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Unit-V

Official Statistics

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UNIT - V

OFFICIAL STATISTICS

Official statistics are the statistical information published by government agencies or other public bodies, which are collected and compiled on various aspects for administrative purposes. Official Statistics are collected in a systematic manner through a well-established Statistical System. This information includes quantitative and qualitative information on all major areas of citizens' lives, such as economic and social development, living conditions, health, education and environment. Official statistics should be objective and easily accessible, produced on a continual basis so that measurement of change is possible.

The following may be considered as the main functions of the Statistical System:

- ✓ Collection, validation, compilation of data
- ✓ Publication/dissemination of the statistical information
- ✓ Maintenance of statistical standards such as definitions, classification, statistical methodology, comparability *etc.*
- ✓ Coordination of statistical activities
- ✓ Training statistical personnel
- ✓ Independence and integrity of its functioning
- ✓ International coordination

Post-Independence Indian Official Statistical System

After Independence, the need for a statistical system for monitoring socio-economic development of the country was felt by the Government of India. In 1949, Shri.P.C.Mahalanobis was appointed by the Government of India as the Honorary Statistical Advisor to the government. In the same year, he established the Central Statistical Unit. This Unit was renamed, in 1951, as Central Statistical Organization, which coordinated various statistical activities in the country. It also defined and maintained statistical standards in the country.

During the same period, the National Income Committee was established in 1949 to estimate the National Income of the country. The Committee recommended the use of sampling methods for collecting information in order to fill the large gaps in the statistical information required for estimation of the National Income. Sample surveys were conducted at national level for this purpose. The first round of National Sample Survey was conducted

in October 1950. Later, a separate organization under the government set-up for conducting sample surveys was formed in the name of National Sample Survey Organization.

The Government of India set up a Commission in the year 2000 under the headship of Shri.C.Rangarajan to address the growing statistical needs of the country. Based on the recommendations of the Commission, a permanent and statutory apex body, called **National Statistical Commission** (NSC), was set up in NSO on July 12, 2006. The NSC was formed to evolve policies, priorities and to maintain quality standards in statistical matters.

The NSC is constituted with an eminent statistician or a social- scientist as its Chairperson and four members - one each from the areas of Economic Statistics; Social and Environmental Statistics; Census Operations, Surveys and Statistical Information System; and National Accounts.

Presently, the main sections of NSO are NSC, CSO, NSSO and a Computer Center.

Central Statistics Office

The **Central Statistics Office** is responsible for coordination of statistical activities in the country, and evolving and maintaining statistical standards. CSO is headed by a Director General, who is assisted by five Additional Director Generals.

The CSO has five main divisions.

The divisions and their responsibilities are presented below:

(i) National Accounts Division

This division is responsible for

- Preparation of national accounts including Gross Domestic Product
- Preparation of quarterly estimates of Gross Domestic Product estimation of Capital Stock and Consumption of fixed capital
- Estimation of State-wise Gross Value Added and Gross Fixed Capital Formation

(ii) Social Statistics Division

This division is responsible for

- Statistical monitoring of the Millennium Development goals
- Preparation and maintaining environmental economic accounting grant-in-aid for research, workshop/seminars/conferences in Official/Applied Statistics
- National/international awards for statisticians

(iii) Economic Statistics Division

This division is responsible for

- Conducting Economic Census and Annual Survey of Industries
- Compiling All India Index of Industrial Production
- Collecting and compiling Energy Statistics and Infrastructure Statistics
- Developing classifications like, National Industrial Classification and National Product Classification.

(iv) Training Division

This division is responsible for

- Training manpower in theoretical and applied statistics to deal with the challenges of data collection, compilation, analysis and dissemination of information for policy making, planning, monitoring and evaluation
- Looking after the National Statistical Systems Training Academy, which is a premier institute for developing human resources to deal with Official Statistics in India as well as at international level.

(v) Coordination and Publications Division

This division is responsible for

- Coordinating the works related to statistical matters within CSO and the Ministries of Central Government and State/UT Governments.
- Organizing Conferences of Central and State Statistical Organizations· celebration of National Statistics Day every year.
- Preparation of Results Framework Document, Citizens' Charter, Annual Action Plan and Outcome Budget of the MoS &PI.

