated GVO and Input.

2.3.4 The Sub-Committee observed that the above refined double deflation approach yielded more stable results compared to earlier methods. Given that FY 2020–21 and FY 2021–22 were significantly affected by the COVID-19 pandemic, the exercise was extended back to FY 2011–12 onwards to assess inter-temporal consistency. Additionally, a parallel exercise using the experimental Producer Price Index (PPI) with base year 2017–18 was undertaken to examine compilation category-wise behaviour of constant price estimates derived using double deflation based on WPI and PPI. Based on these results, compilation categories were analysed to identify cases where:

- Double deflation produced consistent year-on-year growth rates, and
- Single extrapolation (using growth rates derived from deflated output) yielded more stable results.

2.3.5 The double deflation method was conceptually appropriate than other method and not comparable to the results based on single deflator due to different variation in prices of input items and output items. It was also observed that results using WPI and experimental PPI for some of the compilation categories were showing different trend for some of the years possibly due to different baskets and weights. In many compilation categories (CC), results using double deflation was showing high volatility mainly due to large number of imported items and lack of imported price index.

2.3.6 Recommendations of the Sub-Committee: After evaluating the alternative approaches and considering:

- Availability of item-wise price indices in WPI (2011–12 series) and experimental PPI (2017–18 series),
- Share of imported inputs in each compilation category, and
- Availability and reliability of import price indices,

the Sub-Committee recommended adopting differentiated compilation strategies across compilation categories, wherein:

- Double deflation is adopted for compilation categories exhibiting stable behaviour and adequate price information for both outputs and inputs, and
- Single extrapolation method is adopted are retained for compilation categories where double deflation leads to excessive volatility due to data limitations, particularly in respect of imported inputs.

CC No.	Activities	NIC-2008	Approach for Constant Price Estimates	Rationale for Approach
1	Production, processing and preservation of meat, fish, fruit, vegetables, oils and fats	101-104	Single Extrapolation	Constraints on availability of input price as well as imported input price indices for not selecting the double deflator approach
2	Manufacture of dairy products	105	Double Deflation	
3	Manufacture of grain mill products, etc. and animal feeds	106+108	Double Deflation	
4	Manufacture of other food products	107	Double Deflation	
5	Manufacture of beverages	11	Double Deflation	
6	Manufacture of tobacco products	12	Double Deflation	
7	Manufacture of textiles + cotton ginning	13+01632	Double Deflation	
8	Manufacture of wearing apparel, except custom tailoring	14-14105	Double Deflation	
9	Manufacture of leather and related products	15	Double Deflation	
10	Manufacture of Basic Iron and Steel + Casting of iron and steel	241+2431	Double Deflation	
11	Manufacture of basic precious and non-ferrous metals + Casting of non-ferrous metals	242+2432	Double Deflation	
12	Manufacture of fabricated metal products, except machinery and equipments	25	Double Deflation	
13	Manufacture of electronic component, consumer electronics, magnetic and optical media	261+264+268	Single Extrapolation	Constraints on availability of input price as well as imported input price indices for not

CC No.	Activities	NIC-2008	Approach for Constant Price Estimates	Rationale for Approach
				selecting the double deflator approach
14	Manufacture of computer and peripheral equipment	262	Single Extrapolation	Constraints on availability of input price as well as imported input price indices for not selecting the double deflator approach
15	Manufacture of communication equipments	263	Single Extrapolation	Constraints on availability of input price as well as imported input price indices for not selecting the double deflator approach
16	Manufacture of optical and electronics products n.e.c	265+266+267	Double Deflation	
17	Manufacture of Electrical equipments	27	Double Deflation	
18	Manufacture of machinery and equipments n.e.c	28	Double Deflation	
19	Manufacture of Transport Equipments	29+30	Double Deflation	
20	Manufacture of coke and refined petroleum products	19	Double Deflation	
21	Manufacture of chemical and chemical products except pharmaceuticals, medicinal and botanical products	20	Single Extrapolation	Constraints on availability of input price for large no. of items as well as imported input price indices for not selecting the double deflator approach
22	Manufacture of pharmaceutical; medicinal chemicals and botanical products	21	Single Extrapolation	Constraints on availability of input price for large no. of items as well as imported input price indices for not selecting the double deflator approach
23	Manufacture of rubber & plastic products	22	Double Deflation	
24	Manufacture of other non-metallic mineral products	23	Double Deflation	
25	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting material	16	Double Deflation	

CC No.	Activities	NIC-2008	Approach for Constant Price Estimates	Rationale for Approach
26	Manufacture of paper and paper products	17		
27	Printing and reproduction of recorded media except publishing	18	Double Deflation	
28	Manufacture of furniture	31	Double Deflation	
29	Other Manufacturing	32	Single Extrapolation	Constraints on availability of input prices for large no. of items as well as imported input price indices for not selecting the double deflator approach
30	Repair and installation of machinery and equipments	33	To be merged with CC -18 (Manufacture of machinery and equipments n.e.c)	Constraints on availability of price and production indices for not selecting the double deflator and single extrapolation approach

2.3.7 The Sub-Committee also expressed the need to review the number of compilation categories and the level of disaggregation at which GVA and GVO are being published in National Accounts Statistics since some of the compilation categories especially those compilation categories formed on the basis of three-digit National Industrial Classification (NIC) have shown volatile growth rates in single deflation (currently used).

2.4 Electricity, Gas, Water Supply & Remediation (EGWR)

2.4.1 Electricity

2.4.1.1 In the 2011–12 base year series, GVA of Electricity at constant prices was estimated using volume extrapolation method wherein the base year estimates were moved with the index of quantum (units sold) of generated electricity.

2.4.1.2 The volume extrapolation method will continue to be used for estimating the GVA of the Electricity sector at constant prices in the revised base year series. However, volume extrapolation will be applied separately for Renewable and Non-Renewable electricity generation, recognising that the input–output ratios differ significantly between conventional and renewable modes of electricity production. Over the years, the share of renewable electricity in total electricity sold has increased steadily, rising from 5.6 per cent in 2011–12 to about 13 per cent in 2023–24. This structural shift implies a change in the aggregate input–output relationship of the Electricity sector. Since volume extrapolation for constant price estimation is based on the fundamental

assumption of a stable input–output ratio over time, applying a single volume indicator for the combined electricity sector could lead to biased estimates. Therefore, to preserve the validity of this assumption and improve the accuracy of constant price estimates, it was recommended that separate volume extrapolation be undertaken for Renewable and Non-Renewable electricity generation, with the resulting estimates aggregated to derive the overall GVA of Electricity at constant prices.

2.4.2 Gas

2.4.2.1 In the 2011–12 base year series, real GVA of Gas for organised part (NDE & Private Corporate) was estimated using volume extrapolation by moving base year estimate with the index of quantum sales of gas sourced from Gas Authority of India Limited (GAIL). For household sector, constant price estimates of GVA of Gas (biogas) was estimated using volume extrapolation using the index based on cumulative number of bio gas plants.

2.4.2.2 The volume extrapolation method will continue to be used for estimating the GVA of the Gas sector at constant prices in the revised base year series. However, for organized part of Gas sector, volume extrapolation will be done using index based on consumption of Natural Gas. For biogas sector, the possibility of using the information on volume of biogas produced in place of the number of biogas plants was explored. However, the information on volume of biogas produced in each year was not readily available. Considering that the biogas segment has minor share in the GVA (Gas), the Sub-Committee recommended to use cumulative growth in number of biogas plants for volume extrapolation till the production data become available.

2.4.3 Water Supply

2.4.3.1 In the exiting 2011-12 series, constant price GVA of Water Supply was estimated using the single deflation method wherein current price estimates of GVA was deflated with the Consumer Price Index (CPI)-General. A review of deflator used for constant price estimation of GVA (Water Supply) in other economies was done. It was explored to use volume extrapolation method using State/UT wise information on quantum of water supplied by General Administration, Local Bodies, Autonomous Bodies and Public Sector Units (PSUs), for estimating the real GVA of Water Supply in the new series. However, as only a few states have provided these data, it was alternatively explored to use single extrapolation method based on index constructed using GVO at current prices deflated by CPI (Water Charges). It was also noted that the water supply charges by Government and Local Authorities tend to remain stable for long time and do vary according to the type of connection (domestic, industrial/commercial) and also varies across cities within a state. Hence, an index based on prices charged was difficult to construct.

2.4.3.2 The Sub-Committee recommended to adopt the volume extrapolation method, using a quantum-based index constructed from data on quantum of water supplied by major states, for the estimation of GVA of Water Supply at constant prices.

2.4.3.3 Subsequent examination revealed that volume extrapolation could not be implemented for constant price estimation of GVA of Water Supply, since the data on quantum of water supplied was provided by very few States/UTs. This was presented before the ACNAS. Given that the public sector has significant share in GVO and GVA, it was decided that single extrapolation approach wherein GVO is deflated by CPI(IW) for public sector will be used for constant price estimation of GVA of Water Supply.

2.4.4 Remediation (recycling)

2.4.4.1 In the exiting 2011-12 series, the current price estimates of GVA of Remediation (recycling) were deflated with the relevant WPI (of Basic Iron, Steel and casting of iron and steel) to arrive at constant price estimates of this sector. A review of deflator used for constant price estimation of GVA(Remediation-Recycling) used in other economies was done.

2.4.4.2 Based on the availability of price indices in the Indian context, it was recommended to use single extrapolation method for estimation of GVA of Remediation (recycling) at constant prices in the revised series wherein GVO will be deflated by relevant WPI (Index of Basic Iron and Steel and casting of iron and steel, fabricated metal products, paper and plastic products) and then the growth in deflated output will be used for single extrapolation.

2.4.5 Remediation (sewerage)

2.4.5.1 In the 2011–12 base year series, the GVA of Remediation (Sewerage) at constant prices was estimated using the single deflation method, wherein current price GVA was deflated using the CPI (General). An alternative approach of volume extrapolation, using physical indicators such as the quantity of solid waste processed and volume of water treated, was examined. However, after discussion with the concerned Ministries/ Departments and State/UTs, it was observed that the required data are not available.

2.4.5.2 Accordingly, considering the data limitations and availability of price indices in the Indian context, it was recommended that the single extrapolation method will be used for estimating the GVA of Remediation (Sewerage) at constant prices. Under this approach, an implicit volume index, derived by deflating GVO at current prices using CPI (General), will be used for extrapolating the base year estimates to obtain constant price GVA.

2.5 Construction

2.5.1 **Methodology in the 2011–12 Base Year Series**: In the 2011–12 base year series, GVA of Construction sector was derived using commodity flow approach. General Pucca Construction Index derived using the weighted average of prices of material inputs (cement and cement products, iron and steel, glass and glass products, bricks and tiles, timber and wood products, fixtures and fitting, bitumen and bitumen products) and factor inputs was being used for deflating GVA for pucca construction. Similarly, a composite index derived using WPI and CPI was used for deflating current price GVA of Kutcha Construction. Current price GVA of Plantation and

Mineral Exploration (which are considered as kutcha construction) were deflated using CPI-Rural. The weights for deriving these composite indices for deflating GVA of pucca and kutcha construction at current prices had been derived based on a study undertaken by the Ministry during base year revision.

2.5.2 The Sub-Committee examined four alternative approaches for estimating the GVA of the Construction sector at constant prices, as described below:

(i) Single Extrapolation-I: Deflating the GVO at current prices using deflators in existing series and then using single extrapolation i.e. base year GVA extrapolated using the growth rates derived from deflated output.

(ii) Single Extrapolation-II: In this approach, instead of keeping the weights fixed based on base year study, the material and factor inputs have been deflated using the corresponding WPI/CPI based on the values of these material and factor inputs obtained in the commodity flow approach. The output at constant prices is then derived by summing the item-wise deflated values. Single extrapolation is then carried out by moving base year GVA using the growth rates derived from the deflated output. Possibility to construct a wage index using Periodic Labour Force Survey (PLFS) data using information collected in block-6 (current weekly status) wherein both National Industrial Classification (NIC) and National Classification of Occupations (NCO) codes are available, was also explored for deflating factor inputs (which consists of labour charges and operating surplus) instead of using CPI-Rural and Urban. However, the average wages computed from PLFS were found to fluctuate considerably over the years and consistency was an issue.

(iii) Single Extrapolation-III: In this approach, item-wise material inputs are deflated by corresponding WPI. Then, a fixed Input to Output ratio (derived in the base year) is applied to total of material inputs at constant prices to estimate the total output at constant prices.

(iv) Double deflation: The intermediate consumption items are deflated by relevant WPI to arrive at input at constant prices. The output derived using commodity flow approach consisting both of intermediate input and factor inputs are also deflated using relevant WPI and CPI to arrive at GVO at constant prices. The difference between deflated output and input provides estimates for GVA of Construction at constant prices. The drawback of this approach is that since the output is being constructed as sum of intermediate consumption and factor inputs and there is no output price index available for deflating construction output, this approach is not double deflation in true sense.

2.5.3 After evaluating the results obtained from all four approaches, it was observed that **Single Extrapolation – III** best preserves the core assumption of single extrapolation, namely that the input–output ratio remains constant over time. It was also noted that relevant WPIs are available for deflating all material inputs, ensuring consistency and transparency in estimation. Further, this approach avoids the need to deflate the wage component, for which a suitable and stable price index could not be identified, as highlighted under Single Extrapolation – II. Accordingly, it was

recommended to adopt the Single Extrapolation – III approach for estimating the GVA of the Construction sector at constant prices in the revised series.

2.6 Trade, Repair, Hotels and Restaurants

2.6.1 In the existing 2011–12 base year series, the estimation of GVA at constant prices for the Trade, Repair, Hotels and Restaurants sector followed different approaches across subsectors and institutional segments.

- For the private corporate sector under Repair & Maintenance of Motor Vehicles and Sale of Motor Vehicles, GVA at constant prices was estimated by deflating current price GVA using a Trade and Transport Margin (TTM)–based WPI. In contrast, for the Quasi-corporate and Household (HH) sector of this activity, GVA at constant prices was derived using a volume extrapolation method, wherein the base year GVA was extrapolated using the growth in total commercial vehicle sales. The corresponding current price GVA was then obtained by inflating the constant price estimates using the TTM-based WPI.

- For Other Wholesale Trade, Retail Trade & Repair Services, and Hotels & Restaurants, constant price GVA is similarly estimated by deflating current price GVA using the TTM-based WPI.

2.6.2 The TTM-based WPI deflator was constructed using information from the Supply-Use Table (SUT), wherein Trade and Transport Margins were available separately for 112 product items. These margins were used as weights and combined with corresponding item-level WPIs to derive a composite deflator.

2.6.3 The methodologies currently used for estimating constant price GVA in the Trade-related sectors were comprehensively reviewed, with a focus on identifying limitations, data gaps, and conceptual issues. As part of this review, estimation practices adopted by several countries—such as double deflation, volume extrapolation, chain-linking, and annual rebasing—were examined. For all subsectors under Trade, Repair, Hotels and Restaurants, the feasibility of a single extrapolation method based on an index of deflated output using TTM-weighted WPI was assessed. Specifically:

- For Repair & Maintenance of Motor Vehicles and Sale of Motor Vehicles, the continued use of volume extrapolation based on commercial vehicle sales growth was also examined.

- For Repair Services and Hotels & Restaurants, an alternative approach involving single extrapolation using an index of deflated output based on a composite index of relevant CPI items was explored, given the consumption-oriented nature of these services.

2.6.4 Based on improvements in data availability and the establishment of a regular flow of information, the following methodological changes were recommended for the new base year series:

- For Retail Trade, Wholesale Trade, Repair & Maintenance of Motor Vehicles, Sale of Motor Vehicles, and Repair Services, GVA at constant prices will be estimated using a single extrapolation method based on an index of deflated output, replacing the earlier single deflation approach.

- Deflated outputs for these sub-sectors will be constructed using TTM-based WPI as the deflator.

- Updated information on Trade and Transport Margins in the base year will be compiled using the SUT of 2022–23.

2.6.5 For Hotels & Restaurants, single extrapolation method using an index of deflated output will be adopted for estimating constant price GVA. Instead of TTM-based WPI, a composite index constructed from relevant CPI items will be used to deflate current price GVO, reflecting the consumer-facing nature of these activities.

2.7 Transport, Storage, Communication & Services related to broadcasting

2.7.1 Transport sector

2.7.1.1 In the existing series with base year 2011-12, GVA of the Transport sector at constant prices was estimated using the volume extrapolation method. Sub-sector–specific proxy indicators were used to extrapolate the base year GVA. The methodologies followed for different transport sub-sectors are described below:

(i) Railways: An index of Combined Earnings at constant prices, comprising Passenger Earnings and Goods Earnings, was used to extrapolate the base year GVA in the 2011-12 series.

- Passenger Earnings at constant prices were obtained by extrapolating class-wise passenger earnings of the base year using the growth in corresponding Passenger Kilometres (PKM).
- Goods Earnings at constant prices were derived by deflating current price goods earnings using WPI (All Commodities).
- The combined index was prepared by summing Passenger Earnings (volume) and Goods Earnings (volume), and this index was used to move the base year GVA to obtain constant price GVA for subsequent years.

(ii) Road Transport: For departmental enterprises and non-departmental enterprises, volume extrapolation using the quantum mechanical index prepared using passenger kilometers travelled was employed to estimate constant price GVA. For Private corporate, Quasi-corporate and Household sectors, constant price GVA was estimated using growth in stock of commercial vehicles.

(iii) Water Transport: The constant price estimates were prepared by the volume extrapolation method using the Index of cargo handled at major and minor ports. The current price estimates for Quasi-corporate and Household sectors were prepared by inflating constant price estimates using WPI.

(iv) Air Transport: Constant price GVA was compiled using volume extrapolation based on an index of passengers and cargo handled at airports.

(v) Services Incidental to Transport: For services incidental to transport, constant price GVA was estimated by applying volume extrapolation using the combined growth in constant price GVA of different transport sub-sectors.

2.7.1.2 For the new series, it was recommended to continue the volume extrapolation method for estimating GVA of the Transport sector at constant prices, given the limited availability of appropriate price deflators and the dominance of quantity-based indicators in transport activities. The possibility of using fuel consumption data (petrol and diesel) separately for household and non-household purposes, particularly for Road Transport, was examined. However, due to the non-availability of such disaggregated data, the volume extrapolation approach continues to remain the most feasible option. Accordingly, the following improvements and refinements in methodology are recommended:

(i) Railways: The existing approach of volume extrapolation using an index of Combined Earnings at constant prices will be continued in 2022-23 series as well. However, a methodological improvement is recommended for estimating goods earnings:

- Goods Earnings at constant prices will be obtained by extrapolating base year commodity-wise goods earnings using growth in the respective Net Tonne Kilometres (NTKM), instead of deflating goods earnings with WPI (All Commodities).

This change is recommended as volume extrapolation based on NTKM provides conceptually more sound measure of real output than price deflation using a broad-based WPI.

(ii) Road Transport: Constant price GVA will be estimated using volume extrapolation based on the growth in the stock of commercial vehicles.

- The stock of commercial vehicles will be constructed using sales data for the past 15 years, sourced from the Society of Indian Automobile Manufacturers (SIAM).

(iii) Water transport: Volume extrapolation using the Index of cargo handled at both major and minor ports will be used to estimate constant price GVA, replacing the earlier mixed approach across institutional sectors.

(iv) Air transport: The existing methodology of volume extrapolation using the index of passengers and cargo handled at airports will continue. Data on passengers and cargo handled will be sourced from the Directorate General of Civil Aviation (DGCA). As per the latest

information received from DGCA, ratio of passengers and cargo handled at airports have been updated from existing 90:10 to 95:5.

(v) Services incidental to transport: Constant price GVA for services incidental to transport will be estimated using volume extrapolation based on the combined growth in constant price GVA of Road, Air, and Water transport sectors, ensuring closer alignment with the activity base of these services.

2.7.2 Storage

2.7.2.1 In the existing series, the estimation of GVA at constant prices for the Storage sector followed different deflation approaches across institutional sectors. For non-departmental enterprises and the private corporate sector, the Current Price GVA estimates were deflated using a Storage and Warehousing Price Index to derive the corresponding Constant Price estimates. For the Quasi-corporate and Household sector, WPI was used as the deflator.

2.7.2.2 For the new series, the feasibility of using labour-based indicators, such as the number of workers or wage per worker corresponding to the relevant NIC classes from the PLFS, was examined for estimating the constant price GVA of the Storage sector, given the absence of a suitable volume indicator. However, these labour-based indicators were found to be inadequate proxies for output volume in the Storage sector, as they may not appropriately capture productivity changes or variations in storage and warehousing activity levels. In view of these limitations, it was recommended to adopt the single extrapolation method for estimating GVA at constant prices for this sector.

2.7.2.3 Accordingly, the base year GVA will be extrapolated using the growth rates derived from deflated output. For deflating the output at current prices, an index based on storage and warehousing charges will be used as the appropriate deflator.

2.7.3 Communication & services related to broadcasting

2.7.3.1 In the existing series, the estimation of GVA at constant prices for Postal and Courier activities; Cable operators; and Recording, Publishing and Broadcasting services was carried out using the single deflation method, wherein the CPI (Transport & Communication) was used as the deflator.
For the Telecommunication sector, constant price GVA estimates for the non-departmental enterprises, private corporate and co-operative sectors were also compiled using the single deflation method with CPI (Transport & Communication) as the deflator. In contrast, for the Quasi-corporate and Household sector, the constant price GVA of the previous year was extrapolated using the growth rate in Minutes of Usage, as reported by the Telecom Regulatory Authority of India (TRAI).

2.7.3.2 It was observed that the prevailing practice of using CPI (Transport & Communication) as the deflator for the Telecommunication sector significantly understated the real growth of the sector. This was primarily attributable to the sharp decline in data usage prices over the years,

coupled with the inadequate weight assigned to data usage services in the existing CPI basket. As a result, CPI-based deflation failed to reflect the rapid expansion in telecom service volumes, especially data consumption. These shortcomings necessitated an exploration of improved methodologies for the compilation of constant price estimates for the Telecommunication sector.

2.7.3.3 Based on a review of data availability and assessment of alternative approaches, the following methodologies were recommended for estimating constant price GVA of the Communication sector:

(i) Postal and Courier Activities: In the absence of a relevant item-specific price index in the current CPI basket, CPI (Transport & Communication) will continue to be used as the deflator. Constant price GVA will be compiled using the single extrapolation method.

(ii) Telecommunication Sector: Two alternative approaches were examined:

(a) Single extrapolation using relevant CPI item indices; and
(b) Volume extrapolation using physical indicators such as Minutes of Usage and Data Usage.

Considering the comprehensive coverage and robustness of data on minutes of usage and data usage across all telecom service providers in the country, the volume extrapolation method was recommended for estimating constant price GVA of the Telecommunication sector.

(iii) Cable Operators; Broadcasting and Publishing Services: For these activities, the single extrapolation method using the respective CPI item indices was recommended for compiling GVA at constant prices.

2.8 Financial Services

2.8.1 The estimates of Financial Services Sector are compiled at different sub-sector level as per System of National Accounts (SNA) classification. These sub-sectors include Central Bank; Deposit taking Corporations except Central bank; Money Market Funds (MMF) & Non MMF Investment Funds; Other Financial Intermediaries except insurance corporations and pension funds (ICPF); Financial Auxiliaries; Captive Financial Institutions and Moneylenders; Insurance Corporations; and Pension funds. Different sub-sector wise existing methodology of estimation of GVA at constant prices along with the recommended methodology for the new series are detailed in the succeeding paragraphs.

2.8.2 Central Bank (S-121)

2.8.2.1 In the current series (2011–12 base year), the estimation of GVA of Central Bank i.e. Reserve Bank of India (RBI) at constant prices was carried out using the single deflation method. The Implicit Price Index, derived from the ratio of current and constant price estimates of Deposit-taking Corporations except the Central Bank, was used as the deflator for compiling the constant price estimates of GVA of RBI.

2.8.2.2 The existing methodology for estimating constant price GVA of RBI was reviewed in consultation with RBI. In line with the input-based approach recommended in ESA 2016 for Central Banks, the use of the number of employees as a volume indicator was examined. Accordingly, the following alternative approaches were explored:

(i) Method 1: Volume extrapolation was done using the number of employees as volume indicator.

(ii) Method 2: Cost per employee was used to compute price index. Using the same, the volume measure of output was computed and then volume index based on this volume measure of output was used for volume extrapolation.

(iii) Method 3: Volume indices of number of employees and deflated Compensation of Employees (CE) were computed and using the average of these two indices, volume extrapolation was done. For deflating CE, non-finance deflator (the implicit price index of unadjusted GVA for non-financial industries) was used.

(iv) Method 4: Volume indices of number of employees and deflated Output were computed and using the average of these two indices, volume extrapolation was done. For deflating Output, non-finance deflator (the implicit price index of unadjusted GVA for non-financial industries) was used.

(v) Method 5: Volume indices of number of employees and deflated CE were computed and using the average of these two indices, volume extrapolation was done. For deflating CE, CPI (G) was used.

(vi) Method 6: Repeated Method 5 by using CPI(IW) for deflating CE.

2.8.2.3 It was observed that volume extrapolation using only the number of employees as a volume indicator was not appropriate unless grade-wise information on employees was taken into account. Accordingly, the feasibility of obtaining the following data from RBI was examined:

a. Grade-wise number of employees and average CE for each grade for the base year i.e. 2022-23
b. Grade-wise number of employees for the subsequent FYs.

However, it was noted that deriving constant price estimates of CE independent of current price estimates by extrapolating base year values using grade-wise employment data would lead to the following limitations:

- Labour productivity gains would not be captured in the constant price estimates. Productivity improvements would be entirely reflected as price changes, resulting in underestimation of constant price GVA.

- The output generated by employees engaged on ad-hoc or contractual basis (such as consultants and interns), whose remuneration is paid by RBI and forms part of its output

and GVA, may not be adequately captured. Since such personnel are not reflected in regular grade-wise employee data, the proposed approach could fail to capture the associated output and GVA. Consequently, the real value of services rendered by RBI would be influenced by its human resource policies rather than actual output performance.

2.8.2.4 In view of the limitations associated with the use of employment-based volume indicators, it was recommended to adopt the following methodology for estimating constant price GVA of RBI:

- Volume indices of deflated CE will be computed and used for volume extrapolation of Output and GVA. For deflating CE, CPI (G) will be used as the price deflator.

2.8.3 Deposit taking Corporations except RBI (S-122)

2.8.3.1 In the current series (2011–12 base year), constant price estimates of Deposit-taking Corporations except RBI, excluding Co-operative Banks and Post Office Savings Bank, were compiled using a volume index of deflated sum of credit and deposits of all Scheduled Commercial Banks (SCBs). The Implicit Price Index of unadjusted GVA for non-financial industries was used as the price deflator. For Cooperative Banks, average of two indices: (i) Index of deflated deposits and (ii) index of total membership, was used for moving the base year value. For deflating total deposit for a given year, Implicit Price Deflator (IPD) of non-financial services was used. The constant price estimates of Post office saving bank was derived using the single deflation method, where the current price estimates were deflated using the CPI.

2.8.3.2 The Experimental Banking Services Price Index (BSPI) compiled by DPIIT, along with compilation practices followed in advanced economies, was examined to identify an appropriate price measure for financial services. With respect to compiling volume measures of Financial Intermediation Services Indirectly Measured (FISIM), reference was made to the UN Handbook of National Accounting: Financial Production, Flows and Stocks in the System of National Accounts. Based on this, the IMF shared the following conceptual framework:

- FISIM in volume on the loans granted to the institutional sector = stocks of loans granted to the institutional sector/price index * base period margin
- FISIM in volume on the deposits of the institutional sector = stocks of deposits of the institutional sector/price index * base period margin.
- Base period margin on loans = the effective interest rate on loans less the reference rate.
- Base period margin on deposits = the reference rate less the effective interest rate on deposits.
- Stocks of loans and deposits deflated to base period prices using a general price index such as the IPD for domestic final demand or GDP deflator excluding FISIM.

2.8.3.3 Taking into account data availability, empirical exercises were undertaken to estimate constant price GVA of Deposit-taking Corporations except RBI, separately for the following sub-sectors:

A. Scheduled Commercial Banks (SCBs) and Regional Rural Banks (RRBs)

2.8.3.4 Alternative Methodologies Examined for SCBs and RRBs.

Method 1:

- Average aggregate Credits and Average aggregate deposits of Scheduled Commercial Banks and Regional Rural Banks are deflated using CPI(G)
- Volume measures of FISIM on loans (base year prices) is computed as under:
  Volume measures of FISIM on loans (base year prices)
  $$= Deflated\ average\ aggregate\ Credits\ X \frac{\text{LR of Base year} - \text{RR of Base year}}{100}$$
- Volume measures of FISIM on deposits (base year prices) is computed as under:
  Volume measures of FISIM on deposits (base year prices)
  $$= Deflated\ average\ aggregate\ deposits\ X \frac{\text{RR of Base year} - \text{DR of Base Year}}{100}$$
- By adding Volume measures of FISIM on credits (base year prices) and Volume measures of FISIM on deposits (base year prices), Volume measures of total FISIM (base year prices) is computed.

- Yearly Banking Services Price Indices (Direct) for the series 2011-12 Base is computed till FY 2020-21 as average of corresponding monthly indices as available in the website of DPIIT. For the remaining years monthly indices with Base year as 2017-18 were obtained from DPIIT and using this yearly Banking Services Price Indices (Direct) for the series with 2017-18 Base is computed as average of corresponding monthly indices. Using the yearly index for 2020-21 from both these series linking factor was computed. Accordingly, yearly Banking Services Price Indices (Direct) for the series with 2011-12 Base are computed for the FY 2021-22 onwards using this linking factor. For examining the results, base year is considered as 2011-12 in the exercise. The same will be replicated for the base year 2022-23.

- These indices as computed above are used to deflate the Actual Receipts.

- Accordingly, output at base year prices is computed as the sum of deflated Actual Receipts and Volume measure of total FISIM (base year prices).

- Then, volume indicator of the Output so derived is computed and subsequently used to extrapolate GVA.

Method 2:

- Same as Method 1, except that average aggregate credits and deposits of SCBs and RRBs are deflated using the non-finance deflator (implicit price index of unadjusted GVA for non-financial industries) instead of CPI (General).

2.8.3.5 After detailed deliberation on the choice of deflator for average aggregate credits and deposits, it was recommended that, although international handbooks do not explicitly prescribe a specific deflator, considering that CPI (General) captures changing value of money over the time in a more holistic way, CPI (General) may be preferred over the implicit price index of unadjusted GVA of non-financial industries. Accordingly, Method 1 was recommended for adoption. The recommended methodology will be applied separately for public and private sector entities for deriving constant price estimates.

B. Cooperative Banks

2.8.3.6 The same methodology as recommended for Scheduled Commercial Banks and Regional Rural Banks will be used for estimating GVA at constant prices of Co-operative Banks.

C. Post Office Savings Bank

2.8.3.7 For the estimation of constant price GVA of the Post Office Savings Bank in the new series, additional data on the number of subscribers were obtained from the Department of Posts. Volume indices constructed using the number of subscribers will be used to extrapolate output and GVA at constant prices.

2.8.4 Money Market Funds (MMF) & Non MMF Investment Funds (S 123 and S 124)

2.8.4.1 Money Market Funds (MMFs) and Non-MMF Investment Funds do not generate GVA, as their output is equal to their intermediate consumption. Accordingly, constant price estimates of GVA are not compiled for these entities. For estimating Output at constant prices of investment funds, the Eurostat Handbook on Prices and Volume Measures in National Accounts (2016 edition) recommends that, in the case of money funds, the amounts managed, deflated by a price index reflecting changes in the purchasing power of money, may be used as an appropriate volume indicator.

2.8.4.2 In line with the above guidance, the following two alternative approaches were examined separately for public and private sector entities:

Method 1:

- Investments were deflated using CPI(G).
- A volume indicator based on deflated investments was derived and used to extrapolate Output at constant prices.

Method 2:

Same as Method 1, except that investments were deflated using the non-finance deflator (implicit price index of unadjusted GVA for non-financial industries).

2.8.4.3 After evaluation of the two approaches, it was recommended to adopt Method 1, i.e., deflation of investments using CPI (General) for deriving volume indicators and estimating Output at constant prices for Money Market Funds and Non-MMF Investment Funds.

2.8.5 Other Financial Intermediaries except insurance corporations and pension funds (S 125)

2.8.5.1 In the existing series with base year 2011-12, the constant price estimates of GVA for the sub-sector Other Financial Intermediaries (S-125) were compiled using the volume extrapolation method. The base year GVA at constant prices was extrapolated using an index of deflated Net Receipts (the sum of FISIM and Actual Receipts). For the purpose of deflating Net Receipts, the implicit price index of unadjusted GVA for non-financial industries (non-finance deflator) was used.

2.8.5.2 In the new series as well, the volume extrapolation method will be continued for estimating constant price GVA of this sub-sector. Though earlier it was proposed before the Sub-Committee to use deflated Net Receipts as volume indicator, it was felt more appropriate to use deflated output in place of deflated net receipts as it provides a better measure for single extrapolation. This would also be in line with the case of the sub-sector "Insurance Corporations". Accordingly, as approved by ACNAS, the extrapolation will be based on the volume index of deflated Output where CPI (General) will be used for deflating Output. The choice of CPI(General) is intended to provide a more appropriate price measure for capturing the movement in the value of financial intermediation services provided by this sub-sector.

2.8.6 Financial Auxiliaries (S 126)

2.8.6.1 In the existing series, the constant price estimates of GVA for the sub-sector Financial Auxiliaries (S-126) were compiled using the volume extrapolation method. The base year GVA at constant prices was extrapolated using an index of deflated Net Receipts. For the purpose of deflating Net Receipts, the implicit price index of unadjusted GVA for non-financial industries (non-finance deflator) was used.

2.8.6.2 In the new series, the volume extrapolation method will continue to be used for compiling constant price estimates of output and GVA for this sub-sector. Though earlier it was proposed before the Sub-Committee to use deflated Net Receipts as volume indicator, it was felt more appropriate to use deflated output in place of deflated net receipts as it provides a better measure for single extrapolation. Accordingly, as approved by ACNAS, the extrapolation will be based on the volume index of deflated Output. In line with the methodological approach adopted for S.125: Other Financial Intermediaries, CPI (General) will be used as the deflator for output in place of the implicit non-finance deflator. This change ensures consistency in deflation practices across closely related financial sub-sectors.

2.8.7 Moneylenders and remaining unorganised segment except insurance agents (S 127)

2.8.7.1 In the existing series, the constant price estimates of GVA for the sub-sector Moneylenders and Remaining Unorganised Segment (S.127) were compiled using a methodology similar to that adopted for the sub-sectors S.125 (Other Financial Intermediaries) and S.126 (Financial Auxiliaries). The estimates were derived using the volume extrapolation method, based on an index of deflated Net Receipts.

2.8.7.2 In the new series, the methodology for this sub-sector has been aligned with that of S.126, Financial Auxiliaries. Accordingly, the volume extrapolation method will continue to be used for compiling constant price estimates for this sub-sector. Though earlier it was proposed before the Sub-Committee to use deflated Net Receipts as volume indicator later it was found appropriate to consider deflated output. Accordingly, as approved by ACNAS, the extrapolation will be based on the volume index of deflated Output where CPI (General) will be used as the deflator for deflating the output.

2.8.8 Insurance Corporations (S 128)

2.8.8.1 In the existing series, different approaches were being used for compilation of constant price estimates of different segments of this sub-sector as described below:

(i) Public Life Insurance Corporations
The volume extrapolation method was used to compile constant price estimates, with Sum Assured and Life Fund data from LIC of India serving as volume indicators. Both series were deflated using the implicit price index of unadjusted GVA for non-financial industries (non-finance deflator), and indices of deflated Sum Assured and Life Fund were prepared. The average of these two indices was applied to the base year GVA at constant prices to obtain the constant price estimates.

(ii) Public Non-Life Insurance Corporations (excluding ESIC)
The volume extrapolation method was applied using the index of deflated Gross Premium less claims. To deflate Gross Premium less claims, unadjusted GVA for non-financial industries (non-finance deflator) was used as deflator.

(iii) Private Life Insurance Corporation, Private Non-Life Insurance Corporation and ESIC
The single deflation method was used for deriving constant price estimates of this segment. For deflation, unadjusted GVA for non-financial industries (non-finance deflator) was used as deflator.

2.8.8.2 For compiling constant price estimates of insurance services, by referring to the UN Handbook of National Accounting: Financial Production, Flows and Stocks in the SNA, IMF shared the following approaches:

A. Life Insurance

- Deflate premiums earned and premium supplements using a suitable price index for life insurance premiums; in the absence of such an index, CPI (General) may be used.
- Compute growth in the resulting volume measures.
- Use this growth to extrapolate output to obtain volume measures.

B. Non-life insurance:

- Deflate the current-price measures of premiums earned and premium supplements of non-life insurance using an appropriate price index.

- Use the deflated values to extrapolate the level of output of non-life insurance in the base year to obtain the volume measures.

2.8.8.3 Accordingly, the following alternative methods were examined for estimating constant price GVA of Insurance Corporations:

Public Life Insurance Corporation:

Method 1 (PLI&LIC):

- Deflating the premiums earned and premium supplements with CPI(G).
- Computing growth in volume measures of premiums earned and premium supplements.
- Using this growth to extrapolate the output and GVA

Method 2 (only for LIC):

- Deflating the gross premium less claims with CPI(G).
- Computing the growth in the volume measures of gross premium less claims.
- Using this growth to extrapolate the output and GVA.

Method 3 (PLI & LIC):

- Output is deflated using CPI(G).
- Volume indices of deflated Output is used to extrapolate GVA.

Method 4 (only for LIC):

- Volume indices of deflated Sum assured and bonus and deflated life fund are computed and using the average of these two indices, volume extrapolation is done.
- For deflating Sum assured and bonus and life fund CPI(G) is used.

Private Life Insurance Corporations, Public Non-Life Insurance Corporations (excl. ESIC), Private Non-Life Insurance Corp. and ESIC:

Method 1, Method 2 and Method 3, as applied to Public Life Insurance Corporations, were also replicated for these segments.

2.8.8.4 It was observed that Method 1 yielded abnormal constant price estimates in certain cases. The UN Handbook methodology implicitly assumes that premiums earned and premium supplements grow in real terms in line with adjusted claims. Empirical analysis indicated that this assumption did not hold uniformly across insurance segments. Further, in the absence of a suitable price index for insurance premiums, the application of Method 1 was found to be inappropriate.

2.8.8.5 In view of the above, it was recommended to adopt Method 3 for compiling constant price estimates of S.128: Insurance Corporations, uniformly across all types of insurance corporations in the new series.

