ANNUAL SURVEY OF INDUSTRIES (ASI)

1. Introduction

The Annual Survey of Industries (ASI) is the most important source of industrial statistics of the registered organized manufacturing sector of the economy. The provisional data for ASI 2019-20 are ready now and this note presents the estimates of some important parameters tabulated from the survey results of ASI 2019-20 along with its sampling design and sample size etc.

2. Scope and Coverage

The ASI extends to the entire country. It covers all factories registered under Sections 2m(i) and 2m(ii) of the Factories Act, 1948 i.e. those factories employing 10 or more workers using power; and those employing 20 or more workers without using power. For the purpose of frame, only those establishments, which are employing 10 or more workers with power or 20 or more workers without power, are to be entered in the frame in consonance with the Section 2m(i) & 2m(ii) of Factories Act. The above definition is slightly modified due to the amendment of the Factories Act, 1948 for the State of Maharashtra and Rajasthan, as below, which is applicable from ASI 2015-16 onwards:
"Section 2m(i) has been modified, i.e., from *10 or more workers with power* to *20 or more workers with power* and also Section 2m(ii), i.e., from *20 or more workers without power* to *40 or more workers without power*."

The survey also covers bidi and cigar manufacturing establishments registered under the Bidi & Cigar Workers (Conditions of Employment) Act, 1966 with coverage as above. All electricity undertakings engaged in generation, transmission and distribution of electricity, not registered with the Central Electricity Authority (CEA) are also covered under ASI. However, defense establishments, oil storage and distribution depots, restaurants, hotels, café and computer services, departmental units such as railway workshops, RTC workshops, Govt. Mints, sanitary, water supply, gas storage etc. are excluded from the purview of the Survey.

The coverage of ASI has been extended beyond the purview of the Section 2m (i) and 2m (ii) of the Factories Act, 1948 and the Bidi & Cigar Workers (Conditions of Employment) Act, 1966. Accordingly, the units with 100 or more employees, not registered under Section 2m (i) and 2m (ii) of the Factories Act, 1948 but registered under any one of the seven Acts in the Business Register of Establishments (BRE) prepared and maintained by the State Governments are considered.

3. ASI frame and its updation

The ASI frame is based on the lists of registered factory / units maintained by the Chief Inspector of Factories (CIF) in each State and those maintained by registration authorities in respect of Bidi and Cigar establishments and electricity undertakings. The frame is being revised and updated periodically by the Regional Offices of the Field Operations Division of NSO in consultation with the Chief Inspector of Factories in the State. At the time of revision, the names of the de-registered factories are removed from the ASI frame and those of the newly registered factories are added. For the units selected in the last survey year (in this case 2018-19), relevant fields like Status Code,

Frame industry (NIC 4 digit), Employee (Total persons engaged), Address etc. of frame for a given year, say, ASI 2019-20 are auto-updated dynamically based on the information collected during the last survey year.

4. Unit of Enumeration

The primary unit of enumeration in the survey is a factory in the case of manufacturing industries, a workshop in the case of repair services, an undertaking or a licensee in the case of electricity, gas & water supply undertakings and an establishment in the case of bidi & cigar industries. The owner of two or more establishments located in the same State and pertaining to the same industry group and belonging to census scheme is, however, permitted to furnish a single consolidated return. Such consolidated returns are common feature in the case of bidi and cigar establishments, electricity and certain public sector undertakings.

5. Sample Design and Sample Allocation

According to the sampling design followed in ASI 2019-20, all the units in the updated frame are divided into two parts – Central Sample and State Sample. The Central Sample consists of two schemes: Census and Sample. Under Census scheme, all the units are surveyed. Census Scheme consists of the following:

(i) All industrial units belonging to the nine less industrially developed States/ UTs viz. Arunachal Pradesh, Manipur, Meghalaya, Nagaland, Sikkim, Tripura, Mizoram, Andaman & Nicobar Islands and Ladakh.

(ii) All industrial units with Frame NIC = 0893 (Salt Extraction).

