
UNIT 12 STATISTICAL INFORMATION SOURCES

Structure

- 12.0 Objectives
- 12.1 Introduction
- 12.2 Statistics as a Source of Information
- 12.3 Types of Statistical Information Sources
- 12.4 Problems Related to Statistical Information Sources
- 12.5 Summary
- 12.6 Answers to Self Check Exercises
- 12.7 Key Words
- 12.8 References and Further Reading

12.0 OBJECTIVES

In Unit 11, we discussed Biographical Information Sources. In this Unit we introduce you to the Statistical Information Sources.

After reading this Unit, you will be able to:

- understand the importance of statistics as a source of information;
- distinguish different categories of statistical sources of information, and
- explain the problems related to statistical information sources.

12.1 INTRODUCTION

Statistics are concerned with the collection, classification, analysis and interpretation of numerical facts or data. It has an important place in drawing plan for future action in any field or in making assessment of the situation in one or more of various fields of human activities. Scholars need it to strengthen their argument or justify a hypothesis; administrators need it to assess the level of performance in their sphere of responsibility; planners need it to draw plan for future developmental schemes. The primary and secondary sources furnishing reliable and up-to-date statistical information are, therefore, very much in demand in libraries. The reference librarians need to answer questions like How much ...? Or How many? on a regular basis. Depending on the type of query or the purpose behind it, i.e., either motivated by simple curiosity or attending a serious research problem, the reference librarian has to consult variety of sources for stabilitional information. The sources for the possible answers are as numerous as the number of reference works available dealing with statistical data either peripherally or exclusively. Therefore, the reference librarians are expected to possess adequate knowledge of statistical information sources available at national and international levels.

12.2 STATISTICS AS A SOURCE OF INFORMATION

Factual enquiries posed in libraries are generally statistical in nature in which the enquirer wants the latest figures. It is not necessary that all the queries of statistical nature are for enlightenment. It could be mainly for drawing conclusion or proving a point, Yearbooks and directories are, to some extent, useful in providing statistical information. The general almanacs are more useful in providing answers to routine queries of both current and retrospective nature. However, the basic problem with these sources is that being secondary sources of information, the data provided in them may be two or three years old. The only advantage is that these sources are easier to use than the primary sources from which they derive their data.

Usually, it is the government of a country which collects the widest range of statistics for serving their own purpose of better governance. Most of the data collected by the government



are made public such as the Census Report. Other important sources of information are those produced by inter- governmental organizations, viz., United Nations, World Bank, ILO, etc. A series of International statistical yearbooks are produced by these agencies, which give total world figures. These publications are sometimes the only source of data on small countries.

As a result of more sophisticated techniques used for collecting data, relevant and highly reliable statistical data are available to a great extent Statistics are generated in two forms; counted and survey in which only a sample is used. It must, however, be noted that the value of statistics does not depend on its being exact. It rather depends on being reliable that is, it should be approximate to the true value. Census refers to the study where everything or all is counted. Census studies are done to collect information about all aspects of population of a country. These are collected every ten years. Survey on the other hand refers to study where only a sample is taken into consideration. Sample is taken on the basis of a set criteria.

Uses of Statistical Information Sources

Statistical Information Sources provide:

- readymade compiled statistics in all the fields or in one of the fields of specialisation;
- authentic data in all sorts ,of subjects from official data records collected, checked and rechecked by expert statisticians;
- population statistics regarding births, deaths, age wise, sex wise information in various fields;
- history statistics of multiple aspects in last centuries, decades or years; and
- comparative statistics of various countries in several aspects over a time span of few years.

The statistical information may be about agriculture, animals and forests, industries, commerce, communication, different aspects of economics, education, demography, finance, government and constitution, irrigation, energy, transportation, etc.

Self Check Exercise

1) Differentiate between the Census and a Survey

Note: i) Write your answers in the space given below.

ii) Check your answers with the answers given at the end of this Unit.

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

12.3 TYPES OF/ STATISTICAL INFORMATION SOURCES

It is usual for ready reference sources such as general yearbooks, almanacs, directories, encyclopedias; -gazetteers and atlases to possess statistical data also. But from the point of accuracy and reliability they are no match to statistical sources compiled by official bodies of national and international level. Attempts are made to group statistical information sources into:



- a) Dictionaries and encyclopaedias
- b) Yearbooks, directories and atlases
- c) Govt. reports
- d) Special statistical sources.

