

OIC ACCREDITATION CERTIFICATION  
PROGRAMME FOR OFFICIAL STATISTICS

COORDINATION OF STATISTICAL WORK AT  
THE INTERNATIONAL LEVEL

ORGANISATION OF ISLAMIC COOPERATION

STATISTICAL ECONOMIC AND SOCIAL RESEARCH AND TRAINING  
CENTRE FOR ISLAMIC COUNTRIES

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# Chapter I

## Introduction

This chapter presents and discusses the concept of Statistical Coordination at the International Level as well as its features. It also reviews the importance and justification for statistical coordination at the international level. Through reviewing and discussing the three main items referred to in this chapter, concepts and ideas will be clarified, making it easier to understand and deal with the rest of the chapters.

### 1.1 Defining Statistical Coordination at the International Level

Statistical work is no longer restricted to the level of each individual country. With the development of statistics, its increasing importance and status in the world, it has become necessary for each country to build a statistical system which includes, in addition to the official statistical authority, all units and institutions working in the field of statistics. Working on the basis of this method enables national statistical institutions to establish a network of local partners, that are covered by the national statistical system, to provide data from administrative records like those that can be obtained from the different ministries and government institutions as well as what can be provided by other national institutions, and therefore contribute to bridge the gap related to the provision of data from surveys and censuses, which are the main source of data for the national statistical institutions. This is firmly related to one of the fundamental principles of the official statistics which is the principle of cost consideration. The provision of more data for national statistical institutions, through the other components of the statistical system, assures the reduction of costs required in obtaining data through surveys and censuses, which means that the money can be invested for other important matters in statistical work; it also assures the increase of the efficiency of the statistical system components in providing data to serve the state and the development based on the data thereof.

On the other hand, after the establishment of a competent and reliable national statistical system which is capable of providing the state and the community with the needed data, there comes the role of integration with the international statistical system through what is called coordination of statistical work at the international level. The first step consists of building a

strong national statistical system, followed by its reflection on building a strong and integrated international statistical system.

In 2011, the 42nd Session of UNSD Statistical Commission established Friends of the Chair Group whose function is to apply the fundamental principles of Official Statistics.<sup>1</sup>

What can be concluded is that coordination of statistical work at the international level is designed primarily to complementary and cooperation in order to produce accurate high quality statistics and to meet the goals of users away from producing redundant and contradictory data.

## **1.2 Features of statistical coordination at the international level<sup>2</sup>**

In 1994, the United Nations adopted ten principles relating to statistics. They are labeled as «The Ten Fundamental Principles of Official Statistics». The UN encouraged the countries to abide by these Principles in order to insure the preparation of high quality statistics, identify statistical work ethics and to consider that it is necessary that these principles be included in the Code of Practice for official statistics in the national statistical institution. The ten principles are as follows:

### **Principle 1: Proportionality, impartiality and equality in obtaining official statistics**

Official statistics provide an indispensable element in the information system of a democratic society, serving the Government, the economy and the public with data about the economic, demographic, social and environmental situation. To this end, official statistics that meet the test of practical utility are to be compiled and made available on an impartial basis by official statistical agencies to honor citizens' entitlement to public information.

### **Principle 2: Professional standards and ethics**

To retain trust in official statistics, the statistical agencies need to decide according to strictly professional considerations, including scientific principles and professional ethics, on the methods and procedures for the collection, processing, storage and presentation of statistical data.

### **Principle 3: Accountability and transparency**

To facilitate a correct interpretation of the data, the statistical agencies are to present information according to scientific standards on the sources, methods and procedures of the statistics.

### **Principle 4: Prevention of inappropriate use of official statistics**

The statistical agencies are entitled to comment on erroneous interpretation and misuse of statistics.

### **Principle 5: Cost consideration**

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1 Economic and Social Council, the Statistical Commission-Forty-sixth session, 2015 The report of the Friends of the Chair Group on the application of the fundamental principles of official statistics.

2 Palestinian Central Bureau of Statistics, 2006. Code of Practice for Palestine's Official Statistics.

Data for statistical purposes may be drawn from all types of sources, be they statistical surveys or administrative records. Statistical agencies are to choose the source with regard to quality, timeliness, costs and the burden on respondents.

**Principle 6: Confidentiality (privacy)**

Individual data collected by statistical agencies for statistical compilation, whether they refer to natural or legal persons, are to be strictly confidential and used exclusively for statistical purposes.

**Principle 7: Legislation**

The laws, regulations and measures under which the statistical systems operate are to be made public.

**Principle 8: Coordination**

Coordination among statistical agencies within countries is essential to achieve consistency and efficiency in the statistical system.

