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Ministry of Statistics and Programme Implementation

राष्ट्रीय सांख्यिकी कार्यालय
National Statistics Office

Pre-release Consultative Workshop on Base Revision of

Gross Domestic Product (GDP), Index of Industrial Production (IIP) and Consumer Price Index (CPI)

Highlights of Base Revision in Quarterly GDP Estimates

National Accounts Division of Ministry of Statistics and Programme Implementation is responsible for compiling National Accounts Statistics, which inter alia includes GDP and other key macroeconomic aggregates, like, saving, investment and final consumption expenditure. The current series is based on 2011-12.

In view of significant improvements in data availability and to reflect structural changes in the economy, the Ministry has undertaken a revision of base year of the national accounts to a more recent period. Such revisions are carried out periodically to incorporate new data sources, improve methodological practices and align the compilation of national accounts with updated standards and classifications.

In this context, the Advisory Committee on National Account Statistics (ACNAS) was reconstituted to provide necessary guidance in the revision process. The Committee has representation from various Central Ministries and Departments, State Governments, Reserve Bank of India, Academia and Research Institutions. On the recommendation of ACNAS, FY 2022-23 has been chosen as the base year of revised series and the estimates are scheduled to be released on 27th February, 2026.

Quarterly National Accounts play a critical role in providing timely assessments of short-term economic movements, although they rely on high- frequency indicators due to limitations in data availability. In the revised series, the overall framework of Quarterly National Accounts (QNA) remains aligned with the Annual National Accounts (ANA) and the IMF's Quarterly National Accounts Manual (2017), and several important methodological refinements have been introduced to improve consistency, reliability and analytical usefulness. Salient features of improvement in Quarterly GDP estimation are given in succeeding paragraphs.

1. Improvement in Benchmarking Methodology

One of the significant changes relates to the benchmarking technique used to align quarterly estimates with annual benchmarks. The existing method of 'pro-rata benchmarking', which often resulted in artificial discontinuities or "step problems" in the quarterly series, will be replaced by the 'Proportional Denton method'. This change ensures smoother quarterly series by preserving the movement of high-frequency indicators while maintaining consistency with annual estimates.

2. Expanded use of Administrative and high-frequency data sources

The revised series also marks an expansion in the use of administrative and high-frequency data sources. In addition to existing indicators, new datasets such as Harmonized System of Nomenclature (HSN)- and Services Accounting Code (SAC)- wise GST data, e-VAHAN vehicle registration data, natural gas consumption statistics, etc. will

be incorporated. The enhanced use of GST data improves sectoral and institutional coverage, particularly for services and unincorporated enterprises.

3. Methodological improvement on the production side estimates

On the production side, several sector-specific methodological improvements have been introduced. In agriculture and allied activities, quarterly GVA at constant prices will continue to be estimated through volume extrapolation with improved granularity by incorporating larger number of crops. In mining and quarrying, the revised series aligns more closely with annual methodologies by using mineral-specific indices of industrial production as volume indicators. Manufacturing sees a major conceptual shift, as constant price GVA will now be compiled using a double deflation approach, whereby output and intermediate consumption are deflated separately using composite price indices derived from Annual Survey of Industries (ASI) data. At current prices, GST-based indicators will play a larger role, particularly for unincorporated manufacturing units.

In the electricity, gas, water supply and remediation sector, the revised series introduces improved indicators such as natural gas consumption for estimating gas sector output at constant prices, while water supply and remediation services are estimated using deflated output indices. Construction sector estimates are strengthened through an input-based approach, wherein major construction materials are extrapolated individually using relevant indicators, and total output is derived using base-year input–output ratios. For non-financial services, GST outward supply data will serve as the primary indicator for estimating current price GVA across most service activities.

The financial services sector undergoes one of the significant methodological revisions in the new series. Quarterly GVA for Banks and Non-Banking Financial Companies (NBFCs) will be estimated using a Financial Intermediation Services Indirectly Measured (FISIM)-based approach instead of stock-based or revenue-based indicators, thereby aligning quarterly estimates with annual compilation practices. Insurance services will be estimated separately for life and non-life segments using premium-based indicators, while GVA of the Central Bank (i.e., RBI) will be estimated using compensation of employees' data.