(iii) For the States/ UTs other than those mentioned in (i) and (ii),

(a) units having 75 or more employees from six States/UTs, namely, Jammu & Kashmir, Himachal Pradesh, Rajasthan, Bihar, Chhattisgarh and Kerala;

(b) units having 50 or more employees from three States/UTs, namely, Chandigarh, Delhi and Puducherry;

(c) units having 100 or more employees for rest of the States/UTs, not mentioned in (a) and (b) above and;

(iv) All factories covered under 'Joint Return' (JR), where JR should be allowed when the two or more units located in the same State/UT, same sector and belong to the same industry (3-digit level of NIC-2008) under the same management.

(v) After excluding the Census Scheme units in the above manner, all units belonging to the strata (**State x District x Sector x 3 digit NIC-2008**) having less than or equal to 4 units are also considered under Census Scheme. It may be noted that strata are separately formed under three sectors considered as **Bidi, Manufacturing and Electricity**.

(vi) All the remaining units in the frame are considered under **Sample Scheme**. For all the states, **each stratum is formed on the basis of State x District x Sector x 3-digit NIC-2008**. The units are arranged in descending order of their total number of employees.

Samples are drawn using Circular Systematic Sampling technique for this scheme. An even number of units with a minimum of 4 units are selected and distributed in four sub-samples. It may be noted that in certain cases each of 4 sub-samples from a particular stratum may not have equal number of units.

(vii) Out of these 4 sub-samples, two pre-assigned sub-samples are given to NSO (FOD) and the other two-subsamples are given to State/UT for data collection.

(viii) The entire census units *plus* all the units belonging to the two sub-samples given to NSO (FOD) are treated as the **Central Sample**.

(ix) The entire census units *plus* all the units belonging to the two sub-samples given to State/UT are treated as the **State Sample**.

(x) The entire census units *plus* all the units belonging to the two sub-samples given to NSO (FOD) *plus* all the units belonging to the two sub-samples given to State/UT are required for pooling of Central Sample and State Sample.

It may be noted that samples were drawn considering an average sampling fraction for the sample sector as 10%. The size of the live frame for ASI 2019-20 containing units with status 'open', 'close' or 'non-operating', was 2,48,345. Total sample size for Central sample in ASI 2019-20 was 77,737 (54,515 Census and 23,222 Sample).

6. Industrial Classification:

From 1959 onwards, an industrial classification named 'Classification of Indian Industries' was adopted in ASI. With effect from ASI 1973-74, the National Industrial Classification (NIC) 1970 developed subsequently on the basis of UNISIC 1968 (Rev.2) was used. The NIC 1987 that followed UNISIC 1968 was adapted from ASI 1989- 90 to ASI 1997-98. The NIC 1998, developed on the basis of UNISIC, 1990 (Rev. 3) was used from ASI 1998-99 to ASI 2003-04. NIC 2004, developed on the basis of UNISIC 2002 (Rev. 3.1) had been used from ASI 2004-05 to 2007-08. NIC 2008 developed on the basis of UNISIC Rev 4 has been adopted from ASI 2008-09 onwards and is still being used.

7. National Product Classification for Manufacturing Sector (NPCMS):

Central Product Classification (CPC) serves as the reference classification for all product classifications within the international system of economic classifications put in place by the United Nations. It is a complete product classification covering all goods and services that follows the definition of products within the SNA framework. The National Product Classification for Manufacturing Sector (NPCMS), 2011 was developed based on Sections 0 to 4 of CPC, Ver. 2.0 that relate to products of manufacturing sector. The NPCMS, 2011 is a 7-digit classification and the structure is: 5-digit CPC Code + 2-digit Indian requirement. From ASI 2010-2011 onwards, the 7-digit codes and their description as per NPCMS, 2011 are being used for collecting and recording of all input and output items in ASI schedule. From ASI 2015-16 onwards, revised version of NPCMS, 2011 is used to classify the input and output items collected in ASI schedule.

8. Reference period

Reference period for ASI 2019-20 was the accounting year of the factory, ending on any day during the fiscal year 2019-20. Thus in ASI 2019-20, data collected from respective establishments relate to their accounting year ended on any day between 1st April 2019 and 31st March 2020. Survey was conducted during April 2021 to January 2022 through ASI Web Portal. The field work of ASI 2019-20 was suspended/affected for a long time due to second wave of COVID-19 in the country which stretched the survey period beyond its stipulated time.