Present Statistical System in India:

- In addition to the role played by CSO and NSSO, most of the Central Ministries collect statistical information on the subjects related to the respective ministries. The statistical information are collected as by-products of administration of the ministries or for monitoring the progress of specific programmes implemented by the respective ministries. Some Ministries in Government of India, like Agriculture, Water Resources, Health, Finance,

Commerce, Labour, and Industrial Development have separate statistical divisions, while most others have nucleus cells.

- The Statistical System in the States is similar to the system at the Central Government. A Directorate of Economics and Statistics, functioning in each State under a decentralized system, is a nodal agency, which is responsible for the coordination of statistical activities in the State.
- The Directorates have statistical offices at the headquarters in each district. The district level offices collect statistical information related to all sections of the economy of the respective district. The Directorates compile and publish such information as Statistical Hand Books every year.
- The Hand Books contain several information including estimates of area, production and yield of principal crops. In Tamil Nadu, the Directorate is functioning with the nomenclature “**Department of Economics and Statistics**”. This department, with headquarters at Chennai, is headed by a Commissioner, who is assisted by a Director, 3 Additional Directors and 2 Joint Directors, in addition to Assistant Directors and supportive officials.
- Generally, flow of statistical information in the Indian Statistical System is upwards from village → block → district → State Government Departments → corresponding Ministries at the Centre.
- In addition to CSO, NSSO and the Ministries, there are other public and private organizations in India, which also deal with collection of Official Statistics on various characteristics. Reserve Bank of India is one such organization, which collects, compiles and publishes, every year, the statistical information related to the economy of the country as the “**Hand Book of Indian Economy**”.

Methods of collection of official statistics

- ✚ **Census:** The census is conducted every ten years by the Registrar General and Census Commissioner of India. It involves a comprehensive enumeration of the population and housing. While the census provides a complete count of the population, it is conducted infrequently and may not capture rapid changes in demographic characteristics between census years.

- ✚ **Sample Surveys:** Sample surveys, such as those conducted by the National Sample Survey Office (NSSO), involve collecting data from a representative sample of the population. Surveys are conducted on various topics including employment, consumption, health, and education. While sample surveys provide detailed information on specific topics, the reliability of the estimates depends on the sample design, coverage, and response rates.

- ✚ **Administrative Records:** Administrative records maintained by government departments and agencies are another source of official statistics. These records include data on births, deaths, marriages, employment, taxation, and other administrative activities. While administrative records provide timely and cost-effective data, they may suffer from inconsistencies, errors, and incomplete coverage.

- ✚ **Vital Registration Systems:** Vital registration systems record vital events such as births, deaths, and marriages. While vital registration systems provide continuous data on demographic events, their coverage may be incomplete, particularly in rural and remote areas.

- ✚ **Surveys and Studies by Research Institutions:** Research institutions and academic organizations also conduct surveys and studies to collect official statistics on various topics. While these studies provide valuable insights, their reliability depends on the methodology used and the quality of data collection.

- ✚ **Remote Sensing and Geographic Information Systems (GIS):** Remote sensing techniques and GIS technology are used to collect spatial data on land use, land cover, natural resources, infrastructure, and environmental parameters. Remote sensing satellites and aerial surveys provide valuable information for planning, monitoring, and management purposes.

- ✚ **Criminal Justice System Data:** Law enforcement agencies, courts, and correctional institutions collect data on crime, criminal cases, arrests, convictions, and prison populations. The National Crime Records Bureau (NCRB) compiles and publishes crime statistics based on data reported by state police departments.

Reliability and Limitations:

❖ Census:

- **Reliability:** The census aims to provide a complete count of the population and housing units. It is generally considered reliable due to its comprehensive coverage and rigorous enumeration process.
- **Limitations:** Census data may be subject to undercounting, especially in hard-to-reach or marginalized populations. Additionally, the census is conducted only once every ten years, which may not capture rapid demographic changes.