4. Methodological improvement on the expenditure side estimates

On the expenditure side, the revised series introduces substantial refinements across all components. Private Final Consumption Expenditure will be estimated at a more granular item level aligned with COICOP 2018, using HCES results to derive quarterly shares and a combination of GST, IIP and administrative data to compile direct quarterly indicators.

Government Final Consumption Expenditure will continue to be based on revenue expenditure data, with food subsidy now included as part of government consumption. Gross Fixed Capital Formation will be compiled using asset-wise and sub-asset-wise indicators, supported by more granular deflators for machinery, transport equipment and

intellectual property products. Estimates of change in stocks will increasingly rely on quarterly financial returns while valuables will be estimated using net imports of precious metals (gold, silver, diamond, etc.). Exports and imports will be compiled at a more disaggregated level, with improved deflators applied separately for goods and services.

5. Improvement in the use of Price Index

A key improvement in the revised series relates to the use of price indices. The new methodology moves away from reliance on single aggregate deflators and adopts item-specific WPI, CPI and selected item-specific weighted CPI indices across sectors. This includes double deflation in manufacturing, item-level deflation in agriculture and mining, service-specific CPI-based deflators, and granular deflation of consumption, capital formation and external trade components.

Methodological Improvements in compilation of Gross State Domestic Product (GSDP) from Production Approach in the New Series of National Accounts with Base Year 2022-23

A Sub-Committee under the Advisory Committee on National Accounts Statistics (ACNAS), has been constituted with Prof. Ravindra H. Dholakia, former Professor, IIM Ahmedabad as chairman, to review and revise the concepts, definitions, classifications, data sources, and guidelines for the compilation of State Domestic Product (SDP) and District Domestic Product (DDP). The Committee includes representatives from State Governments, research institutions, the Reserve Bank of India, academia, and NITI Aayog.

The GSDP estimates for all the States/UTs are compiled using the identical concepts and definitions of the National Accounts. The estimates are compiled institutional sector-wise and industry-wise. The approach followed for the estimation of the GSDP is primarily direct approach (or the bottoms-up- approach) for the Primary Sector and allocation method or the mixed approach (combination of direct and allocation method) for other sectors.

At the State level, GSDP estimates are compiled and published primarily using the production and income approaches. None of the States compile all components of the GDP following expenditure approach due to paucity of requisite data at state level. At present, only GFCF is being compiled by some of the States and that too largely limited to the public sector.

Changes in the production-side estimates of GDP at national level will also impact GSDP estimates. Discussion paper on production side estimates of GDP is available on MoSPI's website and can be accessed through the following link:

https://new.mospi.gov.in/uploads/announcements/announcements_1763725600839_38257510-c97c-4d03-993e-ccbbf873bc83_Discussion_Paper_NAD.pdf

The scope of this concept note is restricted only to production side estimates of GSDP. The proposed changes in compilation of GSDP may be broadly classified into the following categories.

1. Reducing Allocation in favor of Direct Estimation

In the new series, efforts have been made to minimize allocation-based estimates wherever feasible.

I. For the new series, DDO code-wise (location based) PFMS data in respect of each object head from the office of Comptroller General of Accounts (CGA) will be used for compilation of State-wise net value added from central government.

ii. In the new series, for State-wise estimation of GVA of Communication and Services Related to Broadcasting Sector (Public Part) State-wise information on compensation of employees, revenue and expenditure will be used for some of the subsectors like Post, BSNL and Power Tel.

2. In cases where allocation could not be avoided, more realistic and dynamic indicators have been proposed to improve accuracy.

i. Use of GST Data for Allocation of all India GVA of Non-Financial Services from Private corporates and Construction Sector from Private corporates and NPISH.

ii. Use of annual surveys like ASUES and PLFS to compile industry-wise GSVA from unorganized sector.