**Principle 9: International Standards**

The use by statistical agencies in each country of international concepts, classifications and methods promotes the consistency and efficiency of statistical systems at all official levels.

**Principle 10: International Cooperation**

Bilateral and multilateral cooperation in statistics contributes to the improvement of systems of official statistics in all countries.

A review of the fundamental principles of official statistics shows the features of coordination of statistical work at the international level through their focus on objectivity in data collection and submission to the beneficiaries in order to serve their goals, as well as on the principles such as trust through the provision of reliable and accurate data. This is in addition to adopting scientific methods in the process of collecting and disseminating data and making sure that the statistical data are properly used and scientifically interpreted. The principles also focus on the need to use all available sources to obtain data and taking into account the cost of providing such data. The principle of confidentiality and privacy is one of the most important principles in statistical work; it is through this principle that the privacy of individuals and institutions providing data is maintained and no data that might reveal their privacy is disclosed. Such principle has to do with trust and the insurance the continuity of providing the statistical agencies with reliable and high-quality data.

The fundamental principles of official statistics also include three principles of great importance and are directly relevant to the process of coordinating statistical work at the international level. The first one is coordination; it is essential that specialists in statistical work within the state coordinate with each other so as to ensure consistency and effectiveness of the statistical system. The second principle is taking into account the international standards; it is necessary that each country commits itself to using international standards, classifications and methods, which helps increase the efficiency and effectiveness of official statistical systems. The other principle manifests in the importance of international cooperation at both bilateral and multilateral levels, which increases the chances of improving the official statistical systems.

### **1.3 The importance and justification for the statistical coordination at the international level<sup>3</sup>**

The work on promoting coordination of statistical work at the international level is of great importance both for the national statistical agencies and the international organizations and institutions with competence in statistical work. The importance and justification can be sited as follows:

1. Ensuring maximum level of integration in statistical process and its outputs.
2. Maximizing the utility of the available potentials to individuals and other resources in the provision of quality services.
3. Encouraging the use of appropriate and effective tools and methods in collecting, preparing and producing statistics.
4. Using and applying common standards as well as adopting the best methodologies.
5. Identifying and defining statistical priorities and requirements.
6. Satisfying the statistical demands effectively and efficiently.
7. Ensuring maximum level of cooperation from the part of data providers.
8. Fully considering the inquiries and remarks of data providers.
9. Improving awareness regarding the importance of statistics.
10. Making the data available according to the importance and priorities of the topics for both the government and society.
11. Identifying gaps in the national statistics.
12. Promoting statistical development.

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3 Coordination of National Statistical System ND Reporting Mechanism for MDG data to International Agencies, Botswana Experience, 2008.

## Chapter II

### **Coordination of Statistical work at the International Level Methodologies**

#### **2.1 Unifying concepts, terminology and procedures<sup>4</sup>**

During the processes of designing, examining, using, updating and reviewing classifications, principles and standards of research and statistical methods should be taken into account. Clarity in concepts, terminology, definitions and structure is an essential requirement to get good results in the subject of statistical classifications.

It is necessary to emphasize that unless the concepts and applications used in various statistical topics are unified in a logical framework and in a coordinated manner, it will not be possible to develop a structure for the statistical data both to meet the total needs of data users and to make information derived from various sources identical. It is also important to ensure that each concept should be created by means of consultation with specialists in that particular item so that the unified concept can be publically accepted. The unified application and update of the various classifications and maintaining them in a harmonious manner requires constant care, dialogue and negotiation between data producers and the users of these data.

Weakness in the application of international statistics should be considered as an indicator of a lack of statistical services management. In the same context, the required regulatory measures for coordinating classifications, standards, definitions and concepts should include the establishment of an administrative department that is responsible for matching what is used across the country with what is internationally applied.

It is stipulated in the ninth principle of official statistics that “the use by statistical agencies in each country of international concepts, classifications and methods promotes the consistency and efficiency of statistical systems at all official levels.” This facilitates the international

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<sup>4</sup> Palestinian Central Bureau of Statistics, 2012. Normative Statistical Classifications, Fundamental principles.

comparisons of statistics and ensures efficiency and quality in their production. Through the survey on the application of 12 key international standards, responses of countries reveal that that most of them apply industry, commerce and professions standards, while there are deficiencies in the application of many of the other international statistical standards<sup>5</sup>.

National classifications and international normative classifications mutually depend on each other. The presence of an international normative classification based on the best practices and profound understanding of the field being classified will significantly facilitate derivation of national classifications for countries based on these good international classifications. In order to serve this process (derivation of national classifications for countries), the international normative classifications benefit from the experience gained during the development and use of national classifications, so the coverage and illustration the fundamental principles of normative statistical classifications must include both the national classifications and the international normative ones.

