

# **Index of Industrial Production with Base 2011-12**

*...An Overview*



**Government of India  
Ministry of Statistics and Programme Implementation  
Central Statistics Office  
Economic Statistics Division**

एम.वी.एस. रंगानाधम  
महानिदेशक  
**M.V.S. RANGANADHAM**  
Director General  
Tel : 011-23364761  
e-mail : mvsr.nadham@nic.in



भारत सरकार  
सांख्यिकी एवं कार्यक्रम गियान्वयन मंत्रालय  
412, सरदार पटेल भवन, संसद मार्ग  
नई दिल्ली-110001  
Government of India  
**Ministry of Statistics & Programme Implementation**  
412, Sardar Patel Bhavan, Sansad Marg,  
New Delhi-110001  
Tel : 23364761, 23742026  
E-mail : mvsr.nadham@nic.in

## PREFACE

India has been regularly releasing the all India monthly Index of Industrial Production (IIP), one of the core set of economic statistics, broadly following the International recommendations subject. Base year of IIP has been revised from time to time to ensure that it reflects the real growth pattern of industrial sector. On revision of base year from 2004-05 to 2011-12, several key features were introduced apart from updation of item basket and weighing diagram. This document provides the details of methodological aspects of data (metadata) on IIP with base year 2011-12.

This document may help users to understand the concept of IIP and the methodology adopted for current series of IIP with base year 2011-12. This may provide technical inputs to official agencies at State level to compile and release sub-national level IIP. Also, data sources may find the methodology required for treating the non-response.

I am thankful to the team of officers in Economic Statistics Division (ESD) of CSO for their hard work in preparing this document. I hope this will serve as a useful reference document on the subject. Any suggestion to further improve the contents is welcome.

(M.V.S.Ranganadham)  
Director General, Economic Statistics  
Central Statistics Office

New Delhi  
7<sup>th</sup> March 2018

# CONTENTS

Sl. No.	Topic	Pg. No.
<b>CHAPTER I: INTRODUCTION</b>		<b>1-3</b>
1.1	Index of Industrial Production (IIP)	1
1.2	Importance of IIP	1
1.3	Basic Terminology used in IIP	1-3
1.4	Need for revision of base year	3
<b>CHAPTER II: DELIBERATIONS FOLLOWED FOR BASE REVISION</b>		<b>4-7</b>
2.1	Constitution of Working Group	4
2.2	Recommendations of Working Group	4-5
2.3	Consultation with Source Agencies for data collection	5
2.4	Deliberation in Standing Committee of Industrial Statistics	5-6
2.5	Ratification in National Statistical Commission	6
2.6	Approval of Committee of Secretaries	6
<b>CHAPTER III: METHODOLOGY</b>		<b>7-14</b>
3.1	Selection of Base Year	7
3.2	Selection of Item Basket	7-8
3.3	Selection of Weights	8
3.4	Selection of Factories for data collection	9
3.5	Computation of all India IIP in new series	9
3.6	Frequency and Data revision of IIP	10
3.7	Use based categories in the new series	10-11
3.8	Classification in the new series of IIP	11-12
3.9	Quality Assurance Framework	12
3.10	Deviations from International Recommendations	13
3.11	Periodic Review	13-14
<b>CHAPTER IV: DATA COLLECTION</b>		<b>15-16</b>
4.1	Data collection from Sources	15-16
4.2	Data collected in terms of value data & Use of Price Deflators	16
<b>CHAPTER V: VALIDATION CHECKS &amp; INDEX COMPILATION</b>		<b>17-19</b>
5.1	Validation by Sources	17
5.2	Validation before compilation	17-18
5.3	Response Rate	18
5.4	Index Calculation	18
5.5	Validation after compilation	19
<b>CHAPTER VI: DISSEMINATION</b>		<b>20-21</b>
<b>ANNEXURES</b>		<b>22-37</b>
<i>Annexure I: Item groups and their weights in IIP with base year 2011-12</i>		22-36
<i>Annexure II: Format for Data reporting by Source Agencies</i>		37

# CHAPTER I

## INTRODUCTION

### **1.1. Index of Industrial Production (IIP)**

Comparison of economic performance over time is a key factor in economic analysis and a fundamental requirement for policy-making. Short-term indicators play an important role in this context by providing such comparison indicators. Among the short-term indicators, the Index of Industrial Production (IIP) has historically been one of the most well-known and well-used indicators. The all India IIP is a composite indicator that measures the short-term changes in the volume of production of a basket of industrial products during a given period with respect to that in a chosen base period. It is compiled and published monthly by the Central Statistics Office (CSO) with a time lag of six weeks from the reference month.

### **1.2. Importance of IIP**

The all-India IIP provides a single representative figure to measure the general level of industrial activity in the economy on a monthly basis. It is used by Government agencies/ departments especially the Ministry of Finance, the Reserve Bank of India, etc. for policy purposes. The all-India IIP forms a crucial input for compilation of Gross Value Added of Manufacturing sector in Gross Domestic Product of the country on quarterly basis. It is also used extensively by financial intermediaries, policy analysts and private companies for various analytical purposes suited for their requirements.

### **1.3 Basic Terminology used in IIP**

**1.3.1 Statistical unit:** A statistical unit is an entity about which information is sought and for which statistics are ultimately compiled. The International Recommendations on IIP (IRIIP), 2010, of the United Nations Statistics Division, mentions *establishment*<sup>1</sup> i.e.

---

<sup>1</sup> An establishment is defined as an enterprise (an economic transactor with autonomy in respect of financial and investment decision-making) or part of an enterprise that is situated in a single location and

factories, mills etc., as the statistical unit for the purposes of compiling an IIP because it is the most detailed and elementary unit for which the range of data required is normally available. The data collected, in order to be analytically useful in an IIP context, need to be grouped according to such characteristics as kind of activity, geographical area and size, and this is facilitated by the use of establishment as a statistical unit.

**1.3.2 Index:** An index is a composite/summary indicator, an absolute number free of units of measurement and expressed, generally, as a percentage with reference to a previous period, normally known as base period. Normally, the indices are compared in terms of the growth rates.

**1.3.3 Industrial production:** Industrial production refers to the outputs of all industrial activities, which form part of the International Standard Industrial Classification (ISIC). In India, National Industrial Classification (NIC), which is developed in harmony with the ISIC, is the basis for classification of all economic activities within the boundary of the country. The term 'industry' is used in a restricted sense of production of commodities, excluding agriculture and services. However, in the compilation of IIP the scope is limited and thus industrial production for the purpose of IIP means that of the sectors of Mining, Manufacturing and Electricity.

**1.3.4 Item basket:** It is generally not practicable to include all the economic activities that contribute to industrial production, because data for some activities may not be readily and economically available and some economic activities may not warrant inclusion due to their insignificant contribution. Hence, the items basket means representative basket of items selected by applying judgment and on the basis of their relative importance for inclusion in the compilation of the index. Generally, individual items are included in the item basket according to some minimum contribution of individual item to national product. The basket is so selected that the contribution to national product of all the items in the basket is about 80 percent. The overriding criterion

---

in which only a single productive activity is carried out or in which the principal productive activity accounts for most of the value added.

for the selection of item basket is the regular availability of production data from the various data source agencies.

**1.3.5 Weights:** The relative importance of various economic activities is different and these differentials need to be reflected while measuring the performance of the entire industrial sector. With a view to achieving this, each item included in the item basket is given appropriate weight.

**1.3.6 Base period:** The IIP is a weighted average of the production relatives. The production relative is the ratio of the production in the current period to the reference period. This reference period is called the base period.

#### **1.4 Need for Revision of Base Year**

Over time, economies undergo several changes. Under the current liberalized environment, changes in the Indian economy are taking place at a fast pace. Product and their specifications, both in terms of content, quality and packaging, are changing even faster. It has, therefore, become increasingly difficult to obtain the information of selected products of a fixed basket over a longer period of time. Also, a number of products, which were very important in terms of the market share during the base year of the ongoing series, lose relative importance or completely phase out and get replaced by new substitutes in the market. Hence the need for revisiting the base year is absolutely essential for computing any index to depict the real scenario.

1.5 With the above objective, the revision of present base year of IIP had become a necessity and the Ministry of Statistics & Programme Implementation decided to revise the base year suitably and revisit related issues such as change of item basket, weighting diagram, use of latest classification etc.

## Chapter II

### DELIBERATIONS FOLLOWED FOR BASE REVISION

#### 2.1 Constitution of Working Group

IIP being an important indicator for policy makers and considering the fact that the revision of base year of the IIP entails many critical aspects, a high level Working Group (WG) was constituted under the Chairmanship of Shri Saumitra Chaudhuri, former Member, erstwhile Planning Commission, Government of India and with members drawn from various stakeholder Ministries/ Organizations and academics of repute in the field of Industrial Statistics. The Working Group was given a mandate to review the existing methodology for compilation of all India Index of Industrial Production (IIP), examine possibility of using chain base index, and suggest for base revision exercise in the context of international practices.

#### 2.2 Recommendations of Working Group

2.2.1 The working Group after detailed deliberation on various aspects included in the internationally recommended methodology and made several recommendations for the new series of all India IIP. They recommended 2011-12 as the new base year of IIP. Further, they recommended that status quo be maintained by defining the scope to cover, Mining, Manufacturing and Electricity in the new series keeping in view data availability. Further, they viewed that switching over to a new base year after every 5 years, would be preferred to the internationally recommended chain based approach.