3. Using new and dynamic rates and ratios to compile GSVA

I. State-wise input–output ratios for the forestry sector on an annual basis will be compiled by analysing state and central budget replacing the current fixed rate of 16.2 percent of the total output in the forestry sector applied uniformly across States.

ii. Similarly, for the new series, updated State-wise input-output ratio (for major fish producing States) will be used both for marine fisheries and inland fisheries based on the study conducted by Central Marine Fisheries Research Institute (CMFRI), Kochi and Central Inland Fisheries Research Institute (CIFRI), Barrackpore, Kolkata.

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Proposed changes in the Base revision of Index of Industrial Production

Introduction

The Index of Industrial Production (IIP) is a key short-term indicator reflecting the pulse of industrial production growth in the country. It is monthly indicator which reflect the monthly changes in the volume of production of a representative basket of industrial products, with reference to a specified base year. The all-India IIP provides critical inputs for macroeconomic analysis and evidence-based policymaking by the Ministry of Finance, the Reserve Bank of India, and other users. In addition, the IIP serves as an important input for the quarterly estimation of Gross Value Added (GVA) of the manufacturing sector within the national accounts framework.

The Index of Industrial Production (IIP) is released on a monthly basis based on production data collected from 14 source agencies, covering 407 items or item groups across the three sectors of Mining, Manufacturing, and Electricity. In addition to sectoral indices, the Ministry of Statistics and Programme Implementation (MoSPI) disseminates indices according to use-based categories, namely Primary Goods, Capital Goods, Infrastructure/Construction Goods, Intermediate Goods, Consumer Durables, and Consumer Non-Durables.

In view of technological advancements, structural transformations, and changing production patterns within the industrial sector, periodic revision of the IIP base year is essential to ensure that the index remains representative of the prevailing industrial structure. The MoSPI has initiated the work of the revision of the IIP base year to 2022–23, ensuring stability of industrial activity in the reference year, and introducing methodological enhancements to improve the robustness and analytical usefulness of the index.

The revision seeks to strengthen the IIP through updates in sectoral coverage, revision of item weights, improved representation of factories, and adoption of refined compilation methodologies. The base year revision is also being aligned with the revision of the National Accounts base year to ensure consistency across key macroeconomic indicators.

This concept note presents the key elements of the base year revision exercise, including revised methodologies, an updated item basket, factory substitution provision, Seasonal adjusted index, Chain Index, and other measures undertaken to enhance industrial coverage.

Key Improvements in the New IIP

The new IIP series will feature a comprehensive updation of its components, including an updated product basket that reflects the latest patterns of industrial production, the use of more reliable and timely data sources, and a revision of sectoral and item weights to

better capture the current structure of India's industrial economy. Some of the major enhancements proposed for the revised IIP series include:

1. Expansion of Scope and Coverage

The item basket is being updated to address both outdated products and new products coming from emerging industrial innovations. This involves removing items that are no longer relevant and introducing modern products.

In line with IRIIP guidelines, the IIP is expected to represent a wider range of sectors, including Mining & Quarrying, Manufacturing, Electricity, Gas, Water Supply, and Waste Management. The revised IIP will incorporate data on minor minerals (sand and other minor minerals) and disseminate the Mining index at a more granular level—covering fuel minerals, metallic minerals, non-metallic minerals. The Electricity sector will also be disseminated at a more detailed level, covering electricity generation from renewable and conventional sources. Additionally, gas supply data will be compiled by obtaining information from the concerned Ministries to ensure comprehensive sectoral coverage.

2. Handling of "Not Elsewhere Classified" Items

The IIP item basket is derived from the Annual Survey of Industries (ASI) and its classification system. To improve clarity and accuracy, MoSPI carried out an extensive review of 276 items listed under the "not elsewhere classified" category by revisiting the relevant factories. As a result, the new index ensures that 95% of their weights are assigned to specific items, with only 5% redistributed, thus significantly enhancing information content. This greatly improves the detail and reliability of the information captured in the index.

