

# **INTERNATIONAL WORKSHOP ON SHORT- TERM STATISTICS**

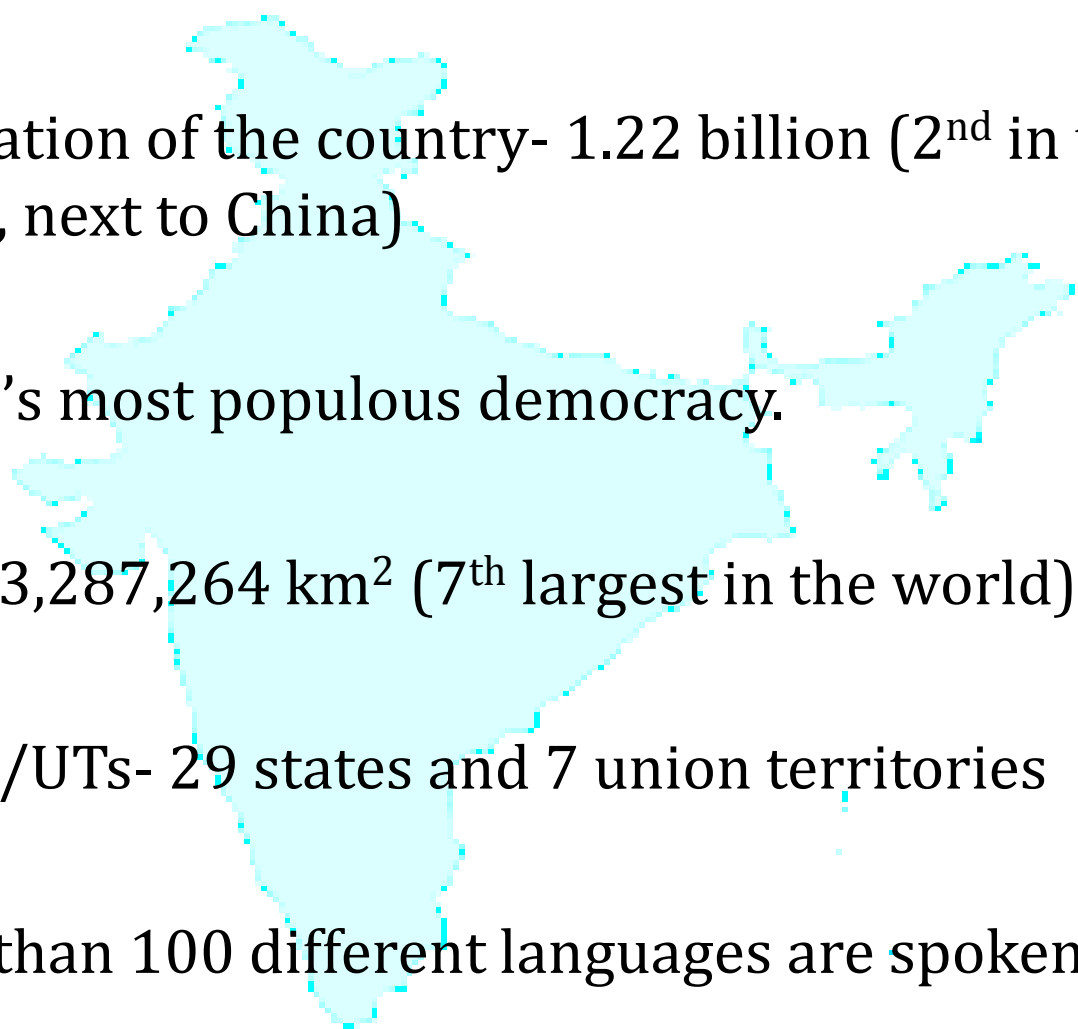
**BEIJING, CHINA**

**18-20 MAY 2015**

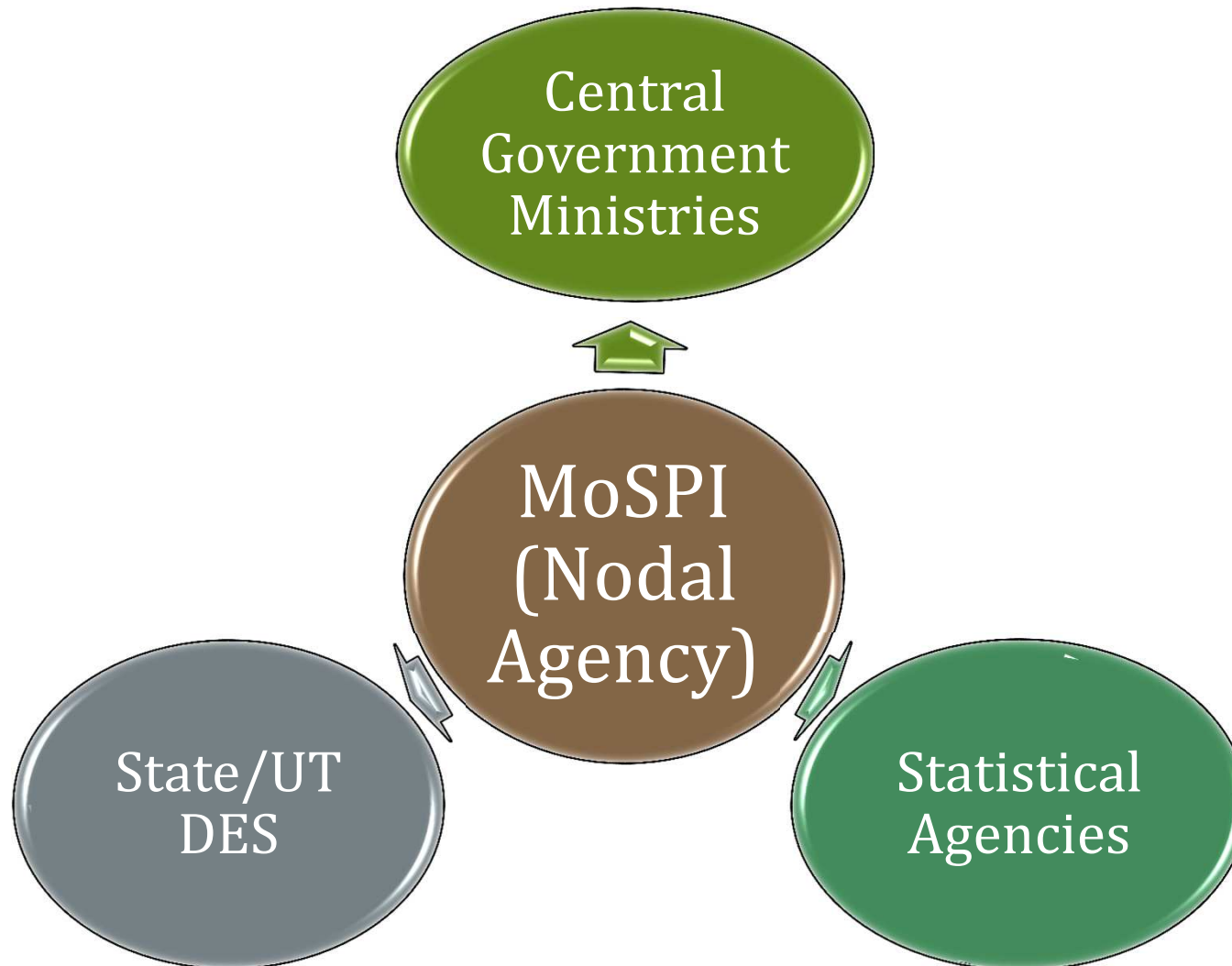
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# About India

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- Population of the country- 1.22 billion (2<sup>nd</sup> in the world, next to China)
  - World's most populous democracy.
  - Area- 3,287,264 km<sup>2</sup> (7<sup>th</sup> largest in the world)
  - States/UTs- 29 states and 7 union territories
  - More than 100 different languages are spoken all over India.

# Structure of Statistical System



# Short-term Statistics on Real Sector coordinated by MoSPI

National  
Accounts

Quarterly  
Estimates  
of GDP

Production  
Index


Index of  
Industrial  
Production  
(IIP)

Prices

Consumer  
Price Index  
(CPI)

Wholesale  
Price Index  
(WPI)

# Quarterly Estimates of GDP

- Benchmark-indicator method.
  - Monthly/quarterly data received from data sources used in the annual estimates, are used to derive the indicators.
  - Estimates are compiled using indicators for quantum growth on the annual estimates (the benchmarks) to arrive at constant price estimates
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- These are then superimposed by the indices of growth in prices for current price estimates.

