

**PROCEEDINGS OF DATA USERS' WORKSHOP  
ON NEW SERIES OF INDEX OF INDUSTRIAL PRODUCTION (IIP)  
WITH BASE 2011-12**

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In the new series of Index of Industrial Production (IIP) with base 2011-12, launched on the 12<sup>th</sup> of May 2017, several methodological changes were introduced by the Central Statistics Office (CSO). In order to sensitize the users of IIP with the new aspects of IIP, a half day Data Users' Workshop was organized by Economic Statistics Division (ESD) of CSO, in Hall No. 5, Vigyan Bhawan on 30.08.2017 under the Chairmanship of Chief Statistician of India. List of participants is given at Annexure-I.

2. Presentations were made by the ESD (on "Salient features of New Series of IIP"), the Department of Industrial Policy and Promotion (on "Collection of Data in New Series of IIP"), the Dept. of Economic Affairs (on "Use of IIP in Economic Policy"), the Reserve Bank of India (on "Use of IIP in Monetary Policy") and the National Accounts Division, CSO (on "Use of IIP in National Accounts"). Producers and Users perspectives were covered in these presentations.

3. The presentation from ESD was made by Ms. G. S. Lakshmi, Deputy Director General. She explained *inter alia* the following methodological details:

- i. Modalities involved and the exercise undertaken for revision of base of all India IIP.
- ii. Coverage of IIP which is limited to organized manufacturing sector and within that to factories registered under the Factories Act.
- iii. Increase in the number of items and item groups in the new series along with inclusion of new items
- iv. Selection of items basket at more disaggregated level aiming at more robustness and increase in number of factories for specific monitoring to strengthening of data collection
- v. Introduction of new concepts such as work in progress and changes made in the Use-Based Categories to meet the requirement of the users
- vi. Establishment of a new mechanism, namely, the Technical Review Committee under the chairmanship of Chief Statistician of India to undertake regular reviews for dynamic updation of the new series

4. Shri S. K. Panda, Deputy Director General, DIPP made a presentation highlighting the following points:

- i. DIPP provides monthly production data for all-India IIP from approximately 5600 unit-product combinations pertaining to approximately 4400 unique factories.
- ii. Authority of collection of data is derived from the Industries (Development and Regulation) Act, 1951 and Scheduled Industries (Submission of Production Return) Rules, 1979.
- iii. DIPP has instituted online reporting mechanism for collection of IIP data from the units under their purview. All factories has been provided login credentials for submitting data online. DIPP has been striving hard, through persuasion to achieve high standard of response from data providers, as per recommendations of NSC Response rate has been gradually increasing. However, some returns are also received through e-mail and post.
- iv. DIPP is the major source agency for providing monthly IIP data to CSO and it follows strict guidelines of dissemination as per SDDS of IMF.
- v. In non-response cases, production is being estimated based on last reported figure.

5. Ms. Kanika Wadhawan, Assistant Director, Economic Division, Department of Economic Affairs made a presentation on usage of IIP in monitoring the Indian economy. In her presentation, she stated that the Ministry of Finance carries out sector-wise and use based analysis of IIP data along with analysis of industries at NIC 2-digit level, major contributors and also month-on-month comparison after de-seasonalizing the index. She emphasized on the aspects of the volume based IIP vis-à-vis value based IIP and also discussed the differences between year-on-year growth and month-on-month growth in IIP. Further, it was suggested that unorganized sector may also be included in the IIP and that the IIP data may capture the qualitative aspects of industrial items.

6. A presentation was made by Shri Rahul Agarwal, Manager, DEPR, Reserve Bank of India on the use of IIP in monetary policy of RBI. He specified that IIP data is used to analyse trends (and reasons) of sectoral and use based categories, underlying factors, etc. He stated that RBI uses the truncated index by excluding most volatile item groups and also seasonally adjusts the index using ARIMA-13. This analysis forms a part of monthly review prepared by DEPR for Monetary Policy Department and top Management in the RBI. The analysis is also presented to the Central Board and Monetary Policy Committee in the RBI. IIP is also published in various reports of RBI.