2.2.2 Output approach was recommended (as opposed to value-added approach) by including physical output quantities and values of output. The hybrid method of using a mix of physical output quantities and value of output (deflated using WPI) was recommended by the Working Group in the new series. For items such as heavy machinery, capital goods, etc., it was recommended that value of 'Operating Work in Progress' should be collected in order to avoid spikes in reporting of these items and reduce volatility. Operating Work in progress/ value of production of capital goods will be

denoted by the expression “Value of Net Sales of Finished Goods” + [“Closing stock of work-in-progress (i.e. goods under manufacture)” – “Opening stock of work-in-progress”] + [“Closing inventory of unsold Finished Goods” – “Opening Stock of unsold Finished Goods”].

2.2.3 Value of output was recommended as the weight variable to compile the IIP at the product group level of the index. The Working Group recommended that the de-seasonalization of indices may be best left to the users themselves.

2.2.4 The report of the Working Group having all the recommendations, may be seen in the following link: [http://mospi.nic.in/sites/default/files/iip/Report\\_of\\_WG\\_on\\_IIP.pdf](http://mospi.nic.in/sites/default/files/iip/Report_of_WG_on_IIP.pdf)

### 2.3 Consultation with Source agencies for Data Collection

As per the recommendations of the Working Group, item basket and weighing diagram was prepared on the basis of ASI 2011-12. The details of item groups, their weights, and the list of factories were appraised to the source agencies. In consultation with source agencies, the item basket and factory list was finalized. Thereafter, the source agencies initiated collection of the production data since April 2011. Once data was collected and its regular flow was ensured, trial index was compiled after thorough validation.

### 2.4 Deliberations in the Standing Committee on Industrial Statistics

2.4.1 The trial index and its details were presented before the Standing Committee on Industrial Statistics (SCIS) headed by Prof. B. N. Goldar, former Professor, Institute of Economic Growth, Delhi University and represented by experts from stakeholder organizations and academics from various Universities.

2.4.2 The SCIS in its meeting held on 19<sup>th</sup> May 2016, observed that the subsidies given by the Government of India to the industry groups ‘Manufacture of Refined Petroleum’ and ‘Manufacture of chemical fertilizers’ should also be incorporated. In case of the industry group ‘Manufacture of chemical fertilizers’, it was found that subsidies were already included in the GVA data of the concerned industry as per ASI. Hence, no adjustment was

made for the industry group 'Manufacture of chemical fertilizers'. In case of the industry group 'Manufacture of Refined Petroleum', as the GVA data as per ASI did not include the subsidies, it was recommended to adjust the weighing diagram after adjusting the GVA with subsidies received by the industry group. Therefore, the weighing diagram was redrawn, and the trial index was revised as recommended by the Committee.

## **2.5 Ratification by the National Statistical Commission**

2.5.1 The trial index as recommended by the SCIS was placed before the National Statistical Commission in its 84<sup>th</sup> meeting held on 27-28 May, 2016. The Commission after detailed deliberation gave its concurrence for the new series of IIP with base 2011-12 with the suggestion to explain the differential treatment of subsidy in respect of refined petroleum and fertilizers in the metadata for IIP with base 2011-12, and to develop an automated online system to enhance system efficiency for quality and timeliness of IIP.

## **2.6 Approval of the Committee of Secretaries**

2.6.1 Thereafter, the Committee of Secretaries headed by the Cabinet Secretary and represented by Secretaries of all concerned Ministries/ Departments as members, discussed the new series of IIP with base 2011-12 in detail during its two meetings held on 9<sup>th</sup> December 2016 and 14<sup>th</sup> March 2017.

2.6.2 In these meetings, the concepts and definitions of IIP were deliberated upon. The common timelines to be adhered to by all source Ministries/ Departments/ Organizations for reporting of monthly production data was also discussed in the meeting. The Committee of Secretaries recommended that a periodic review mechanism should be put in place to take decisions on inclusion/ exclusion of items/ factories during the currency of the base year.

2.7 Once the trial index was ratified by the Committee of Secretaries, IIP with base year 2011-12 was launched through a press conference at National Media Centre, New Delhi on 12<sup>th</sup> May 2017.

# Chapter III

## METHODOLOGY

### 3.1 Selection of Base Year

Initially, 2009-10 was recommended as the base year for the new series of IIP and laid down detailed methodologies of item selection, computation of weights with 2009-10 as base year. However, later the WG took note of the fact that it was already decided that base year of the revised series of National Accounts would be 2011-12. Further the base year of new series of Consumer Price Indices (CPI) was already decided to be 2012 (calendar year). Since it is advisable to consider the same base for all macroeconomic aggregates, the WG recommended shifting the base year of IIP to 2011-12.

### 3.2 Selection of item basket

As per recommendation of the WG, the item basket for new series of IIP was selected from Annual Survey of Industries (ASI) data for 2011-12. To increase representativeness, the selection of items was done at NIC 3 digit level. The sector-wise item basket selection is as under:

(i) For selection of items in Manufacturing sector, value of output figures have been taken from Annual Survey of Industries (ASI) 2011-12 as per methodology recommended by the WG. The method ensures selection of a robust list of items such that the items selected in the basket cover at least 80 percent of the output of each manufacturing industry as per National Industrial Classification (NIC), 2008. Based on this, 809 items were identified. These items were grouped into 405 item groups after detailed consultation with the source agencies which were to provide monthly production data for these items on a regular basis. List of item groups are given in Annexure I.

(ii) For Mining sector, 29 minerals were identified by the Indian Bureau of Mines (IBM), using which a composite index for mining will be computed by IBM and

provided to CSO every month. In this context it may be noted that, subsequent to the notification of Mines and Minerals (Development and Regulation) Amendment Act, 2015 on 27<sup>th</sup> March 2015, all minor minerals have been excluded from the purview of the IIP item basket as they will now be under state subject and will no longer be monitored by IBM.

(iii) Electricity sector, as in the current series, will continue to be represented by a composite index, based on total electricity generation figure sourced from Central Electricity Authority (CEA) every month.

### **3.3 Selection of weights**

3.3.1 As per the methodology recommended by the Working Group, weights at the sectoral level for the new series of IIP have been computed using the sectoral Gross Value Added (GVA) figures from National Accounts Statistics with base 2011-12. The sectoral weights have been distributed at 2, 3 and 4 digit levels of National Industrial Classification (NIC), 2008 using GVA figures from ASI 2011-12. The weights at 4 digit level of NIC have been distributed at product level using value of output figures from ASI 2011-12. At the final level (i.e. 5 digit level of NIC), weights to items have been distributed on the basis of Gross Value of Output (GVO). The weights of selected items within an industry group are apportioned on the basis of the value of output.

3.3.2 In view of heavy subsidies involved in the industry group 'Manufacture of Refined Petroleum Products', weights for this group were calculated by incorporating the subsidies in the GVA. In case of 'Manufacture of chemical fertilisers' the subsidies were already accounted for in the calculation of GVA hence no adjustment was made in this industry group.

3.3.3 It may further be noted that the IIP in the new series monitor the registered manufacturing only as development of a separate index for the Micro, Small and Medium Enterprises (MSME) by the Ministry of MSME is in progress.

### 3.4 Selection of factories for data collection

3.3.1 The selection of factories for the new series of IIP was done on the basis of share of factories in the production of items selected in the basket in the Annual Survey of Industries (ASI) database for the year 2009-10 to 2012-13. As a result the frame of factories was significantly expanded. The frame suggested by CSO was further augmented by source agencies with their own frame of factories.

3.3.2 The frame of factories for Department of Industrial Policy and Promotion (DIPP) which is the most important source in terms of number of items as well as weights underwent a significant expansion in terms of coverage and robustness. The number of factories under DIPP's purview in the new series will be about 5600 as compared to 4300 in the current series. The number of factories reporting data for each item (except 12 items) will be at least 4 thereby reducing chances of exhibiting abnormal volatility during currency of the series after its launch. The 12 items for which number of factories are less than 4 have been retained in consultation with DIPP in view of their emerging nature and contribution at the industry level.

### 3.5 Computation of all-India IIP in new series

3.5.1 In accordance with the recommendations of UNSD, the Laspeyres index formula will be used for compilation of the IIP, in view of its simplicity from calculation point of view and ease of interpretation. Laspeyres fixed-base formula is expressed mathematically as follows:

$$L_t = \frac{\sum R_i W_{i0}}{\sum W_{i0}} * 100$$

where

$W_{i0}$  = Weight of the  $i^{\text{th}}$  item in the base year

$R_i$  = Production relative of the  $i^{\text{th}}$  item =  $P_{it}/P_{i0}$

$P_{it}$  = Production of the  $i^{\text{th}}$  item in the period t

$P_{i0}$  = Production of the  $i^{\text{th}}$  item in the base period

### **3.6 Frequency and Data revision of IIP**

3.6.1 The quick estimates all India IIP is released on a monthly basis with a time lag of 42 days. The quick estimates undergo first revision after one month and the same are released with quick estimates of the subsequent month. The data for a particular month is frozen after five months from the end of reference month. No further revisions to the data are allowed after the final revision. In case any revision is warranted due to certain development, a prior information alongwith reason is intimated in the website.