Harmonizing statistics aims at allowing comparisons between data collected about specific phenomena, different population groups, and in different periods of time. The aim is also to allow comparison between data collected by using different methodologies. Such comparisons will be possible if coherent and consistent are used among the different groups of data. Where it is not possible to use such standards and classifications, will be replaced by former comparison methodology by clarifying the differences and similarities between these standards and classifications during the analytical presentation of the data.

The consistency of statistical classifications should serve as an analytical and descriptive tool for the objectives to be achieved. This consistency includes categories in coherence between each other of the relevant variables or the variables themselves. The intersection lines between the categories of these different classifications could be almost the same; the ones who are in charge of calculating the unemployment levels for different age groups, for example, may face different definitions of the age variable between two sets of data (the first set uses the year of birth and a specific date of reference, while the second uses the method of age in the last birthday of the concerned in the calculation of age), and the age groups used in the statistics of unemployment are different from those used in the total workforce.

Harmonizing statistical classifications requires the establishment of a general framework to overcome the existing differences between them and to ensure the maximum level of communication and consistency between them. This requires the use of common concepts and terminology. It is also important to establish agreed upon and adopted linking tables between the different categories of these classifications. Besides, the identification of common building principles for these categories is also a possible method.

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5 Economic and Social Council, Statistical Commission-7th session, 2006. Statistical capacity building with a view to putting evidence-based policies.

Where different classifications cover the same variable, the consistency process requires a clear understanding of the fundamentals of such differences between these classifications, as well as understanding whether these classifications meet the diverse needs of the users. The desire towards the use of a standardized agreed upon classification usually requires a certain amount of relative adaptation between the relevant statistical classifications, or prioritization of specific statistical applications or users over others, while it is easy to explain how the use of a classification that is not fully allocated to meet specific needs of some users is more realistic and less complex to serve a wide range of users.

In the context of the work to increase the consistency of different statistical classifications, those who are in charge of the work should review all these classifications and collaborate within a regular outreach and communication mechanism. The result of this cooperation is often a system based on derived, reference and related classifications, ensuring the reduction of inconsistencies and loss in the efforts made to the minimum through working in teams and collaborating working groups.

There is a desperate need for permanent communication between those in charge of the different categories of statistical classifications to ensure the desired consistency; otherwise, contradictory interpretations of the same concepts and studied categories will arise.

There can be no amendment in any statistical classification without taking into account the potential impacts on other classifications. By time, such amendments may affect the analyzes that rely on these classifications; therefore, there is a need for a normative procedure to announce any modification or update plans on the classifications, and also to give adequate and reasonable time for those working on the classifications and other users, among other statistical areas to determine the effects of such amendments on their work and themes.

**In the context of the work on the consistency of the statistical classifications, such classifications are generally classified into three categories:**

1. Reference Classifications
2. Derived Classifications
3. Related Classifications

**The national classifications are harmonized with the international ones for the following reasons:**

1. To draw comparisons between the state and circumstances of one country and other countries.
2. To exchange information with individuals and institutions in other countries.

**The role of cooperation and coordination in building the statistical classifications.**

Coordination in the work on the national classifications and international ones takes place through the formation and activation of committees and working meetings. Another way is through the proper dissemination of step-action schedules and the implementation of the hearings and workshops, this is to allow for the involvement of the largest possible number of

producers and users of statistical data during the process of preparation for designing, updating, developing, reviewing or adjusting the statistical classifications.

**Uses of statistical classifications.** The statistical classifications are used for various goals including:

1. Data collection and / or arrangement the data after collecting them.
2. Compiling and sorting data sets in a logical and meaningful way for complex analysis purposes, including the creation of indexes and tabs, e.g. the use of the Classification of Individual Consumption According Purpose (COICOP) to determine the basket of individual consumption of goods and services purchased by households, which is used to unify estimates when calculating the indicator of consumer prices index.
3. Creating classifications of new variants derived from a number of classifications of different variables, for example: socio-economic state classifications which usually contain specific reference categories of groups that exist in the classifications of occupations and employment state, industrial classifications, size of the enterprise and / or educational attainment of the individual.
4. Presentation and dissemination of statistical data.
5. Reference (standard) classifications are used as a model for the development or revision of the relevant classifications, such as national classifications to their relationship with the international classifications in terms of the structural characteristics and common concepts between them.

**Methodological aspects in the development of statistical classifications.** Three methodological issues should be addressed when developing any statistical classification, or in the event of settling international standard classification for domestic use. Such methodological issues are:

1. The issues related to the users requirements.
2. Conceptual issues.
3. Issues related to collecting the necessary information for the development of the statistical classification.

