



Training Course on “Basic Data Analysis for Price and Foreign Trade Data”

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Introduction to Global Statistical System and Methods of Data Collection

Introduction



What is Statistics;

It is the science of collection, analysis, and presentation of data

In other words, it is the science of making;

- *generalisation*
- *estimation*

Introduction

Statistics /indicators collected

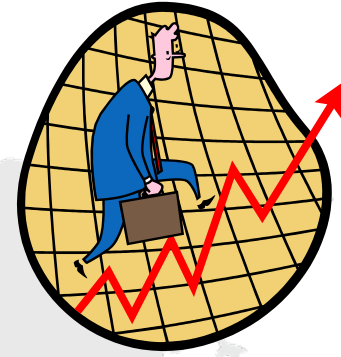
- *to support policy/decision making*
- *to provide data for scientific researches*
- *to inform public*
- *to meet international data demand*



Introduction

Statistics are required for effective policy making

- *to determine country's economic and social condition*
- *to make comparisons with other countries*



Introduction

Statistical Information

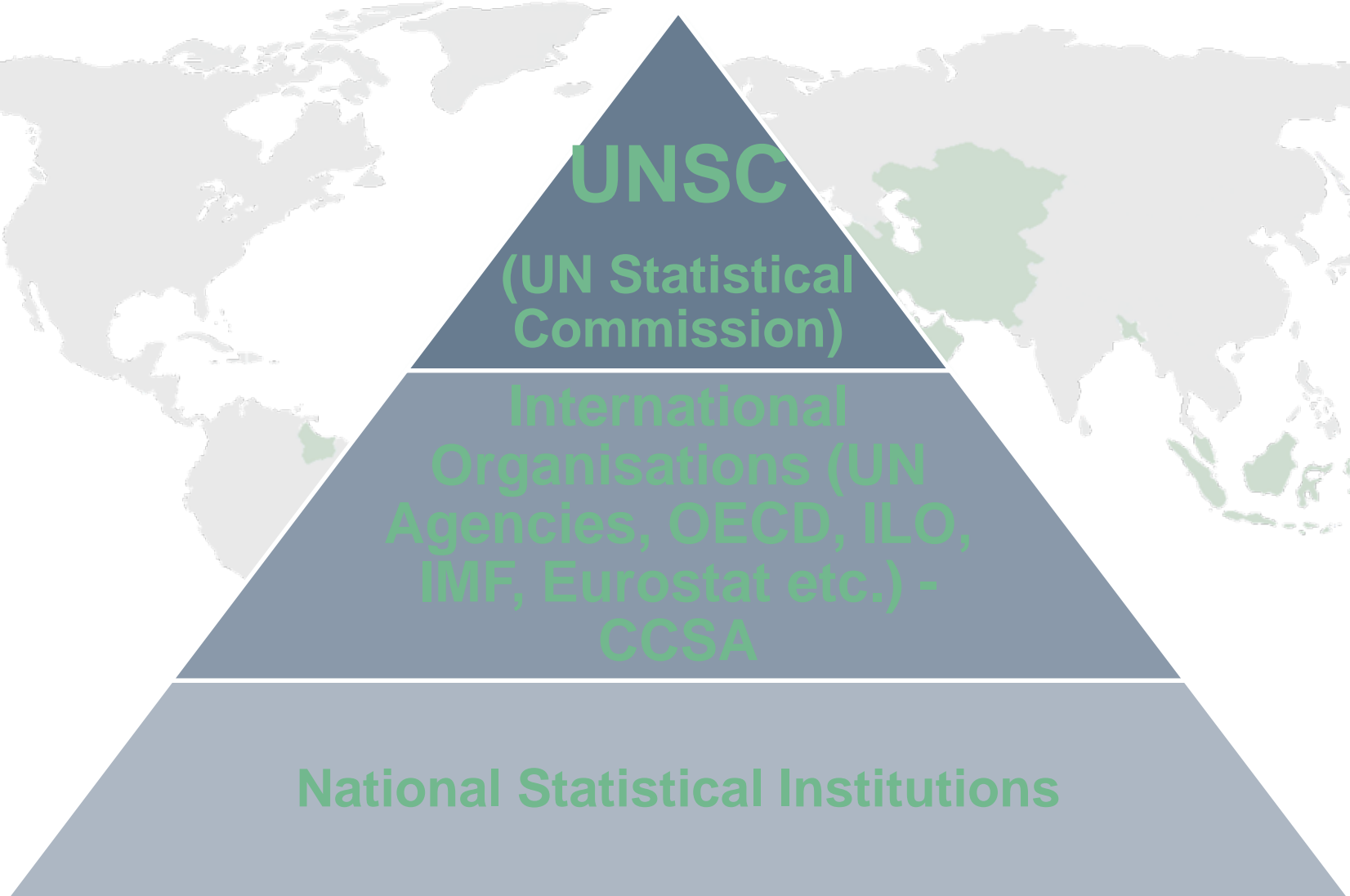
Statistics: Quantitative and qualitative information characterising a collective phenomenon in a considered population.