9. Schedule of enquiry

The schedule for ASI 2019-20 has two parts – Part-I and II. Part-I , processed at the IS Wing, Kolkata, aims to collect data on assets and liabilities, employment and labour cost, receipts, expenses, input items – indigenous and imported, products and by-products, distributive expenses etc. Part-II, processed by the Labour Bureau, aims to collect data on different aspects of labour statistics, namely, working days, man-days worked, absenteeism, labour turnover, man-hours worked, earning and social security benefits.

10. Concepts and Definitions of items collected through the schedule of enquiry

The concepts and definitions of items collected through ASI schedule are given below:

Reference Year for ASI 2019-20 is the accounting year of the factory ending on 31st March 2020.

Factory is one that is registered under sections 2m (i) and 2m (ii) of the Factories Act, 1948. The sections 2m (i) and 2m (ii) refer to any premises including the precincts thereof (a) whereon ten or more workers are working, or were working on any day of the preceding twelve months, and in any part of which a manufacturing process is being carried on with the aid of power, or is ordinarily so carried on; or (b) whereon twenty or more workers are working or were working on any day of the preceding twelve months, and in any part of which a manufacturing process is being carried on without the aid of power, or is ordinarily so carried on.

Fixed Capital represents the depreciated value of fixed assets owned by the factory as on the closing day of the accounting year. Fixed assets are those that have a normal productive life of more than one year. Fixed capital includes land including lease- hold land, buildings, plant & machinery, furniture and fixtures, transport equipment, water system and roadways and other fixed assets such as hospitals, schools, etc. used for the benefit of the factory personnel.

Physical Working Capital is the total inventories comprising of raw materials and components, fuels and lubricants, spares, stores and others, semi-finished goods and finished goods as on the closing day of the accounting year. However, it does not include the stock of the materials, fuels, stores, etc. supplied by others to the factory for processing and finished goods processed by the factory from raw materials supplied by others.

Working Capital is the sum total of the physical working capital as already defined above and the cash deposits in hand and at bank and the net balance receivable over amounts payable at the end of the accounting year. Working capital, however, excludes unused overdraft facility, fixed deposits (irrespective of duration), advances for acquisition of fixed assets, loans and advances by proprietors and partners (irrespective of their purpose and duration), long-term loans (including interest thereon) and investments.

Productive Capital is the total of fixed capital and working capital as defined above.

Invested Capital is the total of fixed capital and physical working capital as defined above.

Gross Value of Plant and Machinery represents the total original (un-depreciated) value of installed plant and machinery at the end of the accounting year. It includes the book value of the newly installed plants and machinery and the approximate value of rented in plants and machinery at the time of renting-in but exclude the value of rented-out plants and machinery. Total value of all the plants and machinery acquired on hire - purchase basis is also included.

Outstanding Loans represent all loans (whether short term or long term, interest bearing or not) outstanding according to the books of the factory as on the closing day of the accounting year.

Workers are defined to include all persons employed directly or through any agency whether for wages or not and engaged in any manufacturing process or in cleaning any part of the machinery or premises used for manufacturing process or in any other kind of work incidental to or connected with the manufacturing process or the subject of the manufacturing process . Labour engaged in the repair & maintenance, or production of fixed assets for factory's own use, or employed for generating electricity, or producing coal, gas etc. are included.

Employees include all workers defined above and persons receiving wages and holding clerical or supervisory or managerial positions engaged in administrative office, store keeping section and welfare section, sales department as also those engaged in purchase of raw materials etc. or purchase of fixed assets for the factory as well as watch and ward staff.

Total Persons Engaged include the employees as defined above and all working proprietors and their family members who are actively engaged in the work of the factory even without any pay, and the unpaid members of the co-operative societies who worked in or for the factory in any direct and productive capacity. The number of workers or employees is an average number obtained by dividing mandays worked by the number of days the factory had worked during the reference year.