3. Substitution of Factories

Currently, the Index of Industrial Production (IIP) is compiled using a fixed panel of factories selected based on a designated base year, which is intended to represent industrial activity across various sectors. Over time, however, some factories in this panel may face operational disruptions, such as permanent closures or changes in production lines. Although the IIP's base year is typically revised at regular intervals, long gaps between these revisions can lead to issues. Continuing with factories that are no longer operational or have changed their production lines results in a greater reliance on estimation and imputation methods to fill data gaps.

The new IIP proposes a systematic unit substitution methodology. Non-operational factories will be replaced with active units of similar production scale. Replacement requires 12 months of overlapping data to ensure consistent index movement. This improves data completeness, reduces imputation reliance, and better reflects current industrial activity. To facilitate stakeholder engagement on the issue of substitution of

factories, a Discussion Paper was published on the Ministry of Statistics and Programme Implementation (MoSPI) website as part of the base year revision of the All-India Index of Industrial Production (IIP).

4. Seasonally adjusted Series

MoSPI, in collaboration with TAC-IIP, is working towards establishing a system to additionally provide a Seasonally adjusted IIP series in line with international practice. Seasonal adjustment is a statistical process that removes predictable fluctuations in a time series caused by seasonal or calendar-related factors—such as weather patterns, festivals, trading-day effects, and movable holidays—to reveal the underlying industrial activity and make month-to-month and year-to-year comparisons more meaningful. This enhances the reliability of the IIP, improves comparability across periods, and allows policymakers to focus on genuine changes in production rather than routine seasonal variations.

5. Chain Based Indices

In the context of the base year revision of the All-India Index of Industrial Production (IIP), the adoption of a chain-based methodology for compilation of the index is being examined. The IIP has traditionally been compiled using a fixed-base Laspeyres framework, wherein sectoral and industry weights remain unchanged until the next base revision. Over time, structural changes in industrial production arising from shifts in demand, technological advancements, policy initiatives and reconfiguration of supply chains render fixed weights progressively less representative. The chain-based approach, by permitting periodic updating of weights, enables the index to better reflect the evolving industrial structure, capture changes in the relative importance of industries and products, and improve the accuracy of measurement of short-term movements in industrial activity. Accordingly, the feasibility of introducing chain-linked indices is being considered as part of the IIP base year revision to enhance the relevance and robustness of the index. To facilitate stakeholder engagement on this issue a Discussion Paper as part of the base year revision of the All-India Index of Industrial Production (IIP) has been published on MoSPI's website.

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Proposed changes in the upcoming Consumer Price Index (CPI) Series

1 About CPI

1.1 The Consumer Price Index (CPI) in India, compiled by the Ministry of Statistics and Programme Implementation (MoSPI), was introduced to provide a more comprehensive and timely measure of inflation reflecting the consumption patterns of different population groups. Historically, India maintained separate CPIs for various segments such as industrial workers, agricultural laborers, and rural laborers. However, recognizing the need for a unified and updated index, MoSPI launched the new CPI series in 2011 with a base year of 2010, later revised to 2012. This revamped CPI includes three indices—CPI (Rural), CPI (Urban), and CPI (Combined)—and is released monthly by the National Statistical Office (NSO). It captures price changes across a wide basket of goods and services, collected from over 1,181 villages and 1,114 urban markets nationwide, and serves as the primary measure for tracking inflation and informing monetary policy in India.

1.2 The Ministry of Statistics and Programme Implementation (MoSPI) is currently working on revising the Consumer Price Index (CPI) series with a new base year of **2024**. This update will incorporate data from the **Household Consumption Expenditure Survey (HCES) 2023–24**, ensuring that the item basket and expenditure weights reflect the most recent consumption patterns across rural and urban India. The revision aims to enhance the accuracy and relevance of CPI estimates, improve methodological transparency, and support more responsive economic policymaking.

2 Process of Base Revision

2.1 The process of base revision of the Consumer Price Index (CPI) commenced in early 2023. To guide and oversee this exercise, an Expert Group on Base Revision of CPI was constituted on 27th February 2023 under the Chairmanship of Shri Ashish Kumar, Ex-Director, UNSIAP and Ex-Director General, CSO. The Group comprises of eminent academicians, representatives from the Reserve Bank of India, the Ministry of Labour & Employment, the Ministry of Commerce & Industry, and senior officials from the Government of India.