Indicators: Data element that represents statistical data for a specified time, place and other characteristics

Index: Indicators derived from weighted parameters

Global Statistical System

Institutional structure



Global Statistical System

Statistical Standards



- **Methodologies (SNA, PPI, CPI etc.)**
- **Harmonised concepts and definitions**
- **Classification systems**

Global Statistical System

National statistical systems

International/Regional organisations and initiatives

- Development of methodology
- Definition of standards
- Coordination
- Capacity development

International statistical system

Global Statistical System

Fundamental Principles of Official Statistics

- Adopted by UNSC in 1994 provides set of principles for accountability and quality aspects of official statistics
- Endorsed and adopted by national statistical organisations and international organisations

<http://unstats.un.org/unsd/methods/statorg/FP-English.htm>

Global Statistical System

Fundamental Principles of Official Statistics

- ✓ **Principle 1:** Relevance, impartiality and equal access
- ✓ **Principle 2:** Professional standards and ethics
- ✓ **Principle 3:** Accountability and transparency
- ✓ **Principle 4:** Prevention of misuse
- ✓ **Principle 5:** Sources of official statistics
- ✓ **Principle 6:** Confidentiality
- ✓ **Principle 7:** Legislation
- ✓ **Principle 8:** National coordination
- ✓ **Principle 9:** Use of international standards
- ✓ **Principle 10:** International cooperation

Global Statistical System

Basic Statistical Domains

- 
1. Social and Demographic Statistics
 2. Economic Statistics
 - 2.1. Macro-economic Statistics
 - 2.2. Business Statistics (Sectoral Statistics)
 3. Agriculture and Food Security
 4. Environmental Statistics
 5. Other (new fields under development)

Global Statistical System

Basic Statistical Domains

1. Social and Demographic Statistics

Population, demography

Migration

Education

Labour force

Income and consumption

Health

Social protection

Culture

Global Statistical System

2. Economic Statistics

2.1. Macro-economic Statistics

National Accounts

Price Indices

Foreign trade

2.2. Business Statistics (Sectoral Statistics)

Manufacturing, Mining and Construction Industry

Financial Institutions

Trade and Services

Transportation

Energy

Tourism

Global Statistical System

3. Agriculture and Food Security

Agriculture

Fishery

Forestry

Food security

4. Environmental Statistics

Environmental statistics and accounting

Sustainable development indicators

5. Other (new fields under development)

Rural development

Science and technology etc.

Method of Data Collection

Process of gathering data for official statistics (deriving information from variety of sources)

✓ Censuses

✓ Sample surveys

✓ Observations/measurements

Method of Data Collection

Censuses

A census is an exhaustive survey covering the whole of the target population

- 
- The Population Census
 - The Agricultural Census
 - The Business Census
 - The Housing and Building Census

Method of Data Collection

Censuses

- It requires significant organisation and planning over the course of several years
- Periodicity is 5 or 10 years (not annual)
- Base for the registration systems and sample surveys
- Questionnaires can be applied
 - By posting to the respondents
 - Presented and completed by a trained surveyor visiting the respondent.
- Mostly requires legal basis

Method of Data Collection

Sample surveys

Actually a survey refers to any form of data collection. A Sample survey is more restricted in scope: the data collection is based on a sample, a subset of total population - i.e. not total count of target population

- Some sub-populations may be investigated completely while the most sub-populations are subject to selected samples.
- In sample surveys it is important to estimate the unknown parameters as reliably as possible.
- Periodicity; monthly, quarterly, annually or bi-annually

Method of Data Collection

Sample surveys

Social surveys; the focus is related with persons and households: e.g. population statistics, labour force participation, wages and salaries, household consumption, poverty and income distribution, education, cultural activities, health and other interested topics.

Business surveys; the focus is related with enterprises, establishments and/or other business units like the local kind of activity units, including farms. The interest may vary from production composition and amount to investment plans, employment, use of energy, output waste etc.

Method of Data Collection

Sample surveys

Social surveys and business surveys differ from each other in official statistics

- business surveys are often mandatory while social surveys tend to be voluntary
- the data collection modes are more versatile in social surveys; even the sampling designs can be different.

Data Sources



The set of data records for statistical units and/or events related to the target statistical units which forms a basis for the production of statistics

Source of the data collected/gathered (statistical unit itself or administrative record for the specific statistical unit)

Data Sources

Statistical Unit

The basic observation unit for which information is sought and for which statistics are ultimately compiled.

Statistical units can be defined on the basis of

- Legal, accounting or organisational structure
- Activity

Data Sources

Basic sources of data

- **Households;** individuals or groups of individuals as consumers and producers of goods and non-financial services for exclusively for their own final use

Data Sources

- **Business enterprises;** all firms, organisations and institutions whose primary activity is the market production of goods or services (other than higher education) for sale to the general public at an economically significant price, and the private non-profit institutes mainly serving them.

Government institutions and non-profit organisations are also included (*Ref. Frascati Manual*)

Data Sources

- **Administrative registers;** Register used for administrative purposes in an administrative information system.

An administrative register should contain all objects to be administrated, the objects are identifiable and the variables in the register are used for administrative and also for statistical purposes

(Ref. WALLGREN, Anders and Britt (Statistics Sweden), "Register-based Statistics. Administrative Data for Statistical Purposes", John WILEY & Sons, Ltd, England, 2007)

A light gray world map is centered on the slide. The country of Turkey is highlighted in a light green color. Overlaid on the map is the text "Thank You!" in a large, bold, blue font with a green outline.

Thank You !

<http://www.sesric.org>
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