GOVERNMENT OF MANIPUR
DIRECTORATE OF ECONOMICS AND STATISTICS

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PRESS RELEASE

INDEX OF INDUSTRIAL PRODUCTION FOR THE YEAR 2016-17 & 2017-18

The Directorate of Economics and Statistics, Government of Manipur has released the Provisional estimates of Index of Industrial Production (IIP) for Manipur with base year 2011-12 for the year 2016-17 and 2017-18. IIP is compiled using primary data collected from the industrial units/factories by the Directorate for the manufacturing sector and electricity generation data of Manipur from Central Electricity Authority website for the electricity sector.

2. IIP measures the industrial performance during a period compared to a fixed period i.e., base year 2011-12=100 of an economy. At the State level, IIP reflects the industrial development of a state.

3. The scope of IIP constitutes the mining, manufacturing and electricity sectors. However, in absence of any mining activity in Manipur only manufacturing and electricity sectors are considered for the compilation of IIP.

4. The General Index for the month of March, 2018 stands at 97.4, which is 20 % higher as compared to the level in the month of March, 2017. The cumulative General Index for the period April-March 2017-18 stands at 155.4.

5. The Indices of Industrial Production for the Electricity and Manufacturing sectors for the month of March, 2018 stand at 92.8 and 136.1 respectively, with the corresponding growth rates of 21.1% and 14.1% as compared to March, 2017 (Statement I of the Annexure). The cumulative index for the two sectors during April-March, 2017-18 are 159.5 and 120.4 respectively.

6. The industry group 'Manufacture of food products' has shown the highest positive growth of 27.4% while the industry group 'Printing and reproduction of recorded media' has shown the

least positive growth of 1.6 % in March, 2018 (Statement IIC of the Annexure). There is no industry group which has shown negative growth in March, 2018.

7. Electricity generation in the state is mainly through hydro power projects. Therefore, electricity generation is low during December, January, February and March. The monthly average power generation in the base year 2011-12 was 43.63 MU. The power generated in February, 2017 is 21.07 MU which is just 48.3% of power generated in the base year. The power generation in February, 2018 is 40.49 MU, which is 92.8% of base year quantity and 92.2% higher than the power generated in February, 2017. The power generation of March, 2017 is 33.44 MU which is 76.6% of base year quantity. The power generation of March, 2018 is 40.49 MU which is 92.8% of base year quantity and which is 21.1% higher than the power generated in March, 2017. The low power generation and high fluctuation in the electricity generation during this period has affected the sectoral as well as general index. As a result, there are sudden deviations in the growth rate of electricity sector which is reflected in the growth rate of general index (Chart 4 of the Annexure) as electricity sector has a weight of 894.97 out of 1000.

8. The methodology adopted for the construction of the Index of Industrial Production of Manipur along with statistical tables and charts showing the month-wise/annual/NIC 2 Digit level IIP for 2016-17 and 2017-18 are at Annexure.

Note: 1. This Press release information is also available at the Website of the Directorate - http://www.desmanipur.gov.in.
     2. March, 2018 indices are Quick Estimates and will undergo revision at the time of release of April, 2018 index.
     3. Released of index for April 2018 with base year 2011-12 will be on Friday, 17th August, 2018.

INDEX OF INDUSTRIAL PRODUCTION

MANIPUR

2016-17
&
2017-18

BASE YEAR: 2011-12

DIRECTORATE OF ECONOMICS & STATISTICS
GOVERNMENT OF MANIPUR

Introduction

   Index of Industrial Production (IIP) measures the industrial production during a period compared to a fixed period, known as base year (the current base year is 2011-12). It measures the general level of industrial performance in an economy. At the state level, State IIP measures the industrial development of a State. The Directorate of Economics and Statistics (DES), Government of Manipur compiles IIP for Manipur state.

Methodology

   The specifications with regard to the drawing of the item basket and weighting diagram as recommended by the Working Group have been elucidated below as guidelines for framing the IIP for States/ UTs with base year 2011-12.