### **3.7 Use Based Categories in the new series**

3.7.1 The Use Based Categories have been reframed in the new series based on recommendations of the Working Group and a Task Group constituted for the purpose in MoSPI. The revised categories are illustrated as under with examples:

- i. Primary goods: Only such goods which are directly obtained from natural sources and used for further processing and consumption in manufacturing and power-generating activities. This category has been created to replace the existing category “Basic goods” since the latter suffered from definitional ambiguity and overlapping coverage with other categories such as “Intermediate goods”. E.g.: Ores and Minerals (incl. concentrates); Fuels (Diesel, Aviation Turbine Fuel, Kerosene, LPG, etc.) and Electricity.
- ii. Capital goods: Plants, machinery and goods used for further investments. E.g.: Boilers, Air & Gas Compressors, Engines including Internal Combustion and Diesel Engine, Tractors (complete), Transformers, Commercial Vehicles and all machineries like Textile Machinery, Printing Machinery etc.
- iii. Infrastructure/ construction goods: Finished goods which are primarily used in infrastructure industry or construction industry as an input. This category has been created to precisely categorise items which could not be classified under Consumer durables or Intermediate goods. E.g.: paints, cement, cables, bricks and tiles, rail materials, etc.

- iv. Intermediate goods: Any good/ product produced as incomplete product or which goes as input in production for further finishing or forming a part of a product. E.g.: Cotton yarn, Plywood, Steel Tubes/ Pipes, Fasteners, etc.
- v. Consumer durables: Products directly used by consumers and having a longer durability (more than 2/3 years). E.g.: Pressure Cooker, Air Conditioners, Tyres, Telephone and mobile instruments, TV Sets, Passenger cars, Two-wheelers (motorcycles/ scooters), Jewellery of gold, etc.
- vi. Consumer non-durables: Products that are directly used by consumers and can't be preserved for long periods. E.g.: Soyabean Oil, Full-cream/ Toned/ Skimmed milk, Milk Powder, Maida, Rice, Biscuits/ cookies, Sugar, Tea, Cigarettes, etc.

### **3.8 Classification in the new series of IIP**

3.8.1 The National Industrial Classification (NIC) is an indigenized version of the International Standard Industrial Classification (ISIC) developed by the United Nations Statistics Division (UNSD). Due to the rapid changes in the industrial structure of the country, it is necessary to undertake revisions of the industrial classification. NIC 2004 version used in IIP with base 2004-05 was based on ISIC version 3.1, while the NIC 2008 version adopted in the new series of IIP with base 2011-12 is based on the revised ISIC 4 version. Between the two versions of NIC, several changes in structure of classification has taken place, by merging/ splitting of existing industries and addition of new industries based on the new industrial pattern of the economy and new industries assuming significance. Accordingly, after the products in the new basket were mapped with the NIC version 2008 at 5 digit level, there are distinct changes in nomenclature and sequencing as compared to the item basket of 2004-05 series and their mapping with NIC 2003. More details on the changes brought about in NIC 2008 as compared to NIC 2004 may be found at the link: [http://mospi.nic.in/sites/default/files/main\\_menu/national\\_industrial\\_classification/nic\\_2008\\_17apr09.pdf](http://mospi.nic.in/sites/default/files/main_menu/national_industrial_classification/nic_2008_17apr09.pdf).

3.8.2 National Industrial Classification (NIC), 2008 based on International Standard Industrial Classification (ISIC), Rev. 4 of the United Nations Statistics Division (UNSD) has been used for classification purposes in the new series of all-India IIP.

### **3.9 Quality Assurance Framework**

3.9.1 The National Quality Assurance Frameworks (NQAF), 2012 of the United Nations Statistical Commission is followed. Proper mechanism is kept in place to meet the exhaustive quality assurance guidelines underlined in the NQAF. As a nodal Ministry under the Allocation of Business Rules, Ministry of Statistics & P.I. (MoSPI) coordinates the statistical system. All stakeholders including data providers and data users are involved. National Statistical Commission (NSC) and Standing Committee on Industrial Statistics (SCIS) set the statistical standards to be followed. Necessary institutional environment and statistical processes ensures several quality aspects namely, professional independence, impartiality, objectivity, transparency, statistical confidentiality & security, the quality commitment, adequacy of resources, cost-effectiveness, methodological soundness, soundness of implementation, and the respondent burden.

3.9.2 In this direction, the Working Group report which governs the methodology followed for IIP is made available in the website of the Ministry for awareness of users. Press releases made every month, are objective and non-partisan. Confidentiality of data is ensured till the IIP is released in public domain. Procedures set for periodic quality reviews, are followed to ensure quality commitments. Multistage quality checks by the source agencies and by MoSPI ensures accuracy & reliability. Use of administrative data collected by various source agencies ensures effective utilization of resources. Management of time lines set for data collection, validation, compilation, and dissemination as decided in consultation with source agencies enables to meet the timeliness & punctuality every month. To assure relevance of IIP, Users are consulted and their requirements are assessed. To enhance clarity, and accessibility, details about the new series of IIP with base year 2011-12, are made available in the public domain. Also, users can download its time series data in excel format. The metadata of IIP is updated periodically and also placed in public domain.

### 3.10 Deviations from International Recommendations

3.10.1 The Working Group on IIP examined in detail the International Recommendations for the Index of Industrial Production (IRIIP), 2010 (<https://unstats.un.org/unsd/statcom/doc10/BG-IndustrialStats.pdf>) and aligned the methodology of compilation of IIP with the same in all aspects barring the scope and compilation of chain based index on account of the following reasons:

- (i) **Scope:** UNSD recommends inclusion of Mining & Quarrying; Manufacturing; Electricity, Gas steam and Air-conditioning supply; as well as Water supply, Sewerage, Waste management and Remediation activities. Due to constraints of the data availability on monthly basis, scope of the all-India IIP with base 2011-12 is limited to Mining, Manufacturing and Electricity sectors only.
- (ii) **Chain-base index:** The Working Group on IIP took note of the fact that there will be problems in updation of weights every time the code structure of industry is revised, which generally happens every 5 years. Hence, fixed base approach was advised by sticking to timeline of revision of weights at the time of base year revision every 5 years.

### 3.11 Periodic Review

3.11.1 A high level Technical Review Committee (TRC) for all-India IIP has been constituted to continuously monitor and suggest improvements in coverage of items and factories during currency of the new base year. The TRC is chaired by the Secretary, M/o Statistics and Programme Implementation. Secretary, Department of Industrial Policy and Promotion and the Chief Economic Adviser to the Government of India are the members of the TRC. The TRC will perform the following functions:

- i. Review periodically the list of products in the item basket of IIP and suggest methodology for inclusion of new important items and exclusion of no longer representative items from the existing basket;

- ii. Review periodically the panel of factories/ establishments for compilation of IIP and suggest methodology for including new representative units that emerge along with suggesting methodology for adjustment of back series;
- iii. Consider cases of closed units during the currency of the base year and recommend the methodology for replacing such units by new ones;
- iv. Review periodically the items in the item basket that exhibit extraordinarily high increase/ decline in index during the currency of a fixed base year and propose normalization methods; and
- v. Recommend appropriate technological interventions to improve coverage, quality and timeliness of the IIP.
- vi. Recommend appropriate technological interventions to improve coverage, quality and timeliness of the IIP.

## Chapter IV

### DATA COLLECTION

#### 4.1 Data collection from sources

4.1.1 Data for compilation of IIP in new series is sourced from 14 source agencies in various Ministries/Departments. Each of the source agencies based on their administrative domain, collect the production data of the concerned list of item groups, and provide the same to Economic Statistics Division, CSO after due validation. The details of source agencies and broad subject of data collection is given below:

S. No.	Source Agency	Broad Category of Items	No. of items
1	Indian Bureau of Mines, Ministry of Mines	Mining products	1
2	Central Electricity Authority, Ministry of Power	Electricity	1
3	Coffee Board, Ministry of Commerce and Industry	Instant Coffee	1
4	Office of the Jute Commissioner, Ministry of Steel	Jute items	1
5	Ministry of Railways	Railway running stock and parts	3
6	Tea Board, Ministry of Commerce and Industry	Tea	1
7	Office of the Coal Controller, Ministry of Coal	Hard Coke	1
8	Department of Fertilizers, Ministry of Chemicals & Fertilizers	Chemical Fertilizers	4
9	Directorate of Sugar & Vegetable Oils, Ministry of Consumer Affairs, Food and Public Distribution	Sugar	1
		Edible vegetable oils	10
10	Office of the Textile Commissioner, Ministry of Commerce and Industry	Textile products	7
11	Department of Chemicals & Petrochemicals, Ministry of Chemicals & Fertilizers	Chemicals & Petrochemicals	27
12	Joint Plant Committee, Ministry of Steel	Steel	18
13	Ministry of Petroleum & Natural Gas	Petroleum Refinery products	9
14	Department of Industrial Policy & Promotion, Ministry of Commerce and Industry	All other items	322
<b>Total</b>			<b>407</b>

4.1.2 Source agencies provide the monthly data in prescribed format as per Annexure II. Every month, 1276 records are received from source agencies. This includes data for the

three months (quick estimate, first revision and final revision), Wholesale Price Indices to be used as deflators, as well as information on number of units responding and volume of estimation. The total size of the data received every month is approximately 7 MB.

## **4.2 Data collected in terms of value and Use of Price Deflators**

4.2.1 In the new series, data for 109 item groups (weight: 19.22%) is collected in value terms. Many of these item groups have production span of generally more than one month for which data is reported on '*work in progress*'. This helps to avoid sudden jumps if the data were collected in quantity terms. The value data reported for such items need to be deflated using an appropriate price deflator.

4.2.2 In absence of a Producers' Price Index in India, the Working Group recommended using Wholesale Price Index (WPI) for deflating value based items in the new series of IIP. Accordingly WPI with base 2011-12 has been used to deflate the value based items in order to compute indices and growth rates.