2.8.9 Pension funds (S 129)

2.8.9.1 In the existing series, the constant price estimates of GVA for the sub-sector Pension Funds (S-129) were compiled using the single deflation method, with CPI used as the deflator.
2.8.9.2 In the new series, the complete Profit and Loss Accounts and Balance Sheets of the Employees' Provident Fund Organisation (EPFO), covering all major funds including Contribution Funds and Administration Funds, will be analysed for generating estimates. The Administration Funds of EPFO will be classified under S-126: Financial Auxiliaries, while the Contribution Funds will be classified under S-129: Pension Funds. For Contribution Funds, output will be computed as the value of intermediate consumption. The feasibility of incorporating other similar organisations, such as the Coal Mines Provident Fund Organisation (CMPFO) and the Seamen's Provident Funds Organisation (SMPFO), was also examined.

2.8.9.3 According to the UN Handbook of National Accounting: Financial Production, Flows and Stocks in the System of National Accounts, in the case of social insurance schemes that pay pension benefits and where output is measured as the sum of costs, the compiling agency may obtain volume measures by deflating output using a composite index of input prices.

2.8.9.4 Based on the above guidance, the following alternative methods were examined for compiling constant price estimates of Pension Funds in the new series:

Method 1

- Investments deflated with CPI(G).
- Volume indices of deflated investments used to extrapolate Output.

Method 2

- Annual Banking Services Price Indices (Direct) computed as the average of corresponding experimental monthly indices, and used to deflate output.

2.8.9.5 After examining both approaches, it was recommended to adopt Method 2 for compiling constant price estimates of Pension Funds (S-129) and other similar organisations included in this sub-sector.

2.9 Real estate, ownership of dwelling & professional services

2.9.1 In the existing series with base year 2011-12, the constant price estimates of GVA for Real Estate & Professional Services were compiled using the single deflation method. Different deflators were applied across institutional segments: CPI (General) for NDEs, WPI for private corporate and cooperative sectors, and CPI (Miscellaneous) for quasi-corporate and household

sectors. In the case of Ownership of Dwellings, the Index of Rural Residential Buildings and CPI (Housing) were used as deflators for rural and urban dwellings, respectively.

2.9.2 In the new series, it was recommended to discontinue the single deflation method and adopt the single extrapolation method for estimating GVA at constant prices for Real Estate & Professional Services. Under this approach, GVO at current prices is first deflated using an appropriate price index, and the growth observed in deflated GVO is used to extrapolate GVA at constant prices. For deflating the output of Real Estate & Professional Services, CPI (Miscellaneous) will be used. In the case of Ownership of Dwellings, the existing practice will continue, with the Index of Rural Residential Buildings and CPI (Housing) used as deflators for rural and urban dwellings, respectively. In view of the fact that CPI (Miscellaneous) will not be available in the new CPI series, it was recommended that relevant items of the new CPI be mapped to construct an appropriate composite CPI, which may be used as the deflator under the single extrapolation method for the Real Estate & Professional Services sector.

2.10 Public Administration and Defence

2.10.1 In the 2011-12 series, the Net Value Added (NVA) of Public Administration and Defence at constant prices was estimated by deflating current price NVA using CPI (General). The GVA at constant prices was then obtained by adding Consumption of Fixed Capital (CFC) at constant prices to the deflated NVA.

2.10.2 International practices were reviewed to identify suitable volume measures that could better reflect the productivity of government employees; however, no appropriate volume indicators could be identified in the Indian context. For estimating GVA in this sector, the sum-of-costs approach is adopted, as there is no operating surplus in the government sector. Compensation of Employees, comprising salaries and wages, constitutes the net value added for this sector, and the addition of CFC yields GVA. As NVA is equal to Compensation of Employees and increase in CE to account for inflation is linked to CPI (IW), it was recommended to deflate NVA at current prices using CPI (IW) in place of CPI (General) in 2022-23 series. The methodology for estimation of CFC at constant prices has been discussed in the chapter 3 of the report.

2.11 Other Services

2.11.1 The Other Services sector comprises Education; Health; Activities of Membership Organisations; Recreational, Cultural and Sporting Activities; Private Households with Employed Persons; and Personal Services and Other Services. In the existing series, constant price estimates of GVA for this sector were compiled using the single deflation method. Appropriate CPI sub-indices were used to deflate current price GVA of the respective services, namely: CPI (Education) for education; CPI (Health) for health; CPI (Miscellaneous) for activities of membership organisations and personal services (including washing, hairdressing, custom tailoring, and funeral services); and CPI (General) for private households with employed persons.

2.11.2 In line with the approach adopted for Real Estate & Professional Services, it was recommended to replace the single deflation method with the single extrapolation method for estimating constant price GVA of Other Services. Under this approach, current price output is deflated using appropriate price indices, and the growth in deflated output is used to extrapolate GVA at constant prices. The following deflators will be used for deflating output under the single extrapolation method:

Sr No	Sector	Deflator (Price Index)
i.	Education (Incl. Coaching and Tuition)	CPI (Education)
ii.	Human Health activities and care services with/without accommodation	CPI (Health)
iii.	Activities of membership organizations	CPI (Misc)
iv.	Recreational, Cultural and Sporting activities	CPI (Recreation)
v.	Personal Services and other services	Composite Index based on relevant CPI items such as Barber, Beautician, Spas, etc.; Washerman, laundry, ironing, dry cleaning, dyeing of clothes; Tailor; etc.
vi.	Pvt HH with employed person	Composite Index based on relevant CPI items such as Domestic Helper, Cook; Sweeper; Watchmen, security Guard, Driver.

2.12 Product Taxes and Subsidies

2.12.1 Product Taxes

2.12.1.1 In the 2011-12 series, the estimates of product taxes at constant prices were derived using volume extrapolation. Different types of taxes were extrapolated with the growth observed in the relevant indicators. For illustration, excise duty was moved each year with growth in output of manufacturing at constant prices.

2.12.1.2 However, after implementation of Goods and Services Tax (GST) in 2017-18, various taxes have been subsumed in GST. Accordingly, new indicators were examined for moving base year taxes including GST in the new series.

2.12.1.3 For estimating GST at constant prices, it was recommended that if GST is made available at industry level, then industry-wise GST values for base year will be extrapolated with the growth observed in the output of respective industries. Otherwise, base year estimates of total GST will be moved with growth observed in the combined output of all industries at constant

prices excluding the output of Agriculture, Ownership of Dwelling, Public Administration and Defence, Electricity and output of General government across all industries.

2.12.1.4 For state excise, which is applicable on liquor, it was recommended to use growth observed in the output of manufactured alcoholic beverages at constant prices to move base year estimates. For union excise, which is applicable on petroleum product, growth observed in the output of manufactured petroleum products at constant prices was recommended to move base year estimates. For sales taxes, combined growth observed in the output of manufactured alcoholic beverages and manufactured petroleum products will be used to move base year estimates. For custom duty, it was recommended to use the growth observed in the imports of goods at constant prices to move base year values. For remaining taxes, which have minor share in overall taxes, combined growth observed in the above taxes will be used to move base year estimates.

2.12.2 Product Subsidies

2.12.2.1 In case of product subsidies, estimates at constant prices in the 2011-12 series were derived by deflating product subsidies at current prices by IPD of GVA of total economy.

2.12.2.2 Use of volume extrapolation for estimating the product subsidies at constant prices was explored. Major subsidies, namely, fertilizer subsidy and electricity subsidy constitute more than 75 percent share in overall subsidies. Different indicators were recommended to move base year values of different types of subsidies in the new series.

2.12.2.3 For fertilizer subsidy, growth observed in the consumption of NPK fertilizers was recommended to move respective base year subsidies. For electricity, as rates of subsidy differ from state to state, base year subsidies of respective states were recommended to be moved with the growth observed in subsidized units consumed in respective states. In case of those states for which information on the subsidized unit will not be available, base year estimates of electricity subsidies for such states were recommended to be moved with the growth in sales of electricity for domestic and agriculture purpose in these states. Remaining subsidies were recommended to be deflated with the overall IPD.

Chapter 3: Constant Price Estimates of Expenditure components in Annual National Accounts

3.1 Private Final Consumption Expenditure (PFCE)

3.1.1 In the current series (base year 2011-12), in general, constant/ current price estimates of PFCE items were derived by deflating/inflating current/ constant price estimates by CPI or by using IPD of GVO with a few exceptions. The components of CPI were applied largely at the aggregate group or sub-group level.

3.1.2 In the new series, components of CPI will be applied at more disaggregated item level, to the extent feasible. For certain PFCE items, the IPD of GVO of the corresponding sector/ volume extrapolation will be used for deriving constant price estimates. Though a detailed list of items was presented before the Sub-Committee with proposed deflator/ inflator, the Sub-Committee was informed that there will be some modifications to this list based on future deliberations in other Committees. After the deliberations held in different Sub-Committees, the detailed item-wise methodology for PFCE estimation subsequently recommended by ACNAS is presented in the **Annexure I**. This item list is for compilation purpose and while publishing the estimates in NAS some items will be grouped.

3.1.3 While mapping PFCE items with appropriate CPI series, items from both the current and the new CPI baskets were examined. In certain cases, although price indices are available in the new CPI basket, corresponding indices were not available in the current CPI basket. For such items, the IPD of GVO of the related activity was recommended as an alternative deflator. The use of new series CPI indices will be subject to their availability; otherwise, the alternative price indices specified in the **Annexure I** will be used. In the case of items where more than one CPI item is mapped to a single PFCE item, composite indices of those CPI indices will be used. Also, volume extrapolation is recommended for Passenger transport by Railway and BkSPI (Direct) is recommended for Explicit charges by deposit-taking corporations & Other financial services. It was also recommended that for Public Distribution System (PDS) items, separate price relatives may be used, subject to availability. In the absence of such data, PDS prices may be kept constant at base-year levels and updated when new price information becomes available.

3.2 Government Final Consumption Expenditure (GFCE)

3.2.1 In the 2011-12 series, estimates of GFCE at constant prices were prepared separately for each of the components, namely, CE; Net purchase of commodities and services; and CFC. The constant price estimates of CE were prepared by deflating the estimates of CE at current prices by CPI (General). Estimates of net purchase of commodities and services at constant prices were obtained by deflating current price estimates by the composite weighted index, where weights were the expenditure of government on different items.

3.2.2 In the 2022-23 series, the constant price estimates of CE will be prepared by deflating the estimates of compensation of employees at current prices by CPI-IW. This aligns with the revised

methodology used for estimating constant price GVA of Public Administration and Defence. Further, the estimates of net purchase of commodities and services at constant prices will continue to be derived by deflating current price estimates using a **composite weighted price index**. However, the weights have been updated using expenditure patterns for FY 2022–23. As Food Corporation of India (FCI) has been reclassified from public corporations institutional sector to general government institutional sector, food subsidy provided to FCI will now be treated as a social transfer in kind, rather than as a product subsidy. This change is in line with SNA principles. To estimate constant price estimates for these transfers, the base year estimates will be moved based on the growth observed in the offtake of foodgrain under National Food Security Act (NFSA).

3.3 Gross Fixed Capital Formation (GFCF)/Consumption of Fixed Capital (CFC)

3.3.1 In the 2011-12 series, for estimating GFCF/ CFC at constant prices, asset-wise different price indices were used. For Dwelling & Other Buildings Structures (DOBS) and Ownership of Dwellings, respectively, the General Pucca Construction Index and Index of Rural Residential buildings & Urban Residential Buildings, as used in the estimates of the construction sector, were used as deflator. For GFCF of Transport equipment, ICT equipment, other Machinery & Equipment and Weapon systems, the corresponding weighted indices based on WPI were used as deflators. In case of Cultivated Biological Resources, CPI (Rural) was used for Trees yielding repeat products and implicit price index was used for Animal resources yielding repeat products. For Intellectual Property Products (IPP), WPI/CPI based indices were being used.

3.3.2 The Sub-Committee examined the deflators used in the existing series and reviewed international practices. It concluded that the deflators used for most physical assets are appropriate and may be continued in the new series. The different asset-wise deflators recommended for continuation in the new series are presented in the table below:

Asset	**Deflators for Constant Price Estimates**
Non-residential buildings, other structures, roads and bridges	General Pucca Construction Index
Dwellings	Index of Residential buildings
Land Improvement	CPI-Rural
Transport Equipment	Weighted index based on WPI for Transport Equipment
ICT Equipment	Weighted Index based on WPI for IT Hardware and Communication Equipments

Asset	Deflators for Constant Price Estimates
Other Machinery & Equipment	Weighted index based on WPI for Agricultural Machinery & Implements Weighted index based on WPI for Fishing Implements Weighted index based on WPI for Industrial Machinery Weighted index based on machinery WPI for mining, quarrying Weighted index based on WPI for construction activities Weighted index based on WPI for service specific machinery (communication, storage and warehousing, education, health etc)
Weapon Systems	Weighted index based WPI for Machinery & Transport Equipment
Cultivated Biological Resources	CPI-R for Trees yielding repeat products and WPI of relevant input items (fertilizers, pesticides, irrigation related items etc) / Implicit index for Livestock

3.3.3 **Revised deflators for IPP**: After reviewing country practices, new deflators were recommended for IPP assets as detailed below:

- **Research & Development:** As per the review of country practices, countries usually deflate R&D expenditure using a wage cost index (scientists, engineers, R&D staff) or weighted mix of labour cost index + intermediate consumption deflators (IT equipment, materials). The feasibility of constructing wage index from PLFS data was explored. However, due to very few observations of persons engaged in R&D related activities, the wage index could not be constructed. Hence, it was recommended to use weighted average of CPI(IW) and CPI(U) as deflator, with weights derived from GVO of Public and Private Sector in R&D activity. Since, the appreciation of salaries of General Government and Autonomous Bodies are linked to CPI(IW), and CPI(U) reflects general level of inflation in urban sector, this approach of using CPI(IW) for deflating GFCF in this asset for public sector and CPI(U) for private sector were recommended.

- **Computer Software & Databases:** Review of countries' practices showed that purchased software are usually deflated by PPIs or ICT price indices, whereas own-account software production and databases are typically deflated using labour cost indices of software engineers/programmers (since labour cost is the main cost). Construction of wage index from PLFS (NIC-2008 Division 62: Computer programming, consultancy and related activities and NIC-2008 Division 63: Information service activities), NCO-2015 Codes: 251 (Software and Application Developers, and Analysts) and 252 (Database and Network Professionals) was also explored. However, due to data consistency issues, it

was not feasible to use this index. Hence, it was recommended to use CPI-U as deflator (as a proxy to wage component) in absence of any other suitable deflator.

- **Mineral Exploration & evaluation:** Composite input-cost deflator (PPIs for drilling & geophysical services/ mining & exploration services + labour cost indices) are used by other countries for deflating GFCF in this asset. However, due to non-availability of suitable PPI for this service and labour cost indices, and considering the fact that mineral exploration & evaluation can take place in both rural and urban sector, it was recommended to use CPI(General) as a deflator.

- **Entertainment, literary and other artistic originals:** Composite input-cost deflator {PPIs for creative services (film, broadcasting, performing, motion picture & sound recording industries) + labour cost indices} or Corporate Services Price Index (CSPI) for broadcasting, film, and publishing are used by other countries for deflating GFCF in this asset. Some countries make use of CPI for recreation & culture as deflator. Hence, it was recommended to use CPI-Recreation as deflator.

- **Other IPP products:** For other IPP products, it was recommended to use CPI-U as deflator.

3.3.4 Consumption of Fixed Capital (CFC): Similar to GFCF, compilation of CFC is also undertaken on an asset-wise basis. The same set of price indices as recommended for GFCF, will be used to derive asset-wise CFC estimates at constant prices.

3.4 Change in Stock and Valuables

3.4.1 Change in Stock (CIS): In the existing (2011-12 base) series, relevant item level WPI based deflators corresponding to CIS of each of the industry (estimated at current price) were used for constant price estimates of CIS. After reviewing the indices currently being used and noting that CIS refers to inventory position of goods, it was recommended that similar deflators based on latest available item-wise WPI series will be used in the revised base year. Industry-wise list of deflators for CIS is given in table below:

Sl. No.	Industry of CIS	Price Index for deflation
1	Crops	WPI for agriculture commodities, consumable items
2	Livestock	WPI for animal feed, consumable items
3	Forestry & logging	WPI for Timber, forest products, consumables
4	Fishing	WPI for nylon yarn, nylon thread, HSD, Light diesel oil and timber, consumable items
5	Mining & quarrying	WPI for mining products, fuel, lubricants, tyres, drill bets, explosives, consumables, spares and stores

Sl. No.	Industry of CIS	Price Index for deflation
6	Manufacturing	WPI for manufactured products, fuel, lubricants, packing material, consumables, spares and stores
7	Electricity	WPI for electricity
8	Gas	WPI for LPG, parts, consumables, spares and stores
9	Water Supply	WPI for chemical products, pipes, tools, consumables, spares and stores
10	Remediation and other Utility Services	WPI for relevant items of metal, paper, rubber, glass, plastic, chemicals, consumables, spares and stores
11	Construction	Index for material inputs (cement, iron and steel, metal, bricks and tiles, timber and wood products, fixture and fittings, glass and glass products, bitumen and bitumen products, lime, plaster etc), fuel, consumables, consumables, spares and stores used in construction
12	Trade & Repair Services	WPI for tradable commodities
13	Hotels & restaurants	WPI for food items, packing material, cleaning items, consumables, spares and stores
14	Railways	WPI for fuel, parts of machinery, relevant electrical items, cleaning items, consumables, spares and stores
15	Road transport	WPI for tyres, fuels, parts, consumables, spares and stores
16	Water transport	WPI for parts of Ships/Boats, fuel, consumables, spares and stores
17	Air transport	WPI of ATF, parts, consumables, spares and stores
18	Services incidental to transport	WPI of parts of machinery, consumables, spares and stores
19	Storage	WPI of chemicals, fumigants, consumables, spares and stores
20	Communication & services related to broadcasting	WPI for parts of equipments, office stationery, consumables and related items
21	Financial services	WPI for office stationery, consumables and related items
22	Real estate and professional services.	WPI for office stationery, consumables and related items
23	Public admn. & defence	WPI for office stationery, consumables and related items
24	Education	WPI for office stationery, consumables and related items
25	Health	WPI for office stationery, cleaning items, medicines, chemicals, consumables and related items
26	Other services (excl education and health)	WPI for office stationery, chemicals, consumables and related items

3.4.2 Valuables: In the existing series, relevant item level WPI based deflators were used for deflating capital formation in the form of valuables. For the new series, it was recommended to use deflator derived from item level indices of CPI such as CPI for gold, silver and other ornaments, for deflating the valuables.

3.5 Import and Export of Goods & Services

3.5.1 Import and Export of Goods

3.5.1.1 In the existing series, Unit Value Indices (UVI) for exports and imports of goods, released by DGCI&S, were used as deflators to convert current price estimates of exports and imports of goods into constant price estimates.

3.5.1.2 The feasibility of using PPI for exports as a deflator for export of goods was examined. It was observed that export prices of items are being collected as part of the ongoing exercise for the compilation of PPI and will be used in the construction of item-level PPI for manufactured goods. However, the availability of a separate export PPI is not envisaged. Accordingly, it was recommended to continue the use of UVI as deflators for exports and imports of goods in the new series.

3.5.2 Import and Export of Services

3.5.2.1 In the existing series, IPD for Non-Financial Services was being used as deflator for deflating current price estimate for import and export of services to arrive at constant price estimates.

3.5.2.2 Various approaches were examined to derive the suitable deflator for trade in services. A weighted index based on weights derived using the shares of these services in export and imports from India, taken from Balance of Payment Statistics (BPM) compiled by RBI and IPD of corresponding services taken from National Accounts Statistics was examined to use as deflator for import and export of services. On exploring the CPI based deflator, it was observed that certain services like computer and ITES, Research & Development services, Professional and Management consulting services and Technical, trade-related, and other business services, were not covered under CPI item basket and hence, using CPI based deflator may not be suitable. An index based on PPI/ Service Producer Price Index / Import PPI of major trading countries was also examined to use as a deflator for import and export of services.

Deflator for Exports of Services:

3.5.2.3 Assuming Import PPI of major exporting countries for use as deflator for export of services, import PPI data and relevant information was collected. It was observed that in respect of telecommunications, computer, and information services and other business services, exports from India of these services formed a minor share in total import of these services by major trading partner countries. So, use of Import PPI of these services was observed to be non-representative

as the price index to deflate the exports from India as the movement in Import PPI for the major trading partner countries would be influenced by price movements of other countries which find significant share in the import basket.

3.5.2.4 Considering relevance of price movement in domestic market for export of such services, it was recommended to use IPD of relevant services in domestic market as a deflator in the new series:

Services	**Deflator for constant price estimate for export of services from India**
Transport	Combined IPD of Transport Sector (Air, Water and Services Incidental to transport)
Travel (Travel (Business, education, health, personal, others)	Combined IPD of Trade, HR, Transport, Other Services
Financial & insurance	IPD of Financial Services
Telecommunications, computer, and information services	IPD of Telecommunications & ICT
Other business services	IPD of Other business services
Government goods and services n.i.e.	IPD of Public Admin and Defence
Manufacturing Services, Maintenance and repair services n.i.e.	IPD of Manufacturing industry
Construction Services	IPD of Construction Activities
Charges For the Use of IPP	CPI-Urban
Personal, Cultural & Recreation	CPI Misc, CPI Recreation

Deflator for Imports of Services:

3.5.2.5 In respect of import of services, under the assumption that price indices compiled for services by major trading partner countries are reflective of prices of their exports to other countries, it was recommended to use the relevant Service PPI of major trading partner countries for deflating import of these services. In some of the trading partner countries where Service PPI were not available or published, concerned IPD will be used. The service-wise imports from other countries will be deflated by corresponding service PPI/IPD and to be aggregated to arrive at constant price estimate. Since the import of services are sensitive to exchange rate fluctuations, it was also recommended to adjust PPI/IPD for exchange rate fluctuations.

Services	Deflator for constant price estimate for import of services by India
Transport	PPI Transport and Warehousing Services / IPD for Transport and Warehousing Services
Travel (Business, education, health, personal, others)	PPI for travel related services (accommodation, hotel, transport, trade, other services). In absence of PPI, IPD of these industries will be used.
Financial & insurance	PPI for financial intermediation services /IPD for financial services/overall service PPI
Telecommunications, computer, and information services	PPI for information and communications services/IPD of information and communications services
Other business services	PPI for business and technical services /IPD of information and communications services
Government goods and services n.i.e.	IPD of Public Administration/ overall CPI (as PPI is not separately compiled for these services)
Manufacturing Services, Maintenance and repair services n.i.e.	Manufacturing PPI /IPD of Manufacturing
Construction Services	PPI /IPD Construction Services
Charges For the Use of IPP	Service PPI / Overall CPI
Personal, Cultural & Recreation	Relevant PPI / IPD of these services

Chapter 4: Volume measures/ use of Deflators in Quarterly National Accounts (Production approach)

4.1 On the concept of price and volume measures, the Quarterly National Accounts (QNA) Manual (IMF, 2017) recommends that QNA price and volume indicators should be temporally consistent with the corresponding indicators derived from the Annual National Accounts (ANA). Where detailed quarterly data on Output and Intermediate Consumption are available, volume estimates of GVA should ideally be compiled using the double indicator method. However, the availability of such detailed information at a quarterly frequency is generally limited. In such circumstances, quarterly estimates of value added are compiled using a single indicator approach, wherein a fixed relationship between output and value added in volume terms is typically assumed.

4.2 With a view to ensuring consistency between QNA and ANA estimates, efforts have been made to align the deflation strategies adopted in QNA with those followed in ANA, to the extent feasible given data availability constraints. Accordingly, the disaggregation by institutional sector and economic activity has also been aligned, particularly for the compilation of Quarterly GVA (QGVA) in the Services sector. The sector-wise deflation strategies recommended for the new QNA series are detailed in the subsequent sections.

4.3 Agriculture & allied sectors

4.3.1 In the existing 2011–12 base year series, assuming a fixed relationship between output and value added, constant price estimates of QGVA for the Agriculture and Allied sectors were compiled using the growth rates observed in the production estimates of the respective sub-sectors. Quarterly crop production estimates, season-wise production estimates of major livestock products, and quarterly production estimates of inland and marine fish were obtained from the Ministry of Agriculture and Farmers Welfare, the Department of Animal Husbandry and Dairying, and the Department of Fisheries, respectively. For deriving current price estimates, a weighted WPI was used, based on the WPI item weights corresponding to various crops, livestock products, inland fish, marine fish, industrial wood, and fodder.

4.3.2 For the new series with base year 2022–23, it has been recommended to continue the volume extrapolation method, using production estimates as the volume indicator for compiling constant price estimates of QGVA for the Agriculture and Allied sectors. However, for deriving current price estimates, a departure from the earlier practice has been made. Instead of using a weighted WPI, individual crop items, livestock products, and items pertaining to the fisheries and forestry sectors will be inflated using their respective WPIs. This approach eliminates reliance on base-year price index weights.

4.4 Mining and Quarrying

4.4.1 In the existing 2011–12 base year series, constant price estimates of QGVA for the Mining and Quarrying sector were compiled using the volume extrapolation method. For fuel minerals, the production indices of Coal, Crude Oil, and Natural Gas, sourced from the ICI released by the

Office of the Economic Adviser (OEA), DPIIT, were used as volume indicators. For metallic, non-metallic, and minor minerals, the IIP for MCDR minerals was used as the indicator. For deriving current price estimates of the Mining and Quarrying sector, a weighted WPI for Coal and Crude Petroleum & Natural Gas was applied.

4.4.2 For the new series with base year 2022–23, it has been recommended to continue the volume extrapolation method for estimating constant price QGVA of the Mining and Quarrying sector. In alignment with the ANA methodology, the IIP of Coal & Lignite and the IIP of Crude Petroleum & Natural Gas, will be used as volume indicators for Coal & Lignite and Petroleum & Natural Gas, respectively. For metallic and non-metallic minerals, the respective IIPs will be used as indicators for volume extrapolation. For deriving current price estimates, it has been recommended to inflate the constant price estimates using WPI (Coal), WPI (Crude Petroleum and Natural Gas), WPI (Metallic Minerals), and WPI (Other Minerals) for Coal, Petroleum & Natural Gas, Metallic Minerals, and Non-metallic Minerals, respectively. In the case of Minor Minerals, WPI (Other Minerals) will be used for inflation.

4.5 Manufacturing

4.5.1 In the existing 2011–12 base year series, constant price estimates of QGVA for the Manufacturing sector were compiled using the single deflation method, wherein the WPI of manufactured products was used as the deflator.

4.5.2 For the new series with base year 2022–23, in order to align with the ANA methodology, the use of the double deflation method was explored for estimating constant price QGVA of the Manufacturing sector. Two alternative approaches for implementing double deflation were examined:

(i) A composite output price index and a composite input price index were constructed for the overall manufacturing sector, using weights derived from the latest available ASI results, to deflate aggregate output and intermediate consumption, respectively.

(ii) Separate composite output and input price indices were constructed for the organized and unorganized segments of the Manufacturing sector, and these were used to deflate output and intermediate consumption of the respective institutional sectors.

4.5.3 Based on the deliberations, it was observed that the unorganized segment of the Manufacturing sector accounts for a relatively small share, and that the growth rates of constant price estimates obtained under the two approaches were very similar. Accordingly, it was recommended that, at the quarterly frequency, composite output and input price indices may be constructed for the overall Manufacturing sector and used as deflators for aggregate output and intermediate consumption, respectively, using weights from the latest available ASI.

4.6 Electricity, Gas, Water Supply & Remediation (EGWR)

4.6.1 In the existing 2011–12 base year series, under EGWR for Electricity sub-sector, volume extrapolation method using IIP (Electricity) was applied for constant price estimates of QGVA. For all other sub-sector of EGWR, past years growth was used for estimating the constant price estimates. Current price estimates of QGVA for this sector was compiled by inflating constant price estimates with WPI (Electricity).

4.6.2 For the new series with base year 2022–23, distinct approaches have been recommended for different sub-sectors of EGWR, with the objective of aligning the QNA methodology with the ANA framework to the extent feasible.

4.6.2.1 **Electricity:** For electricity sub-sector, the existing method will continue for estimating the QGVA, i.e., QGVA at constant prices will be estimated using volume extrapolation based on IIP (Electricity) and current price estimates will be derived by inflating the constant price estimates using WPI (Electricity).

4.6.2.2 **Gas:** For the Gas sub-sector, QGVA at constant prices will be estimated using volume extrapolation. Index based on consumption of Natural Gas will be used as volume indicator, in line with the methodology adopted in ANA. For compiling the current price estimates of GVA of Gas Supply at quarterly level, it was recommended to use WPI of Natural Gas to inflate the constant price estimates.

4.6.2.3 **Water Supply:** For the Water Supply sub-sector, past years' growth rates will be used to estimate QGVA at current prices. In the absence of a suitable quarterly quantum index for water supply, it was recommended to use CPI (water charges) as deflator for compiling constant price estimates.

4.6.2.4 **Remediation:** In alignment with the methodology for ANA, Single extrapolation will be done using Index of deflated Output for estimating the QGVA of Remediation sub-sector at constant prices. Output at current prices will be deflated by weighted WPI (Basic Iron and Steel and casting of iron and steel, fabricated metal products, plastic products) and CPI (G) respectively for Remediation-Recycling and Remediation-Sewerage.

4.7 Construction

4.7.1 In the existing 2011–12 base year series, QGVA estimates for construction sector was compiled separately for accounted and unaccounted construction. Major items taken into account for compiling QGVA from accounted construction were Cement, Steel, Bricks and tiles, Fixtures and fittings, Bitumen and Bitumen mixtures and Glass and Glass products. Value added in the reference quarter was estimated by extrapolating the estimated QGVA in same quarter of previous year with quarterly growth observed in the production of cement and cement products (using the indicator ICI for cement production), iron and steel (using the indicator steel consumption), and relevant IIPs during the reference quarter. For unaccounted construction including plantations and

mineral exploration, the value added was first estimated for the entire year using past trends. Thereafter, the annual estimate was apportioned equally to four quarters.

4.7.2 In the new series with base year 2022–23, for estimating the QGVA of construction sector, item-wise material inputs at constant prices will be first derived using volume extrapolation method. The following indicators have been recommended for different items of inputs:

Input Items	Indicator
Cement & Cement Products	ICI (Cement Production)
Iron & Steel	Consumption of Steel
Bricks & Tiles	Weighted IIP of relevant items
Timber & Roundwood	IIP Wood and Wooden Fixtures etc.
Bitumen and Bitumen Mixtures	IIP Bitumen
Glass and Glass Products	Weighted IIP of relevant items
Fixtures & Fittings	Weighted IIP of relevant items
Other Materials (including kutcha etc.) & Service Charges	IIP Infrastructure and Construction Goods

Then, a fixed Input-output ratio based on previous Annual Estimates will be applied to obtain total Output at Constant Prices. Current price estimates will be compiled by inflating each Input items separately using respective WPI or weighted WPI.

4.8 Non-financial Services Sector

4.8.1 In the existing 2011–12 base year series, the constant price estimates of QGVA for the majority of the non-financial services sectors were compiled using the single deflation method. However, for the transport sector, the QGVA at constant prices was estimated using the volume extrapolation method, wherein appropriate sector-specific volume indicators were used to extrapolate the base year estimates.

4.8.2 In the new series with base year 2022–23, the volume extrapolation method will continue to be used for estimating QGVA at constant prices for the transport sector, in alignment with the methodology adopted for ANA. Further, for the remaining non-financial services sectors, it has been recommended to adopt the single extrapolation method (using indices of deflated output) in place of the single deflation method for estimating QGVA at constant prices. For deflating output at current prices, the same price indices as recommended for ANA will be used for QNA as well. The methodology recommended in the new series with base year 2022–23 for estimating the QGVA at constant prices for various non-financial services sectors is presented in the table below:

Sector	Sub-sector	Recommended methodology (2022-23 series) for QGVA at constant prices
Trade and Repair Services	Wholesale Trade	Single Extrapolation using Current Price GVO deflated by TTM-weighted WPI.

Sector	Sub-sector	Recommended methodology (2022-23 series) for QGVA at constant prices
	Retail Trade	Single Extrapolation using Current Price GVO deflated by TTM-weighted WPI.
	Repair and Maintenance	Volume Extrapolation using Total Domestic Sales of Vehicles of all categories.
Hotel & Restaurants		Single Extrapolation using Current Price GVO deflated by relevant CPI items such as Tea cups, Coffee cups, Cooked Meals purchased, Cooked snacks purchased, Hotel Lodging charges.
Transport	Road Transport	Volume Extrapolation using Stock and Sales of Commercial Vehicles and Three wheelers.
	Water Transport	For constant price estimates, volume extrapolation using Combined Growth observed in Cargo Handled at Major and Minor Ports. For obtaining Current price estimates, CPI (Boat and Steamer charges) will be used to inflate the constant price estimates.
	Air Transport	For constant price estimates, volume extrapolation using Cargo and Passenger Handled at Domestic and International Airport sourced from DGCA. For obtaining Current price estimates, CPI (Air Fare) will be used to inflate the constant price estimates.
	Railway Transport	For constant price estimates, volume extrapolation using weighted growth in overall Net Tonne and Passenger Km. The weight will be assigned based on the earing share from passenger and freight of Railways. For obtaining Current price estimates, Combined WPI and CPI (Railway Fare) will be used to inflate the constant price estimates.
	Services Incidental to Transport	Average growth in the GVA estimates of Road, Water and Air Transport at constant prices, will be used to extrapolate the GVA estimates of Services Incidental to Transport at constant prices.
Communication	Telecommunication	Volume Extrapolation using Weighted growth in Data Usage and Minutes of Usage.
	Post and Courier Service, Recording, Publishing, Broadcasting	Single extrapolation using Current price GVO estimates deflated by relevant CPI items.
Real Estate, IT, Prof Services	Real Estate, Renting, Computer and related activities, Other	Single extrapolation using Current price GVO estimates deflated by composite CPI of relevant items.

Sector	Sub-sector	Recommended methodology (2022-23 series) for QGVA at constant prices
	Business Services, Account and Book Keeping, Administrative and Support Services, Research and Development, Legal Services	
Ownership of Dwelling		In the existing base year, CPI (Housing–Rural) was not available. As a result, GVA of OD–Rural at constant prices was extrapolated using CAGR for constructing annual provisional estimates and then equally distributed across quarters. For OD–Urban, single deflation of nominal GVA using CPI (Housing–Urban) was applied. In the new base year, the Single Extrapolation method will be used by deflating quarter-wise Gross Rental with CPI (Housing–Rural) and CPI (Housing–Urban) for the Rural and Urban segments, respectively.
Public Administration & Defence		GVA is calculated using sum of cost method as there is no operating surplus in case of Government Sector. (GVA= Compensation of Employees (CE)+ CFC). CE which is the major component, will be deflated using CPI (IW). CFC will be first estimated at annual level using past years growth, and then apportioned equally in all the quarters.
Other Services	Education, Health, Activities of Membership Organization, Recreation, Personal Services, Other Services, Pvt HH with employed persons	Single extrapolation using Current price GVO estimates deflated by relevant CPI items as given below: **Education:** CPI Education **Health:** CPI Health **Activities of Membership Organization:** composite CPI of relevant items **Recreation:** CPI Recreation **Personal Services:** Composite index of relevant CPI Items such as barber, beautician, spas, etc.,; washerman, laundry, ironing, dry cleaning, dyeing of clothes,; tailor; grinding/husking charges, etc; other consumer services excluding conveyance; etc. **Pvt HH with employed persons:** Composite index of relevant CPI Items such as Domestic

Sector	Sub-sector	Recommended methodology (2022-23 series) for QGVA at constant prices
		Helper/Cook, Sweeper, Watchmen/Security Guard, Driver.

4.9 Financial Services Sector

4.9.1 In the existing series with base year 2011–12, different approaches were adopted for estimating QGVA at constant prices across various sub-sectors of the Financial Services sector, depending on the availability of quarterly data. For the Central Bank i.e. RBI, Money Lenders and remaining unorganised segments (excluding Insurance Agents), and the Private Life Insurance segment, QGVA at constant prices was estimated using past years' growth rates. In the case of Deposit-taking Corporations, LIC, and Non-life Insurance, constant price estimates of QGVA were derived by deflating the corresponding current price estimates using the Non-Financial GVA deflator. For Other Financial Intermediaries (excluding Insurance Corporations and Pension Funds) and Financial Auxiliaries, volume indicators constructed by deflating Revenue from Operations with the Non-Financial GVA deflator were used to estimate QGVA at constant prices.

4.9.2 In the new series with base year 2022–23, efforts have been made to align the methodology for estimating QGVA at constant prices for the Financial Services sector with that adopted for the ANA, to the extent feasible. However, owing to the non-availability of sufficiently detailed data at the quarterly level, it has not been possible to replicate the ANA methodology in its entirety. Accordingly, based on the availability of quarterly data and suitable indicators, the recommended methodology for estimating QGVA at constant prices for the different sub-sectors of the Financial Services sector is outlined below:

(i) **Central Bank i.e. RBI:** In alignment the ANA methodology, for estimating the quarterly GVA at constant prices for RBI, volume extrapolation method using deflated CE has been recommended wherein CPI (General) will be used as a deflator.

(ii) **Deposit Taking Corporations:** For estimating QGVA at constant prices for this sub-sector, the volume extrapolation method will be applied using the volume measure of total FISIM, defined as the sum of FISIM on Loans and FISIM on Deposits.

(a) **Volume measure of FISIM on Loan:** Deflated Aggregate Credit* (LR of Base Year-RR of Base Year)/100

(b) **Volume measure of FISIM on Deposits:** Deflated Aggregate Deposit* (RR of Base Year-DR of Base Year)/100

where LR denotes the Lending Rate, DR denotes the Deposit Rate, and RR denotes the Reference Rate, defined as the harmonic mean of LR and DR.

For deflating aggregate credit and aggregate deposits, CPI (General) will be used as the deflator, in line with the methodology recommended for the Annual National Accounts (ANA).

(iii) **Other Financial Intermediaries except Insurance Corporations & Pension Funds and Financial Auxiliaries:** For estimating QGVA at constant prices for these sub-sectors, it is recommended to adopt the volume extrapolation method using the growth in the deflated value of Output as the volume indicator. CPI (General) will be used as the deflator for deflating Output.

(iv) **Insurance Corporations (Life and Non-Life Insurance):** In the ANA, GVA at constant prices for this sub-sector will be estimated using output deflated by CPI (General) as the volume indicator, where output is defined as the sum of Net Premium, Premium Supplements, and Miscellaneous Receipts.

For estimating QGVA at constant prices for the various segments of this sub-sector, while the methodology has been conceptually aligned with that of the ANA, the volume indicators differ based on the availability of quarterly data, as detailed below:

(a) **LIC:** Volume Indices of Deflated Net Premium Earned using CPI (General) will be used.
(b) **Private Life Insurance:** Volume Indices of Deflated Net Premium Earned using CPI (General) will be used.
(c) **Non-Life Insurance:** Volume Indices of Deflated Gross Direct Premium using CPI (G) will be used separately for Non-Life Public and Private.
(d) **Postal Life Insurance:** Growth Observed in LIC at constant prices will be used to extrapolate GVA of Postal life insurance at constant prices.