Item Basket

   The scope of IIP constitutes the mining, manufacturing and electricity sectors. However, in absence of any mining activity in Manipur only manufacturing and electricity sectors are considered. The item basket for manufacturing sector were selected and provided to each state/UT by Central Statistics Office (IS-Wing), Kolkata. In case of the Manufacturing sector, the basis for selection of item basket is the GVO (Gross value of Output) figures for products from the Annual Survey of Industries (ASI) 2011-12. The methodology used by CSO for the construction of state-level IIP is as below:

i. Using the ASI 2011-12 production data pertaining to National Industrial Classification (NIC)10 to 32 the first job was to remove 'other products and by-products' from all the industry groups after redistributing their values over the rest of the products occurring in the respective industry groups (NIC 3 digits).

ii. Subsequently, each item 7-digit National Product Classification for Manufacturing Sector (NPCMS) is placed in alignment with a particular industry group (at NIC 3-digit level) in which the product's maximum GVO occurred, leaving with a unique product description, its NPCMS code, its maximum value occurring over the complete dataset and the industry group pertaining to the maximum value.

iii. From the list stated above, the product descriptions at the 7-digit level of the NPCMS corresponding to not-elsewhere-classified (n.e.c.) products are removed and the contributions of all such products in a particular industry group are re-distributed among the non-'n.e.c.' products. This is done to avoid ambiguity of description as well as to facilitate easy identification and collection of data pertaining to these items from the factories.

iv. The list of products thus obtained is arranged in descending order of value of output within each 3-digit level of NIC and then starting from the highest contributor, all the products are selected till total value of output of the selected products becomes at least 80% of the total value of output at each 3-digit level.

Weighting Diagram

The methodology for deriving the weighting diagram for State IIP is detailed as under:

i. Sectoral weight:
In allocation of weights, total weight is taken as 1000 and this is distributed to manufacturing and electricity as per their contribution in State Gross Value Added (GVA).

ii. Weights at 2-digit level:
The weight for the manufacturing sector is distributed at 2- digit levels of NIC in proportion to the total GVA in each 2-digit level of NIC for the State from ASI 2011-12 data.

iii. Weights at 3-digit level:
Weights in each of the NIC 2 digit level is then distributed to NIC 3 digit levels in proportion to their respective GVA figures for the State from ASI 2011-12.

iv. Weights at product/item group level:
NIC-3 digit level weights are then distributed to selected products/ item groups in proportion to their GVOs for the State from ASI 2011-12.

Selection of Factories

Once the item basket for a State/ UT has been derived, the list of factories under an item is selected by considering complete list of factories having a substantial combined/aggregate share (at least 25%,) of production of the item in the state/ UT from ASI 2011-12 data.

Collection of Data

For preparation of the current series of Index of Industrial Production (Base Year 2011-12), the monthly production data of the selected factory units is collected by DES for compilation of Manufacturing Index. To overcome the problem of delayed response/non-response the following procedure has been adopted for estimation of production of such non-responding units on monthly basis: Average production for last three months is taken for seasonal items and production of last month is taken for non-seasonal items. For the Electricity sector, the electricity generation figure for the state is obtained from the Central Electrical Authority.

Calculation Method

The Index of Industrial Production is calculated as Weighted Arithmetic Mean of the production relatives calculated by Laspeyres' formulae:

$$I = \frac{\sum W_i \times R_i}{\sum W_i}$$

Where I is the index, Ri is the production relative of i-th item and Wi is the weight allotted to it.

The production relative (Ri) of i-th item for the month has been calculated by using the following formulae: Ri = Q1i / Q0i

Where Q1i is current month & Q0i is the base year quantity of the i-th item.

Table 1: Item Basket for Index of Industrial Production for Manipur: Manufacturing Sector

Sl.No.	NIC 2 Digit	NIC 3 Digit	NPCMS	NPCMS Description
1	10	103	2143100	Orange Juice
2	10	103	2143300	Pineapple Juice
3	10	106	2311003	Wheat Flour
4	10	106	2311001	Maida
5	10	106	2139600	Peas, otherwise prepared or preserved, not frozen
6	20	202	3533101	Agarbati
7	18	181	3230001	Newspaper, daily
8	23	239	3735002	Bricks fire blocks
9	23	239	1532005	Stone chip

Table 2: Weighting Diagram at the Sector Level

State	State Code	Weight for Mining	Weight for Electricity	Weight for Manufacturing
Manipur	14	0	894.97	105.03