## **2.2 The importance of training in specialized statistical topics<sup>6</sup>**

In response to the renewable needs for training the staff working in statistics and to get adapted to the emerging themes, methodologies and tools in the field of statistical work, in addition to response to the international recommendations in the area of promoting and building statistical capacity, a high level of interest should be shown in regard of strengthening statistical capacity for both the statistical organs and units to ensure the integration of the statistical system at the national, regional and international levels. One way

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<sup>6</sup> Palestinian Central Bureau of Statistics, paper on strengthening the Palestinian Statistical Capacities, 2007, third forum on Strengthening the Arab Statistical Capacities, Sana'a, 2007.

to enhance this is the establishment of training centers that would be in charge of planning and implementation to strengthen the statistical capacities of staff, cadres and experts in the various statistical areas, taking into account all the local and international standards in the empowerment, rehabilitation and training process.

The establishment of training centers requires support in terms of adequate potentials that qualify them to provide comprehensive training and a high level of quality in the areas, methodologies and tools of statistical work, and also the use of statistics in planning and policy-making processes.

Based on the above, the overall objective of strengthening capacities is to contribute to the development of national systems and the reflection thereof on the integration of the international statistical system, resulting in a proper use and production of statistical data and making it in the service of planning and making national and international policies goals. Therefore, some of the sub-goals are highlighted as follows:

1. Provision of trained cadres in statistics capable of producing and using statistics efficiently and effectively.
2. Support and development of statistical or statistics-based research and studies.
3. Provision of advisory services in the field of statistics to all the national and international institutions.
4. Promotion and increase of statistical awareness at the national and international levels.

**To guarantee the optimum results from the process of unifying the training standards and finding qualified training centers, it is necessary to build on the following matters:**

1. Considering human resources as the most important among the other resources in the statistical work system.
2. Training represents the real and long-term investment in human resources.
3. Considering training as the basis for developing and achieving the quality principle.
4. Planning training programs to achieve the career path for the statistical work staff and cadres.
5. Training is a necessity to keep abreast of new developments in the field of work methodologies and techniques.

**Forms of training that can be provided as part of the training plans differ between the statistical agencies and institutions. Some forms of training are highlighted as follows:**

1. Internal training courses based on private training potentials.
2. National training courses.
3. External training courses.
4. Training courses for data users to be organized based on private potentials.

5. Seminars, workshops and panel discussions on emerging and important topics.
6. Training courses to qualify new trainers.
7. Study visits abroad.
8. Recruitment of technical consultants from abroad.

With regard to the training topic, the most important thing that can be referred to at this stage is the unification of training efforts and policies in the region towards realizing the goal and concept of institutional building (capacity building) comprehensively and in an integrated form. Concerted efforts of all organizations and bodies that organize and fund the training along with the statistical agencies are required to achieve the goal. However, in spite of the significant role played by all the actors in the field of strengthening statistical capacity, the deficiency of such actors is the existing contrasts between them regarding the concept of training and its relationship to the institutional building. Among the deficiencies is also the poor coordination between them in the field of the proposed training programs, leading to the duplication of effort and repetition of the same training programs by more than one actor on the expense of other important programs.

### **2.3 The importance of providing standard evidence in the statistical work**

The provision of standard evidence in statistical work and the commitment on its use is an important step towards the embodiment of the coordination of statistical work at the international level concept. This reflects a state of integration and helps build a state of joint action that deviates the national and international statistical bodies from falling into contradiction or lack of complementary and therefore not providing high quality statistics for users and decision makers.

Here are examples of some fundamental standard evidence in statistical work, both at the national and international level:

**First:** the Special Data Dissemination Standard (**SDDS**):<sup>7</sup>

The Special Data Dissemination Standard (**SDDS**) was established by the International Monetary Fund (**IMF**) to guide the members regarding access to international capital markets and the provision of economic and financial data to users. Both the General Data Dissemination System (**GDDS**) and the Special Data Dissemination Standard (**SDDS**) aim at enhancing the availability of timely and comprehensive statistics, and therefore contributing to follow sound macroeconomic policies. It is also expected that **SDDS** can contribute to improving the performance of the financial markets.

**Second:** General Data Dissemination System (**GDDS**):<sup>8</sup>

The aim of the **GDDS** is:

- Encouraging member states to improve data quality.

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<sup>7</sup> <http://dsbb.imf.org/pages/sdds/home.aspx>

<sup>8</sup> <http://dsbb.imf.org/pages/gdds/WhatIsGDDS.aspx>

- Providing a framework for the assessment of needs in order to improve data and identify priorities.
- Providing guidance for the member states in disseminating timely, accessible and reliable comprehensive economic, financial, social and demographic statistics for the public.