2.2 Thirteen meetings of the Expert Group have been held to deliberate on various methodological and operational aspects related to the base revision.

2.3 The base revision has been undertaken through a systematic, multi-stage process. The first stage was sample selection. The sample used in the Household Consumption Expenditure Survey (HCES) 2022-23 was adopted for this purpose. The

subsequent stages included sample verification, identification of markets and dwellings for House rent collection, selection of the most popular shops for each item, and determination of the most representative item specifications. Following these preparatory steps, base prices were collected for the identified item specifications from the selected shops across the respective markets.

2.4 To incorporate the suggestions of the stakeholders and experts, various thematic consultations have been held with international organizations including IMF, World Bank, UNECE' group of experts on CPI, brainstorming sessions with banking and financial institutions, State Government and Central Government Ministries during the base revision exercise. Three discussions papers on PDS and Housing compilation methodology were also published to invite suggestions and comments on the proposed methodology.

3 Key changes in the new series of CPI

3.1 The new CPI series involves a comprehensive revision of the **coverage**, **item basket**, **weights**, and **methodology** used in index compilation. The details of the key changes involved in the new series of CPI is listed below-

3.2 Enhancement in coverage

3.2.1 In the existing CPI series (Base: 2012=100), price data are collected across all States and Union Territories through personal visits by the field staff of the Field Operations Division (FOD), NSO, MoSPI, following a weekly roster. For the new CPI series (Base: 2024=100), price data are being collected from 1,395 urban markets spread over 434 towns and 1,465 villages. This represents an expansion of coverage by 281 urban markets and 284 villages compared to the previous series.

3.2.2 In the updated series of the Consumer Price Index (CPI), in addition to the price data collected from physical outlets as being done in the current series, prices are also being collected from e-commerce platforms in 12 selected cities having a population of more than 25 lakh as per the 2011 Census.

3.4 Refinement in methodology

3.4.1 Base revision of CPI not only includes changes in item basket, weights and base year, but also involves a comprehensive review of the entire methodology for CPI compilation to identify areas for further improvement. As part of this process, the Price Statistics Division, MoSPI has done a detailed due diligence of the existing methodologies. The methodologies were also reviewed and discussed with IMF expert, Dr. Brian Graf during the CPI Technical Mission held from 11th to 14th August 2025. A brief outline of the revised methodologies is provided below-

3.4.2 Index Compilation Methodology

3.4.2.1 In the new series of CPI, the short index formula will be adopted for the compilation of the Elementary Index, replacing the Jevons' long index formula used in the existing series. The short index formula is a chain-based approach, derived through a re-structuring of the long index formula, aimed at improving computational efficiency and transparency in index compilation.

Jevon's long index formula

$$I_t = \prod \left(\frac{p_t^i}{p_0^i} \right)^{\frac{1}{n}} \times 100$$

$$I_t = \prod \left(\frac{p_{t-1}^i}{p_0^i} \times \frac{p_t^i}{p_{t-1}^i} \right)^{\frac{1}{n}} \times 100$$

$$I_t = \prod \left(\frac{p_t^i}{p_{t-1}^i} \right)^{\frac{1}{n}} \times I_{t-1}$$

$I_t = \prod \left(\frac{p_t^i}{p_{t-1}^i} \right)^{\frac{1}{n}}$ X *Index of previous month*. This is the short index formula

3.4.2.2 The short index formula eliminates the dependency on base prices each month for index compilation, which also facilitates easier incorporation of quality adjustments.

3.4.3 House Rent Index Compilation Methodology

3.4.3.1 Stakeholders and data users of the Consumer Price Index (CPI) have, from time to time, raised certain concerns regarding the existing methodology for compiling the Housing Index. It has been observed that three different methods were used for the calculation of the House Rent Index during the existing series:

- **January to May 2013:** Index was fixed at 100.
- **June to November 2013:** Fixed-base method was applied.
- **From December 2013 onwards:** Chain index method has been in use.