## CHAPTER V

### VALIDATION CHECKS & INDEX COMPILATION

5.1 **Validation by Sources:** Validation of data received is made at two stages. At the first stage, the source agencies on receipt of data from establishments, validate the data quality. Most of the source agencies carryout the data validation checks through the web based system. Source agencies treat the non-response by imputing as per the following techniques as recommended by CSO:

- (i) Using previous month's production figure of the particular unit.
- (ii) Using previous year same month's production figure of the particular unit.
- (iii) Using average of the last 3 months' production figures of the particular unit.
- (iv) Average month-on-month percentage change for last 5 years
- (v) Previous month's data (seasonal factor for current month / seasonal factor for previous month)
- (vi) Month-to-month growth of previous year on previous month's figure

#### 5.2 Validation before compilation

5.2.1 After data validation, all source agencies provide their data to Economic Statistics Division, CSO by e-mail with a time lag of 35 days from the end of the reference month. The second stage of validation exercise is conducted by the Economic Statistics Division. Under validation checks, variation statements are prepared vis-à-vis previous month, previous year same month, and variation in respect to the first revised production and final revised production.

5.2.2 Using the variation limit criteria as recommended by Working Group, following are examined: (i) 30% variation for year on year production data for quick estimate, (ii) 20% variation for (a) quick estimate against previous month's first revised estimate; (b) previous month's first revised estimate against its quick estimate, and (iii) 10% variation

for the final revised estimate against its first revised estimate. The item groups for which the production data exceed the aforesaid limits of variation, are tabulated and sent to concerned source agencies for seeking verification alongwith specific reason (if any) of high variability, by next day.

5.2.3 Apart from the above, the item groups whose production for the reference month fall below the minimum production in the last 12 months or rise above the maximum production of last 12 months are referred back to the source agencies for confirmation. Source agencies send their confirmation by return mail.

**5.3 Response Rates:** In addition to the validation checks, item-wise factory response rate pattern are also analysed based on weighted response rate. The weighted response rate; unit wise and production wise are prepared using the formula given below:

$$\frac{\sum w_i * p_i}{\sum w_i}$$

In order to enhance the data response from factories, based on the response rate pattern, source agencies follow-up with non-responding factories and the factories showing delayed response. The matter is deliberated in the meeting with source agencies by CSO periodically.

**5.4 Index Calculation:** After data validation, index is compiled. Under the methodology, the index is compiled in a bottom-up approach. First, the production relatives of item groups are computed. Thereafter, using the using Laspeyres' formula, index is computed after aggregating with respect to corresponding weight at 5-digit, 4-digit, 3 digit, 2 digit level of NIC-08. The index at 2 digit level is also aggregated to arrive at indices at sectoral level and finally the General Index.

5.4.1 Apart from the above the item groups of IIP are also categorized into Used based category (UBC) where the UBC-wise indices are also computed using the production relatives of item groups.

**5.5 Validation after Compilation:** After compilation of indices, contribution of each item group is calculated using the formula:

$$=W_i * (I_{i(t)} - I_{i(t-12)}) / I_{(t-12)}$$

where,  $w_i$  is the weight of the  $i^{\text{th}}$  item,  
 $t$  is the current reference month,  
 $I_{i(t)}$  index of the  $i^{\text{th}}$  item at time  $t$ ,  
 $I_{(t-12)}$  is the overall index at time  $t-12$ .

5.5.1 The production of top twenty positive as well as top twenty negative contributors (item groups) is sent to the respective source agencies for confirmation. On their confirmation, various reports are produced. At the same time, compiled indices as well as data are thoroughly checked at various levels in CSO before finalizing the same for press release.

## CHAPTER VI

### DISSEMINATION

6.1 On approval of the competent authority, all India IIP is released every month as Quick Estimate with a time lag of 42 days every month at 5.30 PM on 12th (or previous working day, if 12th is holiday) through Press Information Bureau as well as on the Ministry's website. The press statement includes indices and growth rates at the sectoral level, at NIC 2-digit level and as per the new Use-Based classification. Also the time series of indices are accessible and downloadable in excel format from the Ministry's website. (Link: <http://mospi.nic.in/iip-2011-12-series> )

6.2 With regard to the presentation and dissemination of indices, following are followed as per the international recommendation:

1. Index numbers rather than monetary values is used to present industrial production volume measures.
2. Index numbers are presented till one decimal place.
3. Long and coherent time series are provided to users.
3. Those product groups or industries that are primarily responsible for the monthly movement in the IIP are presented to users.
5. Data are made available to all users outside the government at the same time.
6. Consistent presentation and reporting practices over time.
7. Weights by industry are made available to users.
8. Data is accompanied by the methodological explanation and advice.

6.3 As per the international recommendations, the press release use to be the first publication containing newly available IIP data to ensure that every citizen access data under equal terms. Further, following the recommendations and given the high level of market and community interest in IIP, it has been decided with the approval of Secretary, MoSPI that the Ministry of Finance, an apex government organisation dealing with the economic policies, receive the data an hour ahead of the official release to allow them the

time to undertake analysis and to develop a briefing to be provided to relevant Ministers after lifting of the embargo. M/o Finance are then able to respond in an informed manner to requests for early comment on the released IIP from the media, thereby avoiding any inadvertent misinterpretation.

6.4 Item group level data of IIP is provided to source Ministries, RBI, M/o Finance and other users on request as per the dissemination policy for IIP available in the website of MoSPI.

6.5 Nodal Office: The Economic Statistics Division of the Central Statistics Office headed by Additional Director General is the nodal office for compilation and dissemination of all India IIP. The office is situated at Level 4, East Block – 6, R. K. Puram, New Delhi – 110066 (E-mail: [iipcsso@nic.in](mailto:iipcsso@nic.in)).

\*\*\*\*\*

**Annexure – I**

**Item groups and their weights in IIP with base year 2011-12**

<b>S. No.</b>	<b>NIC 2008 5-digit</b>	<b>Item groups</b>	<b>Unit</b>	<b>Use-based classification</b>	<b>Weights (in %)</b>
1	05000	Mining Index		Primary goods	13.3725
2	10101	Meat of goat, fresh or chilled	Tonnes	Consumer non-durables	0.0202
3	10102	Buffalo Meat - Fresh, chilled or frozen, whether or not canned	Tonnes	Consumer non-durables	0.0519
4	10104	Poultry meat - Dressed & Frozen, whether or not canned	Tonnes	Consumer non-durables	0.0037
5	10204	Shrimps / Prawns - Processed/Frozen	Tonnes	Consumer non-durables	0.0244
6	10205	Fish meat and fillets, chilled/frozen	Tonnes	Consumer non-durables	0.0407
7	10205	Fish-Whole, Chilled/Frozen	Tonnes	Consumer non-durables	0.0289
8	10209	Other meats of crustacean/ molluscs and seafood	Tonnes	Consumer non-durables	0.0031
9	10302	Honey, artificially preserved	Tonnes	Consumer non-durables	0.0122
10	10304	Fruit Juice including concentrates	K.Litre.	Consumer non-durables	0.0399
11	10304	Fruit Pulp (especially of mango & orange)	Tonnes	Intermediate goods	0.0109
12	10305	Jams, jellies, marmalades and puree	Tonnes	Consumer non-durables	0.0240
13	10306	Pickles/Sauces	Tonnes	Consumer non-durables	0.0258
14	10308	Prepared meals based on vegetables	Tonnes	Consumer non-durables	0.0106
15	10401	Vanaspati and other vegetable oils & fats	Metric Tonnes	Consumer non-durables	0.2234
16	10402	Castor seed oil	Metric Tonnes	Consumer non-durables	0.0129
17	10402	Coconut Oil	Metric Tonnes	Consumer non-durables	0.0153
18	10402	Cottonseed Oil	Metric Tonnes	Consumer non-durables	0.0181
19	10402	Groundnut Oil	Metric Tonnes	Consumer non-durables	0.0314
20	10402	Mustard & Rapeseed Oil	Metric Tonnes	Consumer non-durables	0.0968
21	10402	Palm Oil refined (including Palmolein)	Tonnes	Consumer non-durables	0.2013
22	10402	Soyabean Oil	Metric Tonnes	Consumer non-durables	0.1856
23	10402	Sunflower Oil	Metric Tonnes	Consumer non-durables	0.0746