7. A presentation was made by Shri S. V. R. Murthy, DDG, National Accounts Division, CSO regarding use of IIP in National Accounts. In his presentation, he highlighted the institutional sectors in National Accounts and use of IIP for the quasi-enterprises, un-incorporated and household

enterprises. Further, he stated that IIP is used as proxy for manufacturing sector, mining and electricity, remediation, construction and capital formation. Number of compilation categories are 30 for manufacturing sector in which IIP is used till such time the ASI data becomes available. Benchmark estimates are moved forward using IIP. IIP (Mining) is used for other minerals, IIP (Electricity) is used for electricity sector, IIP of non-metallic products is used as proxy for construction sector in the industry "Glass and glass products". For capital formation, quarterly growth observed in IIP (Capital goods) for "Machinery and equipment" is used while for valuables, quarterly growth in IIP (Other manufacturing) is made use of.

8. During discussions held in the Workshop, many issues were raised and clarifications were given. The gist is given in the statement at Annexure-II.

9. The Chief Statistician of India, in his concluding remarks, suggested the following measures:

- (1) Users in the Government and the RBI, who analyse IIP data may bring out articles/ papers and place them in the public domain. The findings thereof will be useful to the CSO in improving the quality of IIP data.
- (2) Users may refer issues of volatility and suggestions to improve the IIP to CSO from time to time. They will be considered by the Technical Review Committee.

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**Annexure-I****List of participants**

<b>S. No</b>	<b>Name (S/ Shri/ Smt.)</b>	<b>Organization</b>	<b>Designation</b>
1	Dr. T. C. A. Anant	M/o Statistics and PI	Chief Statistician of India
2	Rajeev Lochan	M/o Statistics and PI	Director General, Economic Statistics
3	Dr. Davendra Verma	M/o Statistics and PI	Director General , Social Statistics
4	M.V.S. Ranganadham	M/o Statistics and PI	Additional Director General
5	Pravin Shrivastava	M/o Statistics and PI	Additional Director General
6	Shri Rakesh kumar	CPD, NSSO	Additional Director General
7	Panchanan Dash	CPD, NSSO	Deputy Director General
8	N.K.Santoshi	M/o Labour and Employment	Deputy Director General
9	Vidya Prakash	CPD, NSSO	Deputy Director General
10	Sanjay Kumar Panda	DIPP	Deputy Director General
11	R. C. Gautam	D/o Public Enterprises	Deputy Director General
12	Geeta Singh Rathore	M/o Corporate Affairs	Deputy Director General
13	Kal Singh	M/o Road Transport	Deputy Director General
14	S. V. Ramana Murthy	M/o Statistics and PI	Deputy Director General
15	Palli Kundu	M/o Steel	Deputy Director General
16	Sunil jain	CSO	Deputy Director General
17	P. K. Mukhopadhyay	O/o Development commissioner	Deputy Director General
18	Dr. P. C. Mishra	DGFT	Deputy Director General
19	G. S. Lakshmi	M/o Statistics and PI	Deputy Director General
20	Promodita Satish	M/o Steel	Economic Adviser
21	C. Chinnappa	M/o Textiles	Addl. Economic Adviser
22	Nagesh Kumar Singh	M/o Statistics and PI	Director
23	P. K. Banerjee	M/o Statistics and PI	Director
24	S I S Naqvi	M/o Statistics and PI	Director
25	Ratna Chaudhuri	M/o Statistics and PI	Director
26	Sh. Dinesh	M/o Chemical & Fert	Director
27	Kanchana V. Ghosh	M/o Statistics and PI	Director