Table 3: Weighting Diagram at NIC2-Digit Level

State Code	NIC 2 Digit	Manufacturing Weight	NIC 2 Digit Weight
14	10	105.03	29.71450871
14	16	105.03	0.152422051
14	18	105.03	2.026056485
14	23	105.03	73.13701276

Table 4: Weighting Diagram at NIC 3-Digit Level

State Code	NIC 2 Digit	NIC 3 Digit	NIC 2 Digit Weight	NIC 3 Digit Weight
14	10	103	29.71450871	6.580484999
14	10	106	29.71450871	23.13402371
14	20	202	0.152422051	0.152422051
14	18	181	2.026056485	2.026056485
14	23	239	73.13701276	73.13701276

Table 5: Weighting Diagram at the Item Level

State Code	NIC 3 Digit	NPCMS	NPCMS Description	NIC 3 Digit Weight	Item Weight
14	103	2143100	Orange Juice	6.580484999	4.465524781
14	103	2143300	Pineapple Juice	6.580484999	2.114960218
14	106	2139600	Peas, otherwise prepared or preserved, not frozen	23.13402371	4.591036813
14	106	2311001	Maida	23.13402371	8.956863082
14	106	2311003	Wheat Flour	23.13402371	9.586123814
14	202	3533101	Agarbati	0.152422051	0.152422051
14	181	3230001	Newspaper, daily	2.026056485	2.026056485
14	239	3735002	Bricks fire blocks	73.13701276	64.49349568
14	239	1532005	Stone chip	73.13701276	8.643517078

A brief analysis of Index of Industrial Production

The General Index for the month of March, 2018 stands at 97.4, which is 20 % higher as compared to the level in the month of March, 2017. The cumulative General Index for the period April-March 2017-18 stands at 155.4. The Indices of Industrial Production for the Electricity and Manufacturing sectors for the month of March, 2018 stand at 92.8 and 136.1 respectively, with the corresponding growth rates of 21.1% and 14.1% as compared to March, 2017 (Statement I). The cumulative index for the two sectors during April-March, 2017-18 are 159.5 and 120.4 respectively. The industry group 'Manufacture of food products' has shown the highest positive growth of 27.4% while the industry group 'Printing and reproduction of recorded media' has shown the least positive growth of 1.6 % in March, 2018 (Statement IIC). There is no industry group which has shown negative growth in March, 2018.

Electricity generation in the state is mainly through hydro power projects. Therefore, electricity generation is low during December, January, February and March. The monthly average power generation in the base year 2011-12 was 43.63 MU. The power generated in February 2017 is 21.07 MU which is just 48.3% of power generated in the base year. The power generation in February 2018 is 40.49 MU, which is 92.8% of base year quantity and 92.2% higher than the power generated in February 2017. The power generation of March 2017 is 33.44 MU which is 76.6% of base year quantity. The power generation of March 2018 is 40.49 MU which is 92.8% of base year quantity and which is 21.1% higher than the power generated in March 2017. The low power generation and high fluctuation in the electricity generation during this period has affected the sectoral as well as general index. As a result, there are sudden deviations in the growth rate of electricity sector which is reflected in the growth rate of general index (Chart 4) as electricity sector has a weight of 894.97 out of 1000.

STATEMENT I: Monthly Index of Industrial Production (Base Year 2011-12)

Month	Electricity			Manufacturing			General Index		
	2016-17	2017-18	% growth over previous year same month	2016-17	2017-18	% change over previous year same month	2016-17	2017-18	% growth over previous year same month
April	-	169.9	-	-	122.6	-	-	164.9	-
May	-	177.8	-	-	121.2	-	-	171.9	-
June	-	170.6	-	-	114.6	-	-	164.7	-
July	179.4	179.1	-0.2	102.4	116.0	13.3	171.3	172.5	0.7
August	169.4	177.4	4.7	108.4	110.9	2.3	163.0	170.4	4.6
September	173.4	172.5	-0.5	108.9	117.9	8.3	166.6	166.8	0.1
October	173.7	178.4	2.7	102.6	113.7	10.8	166.2	171.6	3.2
November	172.3	173.8	0.9	109.8	119.8	9.0	165.7	168.1	1.4
December	167.0	175.9	5.3	93.1	120.3	29.3	159.3	170.0	6.8
January	135.4	152.8	12.9	125.8	126.4	0.4	134.4	150.0	11.6
February	48.3	92.8	92.2	121.0	125.2	3.5	55.9	96.2	72.0
March	76.7	92.8*	21.1	119.3	136.1*	14.1	81.1	97.4*	20.0
Cumulative Index	143.9#	159.5	-	110.2#	120.4	-	140.4#	155.4	-

Note: 1. Indices for April, May & June for the year 2016-17 have not been compiled due to non-availability of production data.