S. No.	NIC 2008 5-digit	Item groups	Unit	Use-based classification	Weights (in %)
24	10406	Oilseed cakes (oilcakes)	Metric Tonnes	Consumer non-durables	0.1089
25	10501	Full-cream/ Toned/ Skimmed milk, whether or not chilled	Th. Kilo Liters	Consumer non-durables	0.4206
26	10502	Milk powder	Tonnes	Consumer non-durables	0.0478
27	10504	Butter	Tonnes	Consumer non-durables	0.0370
28	10504	Ghee	Tonnes	Consumer non-durables	0.0315
29	10505	Ice cream	K.Litre.	Consumer non-durables	0.0357
30	10611	Maida	Th.Tonnes	Consumer non-durables	0.0944
31	10611	Wheat bran	Tonnes	Consumer non-durables	0.0176
32	10611	Wheat flour (atta)	Th.Tonnes	Consumer non-durables	0.1110
33	10612	Basmati rice	Tonnes	Consumer non-durables	0.1980
34	10612	Rice (excluding basmati)	Tonnes	Consumer non-durables	0.4549
35	10613	Dal, milled	Tonnes	Consumer non-durables	0.0992
36	10614	Gram powder (besan)	Tonnes	Consumer non-durables	0.1551
37	10614	Rawa(sooji)	Tonnes	Consumer non-durables	0.0125
38	10621	Maize starch	Tonnes	Consumer non-durables	0.0911
39	10711	Bread, buns & croissant	Tonnes	Consumer non-durables	0.0301
40	10712	Biscuits/ cookies	Tonnes	Consumer non-durables	0.1475
41	10712	Cakes, pastries & muffins	Tonnes	Consumer non-durables	0.0212
42	10721	Sugar	M. T.	Consumer non-durables	0.7563
43	10728	Bagasse	Th.Tonnes	Intermediate goods	0.0193
44	10728	Molasses	Th.Tonnes	Intermediate goods	0.0328
45	10732	Chocolate & cocoa powder	Tonnes	Consumer non-durables	0.0973
46	10734	Sweetmeat & sugar confectionary	Tonnes	Consumer non-durables	0.0978
47	10740	Instant food (ready to eat)	Tonnes	Consumer non-durables	0.1041
48	10791	Tea	M. Kgs	Consumer non-durables	0.2951
49	10792	Coffee, instant	MT	Consumer non-durables	0.0404
50	10793	Shelled cashew kernel, whether or not processed/ roasted/ salted	Tonnes	Consumer non-durables	0.1807
51	10795	Spices (including mixed spices)	Tonnes	Consumer non-durables	0.1096
52	10798	Iodized Salt	Th Tonnes	Consumer non-durables	0.0193
53	10801	Husk/ grain based animal feed	Th.Tonnes	Consumer non-durables	0.2118
54	10802	Fishmeal for poultry/ aqua feeds	Tonnes	Consumer non-durables	0.0684
55	11011	Spirits (Distilled alcoholic liqueurs)- whisky, gin, rum, vodka, etc.	K.Litre.	Consumer non-durables	0.1412
56	11012	Toddy (or taddy) and other country liquors	K.Litre.	Consumer non-durables	0.1468
57	11019	Rectified Spirit	K.Litre.	Intermediate goods	0.0737
58	11020	Wines	K.Litre.	Consumer non-durables	0.0387

S. No.	NIC 2008 5-digit	Item groups	Unit	Use-based classification	Weights (in %)
59	11031	Beer & other undistilled and fermented alcoholic liqueurs other than wines	Th. Kilo Liters	Consumer non-durables	0.3740
60	11043	Bottled water	Th. Kilo Liters	Consumer non-durables	0.0130
61	11045	Aerated drinks/ soft drinks (incl. soft drink concentrates)	Th. Kilo Liters	Consumer non-durables	0.2480
62	12002	Bidi	Lakh Nos.	Consumer non-durables	0.2687
63	12003	Cigarettes	Mill.Nos.	Consumer non-durables	0.2890
64	12009	Other tobacco products	Rs.Crore	Consumer non-durables	0.2408
65	13111	Cotton Yarn including hosiery yarn (grey/unbleached, bleached, dyed, or otherwise processed)	Mn. Kg	Intermediate goods	0.8428
66	13114	Other blended spun yarn	Mn. Kg	Intermediate goods	0.1234
67	13114	Polyester spun yarn	Mn. Kg	Intermediate goods	0.0817
68	13114	Rayon / Viscose blended Spun Yarn	Mn. Kg	Intermediate goods	0.3045
69	13119	Jute sacking cloth/ Hessian fabric	Th Tonnes	Intermediate goods	0.0718
70	13121	Cotton woven fabric	Th. Run Mt	Intermediate goods	0.7231
71	13134	Acrylic Yarn	Mn. Kg	Intermediate goods	0.0369
72	13134	Polyester/Viscose blended fabric	Th. Run Mt	Intermediate goods	0.0952
73	13134	Texturised man-made filament yarn	Mn. Kg	Intermediate goods	0.3932
74	13911	Knitted fabrics of cotton	Tonnes	Intermediate goods	0.1343
75	13921	Bed linen/ bedspread and curtains	Rs.Crore	Consumer durables	0.0909
76	13921	Made-up articles of textile materials other than bed-linen/ bed spreads/ curtains	Rs.Crore	Consumer durables	0.0258
77	13924	Quilts	Numbers	Consumer durables	0.0463
78	13926	Blankets	Rs.Crore	Consumer durables	0.0109
79	13929	Terry towels	Tonnes	Consumer durables	0.0631
80	13931	Carpets and other floor coverings of textiles	Th.Sq.Mtrs	Consumer durables	0.0586
81	13944	Nylon rope	Tonnes	Consumer durables	0.0791
82	13992	Narrow fabrics, ornamental trimmings and silk embroidery	Tonnes	Intermediate goods	0.1097
83	14101	Readymade Garments, not knitted	Rs.Crore	Consumer durables	1.0111
84	14104	Leather garments	Rs.Crore	Consumer durables	0.0375
85	14309	Readymade Garments, knitted	Rs.Crore	Consumer durables	0.2258
86	14309	Underwears, socks and other hosiery products	Rs.Crore	Consumer durables	0.0481

S. No.	NIC 2008 5-digit	Item groups	Unit	Use-based classification	Weights (in %)
87	15112	Tanned / dressed leather - Veg or Chrome tanned	Rs.Crore	Intermediate goods	0.0655
88	15121	Travel goods, handbags, office bags, etc.	Rs.Crore	Consumer durables	0.0813
89	15209	Footwear - all types	Th.Pairs	Consumer durables	0.3553
90	16101	Timber Sawn, Wooden Planks	Cubic Meter	Intermediate goods	0.0148
91	16211	Lamination wooden sheets/ Veneer sheets	Th.Sq.Mtrs	Intermediate goods	0.0087
92	16211	Plywood block boards	Th.Sq.Mtrs	Intermediate goods	0.0979
93	16212	Particle Boards	Th.Sq.Mtrs	Intermediate goods	0.0071
94	16229	Handicraft/ decorative fancy items of wood	Rs.Crore	Consumer durables	0.0114
95	16231	Wooden box (incl. Packing box)	Rs.Crore	Intermediate goods	0.0531
96	17012	Newsprint	Tonnes	Intermediate goods	0.3884
97	17029	Paper products (incl. cardboard/ corrugated boxes, rolls, boards, tubes and sleeves, etc.)	Rs.Crore	Consumer non-durables	0.2313
98	17093	Paper of all kinds excluding newsprint	Th.Tonnes	Consumer non-durables	0.2527
99	18111	Newspapers	Lakh Nos.	Consumer non-durables	0.2215
100	18112	Journals/ periodicals	Rs.Crore	Consumer non-durables	0.0143
101	18112	Printed Books (incl. Manuals, reports, brochures, catalogs, etc.)	Rs.Crore	Consumer durables	0.2303
102	18112	Printed forms/ schedules/ paper leaflets	Rs.Crore	Consumer non-durables	0.0239
103	18112	Printed labels/ posters/ calendars	Rs.Crore	Consumer non-durables	0.1749
104	18200	Digital media for electronic media players	Th.Nos.	Consumer durables	0.0150
105	19101	Hard coke	Th Tonnes	Primary goods	0.4853
106	19201	Aviation Turbine Fuel (ATF)	TMT	Primary goods	0.7781
107	19201	Diesel	TMT	Primary goods	5.7130
108	19201	Furnace oil	TMT	Primary goods	0.5785
109	19201	Kerosene	TMT	Primary goods	0.2933
110	19201	Liquefied Petroleum Gas (LPG)	TMT	Primary goods	0.8437
111	19201	Naphtha	TMT	Intermediate goods	1.1511
112	19201	Petrol/ motor spirit	TMT	Primary goods	1.6599
113	19209	Bitumen	TMT	Primary goods	0.1743
114	19209	PET coke	TMT	Primary goods	0.0977
115	20111	Oxygen	Th.Cu.Mtrs	Intermediate goods	0.0423
116	20112	Acetic Acid	MT	Intermediate goods	0.0191
117	20112	Phosphoric acid	Tonnes	Intermediate goods	0.0157