The above grouping is, however, based upon a understanding in considering statistics as data presented in interchangeable terms. Statistics is a distinct branch of mathematics which deals with the collection and analysis of numerical data. Dictionaries and encyclopaedias of statistics are special or subject dictionaries and subject encyclopaedias dealing with statistics as a discipline are dealt with under encyclopaedia. In statistical information sources, we are concerned with information presented through numerical data.

Statistical sources are a category belonging to the "Primary Sources". While a private individual or organisation may arrange to make available data in a series more helpful to meet his requirements or requirement of a specific group, it is the governments from local to national level, who are the primary source of making statistical data available. The statistical sources therefore, may be categorised from different angles: (a) As presentation of data in the form of (i) tabular data series (ii) bar charts or (iii) maps. (b) As presentation of data by area covered (i) local, (ii) national, (iii) international. Again, from the point of view of publication schedule they may be (a) ad hoc or (b) periodic-weekly, monthly, annual or even quinquennial.

Before we take up the study of statistical information sources, it may be rewarding to have a brief background of efforts at collecting statistical data in India. In the modern period of Indian history, the first Statistical Committee was appointed in 1862 to prepare model statistical forms for collection of statistics relating to trade, finance, education, agriculture, etc. The first Statistical Abstract of British India appeared in 1863. Between 1875 when John Strachey suggested setting up a Dept. of Agriculture and Commerce and in 1949 when a statistical unit was set up in the Cabinet Secretariat, Government of India, many Committees were asked to recommend on Collection and Organisation of Statistics. This unit, in course of time, developed into Central Statistical Organisation, Govt. of India, the main body responsible for coordinating statistics collection activity in the country. In other words statistical data for India is not available for periods prior to 1863.

In addition to the Central Statistical Organisation, the Office of the Commercial Intelligence and Statistics, Calcutta; The Labour Bureau, Chandigarh and the Office of the Registrar General and Census Commissioner are the other main compilers of official statistics relating to India. Guide to Official Statistics published by the Central Statistical Organisation, Government of India and revised from time to time, is the basic source for a complete information on the various statistical sources officially published in the country. With this brief background, we shall now study some representative statistical information sources. For convenience sake we shall study them under -

- a) National information sources
 - i) Serial Publications
 - ii) Ad hoc Publications
- b) International/Regional information sources
 - i) Serial Publications
 - ii) Ad hoc Publications

A) National Information Sources

i) Serial Publications

Statistical Abstract of India. New Delhi: Central Statistical Organisation. New Series: 1950 -. Annual.

It supersedes Statistical Abstracts of British India originally launched in 1863. Covers data regarding various topics - viz., area, population, climate, social condition, labour and employment, agriculture, production, irrigation, animal husbandary, forest, industries, trade and commerce, national income and expenditure, balance of payment, banking, insurance, exports and



imports, education, prices, etc. There are around 250 tables. All India time series generally covers a period of ten years.

Annual Abstract of Statistics. London: Central Statistical Office, HMSO, 1946 -. Annual.

It supersedes *Statistical Abstract* published from 1840/53. It provides statistical data for Great Britain arranged under 18 chapters covering almost the same topics as have been listed above under *Statistical Abstract of India*.

Statistical Abstract of the United States. Washington: US Government Printing Office. 1878 -. Annual.

The volume for 1993 presents data in 1500 tables and charts arranged under 31 sections. In addition, there are seven appendices including one on guide to statistical sources and another on statistical methodology and reliability. It is more or less similar to *Statistical Abstract of India* in scope.

A few specialised compilation from India include: *Indian Labour Statistics*. Shimla: The Labour Bureau, 1959 -. Annual; *Education in India*. New Delhi: Ministry of Human Resource Development 1947-48 -. Annual; *Family Welfare Programme in India - Yearbook*. New Delhi: Dept. of Family Welfare, 1972-73 -. New Delhi : Annual; *Health Statistics of India* (Directorate General of Health Services) 1951 New Delhi : Annual; Research and Development Statistics Dept. of Science and Technology 1973-74 -. Annual.

Next to the Central Statistical Organisation, the Office of the Registrar General and Census Commissioner, are the other most important units of the Government of India for collection, compilation and publication of data relating to population. The collection of population data is decennial, i.e., every ten years are basis began in 1881. The reports of the Census of India taken every ten years published both on All India basis as well as on State levels. Census handbooks are also published for each district in the country. Census atlases are published for each State. The *Census Atlas, India, 1981* (New Delhi, 1988) contains 93 plates, statistical tables and diagrams.

ii) **Ad hoc Publications**

Ad hoc statistical information sources are published on specific topics. They are based on regular series and are compiled to present a consolidated picture.