Wages and Salaries are defined to include all remuneration in monetary terms and

also payable more or less regularly in each pay period to workers as compensation for work done during the accounting year. It includes
(a) direct wages and salary (i.e., basic wages/salaries, payment of overtime, dearness, compensatory allowance, house rent and other allowances), (b) remuneration for the period not worked (i.e., basic wages, salaries and allowances payable for leave period, paid holiday, lay-off payments and compensation for unemployment, if not paid from sources other than employers), (c) bonuses and ex-gratia payment paid both at regular and less frequent intervals (i.e., incentive bonuses, good attendance bonuses, productive bonuses, profit sharing bonuses, festival or year-end bonuses, etc.). It excludes lay off payments which are made from trust or other special funds set up exclusively for this purpose i.e., payments not made by the employer. It also excludes imputed value of benefits in kind, employer's contribution to old age benefits and other social security charges, direct expenditure on maternity benefits and crèches and other group benefits. Travelling and other expenditure incurred for business purposes and reimbursed by the employer are excluded. The wages are expressed in terms of gross value i.e., before deduction for fines, damages, taxes, provident fund, employee's state insurance contribution, etc.

Contribution To Provident Fund And Other Funds includes old age benefits like provident fund, pension, gratuity, etc. and employers contribution towards other social security charges such as employees state insurance, compensation for work injuries and occupational diseases, provident fund-linked insurance, retrenchment and lay- off benefits.

Workmen and Staff Welfare Expenses include group benefits like direct expenditure on maternity, crèches, canteen facilities, educational, cultural and recreational facilities; and grants to trade unions**,** co-operative stores, etc. meant for employees.

Total Emoluments is defined as the sum of wages and salaries including bonus.

Total Input comprises total value of fuels and materials consumed as well as expenditures such as cost of contract and commission work done by others on materials supplied by the factory, cost of materials consumed for repair and maintenance of factory's fixed assets including cost of repairs and maintenance work done by others to the factory's fixed assets, rent paid for buildings and plant & machinery and other fixed assets, inward freight and transport charges, rates and taxes (excluding income tax), postage, telephone and telex expenses, banking charges, cost of printing and stationery, R&D expenses, expenses on raw materials and other components for own construction and purchase value of goods sold in the same condition as purchased .

Total Output comprises total ex-factory value of products and by-products manufactured as well as other receipts such as receipts from manufacturing and non-industrial services rendered to others, work done for others on material supplied by them, value of electricity produced and sold, rent received for building, plant & machinery and other fixed assets, sale value of goods sold in the same condition as purchased, addition in stock of semi- finished goods, value of own construction and an

amount equal to expenses on research & development (R&D).

Depreciation is consumption of fixed capital due to wear & tear and obsolescence during the accounting year and is taken as provided by the factory owner or is estimated on the basis of cost of installation and working life of the fixed assets.

Gross Value Added (GVA): Gross value added is defined as additional value created by the process of production. This is calculated by deducting the value of total input from total output.

Net Value Added is arrived by deducting total input and depreciation from total output.

Net Income: It is obtained by deducting the value of rent paid & interest paid from the combined values of NVA.

Net Profit: It is obtained by deducting compensation of employees from net income.

11. Presentation of Data

The ASI results presented in the published reports relate to the industrial units covered under the census and sample sectors (central sample) of the ASI. The total of any characteristic was obtained by adding the figures of the census sector and estimates of sample sector.

12. Present position of availability of results

Seven macro level website tables based on final data are uploaded in the website. ASI publications like Volume-I, Summary Results for Factory Sector are uploaded in the website of the Ministry for dissemination at free of cost after finalization of data.

As per the dissemination policy of the Ministry, Data Informatics and Innovation Division (DIID) disseminates the Unit-level data of ASI to the public. For unit-wise dissemination, due care is taken in anonymizing the identities of industrial units as required under the Collection of Statistics Act 2008. In addition to this, data of some units in some industry groups/States/UTs are merged when the number of such units becomes less than three.

In certain cases, there may be abnormal growth/decline in some characteristics compared to the previous year. The possible reasons for the same may be as follows:

a) Inclusion of new units in the frame, particularly in the Census Sector.
b) Selection/non-selection of some Sample units, having considerable value of multiplier.
c) Closure/Non-Operation of units, which had the significant effect on the economy in the previous year.
d) Movement of Sample units in the previous year to Census units in the current year, depending either on the size of employment or due to the sampling strategy or both, and vice-versa.

e) High/low performance of the units in the current year, as compared to low/high performance in the previous year.

The following office may be contacted for further queries regarding dissemination of the ASI data:

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