S. No.	NIC 2008 5-digit	Item groups	Unit	Use-based classification	Weights (in %)
118	20112	Purified Terephthalic Acid (PTA)	MT	Intermediate goods	0.3512
119	20112	Sulphuric Acid	Th.Tonnes	Intermediate goods	0.0479
120	20114	Dyes and pigments	MT	Intermediate goods	0.2355
121	20115	ABS resin	MT	Intermediate goods	0.0188
122	20116	Calcium Carbonate	MT	Intermediate goods	0.0572
123	20116	Caustic soda (sodium hydroxide)	MT	Intermediate goods	0.1638
124	20116	Ethyl acetate	MT	Intermediate goods	0.0571
125	20116	Isopropyl alcohol	MT	Intermediate goods	0.0178
126	20116	Monoethylene glycol, MEG	MT	Intermediate goods	0.0413
127	20116	Soda ash/ washing soda	MT	Intermediate goods	0.1200
128	20116	Titanium dioxide	MT	Intermediate goods	0.0362
129	20116	Zinc sulphate	Tonnes	Intermediate goods	0.0150
130	20118	Aromatic Chemicals	Tonnes	Intermediate goods	0.0806
131	20119	Aniline	MT	Intermediate goods	0.0154
132	20119	Butadiene	MT	Intermediate goods	0.0335
133	20119	Catalyst, chemical	Tonnes	Intermediate goods	0.0415
134	20119	Expandable Polystyrene , EPS (thermocol)	MT	Intermediate goods	0.0521
135	20119	Fatty Acid	Tonnes	Intermediate goods	0.0254
136	20119	Linear Alkyl Benzene	MT	Intermediate goods	0.0563
137	20119	Liquid chlorine	MT	Intermediate goods	0.0595
138	20119	Phthalic anhydride, PAN	MT	Intermediate goods	0.0353
139	20119	Polyol	MT	Intermediate goods	0.0636
140	20119	Sodium Silicate	Tonnes	Intermediate goods	0.0204
141	20121	Urea	Th Tonnes	Primary goods	0.5590
142	20122	NPK fertilizers	Th Tonnes	Primary goods	0.3897
143	20123	Ammonia	Th.Tonnes	Intermediate goods	0.2101
144	20123	Ammonium nitrate	Tonnes	Intermediate goods	0.0118
145	20123	Ammonium sulphate	Tonnes	Intermediate goods	0.0261
146	20123	Formaldehyde	MT	Intermediate goods	0.0121
147	20123	Nitric Acid	Tonnes	Intermediate goods	0.0181
148	20129	Diammonium Phosphate (DAP)	Th Tonnes	Primary goods	0.0761
149	20129	Superphosphate	Th Tonnes	Primary goods	0.0332
150	20131	Polyester chips or Polyethylene terephthalate(PET) chips	MT	Intermediate goods	0.1108
151	20131	Polymers (incl. Polyethylene, PVC, Poly propylene)	MT	Intermediate goods	0.5954
152	20131	PTFE (TEFLON)	MT	Intermediate goods	0.0244
153	20132	Caprolactam	MT	Intermediate goods	0.0457

S. No.	NIC 2008 5-digit	Item groups	Unit	Use-based classification	Weights (in %)
154	20132	Synthetic rubber (incl. PBR, SBR)	MT	Intermediate goods	0.0295
155	20211	Detergent powder and washing powder	Th.Tonnes	Consumer non-durables	0.2578
156	20211	Pesticides-technical grade	MT	Intermediate goods	0.2116
157	20221	Paints (all types)	Tonnes	Infrastructure/ construction goods	0.3874
158	20221	Varnish (all types)	Tonnes	Intermediate goods	0.0209
159	20223	Printing ink	Tonnes	Intermediate goods	0.0795
160	20229	Thinner	Tonnes	Intermediate goods	0.0110
161	20231	Toilet soap (excl. baby soap)- incl. liquid soap and foam	Tonnes	Consumer non-durables	0.6078
162	20232	Organic surface active agents/ surfactants, except soap (incl. dishwashing soaps, wetting and cleansing agents)	Tonnes	Consumer non-durables	0.1378
163	20233	Detergent cake, washing soap cake/ bar	Tonnes	Consumer non-durables	0.4607
164	20235	Tooth paste	Tonnes	Consumer non-durables	0.3223
165	20236	Hair dye	Tonnes	Consumer non-durables	0.0468
166	20236	Hair oil	Tonnes	Consumer non-durables	0.0556
167	20236	Hair shampoo	Tonnes	Consumer non-durables	0.0929
168	20237	Creams and lotions for topical application	Tonnes	Consumer non-durables	0.1255
169	20238	Agarbatti	Rs.Crore	Consumer non-durables	0.1706
170	20291	Safety matches (match box)	Lackh Boxes	Consumer non-durables	0.0638
171	20292	Fire works/pyrotechnic articles	Tonnes	Consumer non-durables	0.0366
172	20292	Gun powder, detonators/ prepared explosives	Tonnes	Intermediate goods	0.0397
173	20293	Fragrances & Oil essentials	Rs.Lakhs	Intermediate goods	0.1967
174	20295	Adhesive formulations other than natural gum	Tonnes	Intermediate goods	0.3985
175	20295	Gelatin	Tonnes	Intermediate goods	0.0233
176	20297	Methanol	MT	Intermediate goods	0.0291
177	20299	Hydrogen Peroxide	MT	Intermediate goods	0.0500
178	20299	Mosquito coil	Tonnes	Consumer non-durables	0.0215
179	20302	Man-made fibres (incl. Viscose and Artificial Fibres)	MT	Intermediate goods	0.1614
180	21001	API & formulations of vitamins	Rs.Crore	Consumer non-durables	0.8530
181	21002	Antibiotics, API & formulations	Rs.Crore	Consumer non-durables	0.4342
182	21002	Anti-cancer drugs for chemotherapy (e.g. Etoposide, Epirubicin, etc.)	Rs.Crore	Consumer non-durables	0.0796

S. No.	NIC 2008 5-digit	Item groups	Unit	Use-based classification	Weights (in %)
183	21002	Antidiabetic drugs excl. Insulin (Metformin, Pioglitazone, Glimepiride, etc.)	Rs.Crore	Consumer non-durables	0.1166
184	21002	Anti-histamine, antisthine, anthisian, antitussive (codeine etc) prep.	Rs.Crore	Consumer non-durables	0.1354
185	21002	Anti-malarial drugs	Rs.Crore	Consumer non-durables	0.2691
186	21002	Anti-psychotic drugs (e.g. Olanzapine )	Rs.Crore	Consumer non-durables	0.0896
187	21002	Anti-pyretic, analgesic/anti-inflammatory API & formulations	Rs.Crore	Consumer non-durables	0.4457
188	21002	Anti-retroviral drugs for HIV treatment	Rs.Crore	Consumer non-durables	0.0508
189	21002	Antiseptics and disinfectants (e.g. Povidone iodine, butadiene)	Rs.Crore	Consumer non-durables	0.0413
190	21002	Anti-tuberculosis medicines (e.g. Ethambutol, Rifampicin, Isoniazid, Pyrazinamide, etc.)	Rs.Crore	Consumer non-durables	0.0164
191	21002	API & formulations of hypo-lipidemic agents incl. anti-hyper-triglyceridemics (e.g. simvastatin, atorvastatin, etc); anti-hypertensive	Rs.Crore	Consumer non-durables	0.3065
192	21002	Capsules	Rs.Crore	Consumer non-durables	0.0730
193	21002	Digestive enzymes and antacids (incl. PPI drugs)	Rs.Crore	Consumer non-durables	0.2200
194	21002	IV fluids	Rs.Crore	Consumer non-durables	0.0769
195	21002	Steroids and hormonal preparations (including anti-fungal preparations)	Rs.Crore	Consumer non-durables	0.7167
196	21004	Ayurvedic and Homeopathic medicaments	Rs.Crore	Consumer non-durables	0.2268
197	21005	Vaccine for veterinary medicine	Rs.Crore	Consumer non-durables	0.4530
198	21006	Medical/ surgical accessories	Rs.Crore	Consumer non-durables	0.3481
199	21009	Medicated shampoos	Rs.Crore	Consumer non-durables	0.0283
200	22111	Tractor tyres	Th.Nos.	Capital goods	0.0833
201	22111	Tubes for Light Motor Vehicles (LMV) tyres	Th.Nos.	Intermediate goods	0.0282
202	22111	Tyres & tubes for Heavy Motor Vehicles (HMV) and trailers (incl. tubeless solid tyres)	Th.Nos.	Capital goods	0.2973

S. No.	NIC 2008 5-digit	Item groups	Unit	Use-based classification	Weights (in %)
203	22111	Tyres for Light Motor Vehicles (LMV)	Th.Nos.	Consumer durables	0.0934
204	22111	Tyres for Scooter/ Motorcycle/ 3-wheelers	Th.Nos.	Consumer durables	0.0468
205	22112	Tubes for Bicycle/ Tricycle/ Rickshaw tyres	Th.Nos.	Intermediate goods	0.0137
206	22112	Tyres for Bicycle/ Tricycle/ Rickshaw	Th.Nos.	Consumer durables	0.0282
207	22113	Rubber tread	Tonnes	Intermediate goods	0.0430
208	22191	Rubber cloth/ sheet	Tonnes	Consumer durables	0.0189
209	22192	V belt and Rubber Conveyor	Rs.Crore	Capital goods	0.0887
210	22193	Condoms	Lakh Nos.	Consumer non-durables	0.0226
211	22199	Articles of Processed/ vulcanised rubber other than apparel & clothing accessories	Rs.Crore	Intermediate goods	0.0628
212	22199	Compound rubber for rubber-dipped fabrics	Tonnes	Intermediate goods	0.0675
213	22199	Rubber crumb	Tonnes	Intermediate goods	0.0555
214	22201	Acrylic sheets (including PVC, polystyrene / polycarbonate and other plastic sheets)	Tonnes	Intermediate goods	0.0308
215	22201	Films of polythene, polyester, PVC & other forms of plastic	Tonnes	Intermediate goods	0.3787
216	22201	Plastic tarpaulin	Tonnes	Consumer durables	0.0193
217	22203	Bags/ pouches of HDPE/ LDPE (plastic)	Tonnes	Consumer durables	0.3417
218	22203	Plastic components of packing/ closing/ bottling articles & of electrical fittings	Rs.Crore	Intermediate goods	0.2583
219	22203	Plastic jars, bottles and containers	Th.Nos.	Consumer durables	0.2487
220	22203	Sacks of plastic/ woven HDPE	Th.Nos.	Consumer durables	0.0297
221	22204	PVC fittings & other accessories	Tonnes	Consumer durables	0.0486
222	22207	Pipes, tubes & conduits of plastic/ PVC	Tonnes	Infrastructure/ construction goods	0.0655
223	22209	Plastic furniture	Rs.Crore	Consumer durables	0.0203
224	22209	Thermoforming products of plastic	Tonnes	Consumer durables	0.0307
225	23101	Sheet glass	Th.Sq.Mtrs	Intermediate goods	0.0415
226	23102	Fibre glass	Tonnes	Intermediate goods	0.0233
227	23106	Glass bangles	Rs.Crore	Consumer non-durables	0.0076
228	23109	Glassware	Rs.Crore	Consumer durables	0.2441
229	23921	Bricks & tiles (non ceramic)	Tonnes	Infrastructure/ construction goods	0.1935