Women in India: A Statistical Profile. New Delhi: Dept. of Social Welfare, 1978.

It presents statistics under 12 broad subject headings, viz. Demography, Vital Statistics, Health and Family Welfare, Education, Employment, Political Participation, Plan, Women Welfare, Welfare of Physically Handicapped, Social Defence, Social Work, Education and Training.

B) International Information Sources

i) Serial Publications

Unesco Statistical Yearbook. Paris: UNESCO Statistical Office, 1949 -. Annual.

Published since 1949 the yearbook presents data on education, science and technology, libraries, book production, newspapers and other periodicals, cultural papers, films and cinema, broadcasting, international trade in printed matters, cultural heritage, etc. There are seven appendices the edition for 1993. One of the appendices gives list of all statistical publications brought out by the UNESCO. At the beginning of each section there is a note explaining the scope of the information presented.

U.N. Statistical Yearbook. New York : United Nations. 1949 -. Annual.

A comprehensive compendium of the most important internationally comparable data for analysis of the socio-economic development of the world, regional and national level. Data presented cover in many cases 10 year period. The tables are grouped into three broad parts: World summary, General socio-economic statistics, Statistics of basic economic activities. *Each* year certain tables are dropped and replaced by new tables. Information on changes are provided in the introduction. From 1996 the UN is also publishing *Statistical Pocket books* to provide basic data for each member country.



U.N. Demographic Yearbook. New York: UN Department of International Economic and Social Affairs, 1948 -. Annual.

It is a comprehensive collection of International demographic statistics. Technical notes on data under each section are presented in the beginning in about 150 pages followed by detailed tables on population, by rate of increase, distribution by age and sex and vital statistics. Each-volume has special tables. Thus, the volume for 1990 has table on nationality, factual mortality, divorce, population by marital status and household composition.

The United Nations and its allied agencies such as the FAO, ILO, IMF etc. publish many other serial statistical publications devoted to special subjects viz. International Trade Statistics, Balance of Payments Yearbook, Yearbook of Labour Statistics, Production Yearbook. Some of these are continuation of annuals on these subjects published by the League of Nations until 1945.

ii) Ad hoc Information Sources

An International Survey of Book Production during the Last Decades. Paris: UNESCO, 1982.

Statistics of Educational Attainment and illiteracy, 1970-1980. Paris : UNESCO, 1983.

World Tables, 1991/ The World Bank. – 6th ed. - Baltimore: Johns Hopkins University for World Bank, 1991.

First edition was published in 1971. It is a collection of economic and social time series data for most countries of the world from 1950. Country pages include data on national accounts, foreign trade, balance of payments, external debt, manufacturing, money and fiscal social indicators.

Social Indicators of Development/The World Bank Baltimore: Johns Hopkins Press for the World Bank, 1988.

It incorporates statistical and demographic data compiled by the World Bank countries; or international agencies specialising in education, health, nutrition, etc. Arranged alphabetically by country.

C) Statistical Information Source in Map Form

Statistical information sources are also published in the form of map, in individual sheets or as atlases: The following are a few examples:

Atlas of the Child in India/ Moonis Raza and Sudesh Nangia. New Delhi: Concept, 1986.

Basically designed to provide in depth and exhaustive information about the child population in India, it contains 116 thematic maps (152 sheets) covering four facets of child population, namely demographic characteristics, work force, literacy and education and health, nutrition and family planning. Data is collected from 1971 census.

Census Atlas: National Volume, 1981. New Delhi: Registrar General and Census Commissioner, 1988.

This is the third issue in the series, which was begun with 1961 census and is based on 1981 census figures. The volume contains 93 plates and short research notes on each supplemented by useful statistical tables and diagrams in four sections: General, Demographic structure and trends, Economic aspects, Socio-cultural aspects, Evaluation.

An Atlas of Tribal India/ by Mooms Raza and Aijazuddin Ahmad. New Delhi: Concept, 1989.

It is another example of statistical data presented through atlas. Bibliographical Sources for Statistical Information Sources

Knowledge of a few bibliographical sources may help building up a collection of statistical information sources in a library.

These are listed below:

i) *Source Book of Global Statistics/* George Thomas Kurian. New York: Facts on File, 1985.



A bibliographic guide that lists more than 200 information sources of statistics issued by official and private agencies, national and international. Obviously the information needs updating.

- ii) *Statistical Sources*. Detroit: Gale; 1962 –

With the 10th ed. published in 1986, it is being issued as annual publication. It is biased towards the US sources, although sources for numeric data of foreign countries are also listed.
- iii) *Index to International Statistics: a guide to statistical publications of international inter government organisations*. Washington: Congressional Information Service. VI No. I . Jan. 1983 -. Monthly with quarterly and annual cumulation.