# Revision policy of the Quarterly Estimates

- Quarterly estimates are generally released two months after the end of a quarter, with an exception of the estimates of the third Quarter.
- Estimates of Q3 are scheduled for release after 1 month and 7 days after end of the quarter.
- The estimates for Q1 and Q2 are also revised with the release of estimates of the Q3.

# Revision policy of the Quarterly Estimates

- The estimates of all the previous quarters (Q1, Q2 and Q3) undergo revision with the release of the estimates of the fourth quarter.
- Revision of quarterly estimates are primarily due to
  - Revisions in the annual estimates
  - Revision in data sets and availability of data for later months.

# Indicators used for Quarterly estimates

<b>SECTOR</b>	<b>INDICATORS USED FOR QUARTERLY ESTIMATES</b>
<b>1. Agriculture</b>	<b>Quarterly agriculture production estimates of forecast crops and inputs from previous year input-output ratio</b>
<b>2. Forestry</b>	<b>Annual GVA apportioned equally in all the quarters</b>
<b>3. Fishery</b>	<b>Quarterly production from M/Agriculture</b>
<b>4. Mining and quarrying</b>	<b>Monthly Production data- coal, crude petroleum Index of Mining, Quarterly Pvt.Corp. growth</b>
<b>5. Manufacturing</b>	<b>Quarterly Pvt.Corp. growth and IIP</b>
<b>6. Electricity, gas and water supply</b>	<b>Quarterly IIP (Electricity) Annual forecast apportioned equally (Gas and Water Supply)</b>
<b>7. Construction</b>	<b>Pucca Construction-Quarterly production data and Kutcha Construction -Annual forecast-1/4<sup>th</sup> each quarter</b>
<b>8. Trade, hotels and restaurants</b>	<b>Quarterly information on sales tax and Quarterly Pvt. Corp. growth</b>



## Indicators used for Quarterly estimates (Contd.)

<b>SECTOR</b>	<b>INDICATORS USED FOR QUARTERLY ESTIMATES</b>
<b>9. Railways</b>	<b>Quarterly information on Passenger Kms and Net tonne Kms</b>
<b>10. Transport by other means</b>	<b>Production of commercial vehicles for road transport Cargo handled at major ports for water transport Passenger kilometres flown and freight tonne kilometres flown for air transport</b>
<b>11. Services</b>	<b>Annual forecast-1/4<sup>th</sup> each quarter</b>
<b>11. Communication</b>	<b>Quarterly data on stock of telephones and quarterly information on MOU available only with a time lag</b>
<b>12. Financial Services</b>	<b>Quarterly data from Banks and Insurance</b>
<b>13. Public administration</b>	<b>Central government revenue expenditure</b>
<b>14. Other Services</b>	<b>Indicators as in Public Adm and Defence for Public part and for Pvt. part- Quarterly Pvt.Corp growth and annual forecast-1/4<sup>th</sup> each quarter</b>

# What is Index of Industrial Production (IIP)

- Quantifies the level of production performance of the industry at different periods of time
- Comparison at every point with reference to a fixed time point (called 'base year')
- Tracking industrial growth
  - On a year-on-year basis
  - On a month-to-month basis

## BASE YEAR

- Should be a normal period
- Contingent to availability of complete and detailed dataset for selection of basket and weights
- Proximity to the study period
- Synchronization with base year of other important macro-indicators viz. National Accounts, Wholesale Price Index etc. for comparability
- Base year revision at regular intervals is a process to account for changes in the production pattern
- Value of base year index is taken as 100 which is the baseline value for comparison of indices in subsequent time periods
- Current base year: 2004-05

# Why IIP?

- Reflects short-term changes in manufacturing
  - A composite number
  - Available by sector and use-based categories
  - Available with quick turnaround - lag of six weeks from the close of the reference month
- Used in estimation of GDP
- Core indicator for international comparison
  - Follows standard concepts, definitions and methodology prescribed by UNSD for international comparability (International Recommendations for the Index of Industrial Production)