4.10 Product Taxes and Subsidies

4.10.1 Product Taxes

4.10.1.1 In the existing series with base year 2011–12, quarterly estimates of product taxes at constant prices were compiled using the volume extrapolation method at the level of individual tax components prevailing in the base year. Each tax was extrapolated using growth observed in the relevant volume indicators. For instance, excise duty was extrapolated using the growth in GVA of Manufacturing at constant prices.

4.10.1.2 The volume extrapolation method will continue to be used for estimating quarterly product taxes at constant prices in the new series with base year 2022–23 as well. However, following the implementation of GST in 2017–18 and the subsumption of several taxes into GST, new volume indicators have been recommended for extrapolating base year quarterly estimates of product taxes, including GST. These indicators are aligned with those recommended for the ANA. The tax component–wise volume indicators recommended for estimating quarterly product taxes are as follows:

(a) GST: Volume extrapolation using growth observed in the combined output of all industries at constant prices excluding the output of Ownership of Dwelling; Public Administration and Defence; Electricity and output of General Government across all industries.

(b) State excise: Volume extrapolation using growth observed in the IIP (alcoholic beverages).

(c) Union excise: Volume extrapolation using growth observed in the IIP (Manufacture of coke and refined petroleum products).

(d) Sales Tax: Volume extrapolation using combined growth of IIP (Alcoholic beverages) and IIP (Manufacture of coke and refined petroleum products).

(e) Custom duty: Volume extrapolation using growth observed in the imports of goods at constant prices.

(f) For remaining taxes, which have minor share in overall taxes, combined growth observed in the above taxes will be used to extrapolate the base year estimates.

4.10.2 Product Subsidies

4.10.2.1 In the existing series with base year 2011–12, quarterly estimates of Product Subsidies at constant prices were derived by deflating the corresponding current price estimates using the IPD of overall GVA.

4.10.2.2 In the new series with base year 2022–23, efforts have been made to adopt the volume extrapolation method in place of single deflation for estimating quarterly Product Subsidies at constant prices. However, owing to data constraints at the quarterly level, it has not been feasible to apply volume extrapolation uniformly across all subsidy components. Accordingly, the following methodology has been recommended for estimating quarterly Product Subsidies at constant prices:

(a) **Fertiliser Subsidies:** For fertiliser subsidies, which constitute around 50 per cent of total product subsidies, growth observed in quarterly consumption of NPK fertilisers will be used to extrapolate the respective base year estimates. This approach is aligned with the methodology recommended for the ANA.

(b) **Other Subsidies (including Electricity Subsidies):** For the remaining subsidy components, quarterly estimates at constant prices will be obtained by deflating the corresponding current price estimates using the IPD of overall GVA.

4.10.2.3 The above recommendation was further reviewed in the ACNAS. It was suggested by ACNAS that for Electricity subsidy component, IIP electricity may be used for constant price estimates through volume extrapolation. Accordingly, major part of subsidies (Fertilizer subsidy

and Electricity subsidy) at constant prices will be estimated using volume extrapolation. For remaining minor part of subsidies, single deflation will be used using the IPD of overall GVA.

Chapter 5: Volume measures/ use of Deflators for Expenditure Components in Quarterly National Accounts

5.1 Private Final Consumption Expenditure (PFCE)

5.1.1 In the existing series with base year 2011-12, quarterly estimates of PFCE at constant prices were derived by deflating the corresponding current price estimates with the weighted average of CPI and WPI.

5.1.2 In the new series with base year 2022-23, in alignment with the methodology recommended for the ANA, the relevant CPI as the deflator or inflator, as the case may be, will be used in the estimation of quarterly PFCE at a disaggregated item level to the extent feasible. For certain items where appropriate price indices are not available, the IPD of GVO of the corresponding activity will be used as the deflator.

5.1.3 It was noted that the level of disaggregation of PFCE items in the quarterly accounts may differ from that in the annual accounts due to data constraints. The detailed item-wise list of CPI and IPD to be used for PFCE estimation in the annual accounts, will also be replicated, to the extent feasible, for the quarterly estimates.

5.2 Government Final Consumption Expenditure (GFCE)

5.2.1 In the existing series with base year 2011-12, quarterly estimates of GFCE at constant prices were derived by deflating the corresponding current price estimates with the weighted average of CPI and WPI.

5.2.2 In the new series with base year 2022-23, quarterly estimates of NVA component of GFCE at constant prices will be derived by deflating the corresponding current price estimates using CPI (IW) while Net Purchases of Commodities will be deflated using weighted CPI and WPI, in line with the methodology recommended for the ANA. For the Food Subsidy component, the Volume Extrapolation will be done using foodgrain offtake data under various schemes such as ICDS and POSHAN.

5.3 Gross Fixed Capital Formation (GFCF)

5.3.1 In the existing series with base year 2011-12, at quarterly level, Dwelling, Other Buildings and Structures part of GFCF at constant price was estimated using growth in GVO of Construction sector at constant prices. For the remaining asset categories of GFCF, a composite WPI of Transport and Machinery equipment was used as deflator.

5.3.2 With a view to aligning the methodology of quarterly estimates with that adopted in the ANA, the feasibility of undertaking asset-wise deflation at the quarterly level for the estimation of GFCF at constant prices was examined. Accordingly, the following approach was recommended for the asset-wise estimation of quarterly GFCF at constant prices:

(a) **Dwelling, Other Buildings and Structures (DOBS):** At the quarterly level, an appropriate price index specific to DOBS could not be identified. Therefore, consistent

with the existing methodology, constant price estimates of DOBS will continue to be compiled using the growth in GVO of the Construction sector at constant prices.

(b) **Machinery and Equipment:** For Transport equipment; ICT equipment; and Other Machinery and Equipment (Electrical and Non-Electrical), the relevant WPIs, as adopted in the ANA, will be used as deflators. In case of Machinery and Equipment for Defence, past-year growth rates will be applied.

(c) **Cultivable Biological Resources:** Constant price estimates will be derived using past-year growth rates.

(d) **Intellectual Property Products:** The following deflators, as recommended for the Annual National Accounts, will also be applied at the quarterly level for deflating various IPP assets:

(i) Research & Development: Weighted average of CPI(IW) and CPI(U)

(ii) Computer Software & Databases: CPI (Urban)

(iii) Mineral Exploration & evaluation: CPI (General)

(iv) Entertainment, literary and other artistic originals: CPI (Recreation)

(v) Other IPP products: CPI (Urban)

5.4 Change in Stock (CIS)

5.4.1 In the existing series (base year 2011-12), for estimating the CIS at constant prices, average growth of agriculture, manufacturing and mining industry at constant prices was used to extrapolate the annual figure of the previous year. This annual estimate was apportioned into quarters on the basis of estimated quarterly GVA of manufacturing sector at constant prices.

5.4.2 In the new series with base year 2022–23, it was recommended to align the methodology for estimating CIS at constant prices with that followed in the ANA. Accordingly, quarterly estimates of CIS at current prices will be deflated using the relevant industry-wise WPI or IPD to obtain the corresponding constant price estimates.

5.5 Valuables

5.5.1 In the existing series (base year 2011-12), constant price estimates of Valuables at quarterly level were obtained by deflating the corresponding current price estimates using the WPI for Gold and Silver.

5..5.2 In the new series with base year 2022–23, in place of WPI, the CPI for Gold, Silver and Other Ornaments will be used to deflate the current price estimates of Valuables at the quarterly level. This approach is consistent with the methodology adopted in the ANA.

5.6 Import and Export of Goods & Services

5.6.1 The methodology for estimating quarterly Imports and Exports of Goods & Services has been examined with a view to ensuring consistency with the approach adopted in the ANA. However, the matter could not be deliberated in the Sub-Committee. Accordingly, it was placed before the ACNAS for their recommendation.

5.6.2 In the 2011–12 base year, quarterly estimates of Exports and Imports were deflated using the Unit Value Indices (UVI) for Exports and Imports, respectively. In the revised base year, the following changes have been recommended, in line with the methodology adopted for ANA estimates of Exports and Imports:

Export of Goods: Principal commodity-wise Export of Goods will be deflated by respective UVIs.

Import of Goods: Principal commodity-wise Import of Goods will be deflated by respective UVIs.

Export of Services: IPD of Relevant services industries will be used at deflator at disaggregated item level Export of Services component.

Import of Services: For 4 major services items, namely Transport; Travel; Telecommunications, computer, and information services; Other Business Services, the corresponding service PPI/ IPD of major trading partners adjusted for exchange rate will be used for deflating the respective services component at nominal prices. For remaining items, IPD of relevant services industries will be used.

Annexure I

PFCE Codes: 2022-23 series	PFCE Items: 2022-23 series	Method for Deflation/Inflation-Using CPI Item, composite index of CPIs/ Group/ Sub group/ Other alternate method
01	**Food and non-alcoholic beverages**	
01.1	**Food**	
01.1.1	**Cereals and cereal products**	
01.1.1.1	Wheat and wheat products	CPI of wheat/ atta Other sources, maida, suji, rawa Wheat- PDS: CPI of wheat/ atta PDS
01.1.1.2	Rice and rice products	CPI of Rice Other sources, other rice products, chira, muri Rice- PDS: CPI of rice PDS
01.1.1.3	Sorghum and sorghum products	CPI of jowar and its products (as per current basket)/ CPI of jowar (as per new basket)
01.1.1.4	Pearl Millet and Pearl Millet products	CPI of bajra and its products (as per current basket)/ CPI of bajra (as per new basket)
01.1.1.5	Finger Millet and Finger Millet products	CPI of ragi and its products (as per current basket)/ CPI of ragi (as per new basket)
01.1.1.6	Other cereals and cereal products	CPI of other cereals, maize and products, small millets and their products (as per current basket)/ CPI of other cereals & products, maize, small millets (as per new basket)
01.1.1.7	Bread and bakery products	CPI of bread (bakery), biscuits; chocolates; etc.(as per current basket)/ CPI of bread (bakery), Biscuits(as per new basket)
01.1.2	**Meat**	
01.1.2.1	Chicken	CPI of chicken
01.1.2.2	Beef/ Buffalo meat	CPI of beef/ buffalo meat
01.1.2.3	Pork	CPI of pork
01.1.2.4	Mutton/ Goat meat	CPI of goat meat
01.1.2.5	Other meat	CPI of others: birds, crab, oyster, etc.
01.1.3	**Fish and seafood**	CPI of fish, prawn
01.1.4	**Milk, other dairy products and eggs**	
01.1.4.1	Milk and other dairy products	For retail price Milk: CPI of milk liquid (litre) Other dairy products: CPI of other milk products, condensed/powder, curd (as per current basket)/ CPI of other milk products, condensed/powder, curd, yogurt (as per new basket)
01.1.4.2	Eggs	CPI of eggs(no.)
01.1.5	**Oils and fats**	
01.1.5.1	Groundnut oil	CPI of Groundnut oil
01.1.5.2	Coconut oil	CPI of Coconut oil
01.1.5.3	Mustard oil	CPI of mustard oil
01.1.5.4	Butter and Ghee	CPI of Ghee, butter
01.1.5.5	Other edible oils	CPI of refined oil, Vanaspati & margarine

PFCE Codes: 2022-23 series	PFCE Items: 2022-23 series	Method for Deflation/Inflation-Using CPI Item, composite index of CPIs/ Group/ Sub group/ Other alternate method
01.1.6	**Fruits and nuts**	
01.1.6.1	Banana	CPI of Banana
01.1.6.2	Mango	CPI of Mango
01.1.6.3	Coconut	CPI of Coconut, green coconut (no.)
01.1.6.4	Citrus fruits	CPI of orange, mausami, lemon
01.1.6.5	Grapes	CPI of grapes
01.1.6.6	Copra	CPI of coconut: copra
01.1.6.7	Cashew kernels	CPI of cashew nut
01.1.6.8	Groundnut	CPI of Groundnut
01.1.6.9	Other fruits	CPI of other fresh fruits, jackfruit, watermelon, pineapple, guava, singara, papaya, kharbooza, pears/ nashpati, berries, litchi, apple, dates, other nuts raisin; kishmish; monacca; etc. other dry fruits
01.1.6.10	Fruit products	CPI of all items considered under PFCE item fruits and nuts
01.1.7	**Vegetables, tubers, plantains, cooking bananas and pulses**	
01.1.7.1	Onions	CPI of onions
01.1.7.2	Potatoes	CPI of Potato
01.1.7.3	Other vegetables and tubers	CPI of other vegetables, radish, carrot, garlic (gm), palak/other leafy vegetables, tomato, brinjal, cauliflower, cabbage, green chillies, lady's finger, parwal/ patal, kundru, gourd, pumpkin, Peas, beans, barbate, potato, cereal substitute: tapioca, etc
01.1.7.4	Vegetable products	CPI of all items considered under PFCE items Onions and other vegetables and tubers
01.1.7.5	Green gram	CPI of moong
01.1.7.6	Black gram	CPI of urd
01.1.7.7	Gram whole	CPI of gram whole
01.1.7.8	Pigeon peas	CPI of arhar, tur
01.1.7.9	Masoor	CPI of masur
01.1.7.10	Other pulses	CPI of other pulses
01.1.7.11	Gram Products	CPI of gram products (as per current basket)/ CPI of besan, gram products (as per new basket)
01.1.8	**Sugar, confectionery and desserts**	
01.1.8.1	Gur	CPI of jaggery (gur)
01.1.8.2	Refined Sugar	CPI of sugar other sources PDS: CPI of sugar PDS
01.1.8.3	Sugar confectionery	CPI of candy, misri, honey, sauce, jam, jelly, mayonnaise (gm), prepared sweets
01.1.8.4	Ice cream	CPI of Ice cream
01.1.9	**Ready-made food and other food products**	

PFCE Codes: 2022-23 series	PFCE Items: 2022-23 series	Method for Deflation/Inflation-Using CPI Item, composite index of CPIs/ Group/ Sub group/ Other alternate method
01.1.9.1	Salt	CPI of salt (as per current basket) / CPI of salt other sources and salt- PDS (as per new basket)
01.1.9.2	Oilseeds	CPI of oil seeds
01.1.9.3	Spices	CPI of spices
01.1.9.4	Sugar cane for chewing	CPI of sugar other sources
01.1.9.5	Other food	CPI of baby food, pickles, papad, bhujia, namkeen, mixture, chanachur, other packaged processed food, chips (as per current basket)/ CPI of baby food, pickles, papad, bhujia, namkeen, mixture, chanachur, other packaged processed food, chips, nachos, puffs, wafers, etc. (as per new basket)
01.2	**Non-alcoholic beverages**	
01.2.1	**Coffee, tea and cocoa drinks**	
01.2.1.1	Coffee	CPI of coffee: powder
01.2.1.2	Tea	CPI of tea: leaf
01.2.1.3	Cocoa	CPI of other beverages: cocoa; chocolate; etc.
01.2.2	Water, Soft drinks, Fruit and vegetable juices, Other non-alcoholic beverages	CPI of mineral water (litre), cold beverages: bottled/canned (litre), fruit juice and shake(liter) (as per current basket)/ CPI of mineral water (litre), other cold beverages: bottled/canned (litre), fruit juice and shake, sugarcane/ date-palm juice (as per new basket)
02	**Alcoholic beverages, tobacco and narcotics**	
02.1	**Alcoholic beverages**	CPI of country liquor (litre), foreign/refined liquor or wine (litre), toddy (litre), beer (litre)
02.2	**Tobacco**	
02.2.1	Cigarettes	CPI of cigarettes (no.)
02.2.2	Tobacco chewing	CPI of leaf tobacco (gm)
02.2.3	Bidi	CPI of bidi (no.)
02.2.4	Other tobacco products	CPI of other tobacco products, hookah tobacco (gm), cheroot (no.)
02.3	**Narcotics**	
02.3.1	Pan & Its Ingredients	CPI of pan: leaf (no.), pan: finished (no.), ingredients for pan (gm)
02.3.2	Opium	CPI of other intoxicants
03	**Clothing and footwear**	
03.1	**Clothing**	
03.1.1	Clothing materials	CPI of Clothing
03.1.2	Garments, Other articles of clothing	CPI of Clothing

PFCE Codes: 2022-23 series	PFCE Items: 2022-23 series	Method for Deflation/Inflation-Using CPI Item, composite index of CPIs/ Group/ Sub group/ Other alternate method
	and clothing accessories	
03.1.3	**Cleaning, repair, tailoring and hire of clothing**	
03.1.3.1	Cleaning, repair and hire of clothing	CPI of washerman; laundry; ironing (as per current basket)/ CPI of washerman, laundry, ironing, dry cleaning, dyeing (as per new basket)
03.1.3.2	Tailoring	CPI of tailor
03.2	**Footwear**	CPI of Footwear
04	**Housing, water, electricity, gas and other fuels**	
04.1	**Gross rentals, equipment and material for housing**	
04.1.1	Actual and imputed rental payments made for housing	PFCE may be computed as sum of GVO of Ownership of Dwelling at constant prices and Housing services provided by the Govt. at constant prices.
04.1.2	Services for the maintenance, repair and security of the dwelling	Services for the maintenance & repair of the dwelling: Repair & Maintenance Cost of Dwelling at constant prices Services for the security of the dwelling: CPI of watchman charges [other cons taxes] (as per current basket)/ CPI of watchmen/ security guard, driver (as per new basket)
04.1.3	Security equipment and materials for dwelling maintenance and repair	CPI of plugs, switches & other electrical fittings
04.2	**Water supply and miscellaneous services relating to the dwelling**	
04.2.1	Water supply	CPI of water charges
04.2.2	Refuse collection, Sewage collection, Other services related to the dwelling	Using IPD of GVO of Remediation & other utility services.
04.3	**Electricity, gas and other fuels**	
04.3.1	**Electricity**	CPI of Electricity

PFCE Codes: 2022-23 series	PFCE Items: 2022-23 series	Method for Deflation/Inflation-Using CPI Item, composite index of CPIs/ Group/ Sub group/ Other alternate method
04.3.2	**Gas**	
04.3.2.1	LPG	CPI of LPG excl conveyance
04.3.2.2	Other Gas (Gober Gas)	CPI of other fuel
04.3.3	**Liquid fuels (Kerosene)**	PDS: CPI of kerosene PDS (ltr) Non PDS: CPI of kerosene other sources (ltr)
04.3.4	**Solid fuels**	CPI of Coal, firewood and chips, charcoal, dung cake, other fuel
05	**Furnishings, household equipment and routine household maintenance**	
05.1	**Furniture and furnishing, carpets and other floor coverings**	
05.1.1	Furniture and furnishings	CPI of almirah, dressing table, chair, stool, bench, table, other furniture & fixtures (couch, sofa, etc.), bedstead, cloth for upholstery, curtains, tablecloth, etc.
05.1.2	Carpets and other floor coverings	CPI of carpet, daree & other floor mattings
05.1.3	Clock and watches	CPI of clock, watch (As per current basket)/ CPI of clock, watch, smartwatch, fitness tracker (As per new basket)
05.1.4	Repair of computer, personal & HHs goods, furniture, furnishings etc.	Using IPD of GVO of trade and repair services
05.2	**Household textiles**	CPI of bed sheet, bed cover (no.), mosquito net (no.), bedding: others, rug, blanket (no.), pillow; quilt; mattress (no.) (as per current basket)/ CPI of bed sheet, bed cover (no.), mosquito net (no.), bedding: others, rug, blanket (no.), pillow, cushion (no.) (as per new basket)
05.3	**Household appliances**	CPI of inverter, sewing machine, washing machine, stove; gas burner, refrigerator, electric fan, water purifier, electric iron, heater, toaster, oven & other electric heating appliances, other cooking/ household appliances, other durables (as per current basket)/ CPI of inverter, generators, stabilizers, sewing machine, washing machine, stove, gas burner, induction, refrigerator/ freezers, electric fan, water purifier, electric iron, heater, toaster, micro-oven, other cooking/ household appliance, other durables (as per new basket)

PFCE Codes: 2022-23 series	PFCE Items: 2022-23 series	Method for Deflation/Inflation-Using CPI Item, composite index of CPIs/ Group/ Sub group/ Other alternate method
05.4	**Glassware, tableware and household utensils**	CPI of glassware, pressure cooker/ pressure pan, earthenware, stainless steel utensils, other metal utensils, other crockery and utensils (as per current basket)/ CPI of glassware, pressure cooker/ pressure pan, earthenware, paperware, thermocol plates, etc., stainless steel utensils, other metal utensils (non-stick cookware, etc.), other crockery & utensils (jars & containers, cutl (as per new basket)
05.5	**Tools and equipment for house and garden**	CPI of electric bulb; tubelight, electric batteries, torch, lock (as per current basket)/ CPI of other electric bulb, tubelight, decorative lights, electric batteries, other minor durable-type goods like torch, lock (as per new basket)
05.6	**Goods and services for routine household maintenance**	
05.6.1	Non-durable household goods	CPI of candle (no.), coir, rope, etc., washing soap/soda/powder, other washing requisites, incense (agarbatti), room freshener, mosquito repellent, insecticide, acid etc., other petty articles (as per current basket)/ CPI of candle (no.), other petty articles like coir, rope, door mat no., washing soap/ soda/ powder/ liquid detergent, other washing requisite, incense (agarbatti), room freshener, mosquito repellent, insecticide, anti-rodent, etc. (as per new basket)
05.6.2	Domestic services and household services	CPI of domestic helper/cook, sweeper
06	**Health**	
06.1	Health Services	CPI of Health
06.2	Medicines and Health products	CPI of Health
07	**Transport**	
07.1	**Purchase of vehicles**	
07.1.1	Motor cars	CPI of motor car, jeep
07.1.2	Motorcycles	CPI of motor cycle, scooter
07.1.3	Bicycles and animal drawn vehicles	CPI of bicycle
07.2	**Operation of personal transport equipment**	

PFCE Codes: 2022-23 series	PFCE Items: 2022-23 series	Method for Deflation/Inflation-Using CPI Item, composite index of CPIs/ Group/ Sub group/ Other alternate method
07.2.1	Parts and accessories for personal transport equipment	CPI of tyres & tubes
07.2.2	Fuels and lubricants for personal transport equipment	CPI of petrol for vehicle, diesel for vehicle
07.2.3	Maintenance and repair of personal transport equipment	For inflating base year cost -CPI(IW)
07.2.4	Other services related to personal transport equipment	CPI-bus/tram fare, taxi, auto-rickshaw fare, school bus, van, etc. (as per current basket)/ CPI of bus fare for commuting to work.: periodic (lumpsum), bus/tram fare: occasional, auto-rickshaw/e-rickshaw fare, bus fare for school, college, etc.: periodic (lump.), bus/tram fare for commuting to work: daily (miscel.), bus /tram fare for school, college: daily (miscell.), taxi fare (as per new basket)
07.3	**Passenger transport services**	
07.3.1	Passenger transport by railway	Base year estimates may be extrapolated using growth in Passenger Kilometer
07.3.2	Passenger transport by road	Mechanised: For inflating base year earnings/ cost: CPI of bus/tram fare, taxi, auto-rickshaw fare, school bus, van, etc. (as per current basket)/ CPI of bus fare for commuting to work.: periodic (lumpsum), bus/tram fare: occasional, auto-rickshaw/e-rickshaw fare, bus fare for school, college, etc.: periodic (lump.), bus/tram fare for commuting to work: daily (miscel.), bus /tram fare for school, college: daily (miscell), taxi fare (as per new basket) Non-mechanized: CPI of rickshaw (hand-drawn & cycle) fare
07.3.3	Passenger transport by air	CPI of Air fare
07.3.4	Passenger transport by sea and inland waterway	CPI of steamer, boat fare
07.3.5	Other passenger transport services	IPD of GVO of Services Incidental to Transport
07.4	**Transport services for goods**	CPI as indicated against item 7.3.2 (Passenger transport by road)
08	**Information and communication**	

PFCE Codes: 2022-23 series	PFCE Items: 2022-23 series	Method for Deflation/Inflation-Using CPI Item, composite index of CPIs/ Group/ Sub group/ Other alternate method
08.1	**Information and communication equipment**	
08.1.1	Fixed telephone equipment, Mobile telephone equipment	CPI of mobile handset
08.1.2	Information processing equipment and software excluding games	CPI of PC/Laptop/other peripherals incl. software (As per current basket)/ CPI of PC/ Laptop/ tablet, other peripherals incl. software (As per new basket)
08.1.3	Equipment for the reception, recording and reproduction of sound and vision	CPI of television, radio, tape recorder, 2-in-1(As per current Basket)/ CPI of television, other goods for recreation (incl. radio, VCR/VCD) (As per new basket)
08.2	**Information and communication services**	
08.2.1	Communication Services	CPI of telephone charges: landline, telephone charges: mobile, internet expenses (As per current basket)/ CPI of telephone charges: landline*(incl. broadband charges), telephone charges: mobile*(incl. data charges), internet expenses (cable broadband, mobile data charges) (As per new basket)
08.2.2	Television and radio licences and fees, Subscriptions to audiovisual streaming services and rental of audiovisual content	CPI of monthly charges for cable TV connection (As per current basket)/ CPI of cable TV/DTH/set top box (incl. broadband charges) (As per new basket)
09	**Recreation, sport and culture**	
09.1	**Recreational durables**	CPI of camera & photographic equipment, CPI of goods for recreation and hobbies (As per current basket)/ CPI of camera & photographic equipment, other goods for recreation (incl. radio, VCR/VCD) (As per new basket)
09.2	**Other recreational goods**	CPI of sports goods, toys etc., goods for recreation and hobbies (as per current basket)/ CPI of sports goods (badminton, racket, shuttle cock, football, other sports goods), other goods for recreation (incl. radio, VCR/ VCD) (As per new basket)
09.3	**Garden products and pets**	
09.3.1	Garden products, plants and flowers	CPI of flower (fresh): all purposes
09.3.2	Pets and pet products	CPI of goods for recreation and hobbies (As per current basket)/ CPI of pet animals (incl. birds, fish) (As per new basket)

PFCE Codes: 2022-23 series	PFCE Items: 2022-23 series	Method for Deflation/Inflation-Using CPI Item, composite index of CPIs/ Group/ Sub group/ Other alternate method
09.4	Recreational services, Cultural services	CPI of Cinema: new release (normal day), club fees, other entertainment (As per current basket)/ CPI of Cinema, theatre, club, gym, swimming fees & other subscription, other entertainment (mela, fair, picnic, VCD/DVD) (as per new basket)
09.5	**Cultural goods**	
09.5.1	Musical instruments	CPI of goods for recreation and hobbies (As per current basket)/ CPI of musical instruments (As per new basket)
09.5.2	Audiovisual media	CPI of CD, DVD, audio/video cassette, etc. (As per current basket)/ CPI of CD, DVD, pen-drive, external hard disk (As per new basket)
09.6	**Newspapers, books and stationery**	CPI of books, journals (incl. e-books, audio books), newspapers, periodicals, stationery, photocopying charges
10	**Education**	CPI of Education
11	**Restaurants and accommodation services**	CPI of tea: cups (no.), coffee: cups (no.), cooked meals purchased (no.), cooked snacks purchased, hotel lodging charges
12	**Insurance and financial services**	
12.1	**Insurance**	
12.1.1	Life insurance	IPD of GVO of Life Insurance
12.1.2	Non-life insurance	IPD of GVO of Non-Life Insurance
12.2	**Financial services**	
12.2.1	Financial intermediation services indirectly measured	IPD of GVO of S-122-Deposit taking Corporations except Central Bank; S-125-Other Financial Intermediaries except insurance corporations and pension funds; and S-127: Moneylenders and remaining unorganised segment except insurance agents
12.2.2	Explicit charges by deposit-taking corporations (S), Other financial services (S)	Banking Services Price Index (BkSPI) (Direct) (Presently Experimental)
13	**Personal care, social protection and miscellaneous goods and services**	
13.1	**Personal care**	
13.1.1	Electric, other appliances, articles and products for personal care	CPI of toilet soap, toothpaste, toothbrush, comb, etc., powder, snow, cream, lotion and perfume, hair oil, shampoo, hair cream, shaving cream, aftershave lotion, sanitary napkins, suitcase, trunk, box, handbag and other travel goods (As per current basket)/

PFCE Codes: 2022-23 series	PFCE Items: 2022-23 series	Method for Deflation/Inflation-Using CPI Item, composite index of CPIs/ Group/ Sub group/ Other alternate method
		CPI of toilet soap, body-wash, hand-wash, shower gel, toothpaste, mouthwash, toothbrush, etc., powder, cream, body lotion, moisturizers, hair oil, hair colour, shaving cream, shaving foam, aftershave lotion, sanitary napkins, suitcase, trolley bag, duffle bag, trunk, etc. (As per new basket)
13.1.2	Hairdressing salons and personal grooming establishments	CPI of barber, beautician, spas, etc.
13.2	**Other personal effects**	CPI of umbrella, raincoat, any other personal goods (As per current basket)/ CPI of umbrella, raincoat, helmet, any other personal goods (power banks, hair dryers) (As per new basket)
13.3	**Other services**	
13.3.1	Religious services	IPD of GVO/ CPI Priest (As per new basket)
13.3.2	Legal services	IPD of GVO of Legal Services/ CPI Legal (As per new basket)
13.3.3	Funeral services	IPD of GVO of Personal Services/ CPI Priest (As per new basket)
13.3.4	Business services	IPD of GVO of Business Services
13.3.5	Social protection	CPI of Health & Education

*****

रजिस्ट्री सं. डी.एल.- 33004/99 REGD. No. D. L.-33004/99

भारत का राजपत्र
The Gazette of India

सी.जी.-डी.एल.-अ.-28062024-254997
CG-DL-E-28062024-254997

असाधारण
EXTRAORDINARY

भाग I—खण्ड 1
PART I—Section 1

प्राधिकार से प्रकाशित
PUBLISHED BY AUTHORITY

सं. 164] नई दिल्ली, बृहस्पतिवार, जून 27, 2024/आषाढ 6, 1946
No. 164] NEW DELHI, THURSDAY, JUNE 27, 2024/ASHADHA 6, 1946

सांख्यिकी और कार्यक्रम कार्यान्वयन मंत्रालय

(राष्ट्रीय सांख्यिकीय कार्यालय)

अधिसूचना

नई दिल्ली, 27 जून, 2024

सं. यू-11014/9/2023-एनएडी-2बी.—भारत सरकार एतद्द्वारा निम्नलिखित सदस्यों के साथ राष्ट्रीय लेखा सांख्यिकी पर सलाहकार समिति (एसीएनएएस) का पुनर्गठन करती है:

1. प्रो. बिश्वनाथ गोलदर — अध्यक्ष (गैर-सरकारी)
   आर्थिक विकास संस्थान के पूर्व प्रोफेसर
   दिल्ली विश्वविद्यालय एन्क्लेव
   दिल्ली-110007
2. डॉ. जी. सी. मन्ना — सदस्य (गैर-सरकारी)
   (पूर्व महानिदेशक, सीएसओ)
   मानव विकास संस्थान
   256, द्वितीय तल, ओखला औद्योगिक एस्टेट, फेज – III

नई दिल्ली – 110020

3. डॉ. चेतन घाटे — सदस्य (गैर-सरकारी)

निदेशक, आर्थिक विकास संस्थान

दिल्ली विश्वविद्यालय एन्क्लेव

दिल्ली-110007

4. प्रो. पार्थ रे — सदस्य (गैर-सरकारी)

निदेशक

एनआईबीएम, पुणे

5. डॉ. सुब्रत गुहा — सदस्य (गैर-सरकारी)

प्रोफ़ेसर

आर्थिक अध्ययन एवं योजना केंद्र

जवाहरलाल नेहरू विश्वविद्यालय

6. डॉ .मौसमी दास — सदस्य (गैर-सरकारी)

प्रोफ़ेसर

दिल्ली स्कूल ऑफ इकोनॉमिक्स

7. डॉ. शलभ — सदस्य (गैर-सरकारी)

प्रोफेसर, सांख्यिकी और अकादमिक मामलों के डीन

गणित एवं सांख्यिकी विभाग

भारतीय प्रौद्योगिकी संस्थान, कानपुर

8. डॉ. रंजन कुमार साहू, — सदस्य (गैर-सरकारी)

प्रोफेसर,

सांख्यिकी विभाग

हरियाणा केंद्रीय विश्वविद्यालय

महेंद्रगढ़, हरियाणा ।

9. सीईओ, जीएसटीएन — सदस्य (गैर-(सरकारी)

वर्ल्डमार्क 1, एरोसिटी ,

इंदिरा गांधी अंतर्राष्ट्रीय हवाई अड्डा,
नई दिल्ली - 110037

10. महानिदेशक (सांख्यिकी) — सदस्य (सरकारी)

सांख्यिकी और कार्यक्रम कार्यान्वयन मंत्रालय

नई दिल्ली-110001

11. महानिदेशक (राष्ट्रीय प्रतिदर्श सर्वेक्षण), सदस्य (सरकारी)
सांख्यिकी और कार्यक्रम कार्यान्वयन मंत्रालय
नई दिल्ली-110001

12. प्रधान आर्थिक सलाहकार, सदस्य (सरकारी)
डाटा प्रबंधन और विश्लेषण वर्टिकल
(पूर्व पीपीडी) नीति आयोग,
नई दिल्ली-110001

13. वरिष्ठ आर्थिक सलाहकार, सदस्य (सरकारी)
आर्थिक कार्य विभाग,
वित्त मंत्रालय,
नॉर्थ ब्लॉक,
नई दिल्ली-110001

14. महानिदेशक, डीजीसीआईएस सदस्य (सरकारी)
वाणिज्य एवं उद्योग मंत्रालय
कोलकाता-700107

15. सलाहकार (कृषि सांख्यिकी), सदस्य (सरकारी)
अर्थ एवं सांख्यिकी निदेशालय
कृषि एवं किसान कल्याण विभाग
कृषि एवं किसान कल्याण मंत्रालय
नई दिल्ली-110001

16. सलाहकार (सांख्यिकी), सदस्य (सरकारी)
पशुपालन एवं डेयरी विभाग
मत्स्यपालन, पशुपालन और डेयरी मंत्रालय
नई दिल्ली

17. उपमहानिदेशक, कॉरपोरेट डाटा प्रबंधन इकाई सदस्य (सरकारी)
कारपोरेट कार्य मंत्रालय,
शास्त्री भवन,
नई दिल्ली

18. प्रधान सलाहकार (प्रभारी डीएसआईएम) सदस्य (सरकारी)
भारतीय रिजर्व बैंक,

मुंबई

19. प्रधान सलाहकार/प्रभारी अधिकारी, सदस्य (सरकारी)

आर्थिक और नीति अनुसंधान विभाग

(डीईपीआर)

भारतीय रिजर्व बैंक,

मुंबई

20. उपमहानिदेशक, डीपीआईआईटी सदस्य (सरकारी)

उद्योग भवन, नई दिल्ली 110011

21. निदेशक, सदस्य (सरकारी)

अर्थ एवं सांख्यिकी निदेशालय

तमिलनाडु

22. निदेशक, सदस्य (सरकारी)

अर्थ एवं सांख्यिकी निदेशालय

उत्तर प्रदेश

23. निदेशक, सदस्य (सरकारी)

अर्थ एवं सांख्यिकी निदेशालय

ओड़िशा

24. निदेशक, सदस्य (सरकारी)

अर्थ एवं सांख्यिकी निदेशालय

त्रिपुरा

25. निदेशक, सदस्य (सरकारी)

अर्थ एवं सांख्यिकी निदेशालय

महाराष्ट्र

26. अपर महानिदेशक, सदस्य सचिव (सरकारी)

राष्ट्रीय लेखा प्रभाग, सांख्यिकी और कार्यक्रम कार्यान्वयन मंत्रालय,

नई दिल्ली

2. श्री असित कुमार साधु, सदस्य, राष्ट्रीय सांख्यिकी आयोग (एनएससी) समिति में एनएससी प्रतिनिधि के रूप में विशेष आमंत्रित सदस्य होंगे।

3. एसीएनएएस के लिए संदर्भ की शर्तें हैं:

(i) मौजूदा डेटा बेस की समीक्षा करना और राष्ट्रीय लेखा के अनुमानों में सुधार के लिए नए डेटा स्रोतों को शामिल करने पर सलाह देना ।

(ii) आर्थिक विश्लेषण और नीति के प्रयोजनों के लिए राष्ट्रीय लेखा सांख्यिकी के संकलन और प्रस्तुति के लिए कार्यप्रणाली के साथ-साथ त्रैमासिक राष्ट्रीय लेखा के मौसमी समायोजन की कार्यप्रणाली पर सलाह देना और राष्ट्रीय लेखा सांख्यिकी के क्षेत्र में अनुसंधान को बढ़ावा देना।

(iii) नवीनतम संयुक्त राष्ट्र मानकों के कार्यान्वयन, विभिन्न संस्थागत क्षेत्रों के लिए लेखाओं के अनुक्रम के विकास में संयुक्त राष्ट्र सांख्यिकी प्रभाग द्वारा अनुशंसित नए वर्गीकरणों को अपनाने आदि पर सलाह देना।

(iv) अर्थव्यवस्था के विशिष्ट खंडों और उप-राष्ट्रीय लेखा से संबंधित विभिन्न मैक्रो-इकॉनोमिक संकेतकों के अनुमान पर सलाह देना।

(v) राष्ट्रीय लेखा के लिए आधार वर्ष और ड्ब्ल्यूपीआई/पीपीआई, सीपीआई, आईआईपी आदि जैसे अन्य संबंधित उत्पादों के साथ इसके संरेखण पर सलाह देना।

vi) राष्ट्रीय लेखा के संबंध में राष्ट्रीय सांख्यिकी आयोग द्वारा समिति को संदर्भित किसी अन्य मामले पर सलाह देना।

4. राजपत्र अधिसूचना संख्या वाई -18020/3/2019-सीएपी दिनांक 19 जुलाई 2019 द्वारा अधिसूचित व्यावसायिक आचार संहिता समिति के अध्यक्ष तथा सदस्यों (सरकारी तथा गैर-सरकारी दोनों) पर बाध्यकारी होगी।

5. पैरा-1 में उल्लिखित समिति के अध्यक्ष तथा अन्य गैर- सरकारी सदस्य बैठकों में भाग लेने के लिए प्रतिदिन 4000/- रुपये की बैठक फीस के हकदार होंगे। वे समिति की बैठकों में भाग लेने के लिए स्थानीय यात्रा के लिए परिवहन/परिवहन शुल्क के भी हकदार होंगे। इसके अलावा, वे समिति की बैठकों के संबंध में घरेलू दौरों पर इकोनॉमी क्लास में हवाई यात्रा या वातानुकूलित प्रथम श्रेणी में रेल यात्रा करने के पात्र होंगे। बाहरी गैर-सरकारी सदस्यों के लिए कमरे का किराया और टीए/डीए वित्त मंत्रालय द्वारा समय-समय पर बनाए गए नियमों के अनुसार विनियमित किया जाएगा।

6. समिति की बैठकों में भाग लेने के लिए सरकारी सदस्यों के टीए/डीए आदि पर होने वाले व्यय का वहन उनके मूल मंत्रालय/विभाग/संगठन द्वारा किया जाएगा, जिससे वे संबंधित हैं।

7. समिति के अध्यक्ष, यदि आवश्यक हो, सांख्यिकी और कार्यक्रम कार्यान्वयन मंत्रालय की पूर्व स्वीकृति से विभिन्न विषयों से संबंधित विशिष्ट मुद्दों और समस्याओं से निपटने के लिए सदस्य(ओं)/विशेषज्ञ(ओं) को सहयोजित कर सकते हैं। यदि सहयोजित सदस्य/विशेषज्ञ गैर-सरकारी सदस्य हैं, तो वे उपरोक्त पैरा (5) में निर्धारित टीए/डीए और बैठने की फीस आदि के हकदार होंगे।

8. सलाहकार समिति की बैठकों के संचालन पर होने वाला व्यय तथा गैर-सरकारी सदस्यों को किए जाने वाले भुगतान/प्रतिपूर्ति आदि का वहन सांख्यिकी एवं कार्यक्रम कार्यान्वयन मंत्रालय, नई दिल्ली द्वारा लेखा शीर्ष 3454 (मुख्य शीर्ष) के अंतर्गत किया जाएगा।

9. समिति को सचिवालयी सहायता राष्ट्रीय लेखा प्रभाग, राष्ट्रीय सांख्यिकीय कार्यालय, सांख्यिकी एवं कार्यक्रम कार्यान्वयन मंत्रालय द्वारा प्रदान की जाएगी।

10. इस समिति का कार्यकाल पांच वर्ष या राष्ट्रीय लेखा के अगले आधार वर्ष संशोधन के पूरा होने तक, जो भी बाद में हो, होगा। प्रचालन व्यवहार्यता के लिए, समिति अधिकतम दो वर्ष के कार्यकाल के साथ विभिन्न पहलुओं पर उप समितियों का गठन कर सकती है।

11. यह अधिसूचना तत्काल प्रभाव से लागू होगी ।

12. इसे एकीकृत वित्त प्रभाग की मिसिल संख्या यू-11014/9/2023-एनएडी-2बी के तहत दी गई सहमति से जारी किया जाता है ।

ब्रिजेंद्र सिंह, उप महानिदेशक

MINISTRY OF STATISTICS AND PROGRAMME IMPLEMENTATION

(National Statistical Office)

NOTIFICATION

New Delhi, the 27th June, 2024

No. U-11014/9/2023-NAD-2B .—The government of India hereby reconstitutes the Advisory Committee on National Accounts Statistics (ACNAS) with the following composition:

1.	Prof. Biswanath Goldar Former Professor Institute of Economic Growth Delhi University Enclave Delhi-110007	Chairman (non-official)
2.	Dr. G.C. Manna (Former DG, CSO) Institute for Human Development 256, 2nd Floor, Okhla Industrial Estate, Phase – III New Delhi – 110020	Member (non-official)
3.	Dr. Chetan Ghate Director, Institute of Economic Growth Delhi University Enclave Delhi-110007	Member (non-official)
4.	Prof. Partha Ray Director NIBM, Pune	Member (non-official)
5.	Dr. Subrata Guha Professor Centre of Economic Studies and Planning Jawaharlal Nehru University	Member (non-official)
6.	Dr. Mausumi Das Professor Delhi School of Economics	Member (non-official)
7.	Dr Shalabh Professor of Statistics & Dean of Academic Affairs Department of Mathematic & Statistics Indian Institute of Technology, Kanpur	Member (non-official)
8.	Dr. Ranjan Kumar Sahoo, Professor, Department of Statistics Central University of Haryana Mahendragarh, Haryana.	Member (non-official)
9.	CEO, GSTN Worldmark 1, Aerocity, Indira Gandhi International Airport, New Delhi - 110037	Member (non-official)

10. Director General (Stats) MOSPI New Delhi-110001	Member (official)
11. DG (NSS), MOSPI New Delhi-110001	Member (official)
12. Principal Economic Adviser, Data Management and Analysis Vertical (Earlier PPD) NITI Aayog, New Delhi-110001	Member (official)
13. Sr. Economic Adviser, Department of Economic Affairs, Ministry of Finance, North Block, New delhi-110001	Member (official)
14. Director General, DGCIS M/o Commerce & Industry Kolkata 700107	Member (official)
15. Adviser (Agriculture Statistics), Directorate of Economics and Statistics Department of Agriculture & Farmers Welfare Ministry of Agriculture & Farmers Welfare New Delhi-110001	Member (official)
16. Adviser (Statistics), Department of Animal Husbandry & Dairying Ministry of Fisheries, Animal Husbandry & Dairying New Delhi	Member (official)
17. DDG, Corporate Data Management Unit Ministry of Corporate Affairs, Shastri Bhawan, New Delhi	Member (official)
18. Principal Adviser (In charge DSIM) Reserve Bank of India, Mumbai	Member (official)
19. Principal Adviser/Officer-in-charge, Department of Economic & Policy Research (DEPR) Reserve Bank of India, Mumbai	Member (official)
20. DDG, DPIIT Udyog Bhawan, New Delhi 110011	Member (official)

21. Director, Directorate of Economics & Statistics Tamil Nadu	Member (official)
22. Director, Directorate of Economics & Statistics Uttar Pradesh	Member (official)
23. Director, Directorate of Economics & Statistics Odisha	Member (official)
24. Director, Directorate of Economics & Statistics Tripura	Member (official)
25. Director, Directorate of Economics & Statistics Maharashtra	Member (official)
26. Additional Director General, National Accounts Division, MOSPI, New Delhi	Member Secretary (official)

2. Shri Asit Kumar Sadhu, Member, National Statistical Commission (NSC) will be special invitee to the Committee representing the NSC.