28	Ankit Singh	M/o Statistics and PI	Director
29	Ashwini Lal	DEA, M/o Finance	Director
30	Chetna Shukla	M/o Statistics and PI	Director
31	Ashutosh Ojha	CPD, NSSO	Director
32	Harmeet M. Kumar	DIPP	Director
33	Rajesh Kumar Sharma	M/o Statistics and PI	Director
34	Umraw Singh	M/o HUA	Director
35	Shri Ganga Kumar	CPD, NSSO	Director
36	Dr. J. B. Singh	DEPR, Reserve Bank of India	Director
37	Rajesh Bhatia	M/o Statistics and PI	Director
38	Brijendra Singh	M/o Statistics and PI	Director
39	Rajeshwar Singh Jenwar	MeitY	Scientist D
40	Sanjay Kumar	M/o Statistics and PI	Joint Director
41	K. M. S. Khalsa	D/o Food & Public Distribution	Deputy Secretary
42	Hema Jaiswal	D/o Food & Public Distribution	Deputy Secretary
43	Manoj Kumar Verma	DGFT	Joint Director
44	D. S. Garud		Joint Director
45	Shirley M. Daniel	M/o Road Transport	Deputy Director
46	Purushottam verma	DIPP	Deputy Director
47	D. K. Sharma	M/o Coal	Deputy Director
48	Taruna Doliya	M/o I&B	Deputy Director
49	Umesh Kumawat	O/o Development commissioner	Deputy Director
50	Dr. Sipika Chauhan	CII	Deputy Director
51	Rahul Agarwal	DEPR, Reserve Bank of India	Manager
52	Shalaka kujur	MEITY	Assistant Director
53	R N Soreithem	M/o Corporate Affairs	Assistant Director
54	A. V. Siva Prasad		Assistant Director
55	Shobha Sharma	M/o Statistics and PI	Assistant Director
56	Naveen Kumar	M/o Textiles	Assistant Director
57	Chetan Yangjor	M/o Steel	Assistant Director
58	Deepak Das	DEA, M/o Finance	Assistant Director
59	Vipin Saini	Agro Chem Federation of India	Regulatory Affairs Specialist
60	Subhash Chand	M/o Finance	Economic Officer

61	P Bali	M/o Shipping	CO (Ports)
62	Vinod Sagar	M/o Statistics and PI	Senior Statistical Officer
63	Aparoop Bhattacharya	M/o Statistics and PI	Senior Statistical Officer
64	Mukesh Kumar	M/o Statistics and PI	Junior Statistical Officer
65	Saurabh Bansal	M/o Statistics and PI	Junior Statistical Officer
66	Aditya Singh Hada	M/o Statistics and PI	Junior Statistical Officer
67	Johneey Tokas	M/o Statistics and PI	Junior Statistical Officer
68	Haider Ali	M/o Statistics and PI	Junior Statistical Officer
69	Dr. Devi Dass	Dept of Economic and Statistical Analysis, Haryana	Government Service
70	Himank Kothiyal	Press Information Bureau	Media & Communication officer
71	Shashank	PIB	
72	Om Prakash	PIB	
73	Bhupal Durga	PIB	
74	Kirtika Suneja	The Economic Times	Journalist
75	Sumit kumar	Anusha Global LLP	Service
76	Vinay Kumar Punia	BBA University Lucknow	Research Scholar
77	Syed Khushbu Mehdi Rizve	BBA University Lucknow	Research Scholar
78	Shikha Tripathi	BBA University Lucknow	Research Scholar
79	Arun Kumar	BBA University Lucknow	Research Scholar
80	Harikishan Sharma	Dainik Jagran	Journalist
81	Shikha Padam	PJ	Editor
82	Harish Chandra	Consultant	Free lancer
83	Adesh Kumar	JPC	Regional Officer
84	R.K. Padhy	JPC	Manager
85	Aastha Gudwani	Bank of America, Merrill Lynch	Economist
86	Rahul Agrawal	Motilal Oswal Financial Services	Associate Economist
87	Areesha Fatma	PHD Chamber of Commerce	Research Associate
88	Swati Arora	Yes Bank	Economist
89	Mukul Gupta	ICRA Limited	Senior Analyst
90	M. Ramesh Kumar	CWO-MIS	