# Scope and Coverage

- Basic frame for the selection of the products for the manufacturing sector- ASI
- For determining the industry level weights of the manufacturing sector, the results of ASI on organized manufacturing sector and the 62<sup>nd</sup> NSS results on unorganized manufacturing sector are used.
- IIP scope- Mining, Manufacturing and Electricity sectors

# National Industrial Classification (NIC)

- The CSO developed NIC on the basis of the United Nation's International Standard Industry Classification (ISIC).
- NIC is the standard classification followed for classifying all economic activities in India.
- National Industrial Classification (NIC)-2004 is followed (ISIC-Rev.3.1).
- Latest is NIC-2008 (ISIC-Rev.4)

# Data collection system

- Data is received from 16 administrative sources/ departments, major of them being
  - Department of Industrial Policy and Promotion (DIPP)- covers items representing 45.63% weight in IIP
  - Joint Plant Committee(JPC)- 9.21%
  - M/o Petroleum & Natural Gas- 5.94%
  - O/o Textile Commissioner- 5.21%
  
- Data collected by sources through factory visits, post/ fax/ e-mail/ statutory returns/ online data collection
  
- Data reported in quantity/ value terms

# Item Basket & Weighting Diagram

- A representative list of products is selected on the basis of their relative importance in industrial sector
- Entry/ exit of items during the currency of base year is not allowed
- Weight is a quantity (scale 0-100) which signifies the relative importance of an item or a group of items.
- The total weight has been distributed to Mining, Manufacturing and Electricity on the basis of their share of GDP at factor cost at base year (2004-05)

Sector	No of Items	No of Item Groups	Weights
Mining	61	1	14.16
Manufacturing	620	397	75.53
Electricity	1	1	10.32
Total	682	399	100

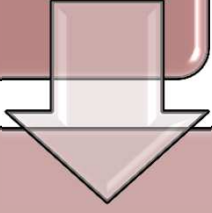


## Compilation of IIP -Laspeyre's fixed base formula

Product-wise production relatives (*ratio of current period production to base period production*) compiled



Product level indices (production relatives) aggregated using weights of individual items to get indices at NIC 5/ 4/ 3/ 2 digit levels



2-digit indices aggregated using weights to compile sectoral indices which are combined using sectoral weights to get monthly IIP

# Dissemination framework

- Indices disseminated on the 12<sup>th</sup> of every month through Press Release on PIB website and on MoSPI website
- General index released along with sectoral, NIC- 2 digit level and use-based indices
- Release of indices for current month along with
  - *first revision* of previous month data and
  - *final revision* to previous 3<sup>rd</sup> month
- Product-level indices/ production data available on request at a price.

# Way forward

## New features of the ongoing base revision exercise

- ❑ Broad-basing of frame: Frame of factories to be prepared on the basis of
  - ✓ ASI frame of factories for the base year +
  - ✓ Large units of 6<sup>th</sup> Economic Census +
  - ✓ Manufacturing units from the frame of Ministry of Corporate Affairs
  
- ❑ Overhauling of data collection system-
  - ✓ **Collection of data directly from manufacturing units** through a web-portal
  - ✓ Due authentication from concerned administrative ministries through shared interface
  - ✓ Imposition of **Collection of Statistics Act, 2008** for better response
  
- ❑ Mid-course correction to list of products and factories
  - ✓ To allow **new products/ factories for inclusion** during the currency of base year
  - ✓ **Concurrent Technical Review** with the advice of experts from industry sector to suggest required changes in item list/ factories

# What is Consumer Price Index

- CPI is designed to measure the changes over time in general level of retail prices of selected goods and services that household purchase for the purpose of consumption.
- CPI measures price changes by comparing, through time, the cost of a fixed basket of commodities.
- The basket is based on the expenditures of a target population in a certain reference period.