3. The terms of reference for the ACNAS are:

(i) To review the existing data bases and advise on inclusion of new data sources for improving the estimates of National Accounts

(ii) To advise on the methodology for compilation and presentation of National Accounts Statistics for purposes of economic analysis and policy including methodology for seasonal adjustment of quarterly national accounts and on promotion of research in the field of National Accounts Statistics.

(iii) To advise on implementation of latest UN standards, adoption of new classifications etc recommended by the UN Statistics Division in development of sequence of accounts for various institutional sectors.

(iv) To advise on estimation of different macro-economic indicators related to specific segments of economy and sub-national accounts.

(v) To advise on base year for national accounts and its alignment with other related products like WPI/PPI, CPI, IIP etc.

(vi) To advise on any other matter referred to the committee by the National Statistical Commission in respect of national accounts.

4. The Code of Professional Ethics as notified vide Gazette Notification No. Y-18020/3/2019-CAP dated19th July 2019 shall be binding on the Chairman and Members (both Official and Non-official) of the committee.

5. The Chairman and other non-official members of the committee mentioned in Para-1 would be entitled to a sitting fee of Rs. 4000/- per day for attending the meetings. They will also be entitled to transport/transport charges for local travel for attending the meetings of the Committee. Besides, they will be eligible to travel by air in economy class or by rail in air-conditioned first class while undertaking domestic tours in connection with the meetings of the Committee. The room rent and TA/DA for the out-station non-official members will be regulated in accordance with the rules in force framed by the Ministry of Finance from time to time.

6. The expenditure of the official members on TA/DA etc. for attending the meetings of the Committee will be borne by their parent Ministry/Department/ Organization to which they belong.

7. The Chairman of the Committee may, if necessary, with prior approval of the Ministry of Statistics and Program Implementation may co-opt member(s)/expert(s) for dealing with the specific issues and problems relating to different subjects. If the co-opted member(s)/expert(s) is/are non-official member(s), then they would be entitled for TA/DA and sitting fees etc. as prescribed in the above para (5).

8. The expenditure on conducting the meetings of the Advisory Committee and the payments/reimbursements etc. made to non-official members would be borne by the Ministry of Statistics and Program Implementation, New Delhi under the Head of Account 3454 (Major head).

9. Secretarial assistance to the committee will be provided by the National Accounts Division, National Statistical Office, Ministry of Statistics & P.I.

10. The tenure of this committee will be five years or till the completion of next base year revision of National Accounts, whichever is later. For operational feasibility, Committee may constitute Sub Committees on different aspects with maximum tenure of two years.

11. The notification will come into force with immediate effect.

12. This issues with the concurrence of Integrated Finance Division vide

BRIJENDRA SINGH, Dy. Director General

Uploaded by Dte. of Printing at Government of India Press, Ring Road, Mayapuri, New Delhi-110064
and Published by the Controller of Publications, Delhi-110054.

F.No.-U-11014/9/2023-NAD-2B
भारत सरकार / Government of India
सांख्यिकी और कार्यक्रम कार्यान्वयन मंत्रालय
Ministry of Statistics and Programme Implementation
राष्ट्रीय सांख्यिकीय कार्यालय/ National Statistical Office
राष्ट्रीय लेखा प्रभाग/ National Accounts Division
*****

के. एल. भवन /Khurshid Lal Bhawan
जनपथ /Janpath,
नई दिल्ली /New Delhi-110001
दिनांक /Dated-27/09/2024

OFFICE MEMORANDUM

The Advisory Committee on National Accounts Statistics (ACNAS) was constituted vide Gazette Notification No.CG-DL-E-28062024-254997 dated 27.06.2024. In the first meeting of the ACNAS held on 20th August, 2024 under the chairmanship of Prof. Biswanath Goldar, the Committee recommended to co-opt official and non-official members for different sub-committees with a term of two years, to simultaneously deliberate upon specific subjects.

2. The recommended composition and terms of reference of Sub-committees have been duly approved by Secretory MoSPI vide File No. U-11014/9/2023-NAD-2B (Note No. 109). Approved composition and terms of reference of Sub-committees are as follows: -

I. **Sub-committee for Incorporation of New Data Sources, Rates and Ratios**

Composition:

i.	CEO, GSTN – Chairperson	Official
ii.	Dr. Amey Sapre, NIPFP	Official
iii.	Dr. Mandira Sarma, JNU	Official
iv.	Dr. Shalabh, IIT Kanpur	Official
v.	Principal Adviser, DEPR, RBI	Official
vi.	DG, DGCIS	Official
vii.	Adviser (AS), M/o AFW	Official
viii.	Director, DES, Uttar Pradesh	Official
ix.	Director, DES, Maharashtra	Official
x.	Director, DES, Uttarakhand	Official
xi.	DDGs from NAD	Official
xii.	Member Secretary: Sh. Shirke Shrinivas Vijay, Joint Director, NAD	Official

Saumya

Terms of Reference:

i. To review the existing data bases and advice on inclusion of new data sources for improving the estimates of National Accounts.

ii. Wider use of databases like GSTN in compilation of different macro-economic aggregates.

iii. Use of GSTN data for regional allocation.

iv. Use of updated rates and ratios based on the studies conducted e.g. Studies related to estimation of fisheries, consumption of milk products etc.

v. Incorporation of results of surveys.

vi. Documentation and writing of report of the sub-committee.

vii. To advise on any other relevant matter referred to the sub-committee by the Committee.

II. **Sub-committee for Methodological Improvement**

Composition:

i.	Dr. G. C. Manna, IHD – Chairperson	Non-Official
ii.	Dr. J. Dennis Rajakumar, EPW	Non-Official
iii.	Dr. Mausumi Das, DSE	Official
iv.	Prof. Partha Ray, NIBM	Official
v.	Dr. Chetan Ghate, IEG	Official
vi.	Principal Adviser, DSIM, RBI	Official
vii.	Representative from DEA	Official
viii.	DDG, CDM, MCA	Official
ix.	DDG, MSME	Official
x.	Director, DES, Tamil Nadu	Official
xi.	Director, DES, Tripura	Official
xii.	Director, DES, Uttar Pradesh	Official
xiii.	DDGs from NAD	Official
xiv.	Member Secretary: Ms. Kratika Mittal, Director, NAD	Official

Terms of Reference:

i. To advise on the methodology for compilation and presentation of National Accounts Statistics for purposes of economic analysis and policy including methodology for seasonal adjustment of quarterly national accounts and methodology for back series.

ii. To advise on estimation of different macro-economic indicators related to specific segments of economy.

Saumya

iii. To review the existing methodology being used in estimation of various macro-economic aggregates.

iv. Refinement in methodology, inter-alia, for estimating Non-financial Private Corporate Sector and unorganized sector for manufacturing and services, for compilation of seasonally adjusted Quarterly National Accounts as well as Quarterization of Benchmark estimates for both Production (Institutional sector wise) and Expenditure side.

v. Feasibility of compiling Chain Based estimates.

vi. Documentation and writing of report of the sub-committee.

vii. To advise on any other relevant matter referred to the sub-committee by the Committee.

III. **Sub-committee for Constant Price Estimates**

Composition:

i.	Prof. Biswanath Goldar (Retd.), IEG – Chairperson	Non-Official
ii.	Sh. Asit Kumar Sadhu, NSC	Official
iii.	Prof. Partha Ray, NIBM	Official
iv.	Dr. Chetan Ghate, IEG	Official
v.	Dr. Subrata Guha, JNU	Official
vi.	Principal Adviser, DEPR, RBI	Official
vii.	DDG, DPIIT	Official
viii.	DDG, Labour Bureau	Official
ix.	DDG, PSD	Official
x.	Director, DES, Odisha	Official
xi.	DDGs from NAD	Official
xii.	Member Secretary: Sh. Vishal Kumar, Joint Director, NAD	Official

Terms of Reference:

i. To review the deflators being used in estimation of various macro-economic aggregates.
ii. Exploring use of double deflation or volume extrapolation as second best alternative and the level of disaggregation at which they may be applied.
iii. Aligning the compilation of constant price estimates in Quarterly and Annual Accounts wherever possible.
iv. Documentation and writing of report of the sub-committee.
v. To advise on any other relevant matter referred to the sub-committee by the Committee.

Saumya

IV. Sub Committee on Regional Accounts

Composition:

i.	Prof. R.H Dholakia (Retd.), IIM – Chairperson	Non-Official
ii.	Dr. G. C. Manna, IHD	Non-Official
iii.	Prof. Sabyasachi Kar, IEG	Official
iv.	Dr. Mausumi Das, DSE	Official
v.	Principal Adviser, DSIM, RBI	Official
vi.	Dr. Ranjan Kumar Sahoo, Central University of Haryana	Official
vii.	Representative from NITI Aayog	Official
viii.	Representative from MoHUA	Official
ix.	Director, DES Rajasthan	Official
x.	Director, DES, Odisha	Official
xi.	Director, DES, Uttar Pradesh	Official
xii.	Director, DES, Maharashtra	Official
xiii.	Director, DES, Tamil Nadu	Official
xiv.	Director, DES, Tripura	Official
xv.	Representative from Geography Dept. ISI-Delhi	Official
xvi.	DDGs from NAD	Official
xvii.	Member Secretary: Ms. Pooja Rani, Director, NAD	Official

Terms of Reference:

i. To advise on estimation of different macro-economic indicators related to sub-national accounts.

ii. To review the concepts, definitions, classifications, data conventions, data sources and data requirements for preparation of State Domestic Product (SDP) and District Domestic Product (DDP) and to lay down the revised guidelines.

iii. To suggest measures for improving SDP and DDP in the country taking into consideration availability of the data and requirements of the Centre and States/Union Territories.

iv. To suggest State level annual/benchmark surveys keeping in view the needs of the System of National Accounts especially in view of the next base year revision.

v. Documentation and writing of report of the sub-committee.

vi. To advise on any other relevant matter referred to the sub-committee by the Committee.

V. Sub-Committee for SNA 2025 Update

Composition:

i.	Dr. Subrata Guha, JNU – Chairperson	Official
ii.	Principal Adviser, DEPR, RBI	Official
iii.	Principal Adviser, DSIM, RBI	Official
iv.	Representative from DEA	Official
v.	DDG, SSD	Official
vi.	Representative from ISI-Delhi	Official
vii.	DDGs from NAD	Official
viii.	Member Secretary: Sh. Rohit Maurya, Director, NAD	Official

Terms of Reference:

i. To advise on implementation of latest UN standards, adoption of new classifications etc. recommended by the UN Statistics Division in development of sequence of accounts for various institutional sectors.
ii. To review the preparedness for implementing recommendations of SNA 2025.
iii. Documentation and writing of report of the sub-committee.
iv. To advise on any other relevant matter referred to the sub-committee by the Committee.

3. The non-official co-opted chairperson(s)/member(s) would be entitled to a sitting fee of Rs. 4000/- per day for attending the meetings. They will also be entitled to transport/travel charges for attending the meetings of the Sub-committee. Besides, they will be eligible to travel by air in economy class or by rail in air-conditioned first class while undertaking domestic tours in connection with the meetings of the Sub-committee. The room rent and TA/DA for the out-station non-official members will be regulated in accordance with the rules in force framed by the Ministry of Finance from time to time.

Saumya
27/09/2024

(Saumya Mishra)
Deputy Director, NAD

To,

All the chairpersons/members of the Sub-committee.

F.NO. P-13011/1/2024-NAD(NAS)
भारत सरकार / Government of India
सांख्यिकी और कार्यक्रम कार्यान्वयन मंत्रालय
Ministry of Statistics and Programme Implementation
राष्ट्रीय सांख्यिकी कार्यालय/ National Statistics Office
राष्ट्रीय लेखा प्रभाग/ National Accounts Division
*****

के. एल. भवन /Khurshid Lal Bhawan
जनपथ /Janpath,
नई दिल्ली /New Delhi-110001
दिनांक /Dated- 14/01/2025

कार्यालय ज्ञापन/ Office Memorandum

Subject: Minutes of the first meeting of the Sub-committee of ACNAS for 'Constant Price Estimates' held on 24th December, 2024.

The minutes of the first meeting of the Sub-Committee of ACNAS for 'Constant Price Estimates' held on **24th December, 2024** under the Chairmanship of Prof. Biswanath Goldar (Retd), IEG are enclosed herewith.

14/01/2025

(Vishal Kumar)
Director

To,
All the members of the Sub-Committee for Constant Price Estimates.

Copy to:
Chairman, Sub-committee of ACNAS for Constant Price Estimates.

Minutes of the Meeting of the Sub-Committee - III of ACNAS: Sub-Committee for Constant Price Estimates held on 24.12.2024

The First Meeting of the Sub-committee for Constant Price Estimates was held at 14.30 hrs on 24.12.2024 in Room no. 609, Khurshid Lal Bhawan, Ministry of Statistics and Programme Implementation under the chairmanship of Prof. Biswanath Goldar (Retd.), IEG. The list of participants is placed at **Annexure**.

2. At the outset, the chairperson welcomed the sub-committee members as well as officers from the National Accounts Division (NAD), MoSPI. The main agenda of the meeting was to review the existing methodology for the compilation of Constant Price Estimates of Gross Domestic Product (GDP). A detailed presentation was made by the National Accounts Division (NAD), MoSPI on the agenda for the meeting. Existing methodology currently being used in the estimation of Gross Value Added (GVA) at Constant Prices for different economic sectors as well as Constant Price estimates of expenditure components of GDP were discussed in detail during the meeting. The proceedings of the discussions are given in succeeding paras.

3. **Review of existing methodology of Constant Price Estimates**

i. Agriculture, Livestock, Forestry and Fishing:

It was informed to the sub-committee that in the Agriculture, Livestock, Forestry and Fishing sector for most of the output items, production and prices figures are available every year. So, the value of output at constant price is estimated by directly multiplying the base year price with the current year production data. Only in case of very minor state specific crops for which production and price data is not available independently, information on Value per Hectare of a particular crop at the base year available from Cost of Cultivation study/ State-specific study is used for estimation of value of output, and its contribution in overall crop sector is very minimal.

In the case of Input items also, production and prices figures are available every year for Crops. However, in the case of Forestry and Fishing sector, the Value of Input is being estimated using some fixed rate/ratio. Shri Brijendra Singh, DDG, NAD raised the concern that, over the years, the intensity of the diesel use and quality of the seeds have been changed substantively and also some of the other input items have grown/ changed over the years, so whether we are going to revise those rates/ratios in the new base year. It was also enquired by the chair whether these rates/ratios have been discussed earlier in any place or any forum and critically examined for improvement. It was apprised to the sub-committee that all the input rates are being re-assessed in the new base year, and the Ministry has also conducted the study for revision of the various rates/ratios being

used, and all these methodological aspects are being discussed in the Sub-committee for Methodological Improvement.

ii. Mining and quarrying:

It was informed to the sub-committee that under this sector, in the case of Fuel Minerals, constant price GVA is estimated by deflating the Current Price GVA with the relevant Wholesale Price Index (WPI). For other major minerals and minor minerals, data on production, price, and input rates of minerals as received from the Indian Bureau of Mines (IBM) are used to derive the deflators. The deflators so derived are used to estimate the constant price GVA of other major minerals and minor minerals.

iii. Manufacturing:

It was informed to the sub-committee that in the case of the Manufacturing sector, GVA at Constant Price is estimated by deflating the compilation category wise GVA at Current prices with relevant WPI. So, completely single deflation method is used in manufacturing.

iv. Electricity, gas, water supply & other utility services:

It was informed to the sub-committee that in the case of Electricity, GVA at constant prices is estimated by moving the base year estimates with the index of quantum sales of electricity which is received from the Central Electricity Authority of India. In the case of Gobar Gas, the current year quantity is multiplied by base year prices to arrive at the constant price estimates. And for gas (other than gobar gas), base year estimates are moved with the index of quantum sales of gas, which is sourced from Gas Authority of India Ltd. (GAIL).

It was enquired by Shri Asit Kumar Sadhu, Member, NSC how did the Ministry get the base year price for gobar gas? It was apprised to the Sub-committee that **Khadi and Village Industries Commission (**KVIC) is providing the quantum of production and value. So, by dividing the value with quantum of production, the price is obtained.

It was also informed to the sub-committee that in the case of Water Supply, CPI (combined) is currently being used as deflator, and in the case of Remediation (recycling), WPI of 'Basic Iron and Steel + Casting of iron and steel' is used as deflator.

It was enquired by the chair whether CPI cover water supply as a separate item. It was apprised to sub-committee that in CPI, 'water charges' is covered as an item, and we may shift from overall CPI to CPI (water charges) to deflate the current price estimates of Water Supply. It was further stated by the Chair that using CPI as deflator for Water Supply is not right as it will under-estimate the growth in price realized on the value. It was enquired by Dr. Chetan Ghate, IEG what approach is being followed by

other countries in this regard. It was apprised to the sub-committee that IMF has also suggested for CPI (water charges). After detailed deliberation on this item, it was observed by the sub-committee the CPI may not be a good deflator for Water Supply and also there is no systematic body of data from which volume index can be derived. Noting the complexity in the estimation of Constant Price GVA of Water Supply, it was suggested by the chair that it may be discussed separately in detail in the subsequent meeting of the Sub-committee.

v. Construction:

It was informed to committee that for the Construction Sector, a composite index based on WPI of relevant commodities and CPI (Rural and Urban) is being used as deflator. The weights of basic materials, other materials and factor inputs used for constructing these indices are based on a study done by CBRI. It was also informed to the sub-committee that Output of the Construction Sector is computed indirectly by using the commodity flow approach. So, cost of seven basic materials & other materials used in the Construction and factor labor cost is used to estimate the output. General Pucca Construction index, Index for rural residential buildings, urban residential buildings, Non-residential buildings and other construction works (NRB &OCW) are being compiled and used as deflator for different institutional sectors. Different weight compositions of basic materials and factor labor cost are being used for compilation of above-mentioned indices. On enquiry by the chair, it was also apprised to the sub-committee that the weights of basic materials, other materials and factor inputs are going to be revised, and Ministry is in the process of awarding the study to an agency for the same.

vi. Trade, repair, hotels and restaurants

It was informed to the sub-committee that in the case of 'Repair and Maintenance of Motor Vehicles and sale of motor vehicles' for private corporate part, GVA at constant price is estimated by deflating the current price GVA estimates with the Trade & Transport Margin (TTM) based WPI. However, for the Quasi & Household (HH) part of this sector, Volume Extrapolation using sales growth of total commercial vehicles is used for Constant Price estimates of GVA, and Current Price GVA estimate is compiled by inflating the constant price estimate with TTM based WPI.
It was also informed to the sub-committee that in the case of Other Wholesale trade, Retail trade & Repair services and Hotels & Restaurants also, TTM based WPI is used as the deflator.
It was enquired by the chair what is the Trade & Transport Margin based WPI. It was apprised to the sub-committee that from Supply-Use table, Trade & Transport margin is available separately for almost 112 items

which are used as weights, and using these weights with the corresponding item level WPI, a composite deflator is formulated.

It was enquired by Shri Brijendra Singh, DDG, NAD that trade margin and transport uses would be different for different item table, so in Supply Use when we take out the trade value and distribute in all items what mechanism is used. It was apprised to the sub-committee that from ASI, we get the ratio of the Trade and Transport margin into all the 112 items.

vii. Transport, storage, communication & services related to broadcasting:

a. Railways: It was informed to the sub-committee that an index of Combined Earnings i.e. sum of Passenger Earnings and Goods Earnings is used to move output and IC of Railways to bring GVA at constant prices.

b. Road Transport: The sub-committee was informed that in the case of Road Transport for the Public sector, Volume extrapolation using volume index of transport (Quantum Mechanical Index) is used for constant price estimates of GVA. For Pvt. Corporate, Quasi and Household sector, Volume extrapolation using growth in registered vehicles is used. For Current price estimates of Quasi and Household sector, constant price estimate is inflated by CPI (Transport & Comm.).

c. Water transport: It was informed to the sub-committee that in the case of Water transport sector, for organized sector, Volume extrapolation using Index of cargo handled at ports, is used to compile the Constant Price estimates. In the case of Quasi and Household sectors, Current Price estimates is compiled first using growth observed in the Private Corporate Sector and then for obtaining Constant Price estimates, overall WPI is used as deflator.

d. Air transport: The sub-committee was informed that in the case of Air Transport sector, volume extrapolation using the Index of passenger and cargo handled at Airports is used to derive the constant price estimates.

e. Services incidental to transport: It was informed to the sub-committee that in the case of Services incidental to transport, volume extrapolation using the combined growth in the GVA of different transport sectors is used for estimation of GVA at constant prices.

f. Storage: It was informed to the sub-committee that in the case of Storage sector, for Non-departmental enterprises & Pvt. Corporate part, Current Price GVA estimate is deflated by storage and warehousing price index to derive the Constant price estimates, and for Quasi & Household sector, WPI is used as a deflator.

g. **Communication & services related to broadcasting:** The sub-committee was informed that for Postal & Courier activities; Cable operator; Recording, publishing & broadcasting services, CPI (Transport & Communication) is used as a deflator. In the case of Telecommunication also, for Non-departmental enterprises, Pvt. Corporate & Co-operative sector, CPI (Transport & Communication) is used as a deflator. For Quasi and Household part of Telecommunication, constant price estimates of GVA of the previous year is moved with the growth rate observed in Minutes of Usage provided by TRAI.

The chair raised the concern that the current practice of using CPI (Transport & Communication) as deflator in Telecommunication sector, is grossly understating the growth of this sector as the data usage prices has drastically fallen over the years and also in the current structure of CPI, Data Usage does not have the adequate weight. It was further suggested by the chair that a better methodology may be explored for the compilation of constant price estimates for Telecommunication.

viii. Financial Services:

The sub-committee was informed that under Financial Services, for Deposit taking corporations, Index of deflated credits and deposits of All Scheduled Commercial Banks and for Central Bank, implicit deflator of commercial banks, are used for estimation of GVA at constant prices. In the case of Financial auxiliaries and Other Financial Intermediaries (except Insurance Corporations and Pension Funds), Index of deflated net receipts is used for the estimation of GVA at constant prices. On enquiry of the chair, it was apprised to the sub-committee that the implicit price deflator of GVA of Non-Finance sector is used for above indicated Index.

It was also informed to the sub-committee that in case of Post Office Saving bank (POSB), Pension Fund and Postal Life Insurance, CPI (IW) is used as a deflator. For Captive financial institutions and money lenders, Index of Net Receipts of corporations and money lenders is used to move the Constant price estimates.

The sub-committee was further informed that in the case of Life Insurance, for LIC, base year estimates are moved with the average of deflated indices of life fund and sum assured, and for private life insurance, WPI is used as deflator. In the case of Non-life insurance, Base year GVA estimates at constant prices are moved with the deflated index of 'Gross premium less claims', for non-life insurance other than ESIC. For ESIC, the current price GVA estimates are deflated with the WPI. For private non-life insurance companies also, current price GVA estimates are deflated with WPI to derive the Constant price estimates of GVA.

ix. Real estate, ownership of dwelling & professional services

It was informed to the sub-committee that in the case of Real estate & Professional services, for Non-departmental enterprises sector CPI (General); for Pvt. Corporate and Cooperative sector WPI; and for Quasi & Household sectors CPI (Misc.) are used as deflators.

x. Ownership of Dwelling:

The sub-committee was informed that in case of Ownership of Dwellings, Index of rural residential buildings and CPI (Urban-Housing) are used as deflators respectively for Rural and Urban dwellings.

It was enquired by the chair how the GVA of Ownership of Dwelling is being estimated. It was apprised to the sub-committee that the estimate of GVA of Ownership of Dwellings (rural) at current price is compiled using the user cost approach. In this approach, the net operating surplus is imputed using the opportunity cost principle; i.e. the net operating surplus is estimated on the basis of what owner-occupiers could have earned on alternative investments (if they had not bought the dwelling). Then, the dwelling costs (intermediate consumption and consumption of fixed capital) are added to the imputed net operating surplus to obtain the imputed rent. Index of rural residential buildings is then used as deflator.

xi. Public Administration and Defence:

It was informed to sub-committee that in case of Public Administration and Defence Sector, CPI (general) is currently being used as a deflator to deflate the Current Price estimates.

It was enquired by the Chair how the value added is calculated for this sector. It was apprised to the sub-committee that sum of cost method is used as there is no operating surplus in the case of Government Sector. Salary & Wages components are the net value addition part for this sector and adding CFC to this gives the GVA. It was also suggested to the sub-committee that as Compensation of Employees is a major component of this sector, CPI (IW) may be the better deflator.

The chair raised the observation that as the size of the government and the number of employees are going down, the salary & wages will also grow slowly and if we deflate it with CPI, the labour productivity in this sector may not show any increase. Therefore, output growth of this sector is parallel to the employee's growth and we are not showing the productivity gain in this sector sufficiently.

After detailed deliberation, it was suggested by the chair to explore the practices being used by the other countries and to explore if there can be a better way to reflect the productivity of the Government employees, otherwise, CPI (IW) may be used instead of CPI (General).

xii. Other Services:

It was informed to the sub-committee that in case of Other services, relevant CPI is being used for different service sector. CPI (education) for the education sector; CPI (health) for the health sector; CPI (Misc.) for Services of membership organisations & Personal services including-washing, hair dressing, custom tailoring and funeral related services; and CPI (general) for Private household with employed person, are being used as deflators. It was also informed to the sub-committee that in the case of Arts, entertainment & recreation sector, CPI (Misc.) is used as deflator for Public & Pvt. Corporate part and CPI (Recreation) is used as deflator for Quasi & Household part.

xiii. Private Final Consumption Expenditure:

(a) Primary Goods: It was informed to the sub-committee that in the case of Primary Goods which primarily includes the Agricultural Items, we estimate marketable surplus i.e. how much quantity is going for consumption, using some rate/ratio and that quantity is multiplied by base year prices to get the Constant Price estimates.

It was enquired by the chair whether for all primary goods we have some estimates of quantity for each year. It was apprised to the sub-committee that commodity flow approach is being used.

It was enquired by Shri Asit Kumar Sadhu, Member, NSC that production values of all the Agricultural Items are not in the same unit, then, how it is used in the estimation. It was apprised to sub-committee that estimates of PFCE are compiled at the item level. In the case of some horticulture crops for which unit of rate varies from place to place, the appropriate conversion rate is used.

It was further raised by Shri Asit Kumar Sadhu, Member, NSC that the market surplus ratio is available only for some major items. It was apprised to the sub-committee that from Household Consumption Expenditure Survey, we are getting item-wise consumption ratio which is being used for estimating market surplus.

(b) Manufactured and other products: It was informed to the sub-committee that in the case of PFCE on Manufactured and other products, relevant CPI is used as a deflator. It was enquired by the Chair that how Ministry is identifying whether Manufacturing Products are going for consumption, investment or intermediate consumption. It was apprised to the sub-committee that list of the items going into household consumption, are available from Classification of Individual Consumption According to Purpose (COICOP). These COICOP items are mapped with National Product Classification for Manufacturing Sector (NPCMS).

It was stated by Shri Asit Kumar Sadhu that for Manufacturing products appropriate deflator should be WPI not CPI. It was apprised to the sub-committee that CPI is used as it is a consumption-side estimate.

The chair raised the concern of underestimation as ASI does not cover the entire manufacturing activities. It was apprised to the sub-committee that only the structure (inter-industry consumption) from ASI is being used and the total Output of the products are coming from Production Side e.g. for Private Corporate from MCA database.

(c) Services: The sub-committee was informed that in case of PFCE on Services for most of the services part, Current price estimates are deflated with the help of implicit price indices of GVO estimates i.e. implicit price deflator of production side estimates of corresponding services is used as deflator. For Health services, relevant CPI is used as a deflator. For constant price estimates of PFCE on electricity, base year estimates are moved forward using consumption of electricity (in terms of electricity sold) as obtained from Central Electricity Authority (CEA).

In the case of Gas & Kerosene, base year estimates are moved forward using domestic consumption of gas & kerosene as obtained from IP&NG Statistics. For PFCE on firewood, the base year value has been moved forward using output of firewood at constant (2011-12) prices as obtained in the forestry sector. The PFCE on Charcoal is estimated using growth in production of charcoal. For consumption of gobar gas, implicit price index of 'production of gobar gas' is used as deflator. In the case of PFCE on Dung fuel, Coke and other Fuel, the ratios of output to PFCE have been used on the value of output at constant prices to obtain PFCE at constant (2011-12) prices.

xiv. Gross Fixed Capital Formation (GFCF)/Consumption of Fixed Capital (CFC):

It was informed to the sub-committee that in the case of GFCF/ CFC, Asset wise different price indices are used. For Dwelling & Other Buildings Structures (DOBS) and Ownership of Dwellings, respectively, the General Pucca Construction Index and Index of Rural Residential buildings & Urban Residential Buildings, as used in the estimates of the construction sector, are used as deflator. The sub-committee was informed that for GFCF of Transport equipment, ICT equipment, other Machinery & Equipment and Weapon systems, the corresponding weighted indices based on WPI are used as deflators. In case of Cultivated Biological Resources, CPI (Rural) is used for Trees yielding repeat products and implicit price index is used for Animal resources yielding repeat products. For Intellectual Property Products (IPP), WPI/CPI based indices are being used.

On enquiry, it was also clarified to the sub-committee that the WPI based composite indices used as deflators are applied asset-wise and hence, the

trend in the movement of overall WPI (all commodities) is not the same as composite indices compiled asset category wise.

xv. Other expenditure components:

It was informed to the sub-committee that in the case of Government Final Consumption Expenditure, deflation of current price estimates is done separately for each of the components. Compensation of Employees is deflated by the Consumer Price Index while net purchase of goods and commodities is deflated using WPI based weighted price index, where the weights have been derived from IOTT.

It was also informed to the sub-committee that in case of Change in Stocks, most relevant commodity-wise WPI are being used for compiling the deflators, and for Valuables, relevant WPI based deflators are currently being used.

The sub-committee was further informed that Export and Import of Goods at current prices are deflated by the unit value index of export and unit value index of import, respectively. For, Export & Import of Services, the implicit price index of non-financial services is being used as deflator.

The chair raised the concern that in expenditure side for Export and Import we are using a new set of price index i.e. Index of export and import. However, from production side, the export and import part are being deflated by domestic price index. This may give rise to the issue of resulting discrepancy in two sides of estimates. It was further stated by the chair that if Producer Price Index (PPI) brings into the computation of the export and import prices index then consistency will arrive between the production side estimates and expenditure side estimates of National Accounts.

xvi. Product Taxes and Subsidies:

The sub-committee was informed that for Constant Price Estimates of Product Taxes, Volume extrapolation method is used. The different Tax Components are estimated using the growth in the GVO at constant prices of relevant sector. It was also informed to the sub-committee that Product Subsidies at Current prices is deflated using Implicit Price Deflator of Overall GVA.

A concern was raised in the sub-committee on the use of Implicit Price Deflator of Overall GVA as the subsidies are provided only for some targeted sector, and it might be a reason for the divergence in the growth rate of GVA and GDP at constant prices. It was apprised to the committee that similar to Constant Prices estimates of Product Taxes, the Ministry is exploring to use Volume Extrapolation method in the case of Product Subsidies, and IMF TA mission has also suggested for the same.

4. **Proposed changes in the existing methodology for Constant Price Estimates of GDP:**

It was informed to the sub-committee that at present, Single Deflation is used for most of the sectors, and the Ministry is proposing to replace Single Deflation with either the Double Deflation method or Single Extrapolation method. It was also informed to the sub-committee that for the double deflation method, Producer Price Index (PPI) for both Output and Input items as well as Service Sector PPI will be required. DDG, DPIIT informed that as per the earlier plan of 2017-18 as the base year, PPI for output goods and five services with the base year 2017-18 have been compiled. Following the decision at the High level to revise base year of all major indicators to the common base year 2022-23, base year of WPI/PPI would be revised at the base year 2022-23. On Input PPI, he apprised that very few countries have been compiling the same due to complicacies involved in the exercise. Even the USA, who is the leading country, is not compiling the same and using PPI for Intermediate use as proxy. Still, as per the requirement of NAD, compilation of Input PPI is being planned by DPIIT. He mentioned that the practice of PPI for Intermediate use by several countries, and also compiled by DPIIT, may also be a viable option and proxy for Input PPI for use in the new series of national accounts. With regard to extension of coverage of services PPI, he informed that DPIIT is banking on the availability of ASSSE survey which is being conducted by MoSPI as required data on other services are not available with the concerned nodal Ministries/Departments.
It was suggested by the chair that wherever possible, the double deflation method should be used or Ministry should move to Single Extrapolation method at least. It was also advised by the chair that the Ministry may come up with a list of some of the sectors where double deflation or single extrapolation may be used and it may be discussed in detail in the subsequent meetings of the sub-committee.

5. A preliminary exercise on the use of Single Extrapolation in Mining & Quarrying sector was demonstrated during the meeting. It was suggested by the chair that the exercise may be relooked and detailed analysis of the results may be done, and thereafter, in the subsequent meetings of the sub-committee, it may be elaborated.