**Third:** advanced experiments in census and surveys guide.<sup>9</sup>

Implementing a statistical field survey or census requires one advanced experiment or more to examine all matters relating to the work plan for the project, especially the schedule, and also examining the work mechanics, forms and definitions. Given the magnitude of these projects and the large costs they require, there must be an experiment in order to get a high level of reliability of data and to avoid the mistakes that can be controlled during the actual implementation of the project.

The different statistics agencies implement advanced experiments to:

1. Develop and raise the efficiency of surveys and censuses carried out through a survey or census design in all its stages.
2. Identify weaknesses in the design of their tools.
3. Enable the project management to control all the tools in all the stages.
4. To redo the calculations, estimates, mechanisms, definitions, instructions, requirements and logistics services.
5. Clarify the whole picture about the mechanics of the project implementation and its requirements in various stages.
6. Detect any possible mistakes and caveats that must be taken into account in the following stages.
7. Estimate the human and material needs and the appropriate schedule.

**Fourth:** Guidelines for the management and implementation of a statistical survey from the idea to the announcement of results.<sup>10</sup>

The process of planning and implementing statistical surveys includes many of the activities that overlap in terms of their timing and implemented jointly by more than one actor or administration in an agency. Therefore it is necessary to coordinate efforts so as the process of implementing the activities can be represented in a harmonious manner, in that every member of the survey crew will be able to know exactly the role they are entrusted with and also the reality of the performed work of the integration process for other activities in it.

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9 Palestinian Central Bureau of Statistics, 2005, advanced experiments in census and surveys guide. Ramallah-Palestine.

10 Palestinian Central Bureau of Statistics, 2010. Guidelines for the management and implementation of a statistical survey: from the idea to the announcement of results, Ramallah-Palestine.

The sole guarantee for the success of any work that involves cooperation between more than one party is the application of the principle of teamwork, management and the collective leadership of activities contained therein. The individual management and lack of consistency or coherence in the performance of crew members inevitably leads to a contradiction in the attitudes and thus failure to reach the desired targets from performing such work or implementing the activity.

This document aims at guiding the project management on how to prepare and implement a survey through the presentation of the various stages of the statistical project. On the other side, it presents conceptual issues that will help the project management to take the appropriate decisions to reach the desired goals and direct the statistical survey to safety.

#### **Fifth: Statistical reports scrutiny and review guide<sup>11</sup>**

Issuing statistical reports, which include results of surveys and numerous studies, is a binding process on the statistical agencies, whether such commitment is at the international level or at the regional and local level. The issuance process also requires adherence to the international recommendations as well as guaranteeing the quality of the data covered by these reports. Based on that, it has become necessary to put the theories and foundations for the issuance of data characterized with credibility, acceptable in terms of quality and of real benefit to meet the goals of the users and provide answers to the international recommendations and achieve the quality goals.

#### **The necessary conditions to issue accurate results of surveys and studies**

The main conditions can be summarized as follows:

1. Existence of clear goals and hypotheses for research or study.
2. Clear identification of research community.
3. Good research design, identification of the necessary method for research, development of the necessary programs for calculation and analysis, designing endocrine tables, and development of scrutiny and control mechanisms during all stages of dealing with data.
4. Identification of data collection mechanism.
5. Presentation and classification of data.
6. Data analysis and testing the validity of goals and hypotheses achievement.
7. Data qualification and dissemination.

**Before the scrutiny and review process of the data, it is also required to examine all the tools of collecting and classifying data, which include:**

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<sup>11</sup> Palestinian Central Bureau of Statistics, 2005, Statistical reports scrutiny and review guide. Ramallah-Palestine.

1. Examination of the questionnaire in terms of suitability, size and logicity of the questions.
2. Examination of calculation and scheduling programs.
3. Examination of extracting samples mechanism and ensuring that it represents the research subject or the required geographical coverage.

## Chapter III

### **Promotion, documentation and dissemination of the international best practices**

#### **3.1 The importance of using statistics in planning and decision making**

The importance of the new technologies in the production of statistical data and information collection consists in their use as an effective analytical and technical tool for both planners and decision makers. Perhaps, the use of statistical data greatly reduces the cost and hastens the decision-making process, to address the problems in all the different and urgent areas; it also supports the completion of plans at a faster rate and high quality, and thereby reducing waste of energy and resources.