# Consumer Price Index (CPI)

- CSO releases the CPI for all India and States/UTs separately for rural, urban and combined every month w.e.f. January 2011.
- The Base year of the series was 2010=100 and the item basket and weighting diagrams were based on the Consumer Expenditure Survey (CES) 2004-05.
- Recently the Base year of CPI is changed from 2010=100 to 2012=100 w.e.f. January 2015. (Price Reference Year)
- Item basket and weighting diagram of the revised series is based on CES 2011-12. (Weight Reference Year)

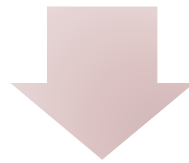
# Consumer Price Index

- Price data collected through Deptt. of Post (DoP) in rural areas NSSO in urban areas.
- Details of villages and towns from which prices are collected

	<b>Agency</b>	<b>No.of Villages/ Towns</b>	<b>No. of quotations</b>
Rural	DoP	1181	1181
Urban	FOD	310	1114

# Compilation of CPI using Laspeyres Index

Price indices are calculated for elementary aggregates, which are known as Item Level indices.



These elementary price indices are aggregated to obtain higher level indices using consumption expenditure as weights, associated with each level.

# Methodological improvements in the revised series

- The item indices are compiled using the Geometric Mean (GM) in place of Arithmetic Mean (AM).
- Prices of Antyodaya Anna Yojana have also been included for indices of PDS items.
- Sample size for compilation of House Rent Index has been doubled.



# Public Distribution System

- The Public Distribution System (PDS) facilitates the supply of food grains and distribution of essential commodities to a large number of poor people through a network of Fair Price Shops at a subsidized price on a recurring basis.
- Antyodaya Anna Yojana launched on Dec 25, 2000 for providing foodgrains to the poor.
- 25 kg. (now 35 kg) of foodgrains/month are provided at highly subsidized rates of Rs. 2/kg. for wheat and Rs. 3/ kg. for rice to each Antodaya family.

# Wholesale Price Index (WPI)

- Measure of wholesale price movement for the economy.
- Covers the general idea of capturing all transactions carried out in the domestic market.
- Compiled by Deptt of Industrial Policy & Promotion
- NIC-98 (ISIC-Rev.3.1) has been followed for the manufactured products
- 676 items in the commodity basket.
- The weighting diagram has been derived on the basis of GVO (2004-05) obtained from the NAS published by CSO.

# Data Collection Mechanism

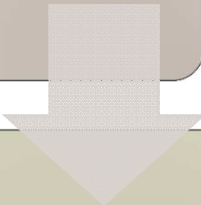
Sector	Price Data Source
Primary Articles and Fuel and Power	Administrative Ministries/ Departments, PSUs, State Government Departments.
Manufactured Products apart from Govn. sources	Leading Manufacturing Units

\* O/o Economic Advisor developed an online data transmission mechanism whereby the factories can directly login to the website and send price information.

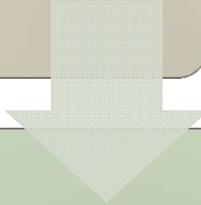
\* NSSO also collects price data for the manufactured units.

# WPI Compilation-Laspeyres Formula

Price relatives are calculated as the percentage ratios which the current prices bear to those prevailing in the base year.



The commodity index is arrived at as the simple average of the price relatives of all the varieties included in that commodity



The indices of the subgroups/groups/major groups/ all commodities are in turn worked out as the weighted AM of the indices of the items/ sub groups subgroups/ groups/ major groups falling under the respective heads.

# Other Short term Indicators

## Fiscal Sector (M/o Finance)

Central  
Government  
Operations  
(Monthly)

Central  
Government  
Debt (Quarterly)

## Financial Sector (RBI)

Interest Rates  
(Daily)

Stock Market  
:Share Price Index  
(Daily)

## External Sector (RBI)

Balance of Payments

Official Reserve Assets

Reserves Templates

Merchandise Trade

International Investment  
Position

External Debt

Exchange Rates

# Some Links

- [www.mospi.gov.in](http://www.mospi.gov.in)- *For Quarterly/Advance Estimates of National Accounts, IIP, CPI*
- [www.eaindustry.nic.in](http://www.eaindustry.nic.in)- *For WPI*
- [www.finmin.nic.in](http://www.finmin.nic.in)- *For Ministry of Finance*
- [www.rbi.org.in](http://www.rbi.org.in)- *For Reserve Bank of India*



THANK YOU