6. The meeting ended with vote of thanks to chair.

Annexure

List of Participants

Sub-committee Members

1. Prof. Biswanath Goldar (Retd.), IEG & Chairperson of the Sub-committee
2. Shri Asit Kumar Sadhu, Member, NSC
3. Dr. Chetan Ghate, IEG
4. Dr. Subrata Guha, JNU (attended virtually)
5. Smt. Rekha Mishra, Principal Adviser, DEPR, RBI (attended virtually)
6. Shri Brijendra Singh, Deputy Director General, NAD, MoSPI
7. Shri Dilip Kumar Sinha, Deputy Director General, NAD, MoSPI
8. Shri Rajesh Kumar Sharma, Deputy Director General, DPIIT
9. Ms. Subhra Sarker, Deputy Director General, NAD, MoSPI
10. Shri Rajeev Kumar, Deputy Director General, NAD, MoSPI
11. Dr. Bijaya Bhushan Nanda, Director, DES, Odisha (attended virtually)
12. Shri Vishal Kumar, Joint Director, NAD, MoSPI (Member Secretary)

Officers from NAD, MoSPI

1. Shri Sanjay, Additional Director General
2. Shri Rohit Maurya, Director
3. Ms. Meera AP, Director
4. Ms. Kratika Mittal, Director
5. Ms. Pooja Rani, Director
6. Shri Shirke Shrinivas Vijay, Joint Director
7. Ms. Monika Kumawat, Joint Director
8. Shri Dipankar Mitra, Deputy Director
9. Ms. Priyanka Anjoy, Deputy Director
10. Ms. Kanwaljit Kaur, Assistant Director

Other Officers/ representatives

1. Ms. Ankita Singh, Deputy Director General, ESD, MoSPI

F.NO. P-13011/1/2024-NAD(NAS)
भारत सरकार / Government of India
सांख्यिकी और कार्यक्रम कार्यान्वयन मंत्रालय
Ministry of Statistics and Programme Implementation
राष्ट्रीय सांख्यिकी कार्यालय/ National Statistics Office
राष्ट्रीय लेखा प्रभाग/ National Accounts Division
*****

के. एल. भवन /Khurshid Lal Bhawan
जनपथ /Janpath,
नई दिल्ली /New Delhi-110001
दिनांक /Dated- 16/05/2025

कार्यालय ज्ञापन/ Office Memorandum

Subject: Minutes of the second meeting of the Sub-committee of ACNAS for 'Constant Price Estimates' held on 24th April, 2025.

The minutes of the second meeting of the Sub-Committee of ACNAS for 'Constant Price Estimates' held on **24th April, 2025** under the Chairmanship of Prof. Biswanath Goldar (Retd), IEG are enclosed herewith.

16/05/2025

(Vishal Kumar)
Director

To,
All the members of the Sub-Committee for Constant Price Estimates.

Copy to:
Chairman, Sub-committee of ACNAS for Constant Price Estimates.

Minutes of the 2nd Meeting of the Sub-Committee III of ACNAS on Constant Price Estimates held on 24.04.2025

The Second Meeting of the Sub-committee for Constant Price Estimates was held under the chairmanship of Prof. Biswanath Goldar (Retd.), IEG at 10.30 hrs on 24.04.2025 in Conference Room No. 201, Khurshid Lal Bhawan, Delhi. A list of participants is placed at **Annexure**.

2. At the outset, the chairperson welcomed the Sub-committee members and the officers of the National Accounts Division (NAD), MoSPI. In the meeting, concerned Directors of NAD made the presentation on the proposed changes in the existing methodology for Constant Price Estimates concerning the following sectors/ components:

(i) Mining & Quarrying sector
(ii) Product Taxes and Subsidies
(iii) Financial Services sector
(iv) Non-Financial Services Sector

3. Major details of the presentation and deliberations held thereafter are mentioned below:

3.1 Constant Price Estimates of Mining & Quarrying Sector

3.1.1 The Sub-Committee was briefed about the current methodology followed in arriving at constant price estimates of GVA for Mining & Quarrying industry. It was proposed that single extrapolation as against the current practice of single deflation may be used for compiling constant price estimates.

3.1.2 Fuel Mineral (Coal), five alternative approaches for compiling constant price estimates for GVA (Coal) were presented.

(i) Using Coal Index published under the Index of Eight Core Industries (ICI). The index excludes lignite.

(ii) Unweighted Index compiled using production of Coal (excluding lignite) in quantity terms as published in Coal Directory by M/o Coal. The volume Index is based on quantity produced.

(iii) Unweighted Index compiled using production of Coal (including lignite) in quantity terms, published in Coal Directory by M/o Coal.

(iv) Weighted Index compiled using weights from the Index of mineral production for Coal published by Indian Bureau of Mines (IBM) with base year 2011-12 along with quantity data in Approach (iii).

(v) Using the weighted Index of coal production (base year 2011-12) compiled by IBM and provided for compilation of IIP Mining.

3.1.3 The results of real GVA (Coal) estimated using above five approaches and the current single deflation were placed before the sub-committee. It was observed that the movement in the indices mentioned in above five approaches were similar over the years and the volatility observed in growth rates of real GVA of Coal using the current approach of deflating GVA of Coal at current prices by using WPI (Coal) got reduced on using single extrapolation for all the above-mentioned five approaches. The Sub-Committee was informed that the GVA to GVO ratio (also the Input to Output ratio) at current prices remained stable and the assumption required for Single Extrapolation that

the input-output technical coefficients do not change, was satisfied. The sub-committee enquired if it was possible to use single extrapolation separately for each of the variety/category of coal (raw coal, middling coal, washed coal and lignite) to which it was informed that category-wise GVA was not available as the details of the inputs used in coal mining were not available separately for each category of coal in the data sources (Annual Reports of NDE and MCA database) for compiling GVA. Also, by using weighted Index, the mix of different types of coal produced was considered. It was also informed that the weighted index of mineral production compiled by IBM would undergo change due to ongoing base revision exercise of IIP.

3.1.4 Since the weighted Index of coal production compiled by IBM and provided for compilation of IIP Mining included lignite and was weighted, **the methodology (v) was considered technically more appropriate for the new GDP series by the Sub-Committee**.

3.1.5 For Fuel Mineral (Petroleum), three alternative approaches were presented before the for single extrapolation of GVA (Petroleum and Natural Gas).

(i) Using combined Indices of Crude Oil and Natural Gas published under the ICI derived as per the weights of these two products available in the ICI.

(ii) Weighted Index compiled using production data for Petroleum (Crude) and Natural Gas provided by M/o Petroleum and Natural Gas and then combining these two Indices using weights from the Index of mineral production for Petroleum (Crude) and natural gas, published by IBM.

(iii) Using the weighted Index of Petroleum and Natural Gas production compiled by IBM and provided for compilation of IIP Mining.

3.1.6 It was observed that the movement of the above-mentioned Indices were similar over the years and the volatility in the growth rates of real GVA of Petroleum and Natural Gas got reduced in above proposed three approaches compared to existing methodology of single deflation. The Sub-Committee was informed that the GVA to GVO ratio (also the Input to Output ratio) at current prices for Petroleum & Natural Gas were not that stable as in case of Coal.

3.1.7 **The sub-committee suggested that instead of using composite index for single extrapolation, feasibility of using single extrapolation separately for GVA of Petroleum (Crude) and that of Natural Gas may be explored.** Since ratio of inputs that goes into production of Petroleum (Crude) and Natural Gas was not available, it was decided that **NAD would consult M/o Petroleum and Natural Gas for the input data for bifurcation of inputs and present the results of the suggested approach in its next meeting.**

3.1.8 For Major Metallic and Non-Metallic Minerals (excluding salt), four alternative approaches for compiling constant price estimates for GVA (Major Metallic and Non-Metallic Minerals (excluding salt)) were presented.

(i) Using mineral-wise quantum index compiled by deflating GVO (Current) by relevant WPI.

(ii) Using mineral-wise quantum Index compiled using quantity produced as reported by IBM.

(iii) Using mineral-wise quantum Index compiled by deflating GVO(Current) by implicit deflator obtained from data provided by IBM [(current year production in quantity terms x current year prices) / (current year production in quantity terms x base year prices)].

(iv) Using mineral-wise Index of Mineral Production of IBM provided for IIP

3.1.9 The results of impact on real GVA using above four approaches and the current methodology of deflating GVA (current) by implicit deflator obtained from mineral-wise data on production (quantity) and prices provided by IBM were placed. It was informed that in the first approach, where ever mineral specific WPI was not available (in case of metallic minerals), overall WPI of metallic minerals (composite index of bauxite, chromite, zinc concentrate, manganese ore, iron ore, copper concentrate and lead concentrate) was used. Similarly, where ever, mineral specific WPI was not available in case of non-metallic minerals, overall WPI of other minerals (composite index of phosphorite, limestone, garnet and sillimanite) was used. The sub-committee was also informed that mineral-wise Index of Mineral Production published by IBM and provided for IIP Mining, was available for most of the major metallic and non-metallic minerals except for silver, flint stone, iolite and few other minerals like moulding sand, perlite, salt (rock) and siliceous earth whose production found to be negligible since 2017-18. **The Sub-committee suggested that IBM may be requested to provide Index for all the metallic and non-metallic minerals as per the revised base year series.**

3.1.10 It was observed that there were wide variations in real GVA for FY 2022-23 and 2023-24 using above four approaches and that the estimates of real GVA using approach (iii) and (iv) were close to each other. Since for fuel minerals, the index of production compiled by IBM was suggested for use by the sub-committee, **it was agreed that single extrapolation using approach (iv) can be the preferred choice.**

3.1.11 On the possibility of double deflator for major metallic and non-metallic minerals, it was informed that NAD examined possibility using the data on mineral-wise inputs used for mining provided by IBM for FY 2022-23. There were two items namely Drill rods & bits and Other Spares & Stores for which relevant WPI was not identifiable. DDG(DPIIT) suggested that Index for Drilling Machine and Mining, quarrying & metallurgical machinery/parts may be used. **The Sub-committee suggested to present the results of real GVA for metallic and non-metallic minerals using double deflation.**

3.1.12 For Minor Minerals, the sub-committee was informed that the data on minor minerals being not available with any central agency, was to be sourced from State/UT Geological Departments. Currently, 25 States/UTs provide data on both quantity and value for these minor minerals. It was proposed that year-wise data on quantity produced would be requested from all States/UTs and then the minor mineral-wise quantum Index would be compiled and used as single extrapolation indicator for deriving the real GVA.

3.2 Constant Price Estimates of Product Taxes and Subsidies

3.2.1 The methodology of compiling product taxes at constant prices in the 2011-12 series was presented before the sub-committee. It was informed to the sub-committee that the estimates of product taxes at constant prices are currently derived using volume extrapolation. Different types of taxes are extrapolated with the growth observed in the relevant indicators, e.g., excise duty is moved each year with growth in output of manufacturing at constant prices. It was further informed to the sub-committee that after implementation of GST in 2017-18, various taxes were subsumed in GST. Accordingly, new indicators were proposed for moving base year taxes including GST in the new series.

3.2.2 For estimating GST at constant prices, it was proposed to move base year estimates with growth observed in the combined output of manufacturing and services at

constant prices excluding Ownership of Dwelling and Public Administration and Defence across institutional sectors except General Government.

3.2.3 Besides, it was also proposed to explore distribution of base year GST across industries where GST is applicable. If GST can be distributed across these industries, in place of using growth observed in the combined output of manufacturing and services as proposed above, it was proposed to use growth observed in the output of respective industries for moving base year GST values. As different products attract different GST rates, ideally volume extrapolation should be done at further disaggregated level. However, considering that getting product-wise GST and a suitable indicator for each product may be difficult, **it was suggested by the sub-committee to restrict distributing GST against relevant industries instead of against different products.**

3.2.4 For state excise, which is applicable on liquor, growth observed in the output of alcoholic beverages at constant prices was proposed to move base year estimates. For union excise, which is applicable on petroleum product, growth observed in the output of petroleum products at constant prices was proposed to move base year estimates. For sales taxes, combined growth observed in the output of alcoholic beverages and petroleum products was proposed to move base year estimates.

3.2.5 For customs, growth observed in the imports of goods at constant prices was proposed to move base year estimates. However, as different products attract customs duty at different rates, the Committee suggested to use growth observed in the imports of different products to move product-wise import duty, instead of growth in total imports.

3.2.6 For remaining taxes, which are around 5 percent of the overall taxes, combined growth observed in the above taxes was proposed to move base year estimates.

3.2.7 It was informed to the sub-committee that in case of product subsidies, estimates at constant prices in the 2011-12 series are derived by deflating product subsidies at current prices by IPD of GVA of total economy. It was suggested to use volume extrapolation in case of product subsidies also. Three major subsidies, namely, food subsidies, fertilizer subsidy and electricity subsidy constitute more than 80 percent share in overall subsidies. Different indicators were proposed to move base year values of different types of subsidies.

3.2.8 For food subsidy, growth observed in allocation/offtake of food grain under NFSA; and, for fertilizer subsidy, growth observed in the production/consumption of NPK fertilizers were proposed to move respective base year subsidies. For electricity, as rates of subsidy differ from state to state, base year subsidies of respective states were proposed to be moved with the growth observed in generation/sales of electricity by concerned states. **Sub-Committee recommended using consumption for domestic consumers and farmers in case of electricity subsidy. Remaining subsidies were proposed to be moved with the combined growth of above subsidies at constant prices. Sub-Committee suggested to explore alternatives like overall IPD/relevant IPD for deflation for remaining subsidies.**

3.2.9 The Sub-Committee suggested to work out estimates of constant price taxes and subsidies as per the methodology presented by NAD and present the same in its next meeting.

3.3 Constant Price Estimates of Financial Services sector

3.3.1 For the Reserve Bank of India, it was informed to the sub-committee that in the current series (2011-12), constant price estimates of RBI are compiled using single

deflation method. The Implicit Index, derived from the current and constant price estimates of Deposit taking Corporations except Central Bank is used as price deflator.

3.3.2 It was proposed that volume extrapolation as against current practice of single deflation may be used for compiling constant price estimates. The following approach for using volume extrapolation was presented before the sub-committee:

3.3.3 The year-wise cost per employee in the Reserve Bank of India (RBI) was first calculated using data on the number of employees and the total compensation paid. This cost per employee was then treated as a price measure to construct a Price Index. Using this Price Index, the output at current prices was deflated to obtain the output at constant prices. Subsequently, a volume index was created based on the constant price output, which was used to estimate the Gross Value Added (GVA) at constant prices for the RBI.

3.3.4 The results of real GVA(RBI) estimated using above approach and the current single deflation were placed before the sub-committee for perusal.

3.3.5 The Sub-Committee observed that using number of employees for volume extrapolation method would not be efficient as year-on-year changes in real GVA was not stable. **It was suggested by the Sub-Committee that there was a need to examine the proposed approach of volume extrapolation, and to look at other indicators which actually reflect to the functioning of the RBI. Further, it was suggested that RBI may examine the issue and propose some alternative method for estimating the GVA of RBI at constant prices.**

3.3.6 For Deposit taking Corporations except RBI, it was informed that in the current series (2011-12), constant price estimates of these entities except Cooperative banks & Post Office Savings Bank are compiled using volume index of deflated sum of credit and deposit of all scheduled commercial banks. The Implicit Price Index of unadjusted GVA for non-financial industries was used as price deflator.

3.3.7 **It was suggested by the Sub-committee that Ministry may examine the document on Banking Services Price Index prepared by RBI and may also examine the practices in advanced economies or seek advice from IMF to identify the suitable price measure of Financial Services.**

4. Due to the paucity of time, remaining sub-sectors of the Financial Services Sector and also the Non-Financial Services Sector could not be discussed in the meeting. The Chairman suggested that the remaining agenda items may be covered in the next meeting of the sub-committee.

5. The meeting ended with a vote of thanks to the Chair.

Annexure

List of Participants

Sub-committee Members

1. Prof. Biswanath Goldar (Retd.), IEG & Chairperson of the Sub-committee
2. Shri Asit Kumar Sadhu, Member, NSC
3. Prof. Partha Ray, NIBM (attended virtually)
4. Dr. Chetan Ghate, IEG
5. Dr. Subrata Guha, JNU
6. Smt. Rekha Mishra, Principal Adviser, DEPR, RBI (attended virtually)
7. Shri Anil Kumar Sharma, Deputy Director General, Labour Bureau (attended virtually)
8. Shri Brijendra Singh, Deputy Director General, NAD, MoSPI
9. Shri Dilip Kumar Sinha, Deputy Director General, DPIIT NAD, MoSPI
10. Shri Rajesh Kumar Sharma, Deputy Director General, NAD, MoSPI
11. Ms. Deepti Srivastava, Deputy Director General, PSD, MoSPI
12. Ms. Subhra Sarker, Deputy Director General, NAD, MoSPI
13. Shri Rajeev Kumar, Deputy Director General, NAD, MoSPI
14. Dr. Bijaya Bhushan Nanda, Director, DES, Odisha (attended virtually)
15. Shri Vishal Kumar, Director, NAD, MoSPI (Member Secretary)

Officers from NAD, MoSPI

1. Shri Rohit Maurya, Director
2. Ms. Kratika Mittal, Director
3. Shri Shirke Shrinivas Vijay, Director
4. Kuwar Alok Singh Yadav, Joint Director
5. Ms. Saroj, Joint Director
6. Ms. Saumya Mishra, Deputy Director
7. Shri Dipankar Mitra, Deputy Director
8. Ms. Priyanka Anjoy, Deputy Director
9. Ms. Nigar Fatma, Assistant Director
10. Ms. Kanwaljit Kaur, Assistant Director

F.NO. P-13011/1/2024-NAD(NAS)
भारत सरकार / Government of India
सांख्यिकी और कार्यक्रम कार्यान्वयन मंत्रालय
Ministry of Statistics and Programme Implementation
राष्ट्रीय सांख्यिकी कार्यालय/ National Statistics Office
राष्ट्रीय लेखा प्रभाग/ National Accounts Division
*****

के. एल. भवन /Khurshid Lal Bhawan
जनपथ /Janpath,
नई दिल्ली /New Delhi-110001
दिनांक /Dated- 15/06/2025

कार्यालय ज्ञापन/ Office Memorandum

Subject: Minutes of the third meeting of the Sub-committee of ACNAS for 'Constant Price Estimates' held on 04th June, 2025.

The minutes of the third meeting of the Sub-Committee of ACNAS for 'Constant Price Estimates' held on **04th June, 2025** under the Chairmanship of Prof. Biswanath Goldar (Retd), IEG are enclosed herewith.

15/06/2025

(Vishal Kumar)
Director

To,
All the members of the Sub-Committee for Constant Price Estimates.

Copy to:
Chairman, Sub-committee of ACNAS for Constant Price Estimates.

Minutes of the 3rd Meeting of the Sub-Committee III of ACNAS on Constant Price Estimates held on 4th June 2025

The Third Meeting of the Sub-Committee for Constant Price Estimates was held under the Chairmanship of Prof. Biswanath Goldar, former faculty IEG at 10.30 AM on 04.06.2025 in the Conference Room No. 201, Khurshid Lal Bhawan, Delhi. A list of participants is at **Annexure**.

2. At the outset, the Chairman welcomed the Sub-committee members and the officers of the National Accounts Division (NAD), MoSPI. Initiating the discussion, the Member Secretary briefed about the decision taken in the last meeting, and the following points scheduled for discussion in the meeting:

(i) Changes in the existing methodology for Constant Price Estimates for Metallic and Non-metallic Minerals under the Mining & Quarrying sector

(ii) Changes in the existing methodology for Constant Price Estimates for Manufacturing Sector

(iii) Changes in the existing methodology for Constant Price Estimates for Non-Financial Services Sector

3. Also, international practice on use of deflation measures in National Accounts Estimates was presented. It was observed that except India and China, all G20 countries were following double deflator or single extrapolation approach. It was intimated that the double deflation measures followed in the US and OECD countries were mainly based on Producer Price Index (PPI) and Consumer Price Index (CPI).

4. Later, concerned Directors of NAD, MoSPI made the presentation on the aforesaid agenda points. Major details of the presentation and deliberations held thereafter are mentioned below:

4.1 Constant Price Estimates of GVA for Mining & Quarrying Sector (Major Metallic and Non-Metallic Minerals)

4.1.1 As suggested by the Sub-committee in the second meeting, results of the double deflation exercise for Major Metallic and Non-Metallic Minerals was presented before the Sub-committee. The Sub-Committee was informed that mineral-wise inputs value used in extraction and mining of major Metallic and Non-Metallic Minerals for FY 2022-23 sourced from Indian Bureau of Mines (IBM) was used for deriving the proportions of each of the input items in the total input and then the value of each input items was deflated using the relevant WPI for arriving at year-wise total input at constant prices. The total output value for each mineral taken from National Accounts Statistics, was deflated by relevant WPI for computing year-wise total output at constant prices. Based on the deflated output and inputs, GVA at constant prices have been estimated. It was observed that volatility in the year-wise growth rate of aggregated GVA estimates for metallic and non-metallic minerals was mainly caused by the WPI for fuel especially Diesel and Kerosene, which constituted major share in total inputs. Also, it was observed the growth rates arrived using double deflation was volatile compared to single extrapolation using mineral-wise index of production compiled by IBM and currently used in IIP (Mining).

4.1.2 After due deliberation, with the objective to maintain the consistency with the methodology for constant price estimates of GVA of Fuel Minerals and also to maintain

consistency with Quarterly National Accounts, the Sub-Committee decided to adopt single extrapolation method for constant price estimates of GVA for major metallic and non-metallic minerals as also recommended for Coal and Petroleum & Natural Gas under the Mining sector.

4.2 Constant Price Estimates of GVA for Manufacturing Sector

4.2.1 The results of the exercise on use of double deflation for constant price estimates of GVA of manufacturing sector were presented before the Sub-Committee. The Sub-Committee was informed that using ASI 2022-23 data, the basket of goods inputs and service inputs, as well as their respective weights were derived separately for each of the 30-compilation category (level of disaggregation at which GVA is published in the National Accounts Statistics). Relevant item-wise WPI for domestic goods input, deflator from National Accounts Statistics for services input and price index for imported items (compiled using median per unit price reported for these items in ASI over the years) were used for constructing a composite deflator for intermediate consumption for each of the compilation category. The output was deflated using WPI based index as used in single deflation approach in the current series. Based on the deflated output and intermediate consumption, GVA estimates at constant price was compiled for each of the compilation category. In order to test the sensitivity of results for the double deflation exercise, estimates compiled for GVA of overall manufacturing and each of the 30 compilation categories were presented using following six methods:

i. Method 1: Double Deflation with input basket consisting of indigenous goods, imported goods and services used as inputs.
ii. Method 2: Double Deflation with input basket consisting of indigenous goods and services used as inputs but excluding imported goods.
iii. Method 3: Double Deflation with input basket consisting of indigenous goods only and excluding imported goods and services used as inputs.
iv. Method 4: Double Deflation with input basket consisting of top 85% in terms of share in value terms of the indigenous goods.
v. Method 5: Single Extrapolation using Compilation Category-wise IIP.
vi. Method 6: Single Extrapolation using quantum index constructed by deflating compilation category-wise GVO at current prices by relevant compilation category-wise WPI.

4.2.2 The Sub-Committee observed that the growth rates for overall manufacturing using double deflation methods were not very volatile as observed in case of some of the compilation categories. Sub-Committee suggested to explore various possibilities namely, (i) using Unit Value Index or Index for imported goods constructed using EXIM data rather than using median per unit cost reported in ASI Block I, (ii) combining some of the related compilation categories, (iii) developing ceilings or metrics indicating agreeable limit of volatility, and identifying compilation categories which were showing volatility within such limit. The Sub-Committee suggested that results of suggested alternatives may be presented in the forthcoming meeting.

4.3 Constant Price Estimates of GVA for Non-financial Services sector

4.3.1 A brief presentation was made outlining the current methodology for the compilation of constant price estimates for some of the non-financial services in the national accounts. The presentation highlighted the sector-wise approaches currently in use, with a particular focus on the limitations and data gaps encountered in the estimation process.

4.3.2 International best practices for deflating current price estimates were also indicated. Methods adopted by several countries such as double deflation, volume extrapolation, chain-linking, and annual rebasing were reviewed. A set of proposed indicators for compiling constant price estimates for the upcoming series of NAS with base 2022–23 was presented. These were mostly identified based on regular flow of information and improved data sources. The indicators, classified by industry, are as follows:

Name of the Service	**Indicator**
Retail trade	Single extrapolation using TTM (based on SUT 2022-23) based WPI
Wholesale trade	Single extrapolation using TTM (based on SUT 2022-23) based WPI
Repair & Maintenance of motor vehicle and sale of motor vehicle	Single extrapolation using TTM (based on SUT 2022-23) based WPI **OR** Volume Extrapolation using sales growth of total commercial vehicles from SIAM
Repair Services	Single extrapolation using TTM (based on SUT 2022-23) based WPI
Hotel & Restaurant	CPI deflated output **OR** Single extrapolation using TTM (based on SUT 2022-23) based WPI
Road transport	VAHAN data on registered commercial vehicles will be explored for volume extrapolation
Water transport	Volume extrapolation using Cargo handled at ports will be used
Air transport	Volume extrapolation using combined index based on information on cargo & passenger, both domestic & international, will be used
Services incidental to transport (SIT)	Combined growth of Road + Water + Air transport will be used
Storage	---

4.3.3 The Sub-Committee reviewed these proposals and observed that the proposed indicators for the services viz. Retail trade, Wholesale trade, Water Transport, Air transport and SIT may be the better options for the new series compared to the indicators in the existing series. Also, the Sub-Committee suggested to explore following data sets/indicators for the remaining industries:

i. Repair & Maintenance of motor vehicle and sale of motor vehicle: Single extrapolation using TTM (based on SUT 2022-23) based WPI was recommended.
ii. Repair services: Items related to repair services may be explored from the CPI item basket.
iii. Hotels & restaurants: Single extrapolation using CPI for items related to hotels & restaurants were suggested to be explored.
iv. Road transport: Data of petrol and diesel separately for household and non-household consumption may be explored.
v. Storage: Number of workers or wage per worker for corresponding NIC from PLFS may be used in the absence of any relevant indicator.

4.3.4 Further, the Committee suggested to work out the estimates based on the above proposed indicators and present the results in the next meeting.

5. The agenda items on the methodology for constant price estimates of GVA for Financial Sector ('RBI' and 'Deposit taking Corporations except RBI') was deferred for the next meeting when member from RBI remain available.

6. The meeting ended with a vote of thanks to the Chair.

*****

Annexure

List of Participants

Sub-Committee Members

1. Prof. Biswanath Goldar (Retd.), IEG [Chairperson]
2. Shri Asit Kumar Sadhu, Member, NSC
3. Dr. Chetan Ghate, IEG (attended virtually)
4. Shri Anil Kumar Sharma, Deputy Director General, Labour Bureau (attended virtually)
5. Shri Brijendra Singh, Deputy Director General, NAD, MoSPI
6. Shri Dilip Kumar Sinha, Deputy Director General, DPIIT, M/o Commerce and Industry
7. Shri Rajesh Kumar Sharma, Deputy Director General, NAD, MoSPI
8. Dr. Bijaya Bhushan Nanda, Director, DES, Odisha (attended virtually)
9. Shri Vishal Kumar, Director, NAD, MoSPI [Member Secretary]

Officers from NAD, MoSPI

1. Shri N. K. Santoshi, Director General (CS), MoSPI
2. Shri Siddhartha Kundu, Additional Director General
3. Ms. Monami Mitra, Director
4. Shri Rohit Maurya, Director
5. Ms. Meera A.P., Director
6. Ms. Puja Rani, Director
7. Shri Shirke Shrinivas Vijay, Director
8. Ms. Saroj, Joint Director
9. Ms. Saumya Mishra, Deputy Director
10. Ms. Priyanka S. Pant, Deputy Director
11. Shri Dipankar Mitra, Deputy Director
12. Ms. Priyanka Anjoy, Deputy Director
13. Ms. Kanwaljit Kaur, Assistant Director

Other Participants

1. Shri Ram Sajeevan, Director, PSD, MoSPI

F.NO. P-13011/1/2024-NAD(NAS)
भारत सरकार / Government of India
सांख्यिकी और कार्यक्रम कार्यान्वयन मंत्रालय
Ministry of Statistics and Programme Implementation
राष्ट्रीय सांख्यिकी कार्यालय/ National Statistics Office
राष्ट्रीय लेखा प्रभाग/ National Accounts Division
*****

के. एल. भवन /Khurshid Lal Bhawan
जनपथ /Janpath,
नई दिल्ली /New Delhi-110001
दिनांक /Dated- 14/07/2025

कार्यालय ज्ञापन/ Office Memorandum

Subject: Minutes of the fourth meeting of the Sub-committee of ACNAS for 'Constant Price Estimates' held on 04th July, 2025.

The minutes of the fourth meeting of the Sub-Committee of ACNAS for 'Constant Price Estimates' held on **04th July, 2025** under the Chairmanship of Prof. Biswanath Goldar (Retd), IEG are enclosed herewith.

14/07/2025
(Vishal Kumar)
Director

To,
All the members of the Sub-Committee for Constant Price Estimates.

Copy to:
Chairman, Sub-committee of ACNAS for Constant Price Estimates.

Minutes of the 4th Meeting of the Sub-Committee III of ACNAS on Constant Price Estimates held on 4th July 2025

The Fourth Meeting of the Sub-committee for Constant Price Estimates was held under the Chairmanship of Prof. Biswanath Goldar, former faculty IEG at 10.30 AM on 04.07.2025 in the Conference Room No. 201, Khurshid Lal Bhawan, Delhi. A list of participants is at **Annexure**.

2. At the outset, the Chairman welcomed the Sub-committee members and the officers of the National Accounts Division (NAD), MoSPI. Initiating the discussion, the Deputy Director General, NAD apprised about the total number of identified agenda items concerning the Sub Committee and the points discussed or covered so far in the last three meetings. Thereafter, the Member Secretary briefed about the outcomes of the last meeting, and the following points scheduled for discussion in the fourth meeting:

(i) Changes in the existing methodology for Constant Price Estimates of GVA for **Financial Services Sector**
(ii) Changes in the existing methodology for Constant Price Estimates of GVA for **Railways**
(iii) Changes in the existing methodology for Constant Price Estimates of GVA for **Public Administration & Defence**
(iv) Changes in the existing methodology for Constant Price Estimates of GVA for **Construction Sector**
(v) Changes in the existing methodology for Constant Price Estimates of GVA for **Manufacturing Sector**

3. This was followed by the presentation on the aforesaid agenda points by the concerned Directors of NAD, MoSPI. Major details of the presentation and deliberations held thereafter are mentioned in succeeding paras.

3.1 Constant Price Estimates of GVA for Financial Services Sector

3.1.1 A brief presentation were made on existing methodology along with proposed changes for compiling estimates of Financial Services for sub sectors S-121 to S-125. The details of the deliberations held are given in succeeding paras.

S-121: Reserve Bank of India (RBI)

3.1.2 As suggested by the Sub-committee in the meeting held on April 24, 2025, RBI was consulted regarding the methodology for deriving constant price estimates in respect of RBI and RBI has shared a note recorded on the subject wherein they have reviewed the existing methods used for estimation of non-market output in national income accounting including SNA 2008 and ESA (European System of Accounts) and proposed input-based approach, as also recommended by ESA, 2016, taking the number of employees. In this regard, results of the different exercises undertaken by NAD were presented.

i. **Method 1:** Volume extrapolation is done using number of employees as volume indicator.
ii. **Method 2:** Cost per employee is used to compute price index. Using the same, the volume measure of output is computed and then volume index based on this volume measure of output, is computed, which has been used for volume extrapolation.
iii. **Method 3:** Volume indices of number of employees and deflated compensation of Employees (CE) are computed and using the average of these two indices, volume extrapolation is done. For deflating CE non-finance deflator (The implicit price index of unadjusted GVA for non-financial industries) is used.
iv. **Method 4:** Volume indices of number of employees and deflated Output are computed and using the average of these two indices, volume extrapolation is done. For deflating Output, non-finance deflator (The implicit price index of unadjusted GVA for non-financial industries) is used.
v. **Method 5:** Volume indices of number of employees and deflated CE are computed and using the average of these two indices, volume extrapolation is done. For deflating CE, CPI (G) is used.
vi. **Method 6:** Repeated Method 5 by using CPI(IW) for deflating CE.

3.1.3 The Sub-committee observed that volume extrapolation using only number of employees as volume indicator is not suitable unless the grade-wise information is considered. Therefore, RBI was requested to examine the feasibility of:

a) providing data on grade-wise number employees and average CE for each grade for the base year i.e. 2022-23
b) providing data on grade-wise number of employees for the subsequent FYs.

On receipt of required data, CE at constant prices can be derived and the same may be used as the volume indicator for extrapolation to derive Output and GVA. In the absence of such data, Method **5** may be adopted. RBI agreed to explore for making available such data for facilitating the decision.

S 122: Deposit taking Corporations except RBI

3.1.4 The Sub-committee was informed that as discussed in the meeting of Sub-committee I, it is planned to use RBI data for compiling estimates in respect of nationalized public sector banks as also used in case of private sector banks. Further in line with the suggestion made by this Sub-committee in the meeting held on 24.04.2025, NAD has taken experimental BSPI (2011-12) series from the website of Office of Economic Advisor, DPIIT which was available till October 2021. Further DPIIT was contacted to acquire data till March 2025. DPIIT informed that the base year of the index was revised from 2011-12 to 2017-18. The indices with base year 2017-18 upto the month of March 2025 were shared with NAD.

3.1.5 Further, IMF was also contacted as advised by the Sub-committee. As regards compiling volume of FISIM, by referring to the UN Handbook of National Accounting Financial Production, Flows and Stocks in the System of National Accounts, they have shared the following methodology:

- FISIM in volume on the loans granted to the institutional sector = stocks of loans granted to the institutional sector/price index * base period margin
- FISIM in volume on the deposits of the institutional sector = stocks of deposits of the institutional sector/price index * base period margin.
- Base period margin on loans = the effective interest rate on loans less the reference rate.
- Base period margin on deposits = the reference rate less the effective interest rate on deposits.
- Stocks of loans and deposits deflated to base period prices using a general price index such as the implicit price deflator for domestic final demand or GDP deflator excluding FISIM.

This handbook also suggests use of all items CPI as well for deflating stocks of loans and deposits.

3.1.6 Taking into consideration data availability, exercises were undertaken by NAD as detailed below and the results were presented before the Sub-Committee.

A. Scheduled Commercial Banks (SCBs) and Regional Rural Banks (RRBs)

i. Method 1:

- Average aggregate Credits and Average aggregate deposits of Scheduled Commercial Banks and Regional Rural Banks are deflated using CPI(G)
- Volume measures of FISIM on loans (base year prices) is computed as under:

Volume measures of FISIM on loans (base year prices)

$$= Deflated\ average\ aggregate\ Credits\ X\ \frac{(\text{LR of Base year} - \text{RR of Base year})}{100}$$

- Volume measures of FISIM on deposits (base year prices) is computed as under:

Volume measures of FISIM on deposits (base year prices)

$$= Deflated\ average\ aggregate\ deposits\ X\ \frac{(\text{RR of Base year} - \text{DR of Base Year})}{100}$$

- By adding Volume measures of FISIM on credits (base year prices) and Volume measures of FISIM on deposits (base year prices) Volume measures of total FISIM (base year prices) is computed.
- Yearly Banking Services Price Indices (Direct) for the series 2011-12 Base is computed till FY 2020-21 as average of corresponding monthly indices as available in the website of DPIIT. For the remaining years monthly indices with Base year as 2017-18 were obtained from DPIIT and using this yearly Banking Services Price Indices (Direct) for the series 2017-18 Base is computed as average of corresponding monthly indices. Using the yearly index for 2020-21 from both these series linking factor was computed. Accordingly, yearly Banking Services Price Indices (Direct) for the series 2011-12 Base are computed for the FY 2021-22 onwards using this linking factor. For presenting results, base year is considered as 2011-12 in the exercise. The same can be replicated for the base year 2022-23.
- These indices as computed above are used to deflate the Actual Receipts.
- Accordingly, output at base year prices are computed as sum of deflated Actual Receipts and Volume measure of total FISIM (base year prices)

- Then volume indicator of the Output so derived is computed and then used to extrapolate GVA.

ii. Method 2:

Same as method 1 except that non-finance deflator (The implicit price index of unadjusted GVA for non-financial industries) is used to deflate Average aggregate Credits and deposits of Scheduled Commercial Banks and Regional Rural Banks.

3.1.7 The Sub-committee deliberated on the choice of deflator for Average aggregate Credits and average aggregate deposits. The Sub-committee suggested that though in the international handbooks it is not explicitly mentioned, CPI(G) may be preferred over the implicit price index of unadjusted GVA of non-financial deflator and accordingly, Sub-committee suggested **Method 1**. It was informed that recommended method will be used separately for private and public entities for deriving constant price estimates.

B. Cooperative Banks:

i. **Method 1:** Same as method 1 indicated in respect of Scheduled Commercial Banks (SCBs) and Regional Rural Banks (RRBs)

ii. **Method 2:** Same as method 2 indicated in respect of Scheduled Commercial Banks (SCBs) and Regional Rural Banks (RRBs)

3.1.8 As in the case of Scheduled Commercial Banks (SCBs) and Regional Rural Banks (RRBs), the Sub-committee agreed for using **Method 1 for Cooperative Banks.**

3.1.9 In case of Post Office Savings Bank, the Sub-committee was informed that data availability for alternate methods are being explored by NAD.

S 123 and S 124: Money Market Funds (MMF) & Non MMF Investment Funds

3.1.10 The Sub-committee was apprised that Eurostat Handbook on prices and volume measures in national accounts (2016 edition) indicates that for money funds, using the amounts managed deflated by a price index that measures the change in the underlying purchasing power of money is a suitable volume indicator. Accordingly, the results of the following two proposed methods which was done separately for public and private entities, were presented before the Sub-committee.

i. Method 1:

- Investments are deflated using CPI(G)
- Then volume indicator of the deflated investments is derived and is used to extrapolate Output

ii. Method 2:

Same as method 1 except that non-finance deflator (The implicit price index of unadjusted GVA for non-financial industries) is used to deflate the investments.

3.1.11 After due deliberations, the Sub-committee agreed for proceeding with **Method 1**.

S 125: Other Financial Intermediaries except insurance corporations and pension funds (ICPF)

3.1.12 The Sub-committee was informed that as discussed in the meeting of Sub-committee I, it is planned to use MCA data and annual report of HDFC Ltd. (for 2022-23) for compiling estimates for private entities. Results of the following two proposed methods which was done separately for public and private entities were presented.

i. Method 1:

- Net Receipts (FISIM + Actual Receipts) are used as the volume indicator.
- Net receipts are deflated with CPI (G)
- Then volume indicator of the deflated net receipts is derived and is used to extrapolate Output and GVA

ii. Method 2:

Same as method 1 except that non-finance deflator (The implicit price index of unadjusted GVA for non-financial industries) is used to deflate the net receipts.

3.1.13 In line with the previous cases, the Sub-committee agreed for the **Method 1**.

3.2 Constant Price Estimates of GVA for Railways

3.2.1 The Sub-committee was briefed that in case of railways, departmental enterprises have majority share which is around 97 percent, and volume extrapolation is being used to get constant price estimates. An index of Combined Earnings i.e. sum of Passenger Earnings and Goods Earnings at constant prices is used to move base year GVA at constant prices. To get Passengers Earnings at constant prices, Class wise passenger earnings of the base year are extrapolated with the growth observed in respective class Passenger Kilometers (PKM). For Goods earnings at constant prices, goods earnings are deflated by WPI all commodities. Combined Earnings at constant prices are prepared by summing up the Passengers Earnings (Volume) and Goods Earnings (Volume). Finally, an index for Combined Earnings (Volume) is obtained by dividing the value for current year by the value for Base Year. This index is used to move base year GVA to get GVA of subsequent years at constant prices.