2. * Quick Estimates.

3. # Cumulative Index is for July to March.

STATEMENT II: Monthly Index of Industrial Production at NIC 2 Digit
(Base Year 2011-12)

A. For the Year 2016-17

Industry Code NIC 2008	Description	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
10	Manufacture of food products	-	-	-	117.0	116.6	114.9	115.6	115.4	114.1	121.6	122.5	115.7
18	Printing and reproduction of recorded media	-	-	-	156.4	159.6	145.0	163.3	129.9	150.1	149.7	151.7	136.2
20	Manufacture of chemicals and chemical products	-	-	-	109.5	109.5	108.8	104.7	104.0	103.3	106.1	108.1	106.8
23	Manufacture of other non-metallic mineral products	-	-	-	95.0	103.7	105.4	95.7	107.1	82.9	126.9	119.6	120.3
35	Electricity	-	-	-	179.4	169.4	173.4	173.7	172.3	167.0	135.4	48.3	76.7

Note: Indices for April, May & June for the year 2016-17 have not been compiled due to non-availability of production data.

B. For the Year 2017-18

Industry Code NIC 2008	Description	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
10	Manufacture of food products	114.4	118.8	118.2	108.8	104.3	103.6	116.8	144.0	147.6	146.5	138.5	147.4*
18	Printing and reproduction of recorded media	155.3	160.0	152.7	162.3	160.2	156.7	161.5	158.8	162.7	151.2	154.3	138.3*
20	Manufacture of chemicals and chemical products	97.1	100.5	99.1	95.0	97.1	95.0	111.6	110.2	112.3	108.8	109.5	112.3*
23	Manufacture of other non-metallic mineral products	125.1	121.2	112.0	117.7	112.2	122.7	111.1	108.8	108.0	117.6	119.1	131.5*
35	Electricity	169.9	177.8	170.6	179.1	177.4	172.5	178.4	173.8	175.9	152.8	92.8	92.8*

* Quick Estimates.

C. Percentage Growth in 2017-18 vis-à-vis 2016-17

Industry Code NIC 2008	Description	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
10	Manufacture of food products	-	-	-	-7.1	-10.5	-9.9	1.0	24.8	29.4	20.4	13.1	27.4
18	Printing and reproduction of recorded media	-	-	-	3.7	0.4	8.0	-1.1	22.2	8.4	1.0	1.8	1.6
20	Manufacture of chemicals and chemical products	-	-	-	-13.3	-11.4	-12.7	6.6	6.0	8.7	2.6	1.3	5.2
23	Manufacture of other non-metallic mineral products	-	-	-	23.9	8.3	16.4	16.1	1.7	30.3	-7.4	-0.4	9.4
35	Electricity	-	-	-	-0.2	4.7	-0.5	2.7	0.9	5.3	12.9	92.2	21.1

Note: Indices for April, May & June for the year 2016-17 have not been compiled due to non-availability of production data.

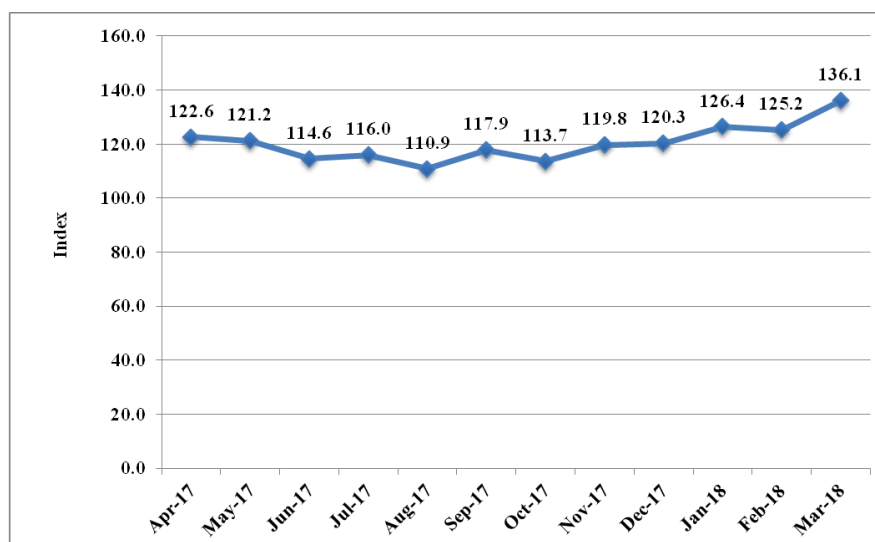**Chart 1: Manufacturing Sector Index for the year 2017-18**