S. No.	NIC 2008 5-digit	Item groups	Unit	Use-based classification	Weights (in %)
230	23934	Electrical Insulators/ insulating fillings of ceramics/ porcelain	Tonnes	Intermediate goods	0.0209
231	23939	Ceramic tiles, flagstones & bricks	Th.Tonnes	Infrastructure/ construction goods	0.1636
232	23941	Cement Clinkers	Th.Tonnes	Infrastructure/ construction goods	0.5087
233	23942	Cement- all types	Th. Tonnes	Infrastructure/ construction goods	2.1631
234	23954	Pre-fabricated Concrete blocks (including RMC)	Th.Tonnes	Infrastructure/ construction goods	0.2985
235	23960	Marble slab polished or not	Th.Sq.Mtrs	Infrastructure/ construction goods	0.0599
236	23960	Polished granite	Th. Sq. Feet	Infrastructure/ construction goods	0.0789
237	23960	Stone chips	Th.Tonnes	Infrastructure/ construction goods	0.0973
238	23993	Abrasive grains/ products for grinding	Rs.Crore	Intermediate goods	0.0410
239	23999	Corrugated sheets of asbestos	Th.Tonnes	Infrastructure/ construction goods	0.1435
240	24101	Pig iron	Th Tonnes	Intermediate goods	0.3978
241	24102	Sponge Iron/ DRI	Th Tonnes	Intermediate goods	0.4036
242	24104	Ferrochrome	Th Tonnes	Intermediate goods	0.0770
243	24104	Other ferro alloys (except ferrochrome)	Th Tonnes	Intermediate goods	0.1489
244	24105	HR coils and sheets of mild steel	Th Tonnes	Infrastructure/ construction goods	1.3487
245	24105	HR plates of mild steel	Th Tonnes	Infrastructure/ construction goods	0.8350
246	24105	CR Coils & Sheets	Th Tonnes	Infrastructure/ construction goods	0.6808
247	24107	Rail and rail materials	Th Tonnes	Infrastructure/ construction goods	0.1175
248	24109	MS blooms/ billets/ ingots/ pencil ingots	Th Tonnes	Intermediate goods	0.9497
249	24109	MS slabs	Th Tonnes	Intermediate goods	0.8438
250	24109	Steel Structurals (including angles, shapes, sections, etc.)	Th Tonnes	Infrastructure/ construction goods	0.7895
251	24109	Billets/blooms/ingots/pencil ingots/slabs of Alloy and Stainless Steel	Th Tonnes	Intermediate goods	0.4805
252	24109	Bars and Rods of Mild steel	Th Tonnes	Infrastructure/ construction goods	1.3519
253	24109	Flat products of Alloy Steel	Th Tonnes	Infrastructure/ construction goods	0.2831

S. No.	NIC 2008 5-digit	Item groups	Unit	Use-based classification	Weights (in %)
254	24109	Bars and Rods of Alloy and Stainless Steel	Th Tonnes	Infrastructure/ construction goods	0.5666
255	24109	Flat products of Stainless Steel	Th Tonnes	Infrastructure/ construction goods	0.1134
256	24109	Galvanised products of Steel (including colour coated, tin plates, TMBP and Tin free steel)	Th Tonnes	Infrastructure/ construction goods	0.7895
257	24109	Pipes and tubes of Steel	Th Tonnes	Intermediate goods	0.3384
258	24201	Brass plates/sheets/coils	Tonnes	Intermediate goods	0.0272
259	24201	Copper bars, rods & wire rods	Tonnes	Intermediate goods	0.6370
260	24201	Copper electrodes	Tonnes	Intermediate goods	0.2169
261	24202	Aluminium bars, rods including shapes, sections and profiles	Tonnes	Intermediate goods	0.2032
262	24202	Aluminium Billets/ingots	Tonnes	Intermediate goods	0.2353
263	24203	Lead ingots/ bars/ blocks and plates	Tonnes	Intermediate goods	0.0438
264	24203	Zinc Ingots/blocks	Tonnes	Intermediate goods	0.0507
265	24311	Galvanized iron pipes	Th.Tonnes	Infrastructure/ construction goods	0.0604
266	24311	Pipes, tubes & casing of steel/iron	Th.Tonnes	Infrastructure/ construction goods	0.3760
267	24319	Cast iron castings	Th.Tonnes	Intermediate goods	0.4380
268	25112	Steel frameworks or skeletons for construction of towers including pit props	Th.Tonnes	Infrastructure/ construction goods	0.6485
269	25119	Air filters	Rs.Crore	Capital goods	0.1883
270	25121	Pressure vessels and tanks other than boilers	Rs.Crore	Capital goods	0.0550
271	25122	Stainless steel tanks (incl. fuel tanks)	Rs.Crore	Capital goods	0.0039
272	25122	Steel vessels/ containers including barrels, drums	Tonnes	Capital goods	0.1077
273	25123	Auxiliary plant for use with boilers	Rs.Crore	Capital goods	0.0587
274	25123	Boilers	Rs.Crore	Capital goods	0.3324
275	25131	Power generating equipment	Rs.Crore	Capital goods	0.1329
276	25200	Pistols and guns	Numbers	Consumer durables	0.0104
277	25910	Fabricated metal products including forged blanks	Tonnes	Capital goods	0.1892
278	25910	Forged metal products for tools and machinery	Rs.Crore	Intermediate goods	0.0698
279	25931	Shaving razors/ razor blades	Lakh Nos.	Consumer durables	0.0300

S. No.	NIC 2008 5-digit	Item groups	Unit	Use-based classification	Weights (in %)
280	25933	Hand Tools incl. interchangeable tools, not mechanised	Rs.Crore	Consumer durables	0.1687
281	25934	Hinges	Tonnes	Intermediate goods	0.0102
282	25991	Fasteners (high tensile)/ bolts and nuts	Rs.Crore	Intermediate goods	0.3583
283	25994	Aluminium utensils (incl. non-stick)	Rs.Crore	Consumer durables	0.0241
284	25994	Pressure cooker	Th.Nos.	Consumer durables	0.0385
285	25994	Stainless steel utensils	Rs.Crore	Consumer durables	0.1666
286	25995	Casting products of iron/ steel for sanitary fittings	Rs.Crore	Intermediate goods	0.0616
287	26101	Capacitors/ capacitance, resistors	Rs.Crore	Intermediate goods	0.1412
288	26104	Printed Circuit Boards (whether or not mounted with IC chips /components)	Rs.Crore	Intermediate goods	0.2247
289	26202	Blank digital media for recording	Rs.Crore	Consumer durables	0.0230
290	26204	Computers & peripherals	Rs.Crore	Consumer durables	0.1676
291	26205	ATM (automatic teller machines)	Numbers	Capital goods	0.0017
292	26305	Telephones and mobile instruments	Th.Nos.	Consumer durables	0.1864
293	26401	T.V.set	Th.Nos.	Consumer durables	0.3092
294	26409	Air conditioners (ACs)	Th.Nos.	Consumer durables	0.0369
295	26409	Washing machines/ laundry machines	Th.Nos.	Consumer durables	0.0855
296	26513	Meters (electric and non-electric)	Th.Nos.	Consumer durables	0.1614
297	26515	Scientific instruments/ apparatus for drawing, calculating and measurement	Numbers	Consumer durables	0.0390
298	26521	Watches, automatic/quartz	Th.Nos.	Consumer durables	0.1048
299	26521	Watches, scientific/ digital & special purpose	Rs.Crore	Consumer durables	0.0137
300	26600	Digital indicator - all types	Numbers	Consumer durables	0.0096
301	26600	Other diagnostic equipments including ECG and EEG machines	Rs.Crore	Capital goods	0.0266
302	26600	X-ray equipment	Numbers	Capital goods	0.0259
303	26700	Microscopes	Numbers	Capital goods	0.0079
304	26700	Sunglasses	Th.Nos.	Consumer durables	0.0053
305	27101	Generators / Alternators	Rs.Crore	Capital goods	0.4611
306	27102	Electric heaters	Rs.Lakhs	Consumer durables	0.2485