3.2.2 It was proposed that goods earning at constant prices may be obtained by moving base year commodity wise earnings with the growth observed in the respective commodity Net Tonne Kilometer (NTKM), instead of deflating the goods earnings with WPI all commodities.

3.2.3 Sub-committee accepted the proposed changes keeping in view that volume extrapolation of goods earning offers a better alternative than deflating goods earning with WPI all commodities.

3.3 Constant Price Estimates of GVA for Public Administration and Defence

3.3.1 Sub-committee was informed that currently the estimates of NVA for public administration and defence at constant prices are worked out by deflating the current price estimates by CPI (General). The GVA is estimated by adding the estimates to CFC at constant prices to the NVA at constant prices.

3.3.2 It was proposed to deflate NVA at current prices by CPI-IW instead of CPI General as dearness allowances of government employees are linked with CPI IW all India, which was accepted by the Sub-committee. However, the Sub-committee suggested that it may be apprised of the reason, if documented, for changing the deflator from CPI IW in the series with base year 2004-2005 to CPI General in the series with base year 2011-12.

3.4 Constant Price Estimates of GVA for Construction Sector

3.4.1 The Sub-committee was informed that GVA of construction is derived using commodity flow approach. General Pucca Construction Index derived using the weighted average of material inputs (cement and cement products, iron and steel, glass and glass products, bricks and tiles, timber and wood products, fixtures and fitting, bitumen and bitumen products) and factor inputs is being used for deflating GVA for pucca construction. Similarly, composite index derived using WPI and CPI is used for deflating current price GVA of Kutcha Construction. Current price GVA of Plantation and Mineral Exploration (which are considered as kutcha construction) are deflated using CPI-Rural. The weights for deriving these composite indices for deflating GVA of pucca and kutcha construction at current prices have been derived based on study undertaken by NAD during base year revision.

3.4.2 Results of constant price estimates using following four approaches were presented:

i. **Single Extrapolation-I**: Deflating the GVO at current prices using deflators in existing series and then using single extrapolation i.e. base year GVA has been extrapolated using the growth rates derived from deflated output.

ii. **Single Extrapolation-II**: In this approach, instead of keeping the weights fixed based on base year study, the material and factor inputs have been deflated using the corresponding WPI/CPI based on the values of these material and factor inputs obtained in the commodity flow approach. The output at constant prices is then derived by summing the item-wise deflated values. Single extrapolation is then carried out by moving base year GVA using the growth rates derived from the deflated output.

iii. **Single Extrapolation-III**: In this approach, item-wise material inputs are deflated by corresponding WPI. Then, a fixed Input to Output ratio (derived in the base year) is applied to total of material inputs at constant prices to estimate the total output at constant prices.

This approach preserves the assumption of single extrapolation that input to output ratio remains constant throughout the series.

iv. **Double deflation**: The intermediate consumption items are deflated by relevant WPI to arrive at input at constant prices. The output derived using commodity flow approach consisting both of intermediate input and factor inputs are also deflated using relevant WPI and CPI to arrive at GVO at constant prices. The difference between deflated output and input provides estimates for GVA of Construction at constant prices. The drawback of this approach is that since the output is being constructed as sum of intermediate consumption and factor inputs and there is no output price index available for deflating construction output, this approach is not double deflation in true sense.

3.4.3 The results of above approaches were presented with the proposal that Single Extrapolation-III may be used. It was also proposed that instead of using CPI-Rural and Urban for deflating factor inputs (which consists of labour charges and operating surplus), it is possible to construct wage index using PLFS data using information collected in block-6 (current weekly status) wherein both National Industrial Classification (NIC) and National Classification of Occupations (NCO) codes are available. The Sub-committee suggested that the consistency of such index may be studied and results based on this exercise may be presented before the Sub-committee in the next meeting.

3.5 Double deflation for Constant Price Estimates of GVA for Manufacturing Sector

3.5.1 The preliminary results of exercise on compilation category-wise GVA at constant prices using double deflation were discussed in its meeting held on 04.06.2025. The results based on following exercise were presented for compilation categories wherein more volatility was observed in the previously presented results:

(i) Instead of fixing the item basket for inputs and therefore the weights based on results of ASI 2022-23 for each compilation category, the item basket for both input (from Block H) as well as output (from Block J) and their corresponding weights have been derived every year using the results of corresponding year ASI. This will address the dynamic changes in the input and output mix for each of the compilation category.

(ii) Imported inputs as well as services related items available from Block I and F respectively of ASI have also been used.

(iii) Items accounting for 85% of the total output and input (in value terms taken in descending order) have been considered while deriving year-wise item basket using ASI.

(iv) The compilation category-wise output from National Accounts Statistics is bifurcated using the item-wise weights derived from Block J of ASI. The item/product-wise output is then deflated using corresponding item-wise WPI. The item-wise deflated output is then summed up to arrive at GVO at constant prices.

(v) Similar exercise using results from ASI (Block H,I and F) has been carried out to arrive at input at constant prices.

(vi) The GVA at constant prices is then arrived at, using difference of deflated GVO and Input.

3.5.2 Results based on above exercise for FY 2017-18 to 2022-23 were presented before the Sub-committee. The Sub-committee opined that the results of above exercise using double deflator were much stable compared to the previous approaches presented before the Sub-committee. The Sub-committee observed that since FY 2020-21 and 2021-22 were COVID affected, in order to check the consistency of above approach, the exercise may be carried out from FY 2011-12 onwards. Further, the Sub-committee suggested that similar exercise based on experimental Producer Price Index (base year 2017-18) may be carried out to study compilation category-wise behaviour of constant price estimates derived using double deflation based on WPI and PPI. The Sub-committee suggested that in the next meeting, NAD may present the results of suggested exercise and also identify in which compilation categories double deflation is showing consistency w.r.t year-on-year growth rates and in which compilation categories, single extrapolation (wherein base year GVA has been extrapolated using growth rates derived from deflated output) is consistent.

4. The meeting ended with a vote of thanks to the Chair.

*****

Annexure

List of Participants

Sub-Committee Members

1. Prof. Biswanath Goldar (Retd.), IEG [Chairperson]
2. Shri Asit Kumar Sadhu, Member, NSC
3. Dr. Chetan Ghate, Indian Statistical Institute
4. Dr. Subrata Guha, JNU
5. Ms. Rekha Mishra, Principal Adviser, DEPR, RBI (attended virtually)
6. Shri Anil Kumar Sharma, Deputy Director General, Labour Bureau (attended virtually)
7. Shri Dilip Kumar Sinha, Deputy Director General, DPIIT, M/o Commerce and Industry
8. Shri Rajesh Kumar Sharma, Deputy Director General, NAD, MoSPI
9. Ms. Subhra Sarker, Deputy Director General, NAD, MoSPI
10. Shri Rajeev Kumar, Deputy Director General, NAD, MoSPI
11. Dr. Bijaya Bhushan Nanda, Director, DES, Odisha (attended virtually)
12. Shri Vishal Kumar, Director, NAD, MoSPI [Member Secretary]

Officers from NAD, MoSPI

1. Shri N. K. Santoshi, Director General (CS), MoSPI
2. Shri Siddhartha Kundu, Additional Director General
3. Shri Rohit Maurya, Director
4. Ms. Kratika Mittal, Director
5. Ms. Meera A.P., Director
6. Shri Shirke Shrinivas Vijay, Director
7. Kunwar Alok Singh Yadav, Joint Director
8. Ms. Saroj, Joint Director
9. Ms. Saumya Mishra, Deputy Director
10. Ms. Priyanka S. Pant, Deputy Director
11. Shri Dipankar Mitra, Deputy Director
12. Ms. Priyanka Anjoy, Deputy Director
13. Ms. Nigar Fatma, Deputy Director
14. Shri A. K. Tripathi, Senior Statistical Officer

Other Participants

1. Shri Ram Sajeevan, Director, PSD, MoSPI (on behalf of DDG, PSD, MoSPI)

F.NO. P-13011/1/2024-NAD(NAS)
भारत सरकार / Government of India
सांख्यिकी और कार्यक्रम कार्यान्वयन मंत्रालय
Ministry of Statistics and Programme Implementation
राष्ट्रीय सांख्यिकी कार्यालय/ National Statistics Office
राष्ट्रीय लेखा प्रभाग/ National Accounts Division
*****

के. एल. भवन /Khurshid Lal Bhawan
जनपथ /Janpath,
नई दिल्ली /New Delhi-110001
दिनांक /Dated- 20/08/2025

कार्यालय ज्ञापन/ Office Memorandum

Subject: Minutes of the fifth meeting of the Sub-committee of ACNAS for 'Constant Price Estimates' held on 11th August, 2025.

The minutes of the fifth meeting of the Sub-Committee of ACNAS for 'Constant Price Estimates' held on **11th August, 2025** under the Chairmanship of Prof. Biswanath Goldar (Retd), IEG are enclosed herewith.

20/08/2025

(Vishal Kumar)
Director

To,
All the members of the Sub-Committee for Constant Price Estimates.

Copy to:
Chairman, Sub-committee of ACNAS for Constant Price Estimates.

Minutes of the 5th Meeting of the ACNAS Sub-Committee III on Constant Price Estimates held on 11th August 2025

The Fifth Meeting of the ACNAS Sub-Committee on Constant Price Estimates was held under the Chairmanship of Prof. Biswanath Goldar, former faculty IEG at 03.00 PM on 11.08.2025 in the Conference Room No. 201, Khurshid Lal Bhawan, Delhi. A list of participants is at **Annexure**.

2. At the outset, the Chairman welcomed the participants. Initiating the discussion, the Member Secretary briefed about the points emerged from the last meeting and the agenda points related to following sectors/sub-sectors in the fifth meeting:

(i) **Manufacturing Sector**
(ii) **Construction Sector**
(iii) **Financial Services Sector**
(iv) **Forestry**
(v) **Fisheries**
(vi) **Various non-Financial Services**

3. This was followed by presentation on the aforesaid agenda points by the concerned Directors of NAD, MoSPI. Major details of the presentation and deliberations held thereafter are mentioned in succeeding paras.

3.1 Manufacturing sector: Double deflation for constant price estimates

3.1.1 As suggested in the Sub-Committee meeting held on 04.07.2025, instead of methodologies of double-deflator based on fixed item basket for inputs and weights using results of ASI 2022-23 for each compilation category, an exercise was conducted as per the methodology wherein item basket for both input (from Block H) as well as output (from Block J) and their corresponding weights was derived every year using the results of corresponding year ASI. This methodology is argued to incorporate the real scenario of dynamic changes in input as well as output mix for each of the compilation category. Key details of the methodology were shared:

(i) Imported inputs as well as services related items available from Block I and F respectively of ASI have also been used. Import price index was constructed using modal price per unit available from ASI Block-I since exact unit value index at item-wise was not available for all the imported items and using price per unit from EXIM data suffered from specification issues.
(ii) Items accounting for 85% of the total output and input (in value terms taken in descending order) have been considered while deriving year-wise item basket using ASI.
(iii) The compilation category-wise output from National Accounts Statistics is bifurcated using the item-wise weights derived from Block J of ASI. The item/product-wise output is then deflated using corresponding item-wise WPI. The item-wise deflated output is then summed up to arrive at GVO at constant prices.
(iv) Similar exercise using results from ASI (Block H, I and F) has been carried out to arrive at input at constant prices.
(v) The GVA at constant prices is then arrived at, using difference of deflated GVO and Input.

3.1.2 Compilation category wise results based on above exercise for FY 2011-12 to 2022-23 for all 30 compilation categories (currently released in National Accounts Statistics) were presented. Similar exercise using experimental Producer Price Index (PPI) compiled by DPIIT with base year 2017-18 was also presented.

3.1.3 It was noted that the double deflator was conceptually appropriate than other method and not comparable to the results based on single deflator due to different variation in prices of input items and output items. It was observed that results using PPI and WPI for some of the compilation categories were showing different trend for some of the years possibly due to different baskets and weights. In many compilation categories (CC), results using double deflator was showing high volatility mainly due to large number of imported items and lack of imported price index.

3.1.4 Based on the availability of item-wise index in WPI (2011-12 series) and PPI (an experimental 2017-18 series) for deflating the items in the output and input basket prepared for each compilation category, share of imported goods in the compilation category and availability of import price indices, the Sub-committee suggested that following approaches may be adopted:

CC No.	Activities	NIC-2008	Approach for Constant Price Est.	Rationale for Approach
1	Production, processing and preservation of meat, fish, fruit, vegetables, oils and fats	101-104	Single Extrapolation	Constraints on availability of input price as well as imported input price indices for not selecting the double deflator approach
2	Manufacture of dairy products	105	Double Deflation	
3	Manufacture of grain mill products, etc. and animal feeds	106+108	Double Deflation	
4	Manufacture of other food products	107	Double Deflation	
5	Manufacture of beverages	11	Double Deflation	
6	Manufacture of tobacco products	12	Double Deflation	
7	Manufacture of textiles + cotton ginning	13+01632	Double Deflation	
8	Manufacture of wearing apparel, except custom tailoring	14-14105	Double Deflation	
9	Manufacture of leather and related products	15	Double Deflation	
10	Manufacture of Basic Iron and Steel + Casting of iron and steel	241+2431	Double Deflation	
11	Manufacture of basic precious and non-ferrous metals + Casting of non-ferrous metals	242+2432	Double Deflation	
12	Manufacture of fabricated metal products, except machinery and equipments	25	Double Deflation	
13	Manufacture of electronic component, consumer electronics, magnetic and optical media	261+264+268	Single Extrapolation	Constraints on availability of input price as well as imported input price indices for not selecting the double deflator approach
14	Manufacture of computer and peripheral equipment	262	Single Extrapolation	Constraints on availability of input price as well as imported input price indices for not selecting the double deflator approach

CC No.	Activities	NIC-2008	Approach for Constant Price Est.	Rationale for Approach
15	Manufacture of communication equipments	263	Single Extrapolation	Constraints on availability of input price as well as imported input price indices for not selecting the double deflator approach
16	Manufacture of optical and electronics products n.e.c	265+266+267	Double Deflation	
17	Manufacture of Electrical equipments	27	Double Deflation	
18	Manufacture of machinery and equipments n.e.c	28	Double Deflation	
19	Manufacture of Transport Equipments	29+30	Double Deflation	
20	Manufacture of coke and refined petroleum products	19	Double Deflation	
21	Manufacture of chemical and chemical products except pharmaceuticals, medicinal and botanical products	20	Single Extrapolation	Constraints on availability of input price for large no. of items as well as imported input price indices for not selecting the double deflator approach
22	Manufacture of pharmaceutical; medicinal chemicals and botanical products	21	Single Extrapolation	Constraints on availability of input price for large no. of items as well as imported input price indices for not selecting the double deflator approach
23	Manufacture of rubber & plastic products	22	Double Deflation	
24	Manufacture of other non-metallic mineral products	23	Double Deflation	
25	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting material	16	Double Deflation	
26	Manufacture of paper and paper products	17		
27	Printing and reproduction of recorded media except publishing	18	Double Deflation	
28	Manufacture of furniture	31	Double Deflation	
29	Other Manufacturing	32	Single Extrapolation	Constraints on availability of input prices for large no. of items as well as imported input price indices for not selecting the double deflator approach

CC No.	Activities	NIC-2008	Approach for Constant Price Est.	Rationale for Approach
30	Repair and installation of machinery and equipments	33	May be merged with CC -18 (Manufacture of machinery and equipments n.e.c)	Constraints on availability of price and production indices for not selecting the double deflator and single extrapolation approach

3.1.5 The sub-committee also expressed the need to review the no. of compilation categories and the level of disaggregation at which GVA and GVO are being published in National Accounts Statistics since some of the compilation categories especially those compilation categories formed on the basis of three-digit NIC have shown volatile growth rates in single deflation (currently used). It was suggested to place this observation before the concerned Sub-Committee on Methodological improvements.

3.2 Construction sector: feasibility of constructing wage rate index for Construction workers using PLFS data

3.2.1 As suggested in the previous meeting held on 04.07.2025, it was informed that an attempt was made to construct wage rate index using PLFS data for construction workers. The year-on-year average wage for combination of NIC and NCO were studied from PLFS 2021-22, 2022-23 and 2023-24. However, the average wages were found to fluctuate considerably over the years and consistency was an issue. Appropriateness of CPI-Rural Labourer was discussed. However, CPI -Rural Labourer covering only rural sector, was found not suitable for use as an index for deflating wage component of output of construction industry. It was also noted that the Occupation Wage Survey carried out by Labour Bureau does not cover construction workers whereas National Building Organization under M/o Housing and Urban Affairs collects data on urban wages for construction workers (mason, carpenter and unskilled labour (male, female)).

3.2.2 The Sub-Committee recommended that NAD may request suitable organization to initiate wage rate collection for all types of construction workers covering both rural and urban sectors. Until such data become available, CPI rural and urban may be used as deflator for deflating wage component of output of construction.

3.3 Financial Services sector: Constant Price Estimates

3.3.1 A presentation was made on the existing methodology for compiling estimates of GVA for the Post Office Savings Bank (Covered in S-122) and sub-sectors S-126 to S-129 of Financial Services Sector, along with the proposed changes. The details of the discussions held are given below:

3.3.2 Post Office Savings Bank (Covered in S-122)

3.3.2.1 The current price estimates of Post Office Savings Bank (Covered in Sub Sector S-122) was proposed to be compiled using the existing methodology. In case of constant price estimates, additional data was collected from Department of Posts, and using the data, the Volume indices of the Number of Subscribers is constructed to extrapolate Output and GVA at constant price.

3.3.2.2 The results based on the above exercise were presented in the meeting. The Sub-committee approved the proposal.

3.3.3 S- 126: Financial Auxiliaries

3.3.3.1 The Sub-Committee was apprised that as discussed in the meeting of Sub-Committee II, the complete Profit and Loss Accounts and Balance Sheets of EPFO covering all major funds, including both contribution and administration funds would be analyzed for generating estimates in the new series. The Administration Funds in respect of EPFO was planned to be considered in the sub-sector 126 and the Contribution Funds under S-129. Analysis of the Administration Funds in respect of EPFO would be continued with the current approach which is production approach. Further, it was informed for Insurance agents, alternate method for compilation of current price estimates, as discussed in Sub-committee II, was being explored. For the remaining entities of this sub-sector, the current price estimates would be compiled using the present method. For compiling constant price estimates, the following methods was proposed for both public and private sector entities:

- Net receipts are deflated with CPI(G)
- Volume indices of deflated net receipts is used to extrapolate Output and GVA.

3.3.3.2 The results based on this exercise were presented in the meeting. The Sub-committee after deliberations approved the proposal.

3.3.4 S-127: Moneylenders and remaining unorganised segment except insurance agents

3.3.4.1 The Sub-committee was informed that for compiling current price estimates in respect of moneylenders, alternate methods are being explored. For remaining unorganised segment except insurance agents, proposal for compilation of estimates using ASUSE has also been discussed in Sub-committee II.

3.3.4.2 For compiling constant price estimates the method as proposed for S-126 was proposed.

3.3.4.3 For undertaking this exercise, current price estimates as compiled using the method adopted in present series are considered. The results based on this exercise were presented in the meeting. The Sub-committee approved the proposal.

3.3.5 S-128: Insurance Corporations

3.3.5.1 The Sub-committee was apprised that current price estimates of this sub-sector would be compiled using the present method itself. For constant price estimates, compilation of volume measure in respect of insurance services, by referring to the UN Handbook of National Accounting: Financial Production, Flows and Stocks in the SNA, IMF shared the following methodology:

A. Life Insurance:

- For each year, deflate the data on premiums earned and premium supplements by the price index for life insurance premiums to obtain the corresponding volume measures. If a price index for insurance premiums is not available, an alternative index to consider could be the overall CPI.
- Compute the growth in the volume measures of premiums earned and premium supplements.
- Use this growth to extrapolate the output of the life insurance to compute volume measures.

B. Non-life insurance:

- Deflate the current-price measures of premiums earned and premium supplements of non-life insurance by an appropriate price index.
- Use the deflated values to extrapolate the level of output of non-life insurance in the base year to obtain the volume measures.

3.3.5.2 In this regard, the results of the different exercises undertaken by NAD as detailed below were presented:

A. Public Life Insurance Corporation:

Method 1:

- Deflating the premiums earned and premium supplements with CPI(G).
- Computing the growth in the volume measures of premiums earned and premium supplements.
- Using this growth to extrapolate the output and GVA

Method 2:

- Deflating the gross premium less claims with CPI(G).
- Computing the growth in the volume measures of gross premium less claims.
- Using this growth to extrapolate the output and GVA

Method 3:

- Output is deflated using CPI(G)
- Volume indices of deflated Output is used to extrapolate GVA

Method 4:

- Volume indices of deflated Sum assured and bonus and deflated life fund are computed and using the average of these two indices, volume extrapolation is done.
- For deflating Sum assured and bonus and life fund CPI(G) is used.

B. Private Life Insurance Corporations, Public Non-Life Insurance Corporations (excluding ESIC), Private Non-Life Insurance Corporation and ESIC: Exercises are undertaken separately for Private Life Insurance Corporations, Public Non-Life Insurance Corporations (excluding ESIC), Private Non-Life Insurance Corporation and ESIC using the following methods.

Method 1: Same as Method 1 for Public Life Insurance Corporations
Method 2: Same as Method 2 for Public Life Insurance Corporations
Method 3: Same as Method 3 for Public Life Insurance Corporations

3.3.5.3 The results of these exercises were presented during the meeting. As in some cases, Method 1 resulted in abnormal values for constant price estimates, the Sub-committee deferred the decision for further examination in the next meeting.

3.3.6 S- 129: Pension funds

3.3.6.1 As indicated earlier, the complete Profit and Loss Accounts and Balance Sheets of EPFO covering all major funds, including both contribution and administration funds will be analyzed for generating estimates in the new series and also the Administration Funds in respect of EPFO will be considered in the Sub Sector 126 and the Contribution funds will be considered under S-129. Further for Contribution funds the output will be computed as the value of the intermediate consumption. Also, as discussed in the meeting of Sub-committee II, the feasibility of

incorporating organisations like Coal Mines Provident Fund Organisation (CMPFO) and Seamen's Provident Funds Organisation (SMPFO) are being explored and on availability of data, the method as outlined for EPFO will be adopted for these organisations as well.

3.3.6.2 As per the UN Handbook of National Accounting: Financial Production, Flows and Stocks in the System of National Accounts, in case of social insurance schemes which pay pension benefits, for output which is computed as the sum of costs, the compiling agency can consider deflating this output by a composite index of input prices to obtain the volume measures.

3.3.6.3 In this regard, the results of the different exercises undertaken by NAD as detailed below were presented:

Method 1

- Investments are deflated with CPI(G)
- Volume indices of deflated investments are used to extrapolate Output.

Method 2

- Yearly Banking Services Price Indices (Direct) to be computed as average of the corresponding experimental monthly indices.
- Using the same the Output is deflated.

3.3.6.4 The Sub-committee after review agreed for using Method-2 for compiling constant price estimates in case of Pension Funds and other similar organisations which will be included in this Sub-sector as detailed above.

3.4 Forestry sector: Constant Price Estimates

3.4.1 Following proposal for constant price estimates of Forestry sector was presented:

(i) For major forest products (industrial wood and fuelwood) and fodder from forest, State wise estimates of the value of output will be obtained using current year quantity along with corresponding base year (2022-23) prices.
(ii) Since information on production of non-timber forest products (NTFP) is not available from States, it was proposed to deflate value of output for NTFP using relevant wholesale price index (WPI).
(iii) For the new series, State-wise input-output ratio from budget documents have been recommended to be used in the Sub-committee on Regional Accounts. Item-wise input-output ratio as used to arrive at current price estimates, will be used to obtain GVA estimates at constant prices.

3.4.2 After deliberation, the Sub-committee approved the suggested proposal.

3.5 Fisheries sector: Constant Price Estimates

3.5.1 Following proposal for constant price estimates of Fisheries sector was presented:

(i) The current catch of marine fish, inland fish and subsistence fish will be valued at constant (2022-23) prices for the estimation of output at constant prices. Similar estimation procedure will be adopted for curing activities.
(ii) For the new series, State-wise input-output ratio separately for marine and inland fishing have been recommended to be used in Sub-committee on Rates and ratios. Item-wise input-output ratio as used to arrive at current price estimates will be used to obtain GVA estimates at constant prices.

3.5.2 The Sub-committee approved the suggested proposal for Fisheries Sector.

3.6 Constant Price Estimates of Communication sector

3.6.1 Following proposal for constant price estimates of Communication sector was presented:

(i) For Postal + courier activities, Sub-committee recommended to use CPI (Transport & Communication) as relevant item index is not available in current CPI basket. This index will be used for compiling constant price estimates by single extrapolation method.

(ii) In case of constant price estimates of Telecommunication sector, results based on following two methods: (i) single extrapolation using respective CPI item indices, and (ii) Volume extrapolation using minutes of usage and data usage, have been presented before the Sub-committee. It was suggested during the meeting to confirm coverage of data on minutes of usage and data usage with reference to all telecom providers in the country. If the coverage is mostly broad based, then volume extrapolation method proposed by NAD may be considered as recommended.

(iii) For compiling GVA at constant prices of Cable operator, Broadcasting and publishing, single extrapolation method using respective CPI item indices was recommended.

3.7 Trade (Retail, Wholesale), Hotels & Restaurants, Transport (Road, Water, Air, Services incidental to transport) and Storage: Constant price Estimates

3.7.1 In the meeting held on 04.06.2025, the Sub-Committee reviewed the proposals and noted that the suggested indicators for services viz Retail Trade, Wholesale Trade, Hotels & Restaurants, Road Transport, Water Transport, Air Transport, Services Incidental to Transport (SIT) and Storage. As suggested by the Sub-committee in the meeting held on 04.06.2025, the comparative results based on the proposed indicators were presented in this meeting. The following decisions were taken regarding the finalization of indicators for compiling constant price estimates:

Activity	Indicator	Method for Constant Price Estimates
Retail Trade, Wholesale Trade, Repair & Maintenance of Motor Vehicles, Sale of Motor Vehicles, and Repair Services	TTM-based WPI (exercise was performed based on final SUT 21-22 and the same will be recompiled once SUT 22-23 is finalized)	Single extrapolation
Hotels & Restaurants	Index based on relevant CPI items	Single extrapolation
Road Transport	SIAM database on Sales of Commercial Vehicles	Volume extrapolation
Air Transport	DGCA data on cargo and passenger traffic	Volume extrapolation
Water Transport	Cargo handled at major and minor ports	Volume extrapolation
Services Incidental to Transport	Combined growth rates of road, air, and water transport	Volume extrapolation
Storage	Indicator based on storage warehousing charges	Single extrapolation

4. The meeting ended with a vote of thanks to the Chair.

*****

Annexure

List of Participants

Sub-Committee Members

1. Prof. Biswanath Goldar (Retd.), IEG [Chairperson]
2. Shri Asit Kumar Sadhu, Member, NSC
3. Dr. Chetan Ghate, Indian Statistical Institute (attended virtually)
4. Dr. Subrata Guha, JNU (attended virtually)
5. Ms. Rekha Mishra, Principal Adviser, DEPR, RBI (attended virtually)
6. Shri Anil Kumar Sharma, Deputy Director General, Labour Bureau
7. Shri Brijendra Singh, Deputy Director General, NAD, MoSPI
8. Shri Rajesh Kumar Sharma, Deputy Director General, NAD, MoSPI
9. Ms. Subhra Sarker, Deputy Director General, NAD, MoSPI
10. Shri Rajeev Kumar, Deputy Director General, NAD, MoSPI
11. Dr. Bijaya Bhushan Nanda, Director, DES, Odisha (attended virtually)
12. Shri Vishal Kumar, Director, NAD, MoSPI [Member Secretary]

Officers from NAD, MoSPI

1. Shri N. K. Santoshi, Director General (CS), MoSPI
2. Shri Siddhartha Kundu, Additional Director General
3. Ms Monami Mitra, Director
4. Shri Rohit Maurya, Director
5. Ms. Meera A.P., Director
6. Ms. Puja Rani, Director
7. Shri Shirke Shrinivas Vijay, Director
8. Kunwar Alok Singh Yadav, Joint Director
9. Ms. Saroj, Joint Director
10. Ms. Saumya Mishra, Deputy Director
11. Ms. Priyanka S. Pant, Deputy Director
12. Shri Dipankar Mitra, Deputy Director
13. Ms. Priyanka Anjoy, Deputy Director
14. Ms. Jagrti Garg, Deputy Director (attended virtually)
15. Ms. Kanwaljit Kaur, Assistant Director
16. Shri A. K. Tripathi, Senior Statistical Officer

F.NO. P-13011/1/2024-NAD(NAS)
भारत सरकार / Government of India
सांख्यिकी और कार्यक्रम कार्यान्वयन मंत्रालय
Ministry of Statistics and Programme Implementation
राष्ट्रीय सांख्यिकी कार्यालय/ National Statistics Office
राष्ट्रीय लेखा प्रभाग/ National Accounts Division
*****

के. एल. भवन /Khurshid Lal Bhawan
जनपथ /Janpath,
नई दिल्ली /New Delhi-110001
दिनांक /Dated- 03/10/2025

कार्यालय ज्ञापन/ Office Memorandum

Subject: Minutes of the sixth meeting of the Sub-committee of ACNAS for 'Constant Price Estimates' held on 19th September, 2025.

The minutes of the sixth meeting of the Sub-Committee of ACNAS for 'Constant Price Estimates' held on **19th September, 2025** under the Chairmanship of Prof. Biswanath Goldar (Retd), IEG are enclosed herewith.

03/10/2025

(Vishal Kumar)
Director

To,
All the members of the Sub-Committee for Constant Price Estimates.

Copy to:
Chairman, Sub-committee of ACNAS for Constant Price Estimates.

Minutes of the 6th Meeting of the ACNAS Sub-Committee III on Constant Price Estimates held on 19th September 2025

The Sixth Meeting of the ACNAS Sub-Committee on Constant Price Estimates was held under the Chairmanship of Prof. Biswanath Goldar, former faculty IEG at 3.00 PM on 19.09.2025 in the Manak Hall, Ground floor, TEC building, Khurshid Lal Bhawan, Janpath, Delhi. A list of participants is at **Annexure**.

2. At the outset, the Chairman welcomed the participants. Initiating the discussion, the Member Secretary briefed about the discussions held in the last meeting and the agenda points related to following sectors/sub-sectors/ components for discussion in the sixth meeting:

(i) **Electricity, Gas, Water Supply & Remediation (EGWR) Sector**
(ii) **Gross Fixed Capital Formation (GFCF) and Consumption of Fixed Capital (CFC)**
(iii) **Change in Stock & Valuables**
(iv) **Import and Export of services**
(v) **Financial Services sector**
(vi) **Product Taxes and Subsidies**
(vii) **Various non-Financial Services**
(viii) **Price and Volume Measures in Quarterly National Accounts**

3. This was followed by presentation on the aforesaid agenda points by the concerned Officers of the National Accounts Division, MoSPI. Major details of the presentation and deliberations held thereafter are mentioned in succeeding paras.

3.1 Electricity, Gas, Water Supply & Remediation (EGWR) Sector

3.1.1 **Electricity:** The sub-committee was informed that in current series, volume extrapolation is used for constant price estimates of GVA (Electricity) wherein the base year estimate is moved with the index of quantum (units sold) of generated electricity. It is proposed that volume extrapolation will be continued in revised base year. However, it is proposed that the volume extrapolation will be carried out separately for Renewable and Non-Renewable electricity generation as the Input/Output ratios of electricity generation differ for conventional and renewable electricity generation. Also, the percentage of units of electricity (renewable) sold has been growing consistently over the years (5.6% in 2011-12 to 13% in 2023-24). Hence, in order to adhere to the basic assumption of carrying out volume extrapolation for constant price estimates (that Input to Output ratio remains constant), this proposal was placed before the sub-committee. Based on the discussion, the proposal was approved by the sub-committee.

3.1.2 **Gas:** The sub-committee was informed that volume extrapolation is used for constant price estimates of GVA(Gas). The base year estimate is moved with the index of quantum sales of gas sourced from GAIL It was proposed that an index based on consumption of LPG, PNG, CNG, RLPG may be used for volume extrapolation. For household sector, constant price estimates of GVA of household sector (biogas) is estimated using volume extrapolation using the index based on cumulative number of bio gas plants. It was proposed that volume extrapolation will be continued in the new series. The sub-committee agreed to use of index based on consumption of LPG, PNG, CNG, RLPG for volume extrapolation. It was suggested that information on volume of biogas produced may be used in place of number of biogas plants. However, since the information on volume of biogas produced in each year is not readily available as data collection from concerned nodal Ministry with States is still under process. Considering that the biogas segment has minor share in the GVA (Gas), the sub-committee accepted the proposal to use

cumulative growth in number of biogas plants for volume extrapolation till the production data become available.

3.1.3 **Water Supply:** The sub-committee was informed that in the exiting series, current price estimates of GVA (Water Supply) are deflated with the CPI(General). A review of deflator used for constant price estimation of GVA (Water Supply) used in other economies was also presented. It was proposed to use quantum of water supplied as an indicator for volume extrapolation. The sub-committee was informed that States/UTs have been requested to provide the quantum of water supplied by General Administration, Local Bodies, Autonomous Bodies and PSUs. However, till date, only 4 states namely, Telangana, Andhra Pradesh, Bihar and Kerala have provided these data. In absence of data on quantum of water, it was proposed that single extrapolation based on index constructed using GVO at current prices deflated by CPI (Water Charges) will be used. The sub-committee was also informed that the water supply charges by Government and Local Authorities tend to remain stable for long time and do vary based on type of connection (domestic, industrial/commercial) and also varies across cities within a state. Hence, index based on prices charged is difficult to construct. The sub-committee suggested that quantum-based index may be preferred and the same may be constructed using data on quantum of water supplied by major states which account for adequate coverage in the GVO at current prices.

3.1.4 **Remediation (recycling):** The sub-committee was informed that in the exiting series, the current price estimates of GVA are deflated with the relevant WPI (of Basic Iron, Steel and casting of iron and steel). A review of deflator used for constant price estimation of GVA(Remediation-Recycling) used in other economies was also informed. Based on the availability of price indices in Indian context, it was proposed to use single extrapolation wherein GVO will be deflated by relevant WPI (Index of Basic Iron and Steel and casting of iron and steel, fabricated metal products, plastic products) and then the growth in deflated output will be used for single extrapolation. The proposal was accepted by the sub-committee.

3.1.5 **Remediation (sewerage):** The sub-committee was informed that in current series, GVA at constant prices is estimated using single deflation using CPI(G). It was proposed to use quantum of solid waste processed and water treated as an indicator for volume extrapolation. A review of deflator used for constant price estimation of GVA(Sewerage) used in other economies was also presented. However, after discussion with the concerned Ministries/ Departments and State/UTs, it was found that the required data are not available. Hence, based on the availability of price indices in Indian context, it was proposed that single extrapolation using index constructed by deflating GVO at current prices with CPI(G) will be used, which was accepted by the sub-committee.

3.2 Gross Fixed Capital Formation (GFCF) and Consumption of Fixed Capital (CFC) (Deflators for Constant Price Est.)

3.2.1 A review of deflators used in current series for constant price estimates of GFCF and CFC were presented. The sub-committee was informed that in existing series, deflators based on WPI (for Machinery & Equipment items) and weighted average of WPI (relevant item level WPI index of material inputs) and CPI (factor costs) are used. For IPP assets, a review of deflator used for constant price estimation of GFCF in IPP assets used in other economies was also apprised to the sub-committee.

- **Research & Development:** As per the review of country practices, countries usually deflate R&D expenditure using a wage cost index (scientists, engineers, R&D staff) or weighted mix of labour cost index + intermediate consumption deflators (IT equipment, materials). The sub-committee was informed that the feasibility of constructing wage

index from PLFS data was explored. However, due to very few observations of persons engaged in R&D related activities, the wage index could not be constructed. Hence, it was proposed that weighted average of CPI(IW) and CPI(U) may be used as deflator, with weights derived from GVO of Public and Private Sector in R&D activity. Since, the appreciation of salaries of General Government and Autonomous Bodies are linked to CPI(IW), and CPI(U) reflects general level of inflation in urban sector, this weighted index was proposed as a deflator. The sub-committee accepted the proposal.

- **Computer Software & Databases:** The sub-committee was informed that review of countries' practices shown that purchased software are usually deflated by PPIs or ICT price indices, whereas own-account software production and databases are typically deflated using labour cost indices of software engineers/programmers (since labour is the main cost). Also, the sub-committee was informed that Constructing wage index from PLFS (NIC-2008 Division 62: Computer programming, consultancy and related activities and NIC-2008 Division 63: Information service activities), NCO-2015 Codes: 251 (Software and Application Developers, and Analysts) and 252 (Database and Network Professionals) was explored. However, due to data consistency issues, it was not feasible to use this index. Hence, it was proposed that CPI-U may be used as deflator (as a proxy to wage component). The sub-committee agreed to the proposal citing non-availability of any other suitable deflator.

- **Mineral Exploration & evaluation:** The sub-committee was informed that composite input-cost deflator (PPIs for drilling & geophysical services/ mining & exploration services + labour cost indices) are used by other countries for deflating GFCF in this asset. However, due to non-availability of suitable PPI for this service and labour cost indices, and considering the fact that mineral exploration & evaluation can take place in both rural and urban sector, it was proposed that CPI(General) may be used as a deflator, which was accepted by the sub-committee.

- **Entertainment, literary and other artistic originals:** The sub-committee was informed that composite input-cost deflator {PPIs for creative services (film, broadcasting, performing, motion picture & sound recording industries) + labour cost indices} or Corporate Services Price Index (CSPI) for broadcasting, film, and publishing are used by other countries for deflating GFCF in this asset. Some countries make use of CPI for recreation & culture as deflator. Hence, it was proposed that CPI-Recreation may be used as deflator, which was agreed by the sub-committee.

- **Other IPP products:** It was proposed that CPI-U may be used as deflator, which was agreed by the sub-committee.

3.3 Change in Stock and Valuables (Deflators for Constant Price Est.)

3.3.1 **Change in Stock (CIS):** The sub-committee was informed that relevant item level WPI based deflators corresponding to CIS of each of the industry (estimated at current price) are used for constant price estimates of Change in Stock. The indices currently used were reviewed by the sub-committee. Since CIS refers to inventory position of goods, it was proposed that similar deflators based on latest available item-wise WPI series will be used in revised based year. The proposal was accepted by the sub-committee.