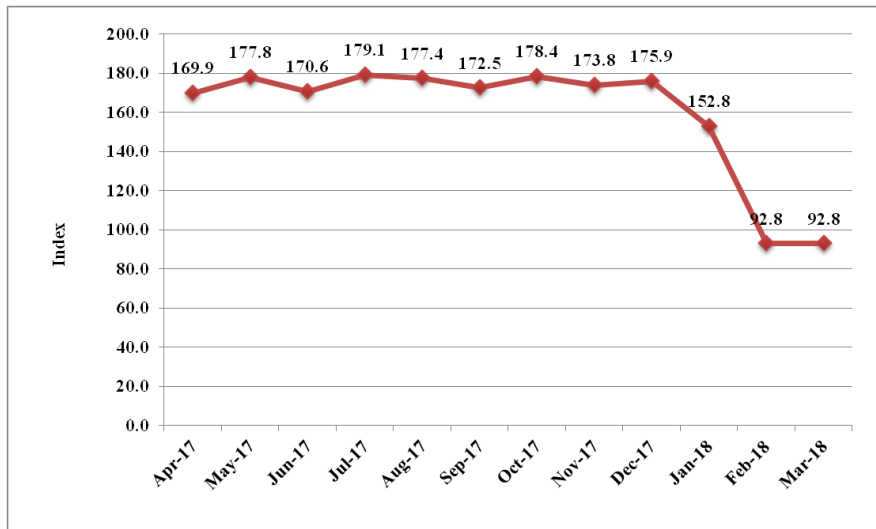## Chart 2: Electricity Sector Index for the year 2017-18

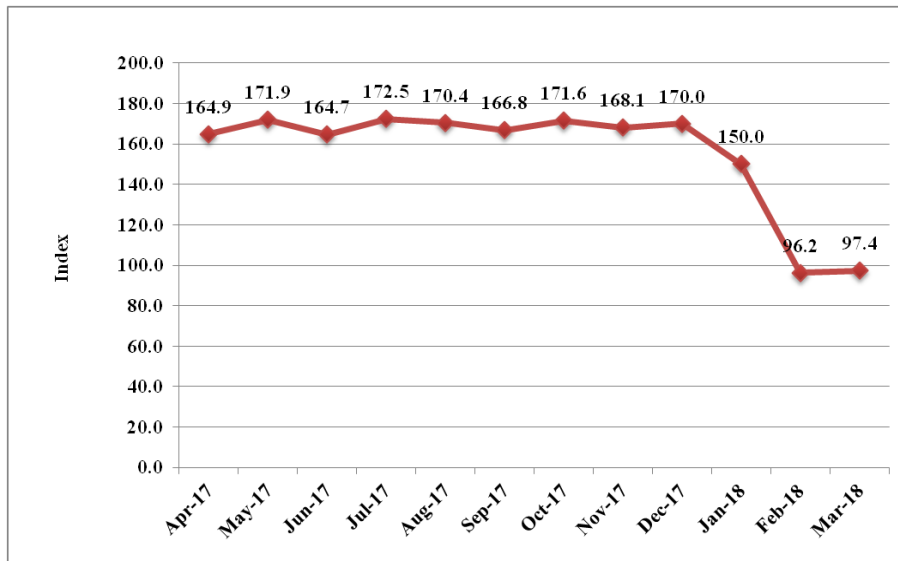## Chart 3: General Index for the year 2017-18

Chart 4: Percentage growth of IIP in 2017-18 over 2016-17 for the corresponding month