91	Megha Kaul	PHD Chamber of Commerce	Associate Economist
92	Atul Kumar Sharma		Research Officer
93	Shishir Kumar Chaurasia	Amar Ujala	Special Correspondent
94	Gunajit Kalita	Rio Tinto	Economist - Economics and Market
95	Aditi Nayar	ICRA Limited	Principal Economist
96	Deepali Sud	CII	Economist
97	Amey Zafar	Consultant	
98	Siddharth V Kothari	Sunidhi Securities & Finance Ltd	Economist
99	Medha Sinha	ICRA Limited	Associate Analyst
100	Yuvika Oberoi	Yes Bank	Economist and Vice President
101	Vikas Dhoot	The Hindu	Economics Editor
102	Sunil Misra	NNOI	Sr. Reporter
103	Nikunj Ohri	Bloomberg Quint	Correspondent
104	Kanika Pasricha	Standard Chartered Bank	Economist
105	Manas Ranaj Behera	Jaypee Institute of Information Technology	Asst. Professor
106	Mohit Kumar Gautam	University of Lucknow	Research Scholar

## **ANNEXURE-II**

### **GIST OF QUERIES RAISED IN THE WORKSHOP AND CLARIFICATIONS THEREOF**

<b>S. No.</b>	<b>Query</b>	<b>Reply</b>
1	<p>The new series of IIP has introduced the concept of 'Work-in-Progress (WIP)' for capital goods, to avoid lumping of production figures. However, it has led to a sharp deviation in the data especially during the period Nov'15-Oct'16 when the new and old IIP for capital goods averaged 4.8% and -20.3% respectively. Has WPI led to this sharp change or is it attributed to change in the industries included?</p>	<p>The concept of "Work in progress" is introduced for those items such as heavy machinery, capital goods etc. for which production time often exceeds one month. In these cases, monthly reporting of production in terms of physical quantity of completed units is neither possible nor is recorded by the manufacturers. If they report the production in physical quantity of completed units, there will be sharp intermittent peaks in the reporting cycle with levelled flats in between. We cannot generalize the reasons for growth rates/behavior of the data for the whole sector. The data is to be studied in detail for a particular industry individually. It may be noted that the frame of factories has been rationalized by including additional/newly registered factories and excluding the closed ones. This has led to capturing of the actual dynamics and growth.</p>
2	<p>The new IIP series increases the coverage of items and also takes into account the concept of 'work in progress' in the capital goods sector in an attempt to reduce volatility. Nonetheless, the index, especially the capital goods sub-component continues to remain volatile. What explains the same?</p>	<p>The Capital Goods sector is inherently volatile as it is prone to changes due to economic shocks. In the new series of IIP some items in the Capital Goods category have less coverage in terms of number of factories. This deficiency will be taken up through the mechanism of Technical Review Committee by incorporation of additional/ newly registered factories etc.</p>
3	<p>Clarity is required on the</p>	<p>Work-in-progress method is used only for</p>

	concept of “work in progress”- whether used only for capital goods or all value-based items. Is WPI method used for all capital goods based value items?	capital goods to avoid lumps reported in production figures. For other value-based items, work in progress is not adopted. Further, WPI deflation is done for all capital goods value-based items
4	IIP consumer non-durables, a key leading indicator for rural demand, has shown a deviation in trend post demonetization (Nov’16 – Feb’17: new IIP – 6%, old IIP – (-) 3.4%). What are the micro drivers of the spike in non-durables post-demonetization, in order to understand better the state of consumer demand, given that detailed industry-wise data for sub-sectors is not provided in the new series?	In the new series of IIP, the pharmaceutical sector has been given wider coverage by including significant items such as anti-pyretic and analgesics, digestive enzymes, anti-retroviral drugs, steroid and hormonal preparations, etc. Since the pharmaceutical sector has been witnessing strong growth in the economy, the same has been duly reflected in the consumer non-durables segment in the new series of IIP.
5	The gap in manufacturing (new vs old) is explained by the rise in weight of pharma sector which is an outlier in terms of growth vis-a-vis other sectors. The driver of the wedge between old and new IIP is primarily the pharma sector. Is the ministry concerned regarding the lopsidedness in the new IIP?	The growth in the new series cannot be only attributed to the growth in pharma sector. On examination of the entire series starting from April 2011, it was found that there is consistently higher growth as compared to the old series on account of various methodological improvements such as inclusion of new items and factories and exclusion of outdated items and closed factories from the frame. Further, the rationalization of weighting structure has resulted in better growth rates, consistent with the economic outlook of the country.
6	The production of digestive enzymes and antacids has been pushing up industrial production over the last few months, despite the fact that the component has a weight of only 0.22% in the overall IIP index. What explains this sharp	The number of factories for the given item is four and the total production is dominated by one of the factories which lead to volatility. This will, however, be taken care of through the mechanism of Technical Review Committee by incorporation of additional/ newly registered factories, where feasible.