3.4.3.2 It was observed that a sharp increase in both the index and inflation occurred after May 2013, resulting in a sudden upward shift. This escalation was largely due to the assumption of a fixed index value of 100 up to May 2013. Furthermore, users, including the Reserve Bank of India, highlighted distortions

arising from concessional or employer-provided dwellings. For instance, when an employee receives a salary increment, the corresponding increase in House Rent Allowance (HRA) is reflected as higher rent, thereby inflating the index. Conversely, when the same dwelling is subsequently allotted to a junior employee with lower HRA, the recorded rent declines, creating a misleading impression of negative inflation, which does not represent an actual fall in rent levels.

3.4.3.3 A discussion paper comprising the detailed methodology was released on **30th October 2025** for feedback from stakeholders and data users. Same may be seen at www.mospi.gov.in for more details on housing methodology.

4. Inclusion of new data sources

4.1 In the updated series of the Consumer Price Index (CPI), in addition to the price data collected from physical outlets as being done in the current series, prices are also being collected from e-commerce platforms in 12 selected cities having a population of more than 25 lakh as per the 2011 Census.

4.2 Administrative data obtained from Ministry of Railways for rail fares and passenger footfall, the Ministry of Petroleum and Natural Gas for fuel prices (petrol, diesel, LPG, CNG and PNG) and the Department of Posts for postal tariffs (money order, speed post charges domestic & international) will be used for index compilation in CPI 2024 series.

4.3 Ministry is also centrally compiling online data for airfare, telephone charges (mobile and landline) and online media services (OTT) through well-known online platforms/websites. The adoption of these alternative and digital data sources is expected to substantially improve the representativeness, reliability, accuracy, and overall quality of the CPI.

5 Adoption of COICOP 2018

5.1. As a step towards standardization and enhancing global comparability of the index, in the new series of the Consumer Price Index (CPI), the Classification of Individual Consumption According to Purpose (COICOP) 2018 will be adopted. While the overall COICOP structure will be retained, certain terminological adaptations will be made to better reflect Indian consumption patterns without affecting comparability.

6 Treatment of free social transfers including PDS items

6.1. In view of the significant coverage under Pradhan Mantri Grameen Kalyan Anna Yojana (PMGKAY) scheme of the Government of India and its impact on the cost of living of the people of the country, MoSPI developed a methodology for including free food items distributed through PDS system. A discussion paper on

the issue was released on 4th October, 2025 for seeking comments and feedback. After having detailed discussions on the views and comments received on the paper, it was decided that **free social transfers, including free food distributed through Public Distribution System, free electricity etc. will not be considered in CPI compilation**. This will be in alignment with the concept of CPI and IMF recommended global practices as well. Therefore, if an item currently has positive expenditure and prices, but its price becomes zero in future due to free provision, the zero price will not be used for index compilation; instead, the price will be treated as missing and imputed using the internationally recommended missing-price imputation methodology. Further, items for which expenditure data is available and also corresponding base prices exists will only be included in the CPI basket.

7 More Granular Data Dissemination

7.1. In the new series, All-India and State-wise item-level CPI will be released for the Rural, Urban, and Combined sectors — a significant enhancement over the existing series, where only the All-India item-level index for the Combined sector was published.

7.2 With the adoption of COICOP 2018, indices will also be released at the Division, Group, Class, and Sub-class levels for both All-India and State-wise. In addition, the General CPI, Consumer Food Price Index (CFPI), and the corresponding inflation rates will also be disseminated at the All-India level.

8. Use of modern technology

8.1 For enhancing accuracy and deriving better insights from data, leveraging latest available technology in price collection and index compilation is being considered. Price collection module on Computer Assisted Personal Interviews (CAPI) and a cloud-based compilation software are in advanced stage of development using Python as coding platform, on Django framework and PostgreSQL as database. Natural Language Processing (NLP) using rule based, AI/ML and statistical methods approach is being used for price data scrutiny. Efforts are underway to develop an effective and robust system to generate accurate and reliable indices.

Comments and suggestions may be sent at;
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