S. No.	NIC 2008 5-digit	Item groups	Unit	Use-based classification	Weights (in %)
307	27102	Transformers (PDT and special type)	M.V.A	Capital goods	0.0095
308	27102	Transformers (Small)	Th.Nos.	Capital goods	0.2168
309	27103	A C Motor	Th.Nos.	Capital goods	0.0667
310	27103	Traction motor	Th. HP	Capital goods	0.0481
311	27104	Electrical apparatus for switching or protecting electrical circuits (e.g switchgear, circuit breakers/switches,control/ meter panel)	Th.Nos.	Consumer durables	0.4516
312	27201	Dry Cells	Th.Nos.	Consumer durables	0.0873
313	27201	Storage Batteries (Lead/Acid)	Th.Nos.	Consumer durables	0.1392
314	27202	UPS in Solid State Drives	Th.Nos.	Capital goods	0.0542
315	27310	Fiber optics/ optical fiber cables	TH. KILO METERS	Infrastructure/ construction goods	0.0467
316	27320	Electronic/ electrical conductor wires (single or multiple strands)	Tonnes	Capital goods	0.1733
317	27320	Jelly Filled Cables	Th. Core Km	Infrastructure/ construction goods	0.0018
318	27320	PVC Insulated Cable	Th. Core Km	Infrastructure/ construction goods	0.0533
319	27320	Rubber Insulated Cables	K.Meter	Infrastructure/ construction goods	0.0136
320	27339	ACSR Conductors	Tonnes	Infrastructure/ construction goods	0.1024
321	27339	End facing connector for optical fibres and cables	Rs.Crore	Capital goods	0.0726
322	27400	Electric filament type lamps	Th.Nos.	Consumer durables	0.0202
323	27400	Fluorescent Tubes and CFLs	Th.Nos.	Consumer durables	0.0925
324	27400	Incandescent Lamps	Th.Nos.	Consumer durables	0.0030
325	27400	Light fitting accessories	Rs.Crore	Consumer durables	0.0549
326	27501	Electric cooking appliances (e.g. toasters, mixers/grinders, food processors)	Th.Nos.	Consumer durables	0.0780
327	27501	Refrigerators for domestic use	Th.Nos.	Consumer durables	0.0946
328	27502	Electric Water heaters/ geysers (domestic)	Th.Nos.	Consumer durables	0.0122
329	27503	Ceiling or table or pedestal fans (other than industrial fans/exhaust fans) and parts thereof	Th.Nos.	Consumer durables	0.1626
330	27504	Non-electric heating appliances for cooking (e.g. gas stove)	Numbers	Consumer durables	0.0147

S. No.	NIC 2008 5-digit	Item groups	Unit	Use-based classification	Weights (in %)
331	27509	LCD/ LED monitor	Rs.Crore	Consumer durables	0.0222
332	27900	Air Coolers	Numbers	Consumer durables	0.0438
333	27900	Carbon brushes and brush holders	Th.Nos.	Intermediate goods	0.0016
334	27900	DC power supply	Th.Nos.	Capital goods	0.0239
335	27900	Electrical steel laminations	Tonnes	Intermediate goods	0.0220
336	27900	Electrical transformers, static converters and inductors	Th.Nos.	Capital goods	0.0826
337	27900	Welding machinery- electrical	Numbers	Capital goods	0.0228
338	28110	Stationary and internal combustion piston engines not for motor vehicles	Th.Nos.	Capital goods	0.5117
339	28110	Steam & other vapour turbines	Rs.Crore	Capital goods	0.0889
340	28120	Pumps of all types (centrifugal & other velocity pumps; hydraulic & other impulse pumps; positive displacement pumps-gear/screw pumps; gravity pumps; steam pumps & boiler feed pumps; valveless pumps)	Th.Nos.	Consumer durables	0.1653
341	28132	Air/ gas compressors of all types (incl. compressors for refrigerators)	Rs.Crore	Capital goods	0.2086
342	28132	Industrial Valves of different types- safety, relief and control valves(non-electronic, non-electrical)	Rs.Crore	Intermediate goods	0.5349
343	28140	Gear boxes - all types	Th.Nos.	Intermediate goods	0.1831
344	28140	Roller and ball bearings	Lakh Nos.	Intermediate goods	0.1893
345	28150	Furnaces	Rs.Crore	Capital goods	0.0195
346	28150	Solar power system (solar panel & attachable equipment)	Th. KW	Capital goods	0.0235
347	28161	Hydraulic equipment (other than pumps) for lifting/ displacement purposes	Th.Nos.	Capital goods	0.0857
348	28161	Material handling, lifting and hoisting equipment	Rs.Crore	Capital goods	0.1371
349	28162	Conveyors- non-roller type	Rs.Crore	Capital goods	0.0427
350	28162	Cranes- all types	Tonnes	Capital goods	0.0106
351	28191	Deep Freezer	Numbers	Capital goods	0.0358
352	28192	Air conditioning systems/ plants for industrial use	Rs.Crore	Capital goods	0.0728
353	28192	Filtration Equipment	Rs.Lakhs	Capital goods	0.1150
354	28193	Fire fighting equipment	Numbers	Capital goods	0.0165

S. No.	NIC 2008 5-digit	Item groups	Unit	Use-based classification	Weights (in %)
355	28199	Industrial fan	Th.Nos.	Capital goods	0.1302
356	28211	Agricultural Tractors	Th.Nos.	Capital goods	0.3978
357	28212	Harvesters and threshers	Rs.Crore	Capital goods	0.2055
358	28212	Other agricultural machinery including dryers and sorters	Rs.Crore	Capital goods	0.0340
359	28221	Lathes	Numbers	Capital goods	0.0514
360	28221	Machine tools for turning, drilling, milling, shaping, planing, boring, grinding etc. (other than lathes)	Rs.Crore	Capital goods	0.1518
361	28221	Moulding machine	Rs.Crore	Capital goods	0.0152
362	28243	Construction machine/ equipment (incl. bull-dozers and road rollers)	Rs.Crore	Capital goods	0.1127
363	28243	Dumpers and Loaders	Numbers	Capital goods	0.1224
364	28245	Concrete Mixer Lorries	Numbers	Capital goods	0.0547
365	28249	Mining machinery	Rs.Crore	Capital goods	0.0237
366	28251	Separators including decanter centrifuge	Rs.Crore	Capital goods	0.1623
367	28252	Rice milling machines	Rs.Crore	Capital goods	0.0316
368	28259	Sugar Machinery	Rs.Crore	Capital goods	0.0752
369	28259	Water purification apparatus	Rs.Crore	Capital goods	0.1010
370	28261	Textile machinery	Rs.Crore	Capital goods	0.1488
371	28265	Sewing machines	Th.Nos.	Capital goods	0.0090
372	28291	Paper making machinery	Rs.Crore	Capital goods	0.0169
373	28293	Printing machinery	Rs.Crore	Capital goods	0.4588
374	28299	Machinery & equipment for defence support	Rs.Crore	Capital goods	0.0215
375	29101	Passenger cars	Th. Nos.	Consumer durables	0.3935
376	29102	Commercial Vehicles	Th. Nos.	Capital goods	0.9445
377	29202	Bodies of trucks, lorries and trailers	Rs.Crore	Capital goods	0.2580
378	29202	Bodies/ chassis of buses and minibuses	Rs.Crore	Capital goods	0.0955
379	29301	Auto components/ spares and accessories	Rs.Crore	Consumer durables	2.5921
380	29301	Axle	Rs.Crore	Consumer durables	0.3413
381	29301	Rim (Wheel)	Rs.Crore	Consumer durables	0.2323
382	30113	Ship building and parts thereof	Rs.Crore	Capital goods	0.1888
383	30203	Railway coaches	Nos.	Capital goods	0.0413
384	30203	Railway wagons	Nos.	Capital goods	0.0612
385	30204	Railway locomotives	Nos.	Capital goods	0.0267
386	30911	Two-wheelers (motorcycles/ scooters)	Th. Nos.	Consumer durables	1.3634
387	30921	Bicycles - all types	Th.Nos.	Consumer durables	0.0949

S. No.	NIC 2008 5-digit	Item groups	Unit	Use-based classification	Weights (in %)
388	31001	Wooden Furniture	Rs.Crore	Consumer durables	0.0508
389	31003	Steel Furniture including safety vaults	Rs.Crore	Consumer durables	0.0319
390	31005	Mattresses made of foam/ LRPu, coir or rubberised coir	Rs.Crore	Consumer durables	0.0484
391	32111	Jewellery of gold (studded with stones or not)	Rs.Crore	Consumer durables	0.4381
392	32112	Cut & Polished diamonds	Rs.Crore	Consumer durables	0.1635
393	32203	Musical instruments	Rs.Crore	Consumer durables	0.0032
394	32300	Carrom boards	Numbers	Consumer durables	0.0022
395	32300	Cricket Ball	Th.Nos.	Consumer durables	0.0002
396	32300	Cricket Bat	Th.Nos.	Consumer durables	0.0026
397	32300	Football	Th.Nos.	Consumer durables	0.0072
398	32300	Gymnasium/ athletics articles and equipments	Rs.Crore	Consumer durables	0.0009
399	32300	Sports goods of rubber (incl. balls)	Th.Nos.	Consumer durables	0.0028
400	32300	Table Tennis Table	Numbers	Consumer durables	0.0010
401	32405	Games & Toys (excl.video games machines & other mechanical/electrical equipment for gaming parlours/ fairs)	Rs.Crore	Consumer durables	0.0060
402	32503	Medical/ dental instruments (except syringes)	Rs.Crore	Capital goods	0.0829
403	32507	Lenses of all kinds	Th.Nos.	Consumer durables	0.0487
404	32901	Stationery items	Rs.Crore	Consumer durables	0.1127
405	32903	Umbrellas and parts	Rs.Crore	Consumer durables	0.0216
406	32904	Human hair- articles thereof	Rs.Crore	Consumer durables	0.0478
407	35000	Electricity	KWH	Primary goods	7.9943

**Annexure II**

Format for Data reporting by Source Agencies												
S. No	Item	Unit of Production	Total no. of Units Reporting Monthly Production data	Current Month			Previous Month			Previous 3rd Month		
				Number of Responding Units	Production of Responding Units	Total Production*	Number of Responding Units	Production of Responding Units	Total Production*	Number of Responding Units	Production of Responding Units	Total Production*
1	2	3	4	5	6	7	8	9	10	11	12	13