	growth in digestive enzymes and antacids?	
7	In the previous IIP series, the final revision of the IIP index number was being done with a lag of two months. However, the new series includes revisions of index numbers for historical data as well (for instance, IIP value of June 2016 was revised in the latest excel on Mospi). Are we to assume that all historical IIP numbers could be subjected to revision each month?	The revision in the last month release of IIP in the historical series is on account of revision in historical series of WPI with new base 2011-12. This was done only as a one-time measure. The existing practice of freezing the data after final revision will continue to be followed by MoSPI.
8	The indices of capital goods, consumer durables and consumer non-durables have undergone substantial revisions in several months. What are the factors contributing to such large quantum of revisions in these sub-indices and are these likely to stabilize going forward?	The revisions are on account of improvement in response rates in coverage between the quick estimate, first revision and the final revision, especially with respect to items for which data is collected by DIPP. This is a phenomenon which is common after the launch of a new series since it requires some time to channelize the data flow on regular basis from the additional/ newly registered factories. The situation is being constantly monitored and is expected to improve within a short span of time. Further, new series of WPI is also undergoing a similar phase due to which there are significant changes in the indices of value based items.
9	The item "Digestive enzymes and antacids" are blurring the growth with high contribution.	The number of factories from which production is reported for these items is less and one of the factories being the dominant producer induces volatility owing to inherent volatility in pharma sector. The matter will be taken up by the Technical Review Committee under Secretary, S&PI for suitably addressing the issues.
10	There is significant	The indices in base year (2011-12) are

	difference in electricity growth rates between core sector index and IIP in 2012-13	considered as 100 in all India IIP whereas different monthly indices have been compiled for Core Sector Index which results in difference in growth rates
11	Petroleum subsidies in base year were included in weights whereas input prices and subsidies have been falling.	The decision to include subsidies was based on the fact that the Oil Marketing Companies provide crude oil at subsidized prices to downstream companies. This is why, despite increase in manufactured quantity, the value added was diminishing over the year in ASI data for the sector. Further, analysis revealed that the ASI GVA does not capture the subsidy component as subsidies are not reported at the establishment level. Therefore, a decision was taken to adjust the GVA of this sector for subsidies for arriving at adjusted GVA for deriving weights. Falling prices are an effect of increase in quantity manufactured which signals a volume growth.
12	Headline WPI is used as deflator for all items instead of considering differences in inflation across products	Disaggregated item-wise WPI (not headline WPI) is used for deflation.
13	Unorganized sector is completely excluded from IIP in new series while it is used as a proxy for unorganized sector in compilation of GVA of unorganized sector in National Accounts.	There is no established mechanism for collection of monthly data on regular basis at present. As such, the unorganized sector was excluded from the coverage of IIP. However, the MSME is exploring the development of a separate IIP for the MSME sector, which when stabilized can be considered suitably for dovetailing with IIP for organized sector.
14	There is continued volatility in the overall index as well as its disaggregates in the new series	This is a common feature after the launch of a new series as is also being seen in WPI since it takes time to stabilize the response from additional/newly included units and also for the new and emerging sectors and items included in the basket. For certain items

		<p>for which the number of factories is less, the issue will be addressed by the Technical Review Committee.</p> <p>The issue of volatility is to be understood in the right spirit when it explains the real behavior of the market. There is need for benchmark comparative studies for volatility with similar high frequency series of other emerging economies to reach a conclusion on the amount of volatility in IIP.</p>
15	Indices may be provided at more disaggregated level, namely mineral-wise, item-wise.	Mining Index is compiled by IBM, Nagpur. CSO may request IBM to share mineral-wise indices. The item-wise indices may be more volatile and may not serve the purpose. Therefore, it has been decided to provide indices at item group level at NIC 5-digit level under the existing policy.
16	Indices data may be shared with RBI before the release.	As per International Standards, such core indices are not to be shared before release.