❖ Sample Surveys:

- **Reliability:** Well-designed sample surveys can provide reliable estimates of population parameters when properly executed. Random sampling methods help ensure representativeness.
- **Limitations:** Sample surveys require careful sampling design to avoid bias and ensure coverage of all relevant population groups. Response rates can affect the reliability of survey results, and non-response bias may distort findings.

❖ Administrative Records:

- **Reliability:** Administrative records can provide reliable data on certain indicators, such as births, deaths, and tax collections, as they are collected as part of routine government operations.
- **Limitations:** Administrative records may suffer from inaccuracies, inconsistencies, and incompleteness due to errors in data entry, misclassification, and underreporting. They may also not capture certain population groups or events.

❖ Vital Registration Systems:

- **Reliability:** Vital registration systems provide continuous data on demographic events such as births and deaths. Sample Registration System (SRS) data is statistically adjusted to provide reliable estimates of vital rates.
- **Limitations:** Incomplete registration and underreporting of vital events, particularly in rural and remote areas, can affect the reliability of vital statistics. Delays in registration and data processing may also occur.

❖ **Surveys and Studies by Research Institutions:**

- **Reliability:** Research surveys conducted by reputable institutions can produce reliable data when using robust methodologies and rigorous data collection procedures.
- **Limitations:** Surveys may be subject to sampling errors, measurement errors, and respondent bias. Small sample sizes or poorly designed surveys can compromise the reliability of the findings.

❖ **Remote Sensing and GIS:**

- **Reliability:** Remote sensing and GIS data can provide reliable spatial information on land use, land cover, and environmental parameters when processed and analyzed correctly.
- **Limitations:** Remote sensing data may be limited by cloud cover, sensor resolution, and temporal coverage. Interpretation of satellite imagery and GIS data requires expertise and validation on the ground.

❖ **Criminal Justice System Data:**

- **Reliability:** Crime data collected by law enforcement agencies can provide reliable information on reported crimes, arrests, and convictions.
- **Limitations:** Crime statistics may be influenced by underreporting, changes in reporting practices, and variations in law enforcement priorities. Not all crimes are reported to the police, leading to a gap in official crime statistics.

Principal publications containing such statistics:

- **Economic Survey:** Published annually by the Ministry of Finance, the Economic Survey provides a comprehensive overview of the Indian economy, including macroeconomic trends, fiscal policy, sectoral performance, and policy recommendations.
- **National Accounts Statistics:** Produced by the Central Statistics Office (CSO), this publication provides detailed data on national income, gross domestic product (GDP), sector-wise contribution to GDP, and other macroeconomic indicators.
- **India Year Book:** Published by the Publications Division, Ministry of Information and Broadcasting, the India Year Book contains a wide range of statistics on various aspects of Indian society, economy, governance, and development.

- **Statistical Yearbook:** Published by the Ministry of Statistics and Programme Implementation (MoSPI), the Statistical Yearbook provides comprehensive statistical data on population, health, education, employment, agriculture, industry, trade, and other socio-economic indicators.
- **Annual Reports of Government Departments:** Various government departments and ministries publish annual reports containing statistical data related to their respective sectors, programs, and activities. Examples include the Annual Report of the Ministry of Health and Family Welfare, Annual Report of the Ministry of Agriculture and Farmers Welfare, etc.
- **Census Reports:** The Registrar General and Census Commissioner of India publish detailed reports based on the decennial census, providing population data, demographic characteristics, and socio-economic profiles at national, state, district, and sub-district levels.
- **Reports and Bulletins by NSSO:** The National Sample Survey Office (NSSO) publishes reports and bulletins based on its sample surveys covering topics such as consumer expenditure, employment, education, health, and housing.
- **Crime in India Report:** Published by the National Crime Records Bureau (NCRB), this report contains statistical data on crime and the criminal justice system in India, including crime rates, crime trends, and law enforcement statistics.

Various official agencies responsible for data collection and their main functions:

- ✚ **Central Statistics Office (CSO):** The CSO is an agency under the Ministry of Statistics and Programme Implementation (MoSPI). It is responsible for coordinating statistical activities in the country and publishing key economic indicators such as GDP, inflation, industrial production, etc.
- ✚ **National Sample Survey Office (NSSO):** The NSSO operates under the Ministry of Statistics and Programme Implementation. It conducts large-scale sample surveys for socio-economic data collection, including consumer expenditure, employment, health, education, and more.