Today, people no longer enjoy the welfare of choosing between making decisions relying on information-based evidence and foundation or on the basis of personal intuition and experiences. The use of scientific foundations and approaches to support and make decisions is no longer a feature of developed nations; rather, it has become a necessity and an international commitment on the developing countries. On this background, decision-making science started evolve gradually to success in attracting some components of social and natural sciences such as statistics, economics and sociology. With the increasing trend of opting for such scientific approaches, the need for making a breakthrough with the participation of statistics has increased as well. Most scientific approaches needed to support the decision require sound and timely statistics and indicators. With the continuous development of decision-making theories and the emphasis on the need to complete the decision-making and the design of policies by developing follow up and evaluation systems to activate the implementation of programs and policies outcome, there emerged the need for having and developing standard statistics, indicators and statistical models which makes it possible to draw conclusions and simulate various policies and development programs. In general, developing decision-making systems that build on information-based evidence is a relatively slow process; however, as soon as their effects are noticeable for the public, it clearly becomes prove to be one of the people's sources of wealth<sup>12</sup>. (Othman, 2007).

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12 Statistics, decision support and public policy formulation – Council of Ministers, Information and Decision Support Center, Egypt, 2007.

In order to produce accurate and fair official statistics, the statistical device is required to work on consolidating the principles of work that might contribute to strengthening the confidence of the public at large in the data that is generated by this device. This is to give a high level of credibility, quality and fairness within the standards and ethics adopted internationally<sup>13</sup>.

**The word ‘Statistics’ which is derived from the Latin origin ‘Status’ means the political situation, and it means facts and figures that are used by the state from the German origin ‘Statistic’.**<sup>14</sup>

Statistics have been known since ancient ages when it was used for military, taxation and astronomical purposes. The importance of statistics increased during the 18th century after the break out of the industrial revolution when businessmen realized that it is very necessary for making sound decisions. However, statistics as a science did not emerge only in the end of the 18th century, and the first one to establish its fundamentals was Quetlet (1766-1874).

**The science of statistics is known as a set of scientific theories and methods which investigate into data collection, presentation and analysis and the use of the outcomes to make estimations, report or decisions.**<sup>15</sup>

As for the decision-makers, whether deciding on administrative or military issues, they cannot do without relying on the statistical methods in studying their alternative decisions before taking any decision.<sup>16</sup>

Statistics is also referred to as a set of standard scientific methods that can be used to collect, classify, summarize and assess data (data and information) on given phenomena and draw conclusions from such data about the community group of units through the adoption of a small part of this society.<sup>17</sup>

The science of statistics is concerned with describing various ways of collecting data and observations and then organizing and presenting them by means of the scientific methods to analyze and draw conclusions from them.

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13 Palestinian Central Bureau of Statistics, 2005. Code of Good Practice for Official Statistics. Ramallah-Palestine

14 Statistics, decision support and public policy formulation –Council of Ministers, Information and Decision Support Center, Egypt, 2007.

15 Principles of statistics, 1st Edition, Amman, Jordan, Dar Albidaya, 2007

16 Introduction to Applied Statistics - Quantitative and mathematics methods, Arab Planning Institute, Kuwait.

17 Introduction to Statistics - Statistics for administrators and economists, Al Yazori Publishing House, 2005.

The science of statistics is also the science that is concerned with the methods of data collection in a manner that allows making use of them in describing and analyzing data to achieve fair decisions where uncertainty prevails.

Through the above definitions, we observe that statistics is polemically related to the process of planning, and that sound planning is based mainly on the analysis and description of the statistical data, this is because planning is a process of making decisions and setting, implementing and following up future goals and schedules.<sup>18</sup>

**Planning is also a systemic effort that leads to making decisions and accurate works allowing the institution to know the nature of its work and the driver of such work.**<sup>19</sup>

The question on the purpose behind planning and its meaning has various answers in different time periods and from different researchers. This suggests that there is no consensus among researchers and scholars over a particular definition of the concept “planning”, especially in occupation conditions, although there is an indirect near consensus over the content of such concept at all its different levels and stages regardless of the variety of perspectives from which this concept is addressed.

Providing answers for questions such as: **What is planning? Why do we plan? For whom do we plan? How do we plan?** constitutes the essence of the Planning Process which in turn leads us to develop a clear and precise definition for the concept of “planning”, that is different from other concepts, since it is considered as a directive but not a descriptive activity.

Planning does not seek to describe the world as it is, but rather to suggest and present methods and ways through which things and phenomena can be changed. For this reason forethought, discretion, thoughtfulness and effort should be the features of the planning process to achieve the desired goals. It is, as Mohamed Khames Zouka defines it, **“a method and approach that aims to study and make an inventory of all the potentials and resources available in the state or any other position at all levels be it a company, city, village, region or country. The aim is also to determine how to utilize such resources and potentials to achieve the desired goals within a given period of time”.**<sup>20</sup>

As a general concept, the researcher defines planning as an oriented, calculated and organized effort that aims at achieving a goal or certain desired objectives within a given period of time, for which a specific amount of money and effort is allocated; that is to say, planning is a organized manner of thinking and approach work for the application of the best cognitive tools to guide and adjust the ongoing process of change with a view to achieving clear, specific, and agreed-upon goals. As an economic concept, the researcher sees that planning is a set of consecutive activities that are developed and implemented with the purpose of

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18 Strategic Planning, Horus International Institution for Publishing and Distribution, Alexandria, 2008.