Self Check Exercises

- 2) List four types of statistical information sources.
- 3) Differentiate between two types of statistical dictionaries.

Note: i) Write your answers in the space given below.
ii) Check your answers with the answers given at the end of this Unit.

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

12.4 PROBLEMS RELATED TO STATISTICAL INFORMATION SOURCES

The Statistical Publications are useful sources of information for any library. However, these publications have certain peculiar problems related to their use as a source of information. The problems related with them are as follows:

- i) **The sources are never up-to-date:** Compilation of the statistical sources is a time consuming job in which data are collected, processed and finally put into a meaningful for-mat. As a result there is generally time-lag of two to three years in its publication. The latest developments in the electronic media, has to some extent, been able to surpass the time lag in the publication process. But, still the latest figures are not always available.
- ii) **Statistics provided may not be in the form the user needs:** The statistics provided in these sources may not be in a form in which the user needs. As a result the user may have either to consult other sources or recalculate the figures to arrive at a meaningful solution.
- iii) **Difficulty in comprehension:** Unless the users are aware about basic terms such as 'base number, ratio, median, arithmetic mean', etc., it may be difficult for them to comprehend



the simple tables and statistics provided in the sources. Under such circumstances, the reference librarian should be prepared to interpret and answer the query put up by the librarian.

- iv) **Non-availability** of statistics: The users may be confronted with the problem of non-availability of statistics on the areas of their requirement. This is because it is impossible to collect data on all aspects. Therefore, readymade data may not be always available for the users.

Moreover, statistics that have been collected may not always be available for use for reasons such as personal privacy, commercial confidentiality, State security, etc. Other reason could be the price of the publication, which may be beyond the means of a library to purchase.

The statistical information sources may abound in problems, but it is the duty of the librarian to see that the enquirers, needs are met satisfactorily. For this the reference librarian needs to be aware of all the information sources available for use. They should also help them in interpreting the available statistics in a meaningful way.

12.5 SUMMARY

In this Unit, you have been introduced to the Statistical Sources of Information. Statistical queries form a major part of reference librarians job, and they need to be aware of different sources of statistical information. Statistical information could be found in (1) dictionaries and encyclopaedias (2) yearbooks, directories and atlases (3) Government special statistical information sources. They are categorized into National or International Sources. These Sources are either serial publication or ad hoc publication.

Statistical information sources face number of problems. The major among them are the time lag in publication, difficulty in use and non-availability of statistical data. It is therefore, the responsibility of the reference librarian to have a detailed knowledge about the sources of Statistical information. They should be capable of collecting latest data from various sources and help the users with *their* needs of statistical information. They should also help the users in understanding the information available in the form of statistics, tables, etc.

12.6 ANSWERS TO SELF CHECK EXERCISES

- 1) Census refers to the study where everything or all is counted. Census studies are done to collect information about all aspects of population of a country. These are collected every ten years. Survey on the other hand refers to the study where only a sample is taken into consideration. Sample is taken on the basis of certain set criteria.
- 2) Four types of statistical information sources are:
 - Dictionaries and Encyclopaedias
 - Yearbooks, Directories and Atlases
 - Government Reports
 - Special Subject Statistical Sources
- 3) Statistical Dictionaries are of two types:
 - Dictionaries of statistical words, or terms, vocabulary terms and phrases; and
 - Dictionaries providing statistics of various kinds.
- 4) Atlases cover statistical information about economics, agricultural crops, industries, minerals, livestock, energy population, etc.

12.7 KEY WORDS

Census : Official counting of a country's population or of other classes of things, e.g., traffic, for statistical purposes.



Demography	:	Study of statistics of births, deaths, diseases, etc., in order to show the state of a community.
Statistics	:	Collection of information shown in numbers. Science of collecting classifying and analysing information.
Survey	:	An account of some research, examinations, or enquiry, which has been done by a scientific or organized method.

12.8 REFERENCES AND FURTHER READING

Grogan, Denise J. (1992). *Practical Reference* 2nd ed. London : Library Association Publishing Limited.

Katz, William A. (1992). *Introduction to Reference Work*. Vol. 1: Basic Information Sources. 6th ed. New York: Mc Graw - Hill.

Activity

Collect the following information from different statistical sources:

- 1) Number of Universities and Colleges in India. The increase in their number from 1951 to 1991.
- 2) Increase in population since 1951.
- 3) Increase in literacy rate from 1951 to 1991.