3.3.2 **Valuables:** The sub-committee was informed that relevant item level WPI based deflators are used for deflating capital formation in the form of valuables. An alternate proposal based on using CPI (gold, silver and other ornaments) was presented before the sub-committee. The sub-

committee suggested to use deflator derived from item level indices of CPI for deflating the valuables.

3.4 Import and Export of Goods & Services (Deflators for Constant Price Est.)

3.4.1 The sub-committee was informed that Unit Value Index (UVI) of exports and imports of Goods (released by DGCI&S) is currently being used for deflating the export and imports of Goods respectively for arriving at constant price estimates. The sub-committee enquired if PPI (export) can be used as deflator, to which, it was informed by sub-committee member from DPIIT that export prices of items are being collected as a part of ongoing exercise of constructing PPI and will be used in compilation of item-level PPI for manufactured goods. However, availability of separate export PPI is not envisaged. Therefore, sub-committee accepted the proposal of using UVI as deflator for international merchandise trade in goods.

3.4.2 The sub-committee was informed that Implicit Price Deflator (IPD) for Non-Financial Services is used as deflator for constant price estimate for import and export of services. Since RBI compiles statistics on trade in services, RBI was requested to carry out an exercise for examining suitable deflator for trade in services. The exercise carried out by RBI was presented by RBI Officers. After testing the hypothesis of law of one prices based on convergence of service specific PPI/CPI of major trading partners, the exercise suggested that except for Computer and ITES services, the law of one prices hold good and hence, a weighted index based on deflators used in National Accounts Statistics for these services, with weights derived using the shares of these services in exports and imports from India may be used for deflator.

3.4.3 NAD informed that a similar deflator based on weights derived using the shares of these services in export and imports from India, taken from Balance of Payment Statistics (BPM) compiled by RBI and IPD of corresponding services taken from National Accounts Statistics was carried out. However, the sub-committee was informed that for certain services like computer and ITES, Other business services like Research & Development services, Professional and Management consulting services and Technical, trade-related, and other business services, are not covered under CPI item basket and hence, using CPI based deflator may not be suitable. There was also a suggestion from the sub-committee to explore feasibility of constructing index for air travel, water transport and hotel accommodation. Sub-committee member from DPIIT informed that Service Price Index for Air Transport is being compiled by Office of Economic Adviser, DPIIT and after meeting with DGCA, it was informed that several aspects like price slabs at which airlines issue tickets (say first 30%, next 20% and so on) is being studied and that the index being developed by DPIIT will include domestic as well as foreign travel prices. It was also suggested by the sub-committee that instead of weighted index, the services may be deflated by suitable index so that effect of base year weights can be eliminated. NAD proposed that an index based on PPI/ Service Producer Price Index of major trading countries may be studied and used as a deflator. Officers from RBI informed that data on service-wise major trading partners and their share in exports from India /imports to India will be shared with NAD. The sub-committee suggested to present the findings of this exercise in the next meeting.

3.5 Financial Services sector (Constant Price Estimates)

3.5.1 A presentation was made before the Sub-Committee outlining the compilation of constant price estimates of the sub-sectors S-121: Central Bank and S: 128 Insurance Corporations. The details of the discussions held are given in succeeding paras.

3.5.2 **S-121: Reserve Bank of India (RBI)**

3.5.2.1 In case of RBI, alternate methods for compilation of constant price estimates were discussed in the meeting of the Sub-Committee held on 04.07.2025. The Sub-committee observed that volume extrapolation using only number of employees as volume indicator is not suitable unless the grade-wise information is considered. Therefore, RBI was requested to examine the feasibility of a) providing data on grade-wise number of employees and average Compensation of Employees (CE) for each grade for the base year i.e. 2022-23, b) providing data on grade-wise number of employees for the subsequent FYs.

3.5.2.2 It was also recommended that on receipt of required data, CE at constant prices can be derived and the same may be used as the volume indicator for extrapolation to derive Output and GVA. In the absence of such data, Sub-Committee had also recommended for adopting the method (computation of Volume indices of number of employees and deflated CE and using the average of these two indices, volume extrapolation). For deflating CE, CPI (G) may be used.

3.5.2.3 The Sub Committee was further informed that in the meantime, Shri Ravi Shankar, Adviser, DSIM, RBI had suggested that deriving the constant price estimates of CE independent of its current price estimates, by extrapolating base year estimates using grade-wise number of employees will lead to the following limitations/issues:

- As per the proposed method, the labour productivity gain will not get reflected in the constant price estimates. The entire productivity gain will be reflected as rise in price and will be leading to under-estimation in constant-price estimates.

- Secondly, the output of RBI employees / workers hired on ad-hoc basis like consultants/interns, for carrying out certain activities whose wages are paid by RBI and wages paid to him/her will be output and GVA of RBI. But the proposed method may fail to capture the output / GVA while deriving constant price estimates as it would not be reflected in the regular grade-wise number of employees. In other words, the real value of services rendered by RBI would be impacted by the human resources policy of RBI rather than the actual output.

3.5.2.4 Accordingly, RBI suggested that it may be more appropriate to derive constant price estimates of CE by deflating its current price estimates with a suitable price deflator.

3.5.2.5 In view of the above, results using the following three alternate methods were presented before for reconsideration:

Method 1: Deriving constant price estimates of CE by extrapolating base year estimates using grade-wise number of employees

Method 2: Volume indices of deflated CE may be computed and using the same volume extrapolation of Output and GVA may be done. For deflating CE, CPI (G) may be used.

Method 3: Volume indices of number of employees and deflated CE may be computed and using the average of these two indices, volume extrapolation may be done. For deflating CE, CPI (G) may be used.

3.5.2.6 The Sub-Committee taking into consideration the comments received from RBI, accepted Method 2 for compiling constant price estimates of RBI.

3.5.3 **S-128: Insurance Corporations**

3.5.3.1 In case of Insurance Corporations, various alternate methods were presented before the Sub-committee during its meeting held on 11.08.2025. However, the Sub-committee deferred the decision for further examination in the next meeting. Accordingly, the results based on the following alternate methods were presented before the Sub Committee for reconsideration:

for ***Public Life Insurance Corporation*****:**

Method 1 (PLI&LIC):

- Deflating the premiums earned and premium supplements with CPI(G).
- Computing growth in volume measures of premiums earned and premium supplements.
- Using this growth to extrapolate the output and GVA

Method 2 (only for LIC):

- Deflating the gross premium less claims with CPI(G).
- Computing the growth in the volume measures of gross premium less claims.
- Using this growth to extrapolate the output and GVA.

Method 3 (PLI & LIC):

- Output is deflated using CPI(G).
- Volume indices of deflated Output is used to extrapolate GVA.

Method 4 (only for LIC):

- Volume indices of deflated Sum assured and bonus and deflated life fund are computed and using the average of these two indices, volume extrapolation is done.
- For deflating Sum assured and bonus and life fund CPI(G) is used.

for ***Private Life Insurance Corporations, Public Non-Life Insurance Corporations (excl. ESIC), Private Non-Life Insurance Corp. and ESIC*** ***(****Separate e*xercises for each ones):

Method 1: Same as Method 1 for Public Life Insurance Corporations

Method 2: Same as Method 2 for Public Life Insurance Corporations

Method 3: Same as Method 3 for Public Life Insurance Corporations

3.5.3.2 The Sub Committee was informed that as in some cases, Method 1 resulted in abnormal values for constant price estimates, the matter was examined further. It was noted that the method recommended by "*UN Handbook of National Accounting Financial Production, Flows and Stocks in the System of National Accounts*" implicitly assumes that premiums earned and premium supplements have the same real growth rates as adjusted claims. However, it is observed that this assumption doesn't hold in some cases. Prof. Subrata Guha, JNU, one of the members of the Sub Committee was of the view that if suitable price indices for insurance premiums are not available it is not appropriate to adopt Method 1. Accordingly taking into consideration these points, the Sub-committee after detailed deliberations, agreed for adopting Method-3 for compiling constant price estimates of Sub Sector S-128: for all type of Insurance Corporations.

3.6 Product Taxes and Subsidies (Constant Price Estimates)

3.6.1 The methodology of compiling product taxes at constant prices in the 2011-12 series was presented before the sub-committee. The estimates of product taxes at constant prices are derived using volume extrapolation. Different types of taxes are extrapolated with the growth observed in the relevant indicators. For illustration, excise duty is moved each year with growth in output of

manufacturing at constant prices. However, after implementation of GST in 2017-18, various taxes have been subsumed in GST. Accordingly, new indicators were proposed for moving base year taxes including GST in the new series.

3.6.2 For estimating GST at constant prices, it was proposed to move base year estimates with growth observed in the combined output of all industries at constant prices excluding the output of Ownership of Dwelling, Public Administration and Defence, electricity and output of General government across all industries as industry wise bifurcation of GST is not available at this stage.

3.6.3 For state excise, which is applicable on liquor, growth observed in the output of manufactured alcoholic beverages at constant prices was proposed to move base year estimates. For union excise, which is applicable on petroleum product, growth observed in the output of manufactured petroleum products at constant prices was proposed to move base year estimates. For sales taxes, combined growth observed in the output of manufactured alcoholic beverages and manufactured petroleum products was proposed to move base year estimates. For custom duty, it was proposed to use the growth observed in the imports of goods at constant prices to move base year values. For remaining taxes, which have minor share in overall taxes, combined growth observed in the above taxes was proposed to move base year estimates.

3.6.4 Results based on the proposed indicators were also presented. The Sub-Committee agreed to the proposal. However, in case GST is made available at industry level, the sub-committee suggested to use industry-wise GST values for base year and extrapolate the same with the growth observed in the output of respective industries instead of moving overall GST values with the output growth of all industries taken together as indicated above.

3.6.5 In case of product subsidies, estimates at constant prices in the 2011-12 series are derived by deflating product subsidies at current prices by IPD of GVA of total economy. It was suggested to use volume extrapolation in case of product subsidies also. Major subsidies, namely, fertilizer subsidy and electricity subsidy constitute more than 75 percent share in overall subsidies. Different indicators were proposed to move base year values of different types of subsidies.

3.6.6 For fertilizer subsidy, growth observed in the consumption of NPK fertilizers were proposed to move respective base year subsidies. For electricity, as rates of subsidy differ from state to state, base year subsidies of respective states were proposed to be moved with the growth observed in subsidized units consumed in respective states. In case the information on the subsidized unit is not made available by some states, base year subsidies for such states were proposed to be moved with the growth in sales of electricity for domestic and agriculture purpose in these states. Remaining subsidies were proposed to be deflated with the overall IPD. Results based on the proposed indicators were also presented before the subcommittee. The sub-committee accepted the proposal.

3.7 Non-financial Services (Single extrapolation for Constant Price Estimates)

3.7.1 Proposed methodology for compilation of constant prices estimates of GVA for some of the Non-financial Services sectors such as Trade, Hotel & Restaurants, Transport and Communication have already been discussed in the previous meetings of the Sub-committee. The current methodology as well as proposed methodology for estimation of GVA at constant prices for remaining non-financial services were deliberated in the meeting. The compilation category wise comparative results for estimation of GVA at constant prices for remaining non-financial services based on the proposed methodology were also presented before the subcommittee III.

3.7.2 The GVO at current prices were deflated using appropriate Indicator (price Index). Growth observed in the deflated GVO is used for moving the GVA at constant prices. The proposed Indicators and Extrapolation method for deriving real GVA for various non-financial sectors are agreed by the Sub-Committee as indicated below:

Sr No	Sector	Indicator (Price Index)	Methodology for deriving Real GVA
i.	Real Estate Services	CPI Misc	Single Extrapolation
ii.	Professional Services		Single Extrapolation
iii.	Ownership of Dwellings	**Rural:** Index of rural residential buildings **Urban**: CPI Housing	Volume extrapolation
iv.	Education (Incl. Coaching and Tuition)	CPI Education	Single Extrapolation
v.	Human Health activities and care services with/without accommodation	CPI Health	Single Extrapolation
vi.	Activities of membership organizations	CPI Misc	Single Extrapolation
vii.	Recreational, Cultural and Sporting activities	CPI Recreation	Single Extrapolation
viii.	Personal Services and other services	Index based on relevant CPI items	Single Extrapolation
ix.	Pvt HH with employed person	Index based on relevant CPI items	Single Extrapolation

3.8 Price and Volume Measures in Quarterly National Accounts (QNA)

3.8.1 The existing as well as the proposed methodology for compilation of Constant Price estimates or use of deflator in the quarterly estimates of GVA of following sectors were presented before the sub-committee:

(i) Agriculture and Allied
(ii) Mining and Quarrying
(iii) Construction
(iv) Trade and Repair Services

3.8.2 It was informed that the attempt has been made to align the methodology of constant price estimates/ deflation in Quarterly accounts with that of the Annual accounts as presented during previous meetings of this sub-committee, to the extent feasible based on the data availability.

3.8.3 Accordingly, the following methodology for compilation of Constant Price estimates or use of deflator in the quarterly estimates of GVA of aforesaid sectors were accepted by the sub-committee as proposed:

Sector	Sub-sector	Accepted Methodology for Constant Price estimates and use of deflator
Agriculture and Allied	Agriculture, Livestock, Forestry and Logging, Fishery	Volume Extrapolation method for obtaining Constant Price Estimates will be followed as per existing methodology. For obtaining Current price estimates, instead of Weighted WPI, individual Crop items, Livestock products, and items in Fishery and Forestry sector will be inflated by respective WPI. This is supposed to do away the practice of reliance on base year weight of Price indices.
Mining and Quarrying	Coal, Crude Petroleum and Natural Gas, Metallic Minerals, Non-Metallic Minerals, Minor Minerals	Volume extrapolation method using Index of Coal production and Combined Index of Crude Oil & Natural Gas production as compiled by IBM will be used for Coal and PNG respectively. In case of Metallic and Non-metallic minerals, volume extrapolation using respective IIPs will be used. For obtaining Current price estimates of Coal, PNG and Metallic & Non-metallic minerals, it is proposed to use WPI Coal, WPI Crude Petroleum and Natural Gas, WPI Metallic Minerals and WPI Other Minerals respectively. For Minor Minerals, use of WPI Minerals.
Construction	Cement and Cement Products, Iron and Steel, Glass and Glass Products, Bricks and Tiles, Timber and Wood Products, Fixtures and Fittings, Bitumen and Bitumen Products and Other Materials (including kutcha etc.) & Service Charges	Volume extrapolation for Input will be done using ICI (Index of Core Industries) Cement, Steel Consumption, IIP Wood, Wood Products, IIP Non-Metallic Mineral products, IIP Infrastructure and Construction Goods. For Other Materials (including kutcha etc.) & Service Charges, growth rate observed in Infrastructure/Construction Goods will be used for volume extrapolation. Then, a fixed Input-output ratio based on previous Annual Estimates will be applied to obtain Total Output at Constant Prices. Current price estimates will be compiled by inflating each Input items separately using respective weighted WPI.
Trade and Repair Services	Whole Sale Trade	Single Extrapolation using Current Price GVO deflated by TTM-weighted WPI.
	Retail Trade	Single Extrapolation using Current Price GVO deflated by TTM-weighted WPI.
	Repair and Maintenance	Volume Extrapolation using Total Domestic Sales of Vehicles of all categories.

4. The meeting ended with a vote of thanks to the Chair.

*****

Annexure

List of Participants

Sub-Committee Members

1. Prof. Biswanath Goldar (Retd.), IEG [Chairperson]
2. Shri Asit Kumar Sadhu, Member, NSC
3. Prof. Chetan Ghate, Indian Statistical Institute
4. Prof. Subrata Guha, JNU (attended virtually)
5. Ms. Rekha Mishra, Principal Adviser, DEPR, RBI (attended virtually)
6. Shri Anil Kumar Sharma, Deputy Director General, Labour Bureau (attended virtually)
7. Shri Dilip Kumar Sinha, Deputy Director General, DPIIT, M/o Commerce and Industry
8. Shri Brijendra Singh, Deputy Director General, NAD, MoSPI
9. Shri Rajesh Kumar Sharma, Deputy Director General, NAD, MoSPI
10. Dr. Subhra Sarker, Deputy Director General, NAD, MoSPI
11. Shri Rajeev Kumar, Deputy Director General, NAD, MoSPI
12. Dr. Bijaya Bhushan Nanda, Director, DES, Odisha (attended virtually)
13. Shri Vishal Kumar, Director, NAD, MoSPI [Member Secretary]

Officers from NAD, MoSPI

1. Shri N. K. Santoshi, Director General (CS), MoSPI
2. Shri Siddhartha Kundu, Additional Director General
3. Ms Monami Mitra, Director
4. Shri Rohit Maurya, Director
5. Ms. Kratika Mittal, Director
6. Ms. Meera A.P., Director
7. Ms. Pooja Rani, Director
8. Shri Shirke Shrinivas Vijay, Director
9. Kunwar Alok Singh Yadav, Joint Director
10. Ms. Saroj, Joint Director
11. Ms. Saumya Mishra, Deputy Director
12. Shri Dipankar Mitra, Deputy Director
13. Dr. Priyanka Anjoy, Deputy Director
14. Ms. Nigar Fatma, Deputy Director
15. Ms. Kanwaljit Kaur, Assistant Director
16. Shri A. K. Tripathi, Senior Statistical Officer

Other Participants

1. Dr. Sanjay Singh, Director, DSIM, RBI
2. Dr. Anirban Sanyal, Assistant Adviser, DSIM, RBI

F.NO. P-13011/1/2024-NAD(NAS)
भारत सरकार / Government of India
सांख्यिकी और कार्यक्रम कार्यान्वयन मंत्रालय
Ministry of Statistics and Programme Implementation
राष्ट्रीय सांख्यिकी कार्यालय/ National Statistics Office
राष्ट्रीय लेखा प्रभाग/ National Accounts Division
*****

के. एल. भवन /Khurshid Lal Bhawan
जनपथ /Janpath,
नई दिल्ली /New Delhi-110001
दिनांक /Dated- 06/11/2025

कार्यालय ज्ञापन/ Office Memorandum

Subject: Minutes of the seventh meeting of the Sub-committee of ACNAS for 'Constant Price Estimates' held on 13th October, 2025.

The minutes of the seventh meeting of the Sub-Committee of ACNAS for 'Constant Price Estimates' held on **13th October, 2025** under the Chairmanship of Prof. Biswanath Goldar (Retd), IEG are enclosed herewith.

06/11/2025

(Vishal Kumar)
Director

To,
All the members of the Sub-Committee for Constant Price Estimates.

Copy to:
Chairman, Sub-committee of ACNAS for Constant Price Estimates.

Minutes of the 7th Meeting of the ACNAS Sub-Committee III on Constant Price Estimates held on 13th October 2025

The Seventh Meeting of the ACNAS Sub-Committee on Constant Price Estimates was held under the Chairmanship of Prof. Biswanath Goldar, former faculty IEG at 10.00 AM on 13.10.2025 in the Conference Room No. 201, 2nd floor, Khurshid Lal Bhawan, Janpath, New Delhi. A list of participants is at **Annexure I**.

2. At the outset, the Chairman welcomed the participants. Initiating the discussion, the Member Secretary briefed about the agenda items covered in the previous six meetings of the Sub-Committee and the remaining agenda items yet to be discussed/ finalized. The following three agenda points were placed for discussion in the seventh meeting:

(i) **Private Final Consumption Expenditure (PFCE) (Deflation)**
(ii) **Government Final Consumption Expenditure (GFCE) (Constant Price Est.)**
(iii) **Price and Volume Measures in Quarterly National Accounts**

3. Later, proposed methodology on above points were presented by concerned Officers of the National Accounts Division, MoSPI followed by discussion. Details are mentioned in succeeding paras.

3.1 Private Final Consumption Expenditure (PFCE) (Constant Price Est.)

3.1.1 The Sub-Committee was apprised that in the current series in general constant/ current price estimates of PFCE items are derived by deflating/inflating current/ constant price estimates by CPI or by using IPD of GVO. The CPIs are considered at aggregate Group or Sub Group level. It was proposed that CPIs may be considered at more disaggregated item level to the extent feasible. Also, in some cases IPD of GVO may be considered. The detailed item level proposal **(Annexure- II)** was presented**.**

3.1.2 It was informed that the proposal in respect of methodology for estimating PFCE, is yet to be discussed in the concerned Sub-committee for Methodological Improvement. Accordingly, there may be some modifications in the item list of PFCE. Also, some items may be merged while compiling Current Price Estimates and, in such cases, it is proposed to use the Composite Index of the respective CPI items. The Committee was also informed that items as per current and new CPI basket are mapped to the PFCE items and included in the proposal for consideration of the Sub-committee. In case of some items, though Price indices are available in new basket, the same is not available in the current CPI basket. In such cases, IPD of GVO of corresponding activities was recommended as deflator. The use of new series CPIs is subject to availability. Otherwise the alternate price index as indicated in the proposal may be used.

3.1.3 The Sub-Committee after detailed deliberation, approved the proposal with the following suggestions:

(i) It was informed that in case of food items where PDS is applicable, PFCE of PDS items will be compiled separately only if commodity flow method is adopted; otherwise if HCES is used for compiling benchmark estimates then it will be included in the respective item's PFCE. The Sub-committee advised that for PDS items, separate price relatives may be considered subject to its availability. Otherwise, PDS price may be kept same as that of base year and Price may be updated on availability of new price data.

(ii) As regards proposal on inclusion of PFCE on Social Protection using ASUSE data, the Sub-committee viewed that as the sample size in ASUSE for NIC 87 and 88 are very small it is not desirable to publish this PFCE in NAS separately. Instead, it may be combined with the PFCE of Other Services.

3.2 Government Final Consumption Expenditure (GFCE) (Constant Price Est.)

3.2.1 The Sub-committee was apprised that in the current series, estimates of government final consumption expenditure at constant prices are prepared separately for each of the components, namely, compensation of employees, net purchase of commodities and services and consumption of fixed capital (CFC). The constant price estimates of compensation of employees are prepared by deflating the estimates of compensation of employees at current prices by CPI-General. Estimates of net purchase of commodities and services at constant prices are obtained by deflating current price estimates by the composite weighted index, where weights are the expenditure of government on different items.

3.2.2 It was proposed that the constant price estimates of compensation of employees will be prepared by deflating the estimates of compensation of employees at current prices by CPI-IW as agreed by this Sub-Committee. Further, the estimates of net purchase of commodities and services at constant prices will be obtained by deflating current price estimates by the composite weighted index with updated weights for FY 2022-23. It was also informed that with the change in FCI's status from market producer to non-market producer, food subsidy provided to FCI will be treated as social transfer in kind instead of product subsidy following the SNA principles. To estimate constant price estimates for these transfers, the base year estimates will be moved based on the growth observed in the offtake of foodgrain under NFSA.

3.2.3 The Sub-committee after detailed deliberations, agreed to the proposed deflators.

3.3 Price and Volume Measures in Quarterly National Accounts

3.3.1 Sector-wise proposed deflation strategy for estimating the quarterly GVA at constant prices for the various sectors namely, Manufacturing Sector; Hotel & Restaurants; Transport Sector; Communication Sector; Real Estate, IT and Professional Services; and Other Services (Education, Health, Recreation, Personal Services, etc.), was presented before the sub-committee. It was apprised to the Sub-committee that the methodology for constant price estimates of quarterly GVA have been aligned with the methodology as already approved by the Sub-committee for Annual National Accounts, to the extent feasible. The proposed methodology has been summarized in the table below:

Sector	Sub-sector	QNA Deflation Strategy
Manufacturing		It was proposed to use double deflation at overall value of the sector. Composite Output and Input price index will be constructed to use as deflator for overall Output and Input respectively using weights from the latest available ASI.
Hotel & Restaurants		Single Extrapolation using Current Price GVO deflated by relevant CPI items such as Tea cups, Coffee cups, Cooked Meals purchased, Cooked snacks purchased, Hotel Lodging charges.
Transport	Road Transport	Volume Extrapolation using Domestic Sales of

Sector	Sub-sector	QNA Deflation Strategy
		Commercial Vehicles and Three wheelers.
	Water Transport	For constant price estimates, it was proposed to use Volume Extrapolation using Combined Growth observed in Cargo Handled at Major and Minor Ports. For obtaining Current price estimates, it is proposed to use CPI (Boat and Steamer charges) or WPI.
	Air Transport	For constant price estimates, it was proposed to use Volume Extrapolation using Cargo and Passenger Handled at Domestic and International Airport sourced from DGCA. For obtaining Current price estimates, it was proposed to use CPI (Air Fare).
	Railway Transport	For constant price estimates, it was proposed to use Volume Extrapolation using weighted growth in overall Net Tonne and Passenger Km. The weight will be assigned based on the earing share from passenger and freight of Railways. For obtaining Current price estimates, it is proposed to use Combined WPI and CPI (Railway Fare).
	Services Incidental to Transport	It was proposed that average growth in the GVA estimates of Road, Water and Air Transport, will be used to extrapolate the GVA estimates of Services Incidental to Transport.
Communication	Telecommunication	Volume Extrapolation using Weighted Data Usage and Minutes of Usage growth.
	Post and Courier Service, Recording, Publishing, Broadcasting	Single extrapolation using Current price GVO estimates deflated by relevant CPI items.
Real Estate, IT, Prof Services	Real Estate, Renting, Computer and related activities, Other Business Services, Account and Book Keeping, Administrative and Support Services, Research and Development, Legal Services	Single extrapolation using Current price GVO estimates deflated by CPI (Miscellaneous).
Other Services	Education, Health,	Single extrapolation using Current price GVO

Sector	Sub-sector	QNA Deflation Strategy
	Activities of Membership Organization, Recreation, Personal Services, Other Services, Pvt HH with employed persons	estimates deflated by relevant CPI items as given below: **Education:** CPI Education **Health:** CPI Health **Activities of Membership Organization**: CPI (Miscellaneous) **Recreation:** CPI Recreation **Personal Services:** Composite index of relevant CPI Items such as barber, beautician, spas, etc.,; washerman, laundry, ironing, dry cleaning, dyeing of clothes,; tailor; grinding/husking charges, etc; other consumer services excluding conveyance; etc. **Pvt HH with employed persons:** Composite index of relevant CPI Items such as Domestic Helper/Cook, Sweeper, Watchmen/Security Guard, Driver.

3.3.2 On deliberations on above proposal on deflators for quarterly estimates, following were suggested:

(i) For Quarterly estimates of Manufacturing sector, it was observed that unorganized part may be dominated by the certain compilation categories. Therefore, Sub-committee suggested that composite Output and Input price index may be constructed separately for organized sector and unorganized sector of manufacturing and the results may be presented in its next meeting.

(ii) For Hotel & Restaurants sector, Transport and Communication sectors, the Sub-committee agreed for the proposed methodology as indicated in above table. However, in case of estimation of current price estimates of Water Transport sector, the Sub-committee suggested to use CPI (Boat and Steamer charges) for inflation instead of overall WPI.

(iii) For Real Estate, IT and Professional Services, it was proposed to use CPI (Miscellaneous) in alignment with the Annual National Accounts. DDG, Price Statistics Division (PSD) has informed that in the new series of CPI, there will be no CPI (Miscellaneous). Accordingly, the Sub-committee suggested that relevant items of CPI in the new series may be mapped to construct the composite CPI and the same may be used for single extrapolation method in the aforesaid sectors both for Annual and Quarterly accounts.

(iv) For Other Services sector also, the Sub-committee agreed for the proposed methodology as indicated in above table. Only in case of Activities of Membership Organization where it was proposed to use CPI (Miscellaneous), the Sub-committee suggested the same methodology as for Real Estate, IT and Professional Services.

4. The meeting ended with a vote of thanks to the Chair.

*****

Annexure I

List of Participants

Sub-Committee Members

1. Prof. Biswanath Goldar (Retd.), IEG [Chairperson]
2. Shri Asit Kumar Sadhu, Member, NSC
3. Prof. Partha Ray, NIBM (attended virtually)
4. Prof. Chetan Ghate, Indian Statistical Institute (attended virtually)
5. Prof. Subrata Guha, JNU (attended virtually)
6. Ms. Rekha Mishra, Principal Adviser, DEPR, RBI (attended virtually)
7. Shri Anil Kumar Sharma, Deputy Director General, Labour Bureau
8. Shri Dilip Kumar Sinha, Deputy Director General, DPIIT, M/o Commerce and Industry (attended virtually)
9. Shri Brijendra Singh, Deputy Director General, NAD, MoSPI
10. Shri Rajesh Kumar Sharma, Deputy Director General, NAD, MoSPI
11. Ms. Deepti Srivastava, Deputy Director General, PSD, MoSPI
12. Dr. Subhra Sarker, Deputy Director General, NAD, MoSPI
13. Shri Rajeev Kumar, Deputy Director General, NAD, MoSPI
14. Dr. Bijaya Bhushan Nanda, Director, DES, Odisha (attended virtually)
15. Shri Vishal Kumar, Director, NAD, MoSPI [Member Secretary]

Officers from NAD, MoSPI

1. Shri Siddhartha Kundu, Additional Director General
2. Ms Monami Mitra, Director
3. Ms. Kratika Mittal, Director
4. Ms. Meera A.P., Director
5. Ms. Pooja Rani, Director
6. Shri Shirke Shrinivas Vijay, Director
7. Kunwar Alok Singh Yadav, Joint Director
8. Ms. Saroj, Joint Director
9. Shri Suraj Kumar, Deputy Director
10. Dr. Priyanka Anjoy, Deputy Director
11. Ms. Jagrti Garg, Deputy Director
12. Ms. Kanwaljit Kaur, Assistant Director

Annexure II

No.	Tentative Item Name (Note: Some items may be merged/bifurcated)	Tentative Item Name (Note: Some items may be merged/bifurcated)	Proposed method for Deflation/Inflation-Using CPI Item, composite index of CPIs/ Group/ Sub group/ Other alternate method
01	Food and non-alcoholic beverages		
01.1	Food		
01.1.1	Cereals and cereal products		
01.1.1.1	Wheat and wheat products	Wheat	CPI of wheat/ atta Other sources
		Wheat Products	CPI of wheat/ atta Other sources
			CPI of maida
			CPI of suji, rawa
		Wheat: PDS	CPI of wheat/ atta PDS
01.1.1.2	Rice and rice products	Rice	CPI of rice other sources
		Rice Products	CPI of other rice products
			CPI of chira
			CPI of muri
		Rice:PDS	CPI of rice PDS
01.1.1.3	Sorghum and sorghum products	Jowar	CPI of jowar and its products(as per current basket)/ CPI of jowar(as per new basket)
		Jowar Products	CPI of jowar and its products(as per current basket)/ CPI of jowar(as per new basket)
01.1.1.4	Barley and Barley products	Barley & Products	CPI of other cereals(as per current basket)/ CPI of other cereals & products(as per new basket)
01.1.1.5	Pearl Millet and Pearl Millet products	Pearl Millet	CPI of bajra and its products(as per current basket)/ CPI of bajra (as per new basket)
		Pearl Mille Products	CPI of bajra and its products(as per current basket)/ CPI of bajra (as per new basket)
01.1.1.6	Finger Millet and Finger Millet products	Finger Millet	CPI of ragi and its products(as per current basket)/ CPI of ragi (as per new basket)
		Finger Millet Products	CPI of ragi and its products(as per current basket)/ CPI of ragi (as per new basket)
01.1.1.7	Maize (corn) and Maize products	Maize (corn) and Maize products	CPI of maize and products(as per current basket)/ CPI of maize(as per new basket)
01.1.1.8	Small millets and small	Small Millet	CPI of small millets and their

No.	Tentative Item Name (Note: Some items may be merged/bifurcated)	Tentative Item Name (Note: Some items may be merged/bifurcated)	Proposed method for Deflation/Inflation-Using CPI Item, composite index of CPIs/ Group/ Sub group/ Other alternate method
	millet products		products(as per current basket) / CPI of small millets(as per new basket)
		Small Millet products	CPI of small millets and their products(as per current basket)/ CPI of small millets(as per new basket)
01.1.1.9	Other cereals	Other cereals	CPI of other cereals(as per current basket)/ CPI of other cereals & products(as per new basket)
01.1.1.10	Bread and bakery products	Bread and bakery products	CPI of bread (bakery)
			CPI of biscuits; chocolates; etc. (as per current basket)/ CPI of Biscuits(as per new basket)
01.1.2	Meat		
01.1.2.1	Beef/ buffalo meat	Beef	CPI of beef/ buffalo meat
01.1.2.2	Pork	Pork	CPI of pork
01.1.2.3	Mutton/ Goat meat	Mutton	CPI of goat meat/
01.1.2.4	Other meat products	Other meat products	CPI of others: birds, crab, oyster, etc.
01.1.2.5	Duck	Duck	CPI of others: birds, crab, oyster, etc.
01.1.2.6	Fowl	Fowl	CPI of others: birds, crab, oyster, etc.
01.1.2.7	Chicken	Chicken	CPI of chicken
01.1.3	Fish and other seafood	Fish Curing	CPI of fish, prawn
		Inland Fish	CPI of fish, prawn
		Marine Fish	CPI of fish, prawn
01.1.4	Milk, other dairy products and eggs		
01.1.4.1	Milk and other dairy products	Milk	CPI of milk: liquid (litre)-For retail price
		Other dairy products	CPI of other milk products-For retail price
			CPI of milk: condensed/ powder-For retail price
			CPI of curd(as per current basket)/ CPI of curd, yogurt(as per new basket)-For retail price
01.1.4.2	Eggs	Eggs	CPI of eggs (no.)
01.1.5	Oils and fats		
01.1.5.1	Palm oil	Palm oil	CPI of refined oil
01.1.5.2	Groundnut oil	Groundnut oil	CPI of groundnut oil

No.	Tentative Item Name (Note: Some items may be merged/bifurcated)	Tentative Item Name (Note: Some items may be merged/bifurcated)	Proposed method for Deflation/Inflation-Using CPI Item, composite index of CPIs/ Group/ Sub group/ Other alternate method
01.1.5.3	Coconut oil	Coconut oil	CPI of coconut oil
01.1.5.4	Vanaspati	Vanaspati	CPI of vanaspati & margarine
01.1.5.5	Mustard oil	Mustard oil	CPI of mustard oil
01.1.5.6	Gingelly oil	Gingelly oil	CPI of refined oil
01.1.5.7	Linseed oil	Linseed oil	CPI of refined oil
01.1.5.8	Castor oil	Castor oil	CPI of refined oil
01.1.5.9	Butter and Ghee	Butter and Ghee	CPI of ghee
			CPI of butter
01.1.5.10	Other edible oils	Other edible oils	CPI of refined oil
01.1.6	Fruits and nuts		
01.1.6.1	Banana	Banana	CPI of banana (no.)
01.1.6.2	Mango	Mango	CPI of mango
01.1.6.3	Coconut	Coconut	CPI of coconut (no.)
			CPI of green coconut (no.)
01.1.6.4	Citrus fruits	Citrus fruits	CPI of orange; mausami (no.)
			CPI of lemon (no.)
01.1.6.5	Grapes	Grapes	CPI of grapes
01.1.6.6	Copra	Copra	CPI of coconut: copra
01.1.6.7	Cashew kernels	Cashew kernels	CPI of cashew nut
01.1.6.8	Groundnut	Groundnut	CPI of groundnut
01.1.6.9	Other fruits	Other fruits (including floriculture)	CPI of: other fresh fruits jackfruit watermelon pineapple guava singara papaya kharbooza pears/ nashpati berries litchi apple dates other nuts raisin; kishmish; monacca; etc. other dry fruits
01.1.6.10	Fruit products	Fruit products	CPI of all items considered under PFCE item fruits and nuts
01.1.7	Vegetables, tubers, plantains, cooking bananas and pulses		

No.	Tentative Item Name (Note: Some items may be merged/bifurcated)	Tentative Item Name (Note: Some items may be merged/bifurcated)	Proposed method for Deflation/Inflation-Using CPI Item, composite index of CPIs/ Group/ Sub group/ Other alternate method
01.1.7.1	Onions	Onions	CPI of onion
01.1.7.2	Other vegetables	Other vegetables (including kitchen garden)	CPI of: other vegetables radish carrot garlic (gm) palak/other leafy vegetables tomato brinjal cauliflower cabbage green chillies lady's finger parwal/patal, kundru gourd, pumpkin Peas beans, barbati
01.1.7.3	Vegetable products	Vegetable products	CPI of all items considered under PFCE items Onions and other vegetables
01.1.7.4	Potatoes	Potatoes	CPI of potato
01.1.7.5	Sweet potatoes and products	Sweet potatoes	CPI of potato
		Sweet potatoe product	CPI of potato
01.1.7.6	Tapioca	Tapioca	CPI of cereal substitutes: tapioca, etc.
		Tapioca products	CPI of cereal substitutes: tapioca, etc.
01.1.7.7	Green gram	Green gram	CPI of moong
01.1.7.8	Black gram	Black gram	CPI of urd
01.1.7.9	Gram whole	Gram whole	CPI of gram: whole
01.1.7.10	Pigeon peas	Pigeon peas	CPI of arhar, tur
01.1.7.11	Masoor	Masoor	CPI of masur
01.1.7.12	Other pulses	Other pulses	CPI of other pulses
01.1.7.13	Gram Products	Gram Products	CPI of gram products(as per current basket)/ CPI of besan, gram products (as per new basket)
01.1.8	Sugar, confectionery and desserts		
01.1.8.1	Gur	Gur	CPI of jaggery (gur)
01.1.8.2	Refined Sugar	Refined Sugar	CPI of sugar other sources

No.	Tentative Item Name (Note: Some items may be merged/bifurcated)	Tentative Item Name (Note: Some items may be merged/bifurcated)	Proposed method for Deflation/Inflation-Using CPI Item, composite index of CPIs/ Group/ Sub group/ Other alternate method
		Refined Sugar- PDS	CPI of sugar PDS
01.1.8.3	Sugar confectionery	Sugar confectionery	CPI of candy, misri
			CPI of honey
			CPI of sauce, jam, jelly, mayonnaise (gm)
			CPI of prepared sweets
01.1.8.4	Ice Cream	Ice Cream	CPI of ice-cream
01.1.9	Ready-made food and other food products		
01.1.9.1	Rapeseed and mustard	Rapeseed and mustard	CPI of oilseeds (gm)
01.1.9.2	Salt	Salt	CPI of salt(as per current basket) / CPI of salt other sources and salt- PDS (as per new basket)
01.1.9.3	Sesamum seed	Sesamum seed	CPI of oilseeds (gm)
01.1.9.4	Linseed	Linseed	CPI of oilseeds (gm)
01.1.9.5	Other oilseeds	Other oilseeds	CPI of oilseeds (gm)
01.1.9.6	Spices	Spices	CPI of Spices
01.1.9.7	Sugar cane for chewing	Sugar cane for chewing	CPI of sugar other sources
01.1.9.8	Other food	Other food	CPI of baby food
			CPI of pickles
			CPI of chips(as per current basket)/ CPI of chips , nachos, puffs, wafers, etc.(as per new basket)
			CPI of papad, bhujia, namkeen, mixture, chanachur
			CPI of other packaged processed food
01.2	Non-alcoholic beverages		
01.2.1	Coffee, tea and cocoa drinks		
01.2.1.1	Coffee	Coffee	CPI of coffee: powder (gm)
01.2.1.2	Tea	Tea	CPI of tea: leaf (gm)
01.2.1.3	Cocoa	Cocoa	CPI of other beverages: cocoa; chocolate; etc.
01.2.2	Water, Soft drinks, Fruit and vegetable juices, Other non-alcoholic beverages	Water, Soft drinks, Fruit and vegetable juices, Other non-alcoholic beverages	CPI of mineral water (litre)
			CPI of other cold beverages: bottled/canned (litre)