19 Bryson, M, John (2004): Strategic Planning for Public and Nonprofit Organizations, third edition. Jossey-Bass. USA.

20 Regional Planning and its Geographical Dimensions Dar Al-Maarifah Al-Jamiia/ Alexandria

solving certain economic problems. It is a conscious choice of the Economic Priorities by means of some public institutions.

Concerning the design of policies and developmental decision-making, the main theory for making decisions is based on two fundamental pillars: decision-making based on the arbitrary inference method and decision-making based on alternatives methods. The latter represents the scientific development throughout the history of decision-making; all the efforts, during the different phases of evolution, have aimed at including scientific spheres (e.g. Statistics and economics sciences and operations researches) and linking their paths with the theories of making and supporting decisions. Lately, there has been tendency towards improving and developing the scientific methods used in developmental decision-making; this is by means of activating theories in other sciences such as information systems, cognitive psychology and artificial intelligence. The purpose behind this is to add some complementary sides of the basic sciences, to provide a full image of what is being defined Decision Support System (DSS).<sup>21</sup>

There is a polemical relationship between statistical development, the statistical system quality and the level of development in understanding and managing the developmental process in any society. There is a common tendency for reducing investment in statistical development. Such tendency becomes less common whenever decision-makers are convinced about the usefulness of the statistical system and the quality of its outputs. The wiser and more developed is the management process, the tendency towards supporting the statistical development increases. However, for the development of the developmental process, there should be a sound statistical system and reliable official statistics. It is not possible to separate the relationship between the statistical development, investment in statistics, management of the developmental process and its integration in the frame of policies from the dialectical and complementary relation that exists between statistics, the developmental process and decision-making.

The third principal that was adopted by the UN Conference on Environment and Development, held in Rio de Janeiro, Brazil in 1992, defines sustainable development as “the right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations”.<sup>22</sup>

Development is also defined as providing a productive work and a good quality life for all the peoples, which requires a substantial growth in productivity, income and developing the purchasing power.<sup>23</sup>

**The process of development and developmental planning is strongly related to statistics.**  
The extent to which development plans are successful depends on what basis these plans are

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21 Statistics, decision support and public policy formulation –Council of Ministers, Information and Decision Support Center, Egypt, 2007.

22 Douglas Moschit, F. (2000) “Principles of Sustainable Development, Translated into Arabic by Baha Shahin, International House for Cultural Investments, Egypt.

23 Environment and Sustainable Development Management in the Light of Modern Globalization. The Arab League. Alexandria.2007.

made and what statistical data, information and indicators on the demographic, social and economic variables of society are available. Traditionally, when World War II was over, many countries in the world opted for development planning as a method to organize their social and economic life, a means to for the advancement of the social and economic development and a tool to attain the objectives of the development plans which aim at improving the living levels of people in society (the future role of statistics and its relation to development).

From the above, it can be concluded that it is necessary to acknowledge that there are strong links between demographic trends and development factors and that the availability of the different types of statistics (population, demographic, social, economic and environmental) is the sole way to ensure the success of the development planning in any country and to achieve the aimed at objectives from it.

The mere interest at handling and using statistical information by members of the community is itself a healthy phenomenon which indicates the spread of statistical awareness among these individuals, and also proves the extent to which these statistics are useful and valuable. Such interest also reflects the strong relation that exists between the perception of the importance of statistics and statistical awareness. The increasing demand for statistics by planners, development policy-makers, decision-makers and researchers in a particular society is an evidence of the broad understanding and awareness about the importance of these statistics. The process of providing the necessary statistical data sufficiently is also linked to the level of statistical awareness among the community members; where there is statistical awareness; understanding and conception of the value of statistical information, there will be no scarcity of these statistics at all.

Through the close relationship between planning and statistics we cannot imagine mere thinking of proper development planning without the availability of statistical data, information and indicators (statistics) a high degree of accuracy, reliability and comprehensiveness. For attaining such objective, the relevant actors concerned with the development planning must enjoy a good degree of statistical awareness.

Weakness of statistical awareness among some of the workers in the planning agencies, designers of development policies and decision-makers may have a negative impact on the decision-making in social and economic issues; this is due to the lack of knowledge about the facts and pillars which should be adopted to reach the desired goals. It can also be that those in charge of planning rely on incomplete or doubtful data and information (statistics), in terms of accuracy. The reason may also be attributed to recession in the relation and lack of communication between those in charge of the planning agencies and decision-makers, on the one hand, and the producers of the statistical figures and indicators (statistical agencies), on the other hand, or the total absence of such communication.