- ✚ **Registrar General and Census Commissioner of India:** This office is responsible for conducting the decennial Census in India. It gathers demographic data on population, housing, and other related characteristics.

- ✚ **National Crime Records Bureau (NCRB):** The NCRB, under the Ministry of Home Affairs, collects and disseminates data on crime and criminal justice in India.
- National Health Mission (NHM): NHM, under the Ministry of Health and Family Welfare, collects health-related statistics and oversees health programs across the country.

- ✚ **National Institute of Nutrition (NIN):** NIN, under the Indian Council of Medical Research (ICMR), conducts surveys and research related to nutrition and food consumption patterns in India.

- ✚ **National Informatics Centre (NIC):** NIC, under the Ministry of Electronics and Information Technology, facilitates the collection, storage, and dissemination of various types of data and information, including statistical data.

Ministry of statistics and programme implementation:

The Ministry of Statistics and Programme Implementation attaches considerable importance to coverage and quality aspects of statistics released in the country. The statistics released are based on administrative sources, surveys and censuses conducted by the center and State Governments and non-official sources and studies. The surveys conducted by the Ministry are based on scientific sampling methods.

Field data are collected through dedicated field staff. In line with the emphasis on the quality of statistics released by the Ministry, the methodological issues concerning the compilation of national accounts are overseen Committees like Advisory Committee on National Accounts, Standing Committee on Industrial Statistics, Technical Advisory Committee on Price Indices. The Ministry compiles data sets based on current data, after applying standard statistical techniques and extensive scrutiny and supervision.

National Statistical Office (NSO) is mandated with the following responsibilities:

- 1) Acts as the nodal agency for planned development of the statistical system in the country, lays down and maintains norms and standards in the field of statistics, involving concepts and definitions, methodology of data collection, processing of data and dissemination of results;
- 2) Coordinates the statistical work in respect of the ministries/departments of the government of india and state statistical bureaus (ssbs), advises the ministries/departments of the government of india on statistical methodology and on statistical analysis of data;
- 3) Prepares national accounts as well as publishes annual estimates of national product, government and private consumption expenditure, capital formation, savings, estimates of capital stock and consumption of fixed capital, as also the state level gross capital formation of supra-regional sectors and prepares comparable estimates of state domestic product (sdp) at current prices;
- 4) Maintains liaison with international statistical organizations, such as, the united nations statistical division (unsd), the economic and social commission for asia and the pacific (escap), the statistical institute for asia and the pacific (siap), the international monetary fund (imf), the asian development bank (adb), the food and agriculture organizations (fao), the international labour organizations (ilo), etc.
- 5) Compiles and releases the index of industrial production (iip) every month in the form of 'quick estimates'; conducts the annual survey of industries (asi); and provides statistical information to assess and evaluate the changes in the growth, composition and structure of the organized manufacturing sector;
- 6) Organizes and conducts periodic all-india economic censuses and follow-up enterprise surveys, provides an in-house facility to process the data collected through various socio economic surveys and follow-up enterprise surveys of economic censuses;

- 7) Conducts large scale all-india sample surveys for creating the database needed for studying the impact of specific problems for the benefit of different population groups in diverse socio economic areas, such as employment, consumer expenditure, housing conditions and environment, literacy levels, health, nutrition, family welfare, etc.;
- 8) Examines the survey reports from the technical angle and evaluates the sampling design including survey feasibility studies in respect of surveys conducted by the national sample survey organizations and other central ministries and departments;
- 9) Dissemination of statistical information on various aspects through a number of publications distributed to government, semi-government, or private data users/agencies; and disseminates data, on request, to the united nations agencies like the unsd, the escap, the ilo and other international agencies;
- 10) Releases grants-in-aid to registered non-governmental organizations and research institutions of repute for undertaking special studies or surveys, printing of statistical reports, and financing seminars, workshops and conferences relating to different subject areas of official statistics;