No.	Tentative Item Name (Note: Some items may be merged/bifurcated)	Tentative Item Name (Note: Some items may be merged/bifurcated)	Proposed method for Deflation/Inflation-Using CPI Item, composite index of CPIs/ Group/ Sub group/ Other alternate method
			CPI of fruit juice and shake(liter)(as per current basket)/ CPI of fruit juice and shake, sugarcane/ date-palm juice (as per new basket)
02	Alcoholic beverages, tobacco and narcotics		
02.1	Alcoholic beverages	Alcoholic beverages	CPI of country liquor (litre)
			CPI of foreign/refined liquor or wine (litre)
			CPI of toddy (litre)
			CPI of beer (litre)
02.2	Tobacco		
02.2.1	Cigarettes	Cigarettes	CPI of cigarettes (no.)
02.2.2	Tobacco chewing	Tobacco chewing	CPI of leaf tobacco (gm)
02.2.3	Bidi	Bidi	CPI of bidi (no.)
02.2.4	Other tobacco products	Other tobacco products	CPI of other tobacco products
			CPI of hookah tobacco (gm)
			CPI of cheroot (no.)
02.3	Narcotics		
02.3.1	Pan	Pan	CPI of pan: leaf (no.)
			CPI of pan: finished (no.)
02.3.2	Arecanut	Arecanut	CPI of ingredients for pan (gm)
02.3.3	Opium	Opium	CPI of other intoxicants
03	Clothing and footwear		
03.1	Clothing		
03.1.1	Clothing materials	Clothing materials	CPI of Clothing
03.1.2	Garments , Other articles of clothing and clothing accessories	Garments , Other articles of clothing and clothing accessories	CPI of Clothing
03.1.3	Cleaning, repair, tailoring and hire of clothing		
03.1.3.1	Cleaning, repair and hire of clothing	Cleaning, repair and hire of clothing	CPI of washerman; laundry; ironing(as per current basket)/ CPI of washerman, laundry, ironing, dry cleaning, dyeing (as per new basket)
03.1.3.2	Tailoring	Tailoring	CPI of tailor
03.2	Footwear		
03.2.1	Shoes and other footwear	Shoes and other footwear	CPI of Footwear
04	Housing, water, electricity, gas and other fuels		
04.1	Gross rentals, equipment and material for housing		

No.	Tentative Item Name (Note: Some items may be merged/bifurcated)	Tentative Item Name (Note: Some items may be merged/bifurcated)	Proposed method for Deflation/Inflation-Using CPI Item, composite index of CPIs/ Group/ Sub group/ Other alternate method
04.1.1	Actual and imputed rental payments made for housing	Actual and imputed rental payments made for housing	To consider Value of Gross Value Added of Ownership of Dwelling (Constant Price)
04.1.2	Services for the maintenance, repair and security of the dwelling	Services for the maintenance, repair and security of the dwelling	CPI of residential building & land (cost of minor repairs)
			CPI of watchman charges [other cons taxes](as per current basket)/ CPI of watchmen/security guard, driver(as per new basket)
04.1.3	Security equipment and materials for dwelling maintenance and repair	Security equipment and materials for dwelling maintenance and repair	CPI of plugs, switches & other electrical fittings
04.2	Water supply and miscellaneous services relating to the dwelling		
04.2.1	Water supply	Water supply	CPI of water charges
04.2.2	Refuse collection, Sewage collection, Other services related to the dwelling	Refuse collection, Sewage collection, Other services related to the dwelling	Using IPD of GVO of Remediation & other utility services.
04.3	Electricity, gas and other fuels		
04.3.1	Electricity	Electricity	Base year estimates may be moved forward using consumption of electricity (in terms of quantum of electricity sold) as obtained from CEA, for Constant Price estimates. CPI-Electricity will be used for inflating the constant price estimates.
04.3.2	Gas		
04.3.2.1	LPG	LPG	CPI of LPG excl conveyance
04.3.2.2	Other Gas(incl. Gober Gas-shifted from solid fuel)	Other Gas(incl. Gober Gas-shifted from solid fuel)	CPI of other fuel
04.3.3	Liquid fuels	Kerosene	CPI of kerosene PDS (ltr)
			CPI of kerosene other sources (ltr)
04.3.4	Solid fuels		
04.3.4.1	Coal	Coal	CPI of coal
04.3.4.2	Firewood	Firewood	CPI of firewood and chips
04.3.4.3	Charcoal	Charcoal	CPI of charcoal
04.3.4.4	Dung fuel	Dung Cake	CPI of dung cake

No.	Tentative Item Name (Note: Some items may be merged/bifurcated)	Tentative Item Name (Note: Some items may be merged/bifurcated)	Proposed method for Deflation/Inflation-Using CPI Item, composite index of CPIs/ Group/ Sub group/ Other alternate method
04.3.4.5	Gas coke	Gas Coke	CPI of other fuel
04.3.4.6	Other solid fuels	Vegetable Waste (other fuel)	CPI of other fuel
		Bagasse (other fuel)	CPI of other fuel
05	Furnishings, household equipment and routine household maintenance		
05.1	Furniture and furnishing, carpets and other floor coverings		
05.1.1	Furniture and furnishings	Furniture and furnishings	CPI of almirah, dressing table
			CPI of chair, stool, bench, table
			CPI of other furniture & fixtures (couch, sofa, etc.)
			CPI of bedstead
			CPI of cloth for upholstery, curtains, tablecloth, etc.
05.1.2	Carpets and other floor coverings	Carpets and other floor coverings	CPI of carpet, daree & other floor mattings
05.1.3	Clock	Clock	CPI of clock, watch, smartwatch, fitness tracker
05.1.4	Repair of computer, personal & Hhs goods, furniture, furnishings and floor coverings (s)	Repair of computer, personal & Hhs goods, furniture, furnishings and floor coverings (s)	Using IPD of GVO of trade and repair services
05.2	Household textiles	Household textiles	CPI of bed sheet, bed cover (no.)
			CPI of pillow; quilt; mattress (no.)(as per current basket)/ CPI of pillow, cushion (no.)(as per new basket)
			CPI of mosquito net (no.)
			CPI of bedding: others
			CPI of rug, blanket (no.)
05.3	Household appliances	Household appliances	CPI of: inverter, generators, stabilizers
			sewing machine
			washing machine
			stove; gas burner(as per current basket)/ stove, gas burner, induction(as per new basket)
			refrigerator(as per current basket)/ refrigerator/freezers (as per new basket)
			electric fan
			water purifier

No.	Tentative Item Name (Note: Some items may be merged/bifurcated)	Tentative Item Name (Note: Some items may be merged/bifurcated)	Proposed method for Deflation/Inflation-Using CPI Item, composite index of CPIs/ Group/ Sub group/ Other alternate method
05.4	Glassware, tableware and household utensils	Glassware, tableware and household utensils	electric iron, heater, toaster, oven & other electric heating appliances(as per current basket)/ electric iron, heater, toaster, micro-oven,(as per new basket)
			other cooking/ household appliances
			other durables
			CPI of: glassware
			pressure cooker/ pressure pan
			earthenware(as per current basket)/ earthenware, paperware, thermocol plates, etc.(as per new basket)
			stainless steel utensils
			other metal utensils(as per current basket)/ other metal utensils (non-stick cookware, etc.)(as per new basket)
			other crockery and utensils(as per current basket)/ other crockery & utensils (jars & containers, cutl(as per new basket)
05.5	Tools and equipment for house and garden	Tools and equipment for house and garden	CPI of electric bulb; tubelight(as per current basket) / CPI of other electric bulb, tubelight, decorative lights(as per new basket)
			CPI of electric batteries
			CPI of torch, lock (as per current basket)/ CPI of other minor durable-type goods like torch, lock,(as per new basket)
05.6	Goods and services for routine household maintenance		
05.6.1	Non-durable household goods	Non-durable household goods	CPI of: candle (no.)
			coir, rope, etc.(as per current basket)/ other petty articles like coir, rope, door mat, no(as per new basket)

No.	Tentative Item Name (Note: Some items may be merged/bifurcated)	Tentative Item Name (Note: Some items may be merged/bifurcated)	Proposed method for Deflation/Inflation-Using CPI Item, composite index of CPIs/ Group/ Sub group/ Other alternate method
			washing soap/soda/powder(as per current series)/ washing soap/soda/powder/liquid detergent(as per new basket)
			other washing requisites
			incense (agarbatti), room freshener
			mosquito repellent, insecticide, acid etc.(as per current basket)/ mosquito repellent, insecticide, anti-rodent, etc.(as per new basket)
			other petty articles(as per currents basket)/ other petty articles like coir, rope, door mat, no(as per new basket)
05.6.2	Domestic services and household services	Domestic services and household services	CPI of domestic helper/cook
			CPI of sweeper
06	Health	Health	CPI of Health
07	Transport		
07.1	Purchase of vehicles		
07.1.1	Motor cars	Motor cars	CPI of motor car, jeep
07.1.2	Motorcycles	Motorcycles	CPI of motor cycle, scooter
07.1.3	Bicycles	Bicycles	CPI of bicycle
07.1.4	Animal-drawn vehicles	Animal-drawn vehicles	CPI of bicycle
07.2	Operation of personal transport equipment		
07.2.1	Parts and accessories for personal transport equipment	Parts and accessories for personal transport equipment	CPI of tyres & tubes
07.2.2	Fuels and lubricants for personal transport equipment	Fuels and lubricants for personal transport equipment	CPI of petrol for vehicle
			CPI of diesel for vehicle
07.2.3	Maintenance and repair of personal transport equipment	Maintenance and repair of personal transport equipment	For inflating base year cost - CPI(IW)
07.2.4	Other services related to personal transport equipment (Subject to availability of data from the study)	Other services related to personal transport equipment	CPI-bus/tram fare,taxi, auto-rickshaw fare, school bus, van, etc.(as per current basket)/ bus fare for commuting to work.: periodic (lumpsum, bus/tram fare: occasional, auto-rickshaw/e-rickshaw fare, bus

No.	Tentative Item Name (Note: Some items may be merged/bifurcated)	Tentative Item Name (Note: Some items may be merged/bifurcated)	Proposed method for Deflation/Inflation-Using CPI Item, composite index of CPIs/ Group/ Sub group/ Other alternate method
			fare for school, college, etc.: periodic (lump, bus/tram fare for commuting to work: daily (miscel, bus /tram fare for school, college: daily (miscell, taxi fare(as per new basket)
07.3	Passenger transport services		
07.3.1	Passenger transport by railway	Passenger transport by railway	Base year estimates may be extrapolated using growth in Passenger Kilometer
07.3.2	Passenger transport by road	Passenger transport by road-Mechanised	For inflating base year earnings/ cost: CPI-bus/tram fare,taxi, auto-rickshaw fare, school bus, van, etc.(as per current basket)/bus fare for commuting to work.: periodic (lumpsum, bus/tram fare: occasional, auto-rickshaw/e-rickshaw fare, bus fare for school, college, etc.: periodic (lump, bus/tram fare for commuting to work: daily (miscel, bus /tram fare for school, college: daily (miscell, taxi fare(as per new basket)
		Passenger transport by road-Non-Mechanised	CPI of rickshaw (hand-drawn & cycle) fare
07.3.3	Passenger transport by air	Passenger transport by air	CPI of Air fare
07.3.4	Passenger transport by sea and inland waterway	Unorganised water tpt	CPI of steamer, boat fare
		Organised Water Transport	CPI of steamer, boat fare
07.3.5	Other passenger transport services	Other passenger transport services	Using IPD of GVO of Services Incidental to Transport
07.4	Transport services for goods	Transport services for goods	CPI as indicated against item 7.3.2 (Passenger transport by road)
08	Information and communication		
08.1	Information and communication equipment		
08.1.1	Fixed telephone equipment, Mobile telephone equipment	Fixed telephone equipment, Mobile telephone equipment	CPI of mobile handset
08.1.2	Information processing equipment and software excluding games	Information processing equipment and software excluding games	CPI of PC/Laptop/other peripherals incl. software(As per current basket)/ CPI of PC/ Laptop/ tablet, other

No.	Tentative Item Name (Note: Some items may be merged/bifurcated)	Tentative Item Name (Note: Some items may be merged/bifurcated)	Proposed method for Deflation/Inflation-Using CPI Item, composite index of CPIs/ Group/ Sub group/ Other alternate method
			peripherals incl. software (As per new basket)
08.1.3	Equipment for the reception, recording and reproduction of sound and vision	Equipment for the reception, recording and reproduction of sound and vision	CPI of television
			CPI of radio, tape recorder, 2-in-1(As per current Basket)/ CPI of other goods for recreation (incl. radio, VCR/VCD)(As per new basket)
08.2	Information and communication services		
08.2.1	Communication Services	Communication Services	CPI of telephone charges: landline(As per current basket)/ CPI of telephone charges: landline* (incl. broadband charges)(As per new basket)
			CPI of internet expenses(As per current basket)/ CPI of telephone charges: mobile* (incl. data charges if)(As per current basket)
			CPI of internet expenses(As per current basket)/ CPI of internet expenses (cable broadband, mobile data charges) (As per current basket)
08.2.2	Television and radio licences and fees , Subscriptions to audiovisual streaming services and rental of audiovisual content	Television and radio licences and fees , Subscriptions to audiovisual streaming services and rental of audiovisual content	CPI of monthly charges for cable TV connection(As per current basket)/ CPI of cable TV/DTH/set top box (incl. broadband charges)(As per new basket)
09	Recreation, sport and culture		
09.1	Recreational durables		
09.1.1	Photographic and cinematographic equipment and optical instruments	Photographic and cinematographic equipment and optical instruments	CPI of camera & photographic equipment
09.1.2	Major recreational durables	Major recreational durables	CPI of goods for recreation and hobbies(As per current basket)/ CPI of other goods for recreation (incl. radio, VCR/VCD)(As per new

No.	Tentative Item Name (Note: Some items may be merged/bifurcated)	Tentative Item Name (Note: Some items may be merged/bifurcated)	Proposed method for Deflation/Inflation-Using CPI Item, composite index of CPIs/ Group/ Sub group/ Other alternate method
			basket)
09.2	Other recreational goods		
09.2.1	Games, toys and hobby-related articles	Games, toys and hobby-related articles	CPI of sports goods, toys, etc. (As per current basket)/ CPI of sports goods (badminton racket, shuttle cock, foot, other sports goods(As per new basket)
09.2.2	Sporting, camping and open-air recreation equipment	Sporting, camping and open-air recreation equipment	CPI of goods for recreation and hobbies(As per current basket)/ CPI of other goods for recreation (incl. radio, VCR/VCD)(As per new basket)
09.3	Garden products and pets		
09.3.1	Garden products, plants and flowers	Garden products, plants and flowers	CPI of flower (fresh): all purposes
09.3.2	Pets and pet products	Pets and pet products	CPI of goods for recreation and hobbies(As per current basket)/ CPI of pet animals (incl. birds, fish) (As per new basket)
09.4	Recreational services, Cultural services		
09.4.1	Recreational and cultural services	Recreational and cultural services	CPI of cinema: new release(normal day)(As per current basket)/ CPI of cinema, theatre(As per new basket)
			CPI of club fees(As per current basket) / CPI of club, gym, swimming fees & other subscriptions/ (As per new basket)
			CPI of other entertainment(As per current basket)/ CPI of other entertainment (mela, fair, picnic, VCD/DVD h)(As per new basket)
09.5	Cultural goods		
09.5.1	Musical instruments	Musical instruments	CPI of goods for recreation and hobbies(As per current basket)/ CPI of musical instruments(As per new basket)
09.5.2	Audiovisual media	Audiovisual media	CPI of CD, DVD, audio/video cassette, etc.(As per current basket)/ CPI of CD, DVD, pen-drive, external hard disk(As

No.	Tentative Item Name (Note: Some items may be merged/bifurcated)	Tentative Item Name (Note: Some items may be merged/bifurcated)	Proposed method for Deflation/Inflation-Using CPI Item, composite index of CPIs/ Group/ Sub group/ Other alternate method
			per new basket)
09.6	Newspapers, books and stationery		
09.6.1	Books	Books	CPI of books, journals (incl. e-books, audio books): firs
09.6.2	Newspapers and periodicals	Newspapers and periodicals	CPI of newspapers, periodicals
09.6.3	Miscellaneous printed matter	Miscellaneous printed matter	CPI of books, journals (incl. e-books, audio books): firs
09.6.4	Stationery and drawing materials	Stationery and drawing materials	CPI of stationery, photocopying charges
10	Education	Education	CPI of Education
11	Restaurants and accommodation services	Restaurants and accommodation services	CPI of tea: cups (no.)
			CPI of coffee: cups (no.)
			CPI of cooked meals purchased (no.)
			CPI of cooked snacks purchased
			CPI of hotel lodging charges
12	Insurance and financial services		
12.1	Insurance		
12.1.1	Life insurance	Life insurance	Using IPD of GVO of Life Insurance
12.1.2	Non-life insurance	Non-life insurance	Using IPD of GVO of Non-Life Insurance
12.2	Financial services		
12.2.1	Financial intermediation services indirectly measured	Financial intermediation services indirectly measured	Using IPD of GVO of S-122-Deposit taking Corporations except Central Bank; S-125-Other Financial Intermediaries except insurance corporations and pension funds; and S-127: Moneylenders and remaining unorganised segment except insurance agents
12.2.2	Explicit charges by deposit-taking corporations (S) , Other financial services (S)	Explicit charges by deposit-taking corporations (S) , Other financial services (S)	Banking Services Price Index (BkSPI) (Direct) (Presently Experimental)
13	Personal care, social protection and miscellaneous goods and services		
13.1	Personal care		

No.	Tentative Item Name (Note: Some items may be merged/bifurcated)	Tentative Item Name (Note: Some items may be merged/bifurcated)	Proposed method for Deflation/Inflation-Using CPI Item, composite index of CPIs/ Group/ Sub group/ Other alternate method
13.1.1	Electric, other appliances, articles and products for personal care	Electric, other appliances, articles and products for personal care	CPI of: toilet soap(As per current basket)/ toilet soap, body-wash, hand-wash, shower gel, fac(As per new basket)
			toothpaste, toothbrush, comb, etc.(As per current basket) / toothpaste, mouthwash, toothbrush, etc.(As per new basket)
			powder, snow, cream, lotion and perfume/ powder, cream, body lotion, moisturizers(As per new basket)
			hair oil, shampoo, hair cream(As per current basket)/hair oil, hair colour(As per new basket)
			shaving cream, aftershave lotion(As per current basket) shaving cream, shaving foam, aftershave lotion, af(As per new basket)
			sanitary napkins
			suitcase, trunk, box, handbag and other travel goods(As per current basket) /suitcase, trolley bag, duffle bag, trunk, etc.(As per new basket)
13.1.2	Hairdressing salons and personal grooming establishments	Hairdressing salons and personal grooming establishments	CPI of barber, beautician, spas, etc.
13.2	Other personal effects		
13.2.1	Other personal effects n.e.c.	Other personal effects n.e.c.	CPI of umbrella, raincoat (As per current basket)/ CPI of umbrella, raincoat, helmet (As per new basket)
			CPI of any other personal goods(As per current basket)/ CPI of any other personal goods(power banks, hair dryers,(As per new basket)
13.3	Social Protection	Social Protection	CPI of Health & Education
13.4	Other services		

No.	Tentative Item Name (Note: Some items may be merged/bifurcated)	Tentative Item Name (Note: Some items may be merged/bifurcated)	Proposed method for Deflation/Inflation-Using CPI Item, composite index of CPIs/ Group/ Sub group/ Other alternate method
13.4.1	Religious services	Religious services	Using IPD of GVO/ CPI Priest (As per new basket)
13.4.2	Legal services	Legal services	Using IPD of GVO of Legal Services/ CPI Legal (As per new basket)
13.4.3	Funeral services	Funeral services	Using IPD of GVO of Personal Services/ CPI Priest (As per new basket)
13.4.4	Business services	Business services	Using IPD of GVO of Business Services

F.NO. P-13011/1/2024-NAD(NAS)
भारत सरकार / Government of India
सांख्यिकी और कार्यक्रम कार्यान्वयन मंत्रालय
Ministry of Statistics and Programme Implementation
राष्ट्रीय सांख्यिकी कार्यालय/ National Statistics Office
राष्ट्रीय लेखा प्रभाग/ National Accounts Division
*****

के. एल. भवन /Khurshid Lal Bhawan
जनपथ /Janpath,
नई दिल्ली /New Delhi-110001
दिनांक /Dated- 08/12/2025

कार्यालय ज्ञापन/ Office Memorandum

Subject: Minutes of the eighth meeting of the Sub-committee of ACNAS for 'Constant Price Estimates' held on 13th November, 2025.

The minutes of the eighth meeting of the Sub-Committee of ACNAS for 'Constant Price Estimates' held on **13th November, 2025** under the Chairmanship of Prof. Biswanath Goldar (Retd), IEG are enclosed herewith.

08/12/2025

(Vishal Kumar)
Director

To,
All the members of the Sub-Committee for Constant Price Estimates.

Copy to:
Chairman, Sub-committee of ACNAS for Constant Price Estimates.

Minutes of the 8th Meeting of the ACNAS Sub-Committee III on Constant Price Estimates held on 13th November 2025

The Eighth Meeting of the ACNAS Sub-Committee on Constant Price Estimates was held under the Chairmanship of Prof. Biswanath Goldar, former faculty IEG at 03.00 PM on 13.11.2025 in the Conference Room No. 201, 2nd floor, Khurshid Lal Bhawan, Janpath, New Delhi. A list of participants is at **Annexure I**.

2. At the outset, the Chairman welcomed the participants. Initiating the discussion, the Member Secretary briefed about the agenda items covered in the previous seven meetings of the Sub-Committee and the remaining agenda items yet to be discussed/ finalized. In the seven meetings of the sub-committee, for Annual National Accounts (ANA), methodology of Constant Price Estimates for all the sectors of production side estimates as well as all the components of expenditure side estimates (except Import and Export of Goods & Services) have been discussed and finalized. In case of Quarterly National Accounts (QNA), methodology for constant prices estimates in respect of Manufacturing, EGWR, Financial Services, Ownership of Dwelling, Public Administration & Defence, Product Taxes & Subsidies, and all the components of expenditure side estimates were required to be finalized. Accordingly, all the remaining agenda items as mentioned below were placed for discussion in the eighth meeting:

(i) **Import and Export of Goods & Services (Constant Price Est.)**

(ii) **Price and Volume Measures in Quarterly National Accounts**

- Manufacturing sector
- Electricity, Gas, Water Supply and Remediation (EGWR)
- Financial Services
- Ownership of Dwelling
- Public Administration & Defence
- Product Taxes & Subsidies
- Expenditure Components

(iii) Format for the report of the Sub-committee

3. Later, proposed methodology on above points were presented by concerned Officers of the National Accounts Division, MoSPI followed by discussion. Details are mentioned in succeeding paras.

3.1 Import and Export of Goods & Services (Constant Price Est.)

3.1.1 In the last meeting dated 19.09.2025, this Sub-Committee had suggested that an index based on PPI/ Service Producer Price Index / Import PPI of major trading countries may be studied for potential use as a deflator for import and export of services.

3.1.2 As per the suggestions, the Sub-Committee was apprised about the analysis undertaken on the basis of available data of PPI/ Service Producer Price Index/Import PPI of major contributing countries.

Deflator for Exports of Services:

3.1.2.1 Assuming Import PPI of major exporting countries for use as deflator for export of services, import PPI data and relevant information was collected. It was observed that in respect of telecommunications, computer, and information services and other business services, exports from India of these services formed a minor share in total import of these services by major trading

partner countries. So, use of Import PPI of these services was observed to be non-representative as the price index to deflate the exports from India as the movement in Import PPI for the major trading partner countries would be influenced by price movements of other countries which find significant share in the import basket.

3.1.2.2 Considering relevance of price movement in domestic market for export of such services, it was proposed to use Implicit Price Deflator (IPD) of relevant services in domestic market as a deflator:

Services	**Deflator for constant price estimate for export of services from India**
Transport	Combined IPD of Transport Sector (Road/Rail/Air/Water/Services Incidental to transport)
Travel (Travel (Business, education, health, personal, others)	Combined IPD of Trade, HR, Transport, Other Services
Financial & insurance	IPD of Financial Services
Telecommunications, computer, and information services	IPD of Telecommunications & ICT / IPD Non-Financial Services
Other business services	IPD of Other business services / IPD Non-Financial Services
Government goods and services n.i.e.	IPD of Public Admin and Defence
Manufacturing Services, Maintenance and repair services n.i.e.	IPD of Manufacturing industry
Construction Services	IPD of Construction Activities
Charges For the Use of IPP	CPI-Urban
Personal, Cultural & Recreation	CPI Misc, CPI Recreation

3.1.2.3 After deliberation, the Sub-Committee suggested that for export of transport services, combined IPD of Transport Sector (Air, Water, Services Incidental to transport) can be used as the share of export of transport services by road and rail has very small share. Also, the sub-committee observed that IPD of Telecommunications and ICT, and IPD of Other business services can be used as deflator. The proposal of deflator in respect of export of all other services was agreed by the sub-committee.

Deflator for Imports of Services:

3.1.2.4 In respect of import of services, under the assumption that price indices compiled for services by major trading partner countries are reflective of prices of their exports to other countries, it was proposed that relevant Service Producer Price Index of major trading partner countries can be used for deflating import of these services. In some of the trading partner countries, Service PPI were not available or published. In such cases, concerned IPD can be used. The service-wise imports from other countries will be deflated by corresponding service PPI/IPD and to be aggregated to arrive at constant price estimate. Since the import of services are sensitive to exchange rate fluctuations, it was proposed to adjust PPI/IPD for exchange rate fluctuations.

Services	Deflator for constant price estimate for import of services by India
Transport	PPI Transport and Warehousing Services / IPD for Transport and Warehousing Services
Travel (Business, education, health, personal, others)	PPI for travel related services (accommodation, hotel, transport, trade, other services). In absence of PPI, IPD of these industries may be used
Financial & insurance	PPI for financial intermediation services /IPD for financial services/overall service PPI
Telecommunications, computer, and information services	PPI for information and communications services/IPD of information and communications services
Other business services	PPI for business and technical services /IPD of information and communications services
Government goods and services n.i.e.	IPD of Public Administration/ overall CPI (as PPI is not separately compiled for these services)
Manufacturing Services, Maintenance and repair services n.i.e.	Manufacturing PPI /IPD of Manufacturing
Construction Services	PPI /IPD Construction Services
Charges For the Use of IPP	Service PPI / Overall CPI
Personal, Cultural & Recreation	Relevant PPI / IPD of these services

3.1.2.5 Thus, based on the above exercises, two approaches were presented:

Approch-1: (*Deflating service-wise exports and imports by corresponding IPD*);

Approach-2: (*Deflating service-wise exports from India by relevant IPD and import of services by India using partner country PPI/IPD for services*).

3.1.2.6 The Sub-committee found Approach-2 technically more appropriate and hence recommended Approach-2 for deflating import of services.

3.2 Price and Volume Measures in Quarterly National Accounts

3.2.1 **Manufacturing Sector:** In the last meeting of the Sub-Committee held on 13.10.2025. for constant price estimates of quarterly GVA of Manufacturing sector, it was proposed to use double deflation at overall value of the manufacturing sector. For deflation, it was proposed that Composite Output and Input price index would be constructed to use as deflator for overall Output and Input respectively using weights from the latest available ASI. Sub-committee suggested that composite Output and Input price index may be constructed separately for organized sector and unorganized sector of manufacturing. Accordingly, the results of the exercise carried out was presented.

3.2.2 After deliberations, the Sub-committee observed that the unorganized part of the manufacturing sector has very small share and the growth rate in constant price estimates arrived by both the approaches were very close. Accordingly, Sub-committee suggested that at quarterly level, composite Output and Input price index may be constructed to use as deflator for overall Output and Input respectively using weights from the latest available ASI.

3.2.3 Besides, sector-wise proposed deflation strategy for the remaining sectors namely, Electricity, Gas, Water Supply and Remediation (EGWR); Financial Services; Ownership of Dwelling; Public Administration & Defence; Product Taxes & Subsidies; and all the Expenditure Components, was also presented before the sub-committee. It was apprised to the Sub-committee that the methodology for constant price estimates of quarterly GVA have been aligned with the methodology as already approved by the Sub-committee for Annual National Accounts, to the extent feasible. The proposed methodology as indicated below was discussed:

Sector	Sub-sector	QNA Deflation Strategy (proposed)
Financial Services	**S-121: Central Bank**	GVA at current prices will be deflated by CPI (G).
	S-122: Deposit Taking Corporations	Volume extrapolation will be done using volume measure of FISIM. **Volume measure of FISIM on Loan:** Deflated Agg. Credit* (LR of Base Year-RR of Base Year)/100 **Volume measure of FISIM on Deposits:** Deflated Agg. Deposit* (RR of Base Year-DR of Base Year)/100 LR: Lending Rae DR: Deposit Rate RR: Reference Rate (Harmonic Mean of LR and DR)
	S-125: Other Financial Intermediaries except Insurance Corporations & Pension Funds **S-126: Financial Auxiliaries**	Revenue from Operations deflated by **CPI (G)** will be used as Volume Indicator of GVA.
	S-127: Money Lenders and Remaining Unorganised Segments except Insurance Agents	Past year growth will be used for estimating GVA at current prices. For Constant Price Estimates CPI (G) will be used as deflator.
	S-128: Insurance Corporations (Life and Non-Life Insurance)	**LIC:** Volume Indices of Deflated Net Premium Earned using CPI (G) will be used. **Private Life Insurance:** Volume Indices of Deflated Net Premium Earned using CPI (G) will be used. **Non-Life Insurance:** Volume Indices of Deflated Gross Direct Premium using CPI (G) will be used separately for Non-Life Public and Private. **Postal Life Insurance:** Growth Observed in LIC at constant prices will be used to extrapolate GVA of Postal life insurance at constant prices.

Sector	Sub-sector	QNA Deflation Strategy (proposed)
EGWR	**Electricity**	As per existing methodology, Volume Extrapolation will be done using IIP Electricity for constant price estimates. Current price estimates will be compiled by inflating constant price estimates with WPI (Electricity).
	Gas	For constant price estimates, volume extrapolation will be done using index based on consumption of LPG, PNG, CNG. Current Price Estimates will be obtained by inflating Constant Price Estimates with relevant CPI.
	Water Supply	Past year growth will be used to estimate GVA at Current Prices. For Constant Price Estimates CPI (Water Charges) will be used as deflator.
	Remediation	Single extrapolation will be done using Index of deflated Output. Output at current prices will be deflated by relevant WPI and CPI (G) respectively for Remediation Recycling and Remediation Sewerage.
Ownership of Dwelling		**Ownership of Dwelling (Rural and Urban):** Past year growth will be used to estimates the GVA at constant prices at annual level. Then annual estimates will be equally apportioned in all the quarters. For Current price estimates, CPI (Housing) will be used as inflator.
Public Administration & Defence		GVA is calculated using sum of cost method as there is no operating surplus in case of Government Sector. (GVA= Compensation of Employees (CE)+ CFC). CE which is the major component, will be deflated using CPI (IW). CFC will be first estimated at annual level using past years growth, and then apportioned equally in all the quarters.
Product Taxes		In alignment with the methodology as already agreed for Annual National Accounts, Volume extrapolation will be done by moving the base year value of different components of product taxes with the growth observed in the output of respective industries at constant prices where these taxes are applicable.
Product Subsidies		For **fertilizer subsidies** which constitutes around 50% of total subsidies, growth observed in the quarterly consumption of NPK fertilizers will be used to move respective base year subsidies. For remaining subsidies, current price estimates will be deflated with the IPD of overall GVA.
Expenditure Components	**PFCE**	In alignment with Annual estimates, for constant price estimates of PFCE items relevant CPI will be used as deflator at disaggregated item level to the extent feasible.

Sector	Sub-sector	QNA Deflation Strategy (proposed)
		In case of some items, where relevant Price indices are not available, IPD of GVO of corresponding activities will be used as deflator. However, the level of disaggregation of PFCE items may be different in quarterly accounts as compare to Annual accounts.
	GFCE	Current price estimates will be deflated using weighted average of CPI (IW) and composite weighted price index for net purchase of commodities and services as proposed for the Annual Accounts.
	GFCF	**Dwelling, Other Buildings and Structures:** Constant price estimates will be compiled using growth in GVO of construction sector at constant prices. **Machinery and Equipment:** For Transport equipment; ICT equipment; and Other Machinery and Equipment (Elec. And Non Elec.) relevant WPI will be used as deflator. For Machinery and Equipment from Defence, past year growth will be used. **Cultivable Biological Resources; P**ast year growth will be used. **Intellectual Property Products:** Following deflators as approved for Annual Accounts will be used at quarterly level also. **(i) Research & Development:** weighted average of CPI(IW) and CPI(U) **(ii) Computer Software & Databases:** CPI (U) **(iii) Mineral Exploration & evaluation:** CPI(General) **(iv) Entertainment, literary and other artistic originals:** CPI-Recreation **(v) Other IPP products:** CPI-U
	Change in Stock	Current price estimates will be deflated by respective industry-wise WPI/IPD.
	Valuables	As agreed for Annual Accounts, CPI (gold, silver and other ornaments) will be used to deflate the current price estimates of valuables at quarterly level.

3.2.4 On deliberations on above proposal on deflation strategy for quarterly estimates, following were suggested:

(i) The sub-committee noted that methodology as proposed for quarterly estimates at constant prices for Financial Services; Electricity; Remediation; Public Administration and Defence; Product Taxes & Subsidies; PFCE; GFCE; Change in Stock; and Valuables, were aligned with the methodology already agreed for

Annual National Accounts (ANA). Accordingly, sub-committee agreed for the proposal.

(ii) For Gas supply, the sub-committee agreed for the proposed methodology for constant price estimates as it was in alignment with the methodology already approved for ANA. For compiling the current price estimates of GVA of Gas Supply at quarterly level, the sub-committee suggested that instead of using CPI based price index, WPI of Natural Gas and LPG would be the more appropriate to inflate the constant price estimates.

(iii) In the absence of any quantum index at quarterly level for Water Supply, it was proposed to use CPI (water charges) as deflator for compiling constant price estimates. The sub-committee agreed for the proposal.

(iv) For estimation of GVA of Ownership of Dwelling at quarterly level, no high frequency indicator was available. Accordingly, it was proposed that past year growth will be used to estimates the GVA at constant prices at annual level and then annual estimates would be equally apportioned in all the quarters. For Current price estimates, CPI (Housing) would be used as inflator. After deliberation, the sub-committee agreed for the proposal.

(v) For Dwelling, Other Buildings and Structures (DOBS) part of GFCF, it was proposed that growth in GVO of Construction at constant prices would be used as indicator for estimation of DOBS at constant prices in QNA. For all other assets of GFCF, the deflator as already agreed for ANA, would be used in QNA also. After deliberations, the sub-committee agreed for the proposal.

3.3 Format for the report of the Sub-committee

3.3.1 A format for the report of the sub-committee was also placed in the meeting. It was proposed that the report may have the following 4 sections:

(i) Introduction: It will cover Purpose, Composition of Sub-committee and Terms of Reference.

(ii) Agenda Items Covered: It will include different sector/ component wise Review of Existing Methodology, Alternatives Proposed and Recommended Alternative alongwith Rationale

(iii) Summary of Recommendations

(iv) Minutes of Meetings at annexure

3.3.2 The sub-committee suggested to circulate the draft report to all the members of the sub-committee for their comments.

4. It was also brought to the notice of the sub-committee that in the minutes of the fifth meeting of Sub-committee on constant price estimates held on 11.08.2025, at **para 3.4 and 3.5,** the existing methodology for arriving at constant price estimates for forestry and fishery sectors had been recorded inadvertently instead of proposed methodology. Accordingly, **para 3.4 and 3.5** of the minutes of the fifth meeting of Sub-committee on constant price estimates held on 11.08.2025 may be modified as under:

"…

3.4: Forestry sector: Constant Price Estimates

3.4.1 Following proposal for constant price estimates of Forestry sector was presented:

(i) For major forest products (industrial wood and fuelwood) and fodder from forest, State wise quantum index will be prepared based on State wise production/quantity data. Using this quantum index, base year GVA (at constant prices) will be extrapolated for arriving at GVA at constant prices for subsequent years.

(ii) In the case of non-timber forest products (NTFP), information on their production and price is generally not available from States. Only value of output for NTFP is reported by States. Quantum index will be prepared by deflating current year GVO using relevant WPI. Using this quantum index, base year GVA (at constant prices) will be extrapolated for arriving at GVA at constant prices for subsequent years.

3.4.2 After deliberation, the Sub-committee approved the suggested proposal.

3.5: Fishery sector: Constant Price Estimates

3.5.1 Following proposal for constant price estimates of Forestry sector was presented:

(i) State wise production data will be used to arrive at State wise quantum index separately for marine, inland, subsistence and other disposal related items. Using this quantum index, base year GVA (at constant prices) will be extrapolated for arriving at GVA at constant prices for subsequent years.

3.5.2 After deliberation, the Sub-committee approved the suggested proposal.

…"

The sub-committee noted the above modification in the minutes of the fifth meeting held on 11.08.2025.

5. The meeting ended with a vote of thanks to the Chair.

*****

Annexure I

List of Participants

Sub-Committee Members

1. Prof. Biswanath Goldar (Retd.), IEG [Chairperson]
2. Shri Asit Kumar Sadhu, Member, NSC
3. Prof. Chetan Ghate, Indian Statistical Institute
4. Ms. Rekha Mishra, Principal Adviser, DEPR, RBI (attended virtually)
5. Shri Anil Kumar Sharma, Deputy Director General, Labour Bureau (attended virtually)
6. Shri Brijendra Singh, Deputy Director General, NAD, MoSPI
7. Shri Rajesh Kumar Sharma, Deputy Director General, NAD, MoSPI
8. Dr. Subhra Sarker, Deputy Director General, NAD, MoSPI
9. Shri Rajeev Kumar, Deputy Director General, NAD, MoSPI
10. Dr. Bijaya Bhushan Nanda, Director, DES, Odisha (attended virtually)
11. Shri Vishal Kumar, Director, NAD, MoSPI [Member Secretary]

Officers from NAD, MoSPI

1. Shri N.K. Santoshi, Director General
2. Shri Siddhartha Kundu, Additional Director General
3. Shri Shirke Shrinivas Vijay, Director
4. Kunwar Alok Singh Yadav, Joint Director
5. Dr. Priyanka Anjoy, Deputy Director
6. Ms. Jagrti Garg, Deputy Director