Weakness in the statistical awareness may sometimes be attributed to the inappropriate use of the statistical data by the workers in the planning agencies to reach the aimed at goals, such as using some statistical indicators without taking into account the other relevant variables, especially the statistical methods and concepts of these variables that can have impact on the issue subject to the process of planning. Moreover, the prevailing environment of trust between those responsible for planning in terms of the figures representing the available statistical data, information and indicators plays an important role in reaching the desired goals of the planning (social, the future role of statistics and its relation to development).

Therefore, the following question can be raised: How and when statistics can make a fundamental difference in the decision-making process and policies formulation?

To answer this question, this detail is exposed to a number of criteria and attitudes through which they are inferred the conditions and determinants that make the use of statistics a catalyst with a positive impact on the decision-making process.

First: Statistics helps at getting familiar with the theses and issues.

Second: Statistics is useful for designing and choosing policies.

Third: Statistics and predicting the future.

Fourth: Statistics and the follow up of implementing policies.

Fifth: Statistics and the assessment of the different programs and policies.<sup>24</sup>

### **3.2 The importance and role of media in raising awareness about the importance of statistics**

Communication means have developed and multiplied tremendously in the recent years thanks to the scientific advance and technological revolution of the twentieth century. They play a critical role in raising the public interest in the issues and problems at hand. Besides, communication means are the main resource to which the public resort to be informed about all the political, cultural and social issues due to their social efficiency and widespread; with its -media- ability to mobilize and address the wide majority of the components of society, it has the power of creating an impact, which is not in a direct manner, but through the formation of the social awareness in an indirect manner and at an unnoticeable rapid pace. Media is also an effective element in the lives of communities as it is the main diffuser and promoter of the intellect and culture. It also actively contributes to the process of forming the social consciousness of individuals alongside the family, educational institutions and civic institutions; furthermore, it is in many countries of the world one of the producers of culture through mutual human interaction and influence. In the recent years, media, with its various aspects, has acquired new dimensions that have increased the strength of its impact on individuals and groups. In addition, as an important social institution in human communities, media is loaded with economic and political implications.

Media includes all aspects of communicative activities that provide humans with all cognitive facts and information, considering that communication is a driving force of society that leads to an interactive movement based on affecting and getting affected. Communication is a social process, and it takes place in a particular environment, where it has effect and gets affected by it, and there is interaction between communication and society<sup>25</sup>.

#### **Media available for raising awareness about the importance of statistics:**

1. Visual

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<sup>24</sup> Statistics, decision support and public policy formulation –Council of Ministers, Information and Decision Support Center, Egypt, 2007.

<sup>25</sup> The role of media in shaping social awareness among Palestinian youth, 2010

2. Audio
3. Written
4. Social media

**Media with its different forms and patterns can play a tremendous role in raising awareness about the importance of statistics through:**

1. Continuity, maintaining the broadcast of the statistical news permanently and continuously.
2. Time, dissemination of statistical news timely.
3. Objectivity and professionalism, broadcasting news in a professional and objective manner away from bias.
4. Attractiveness, broadcasting news in an attractive manner for the reader and not make them turn away from it, and this via the use of dissemination mechanisms that are appropriate for people from all walks of society (adults, young, specialists, laypersons, academicians, researchers), i.e. dissemination in a user friendly manner.
5. Credibility and confidentiality, publishing credible and non-contradictory news, and not to disclose the confidential standards both for individuals or institutions.

### **3.3 The Importance of Documenting the Best Practices**

Accurate statistics is considered to be one of the basic tools for the work of any government trying to guide its decisions and improve its performance. Accurate statistics is also an unbiased scientific component that provides common ground for free rational debate regarding core issues of concern to the community in social and economic fields. Statistics is also considered as an important tool in the consolidation of democracy and the principle of accountability and transparency. The accurate monitoring of the evolution of the social and economic fields allows us to control and evaluate governmental policies and the progress achieved by the government as time passes concerning the objectives and programs on the basis of which the government was entrusted. For that reason, the statistical device is required to work on consolidating the principles of work that might contribute to strengthening the confidence of the public at large in the data that is generated by this device. This is to give a high level of credibility, quality and fairness within the standards and ethics adopted internationally.<sup>26</sup>

**Follow up of the importance of documenting statistical good practices through its commitment to the principles of Code of Practice for Official Statistics, namely:**

1. To be relevant to the subject
2. Independence
3. Quality
4. Data availability for public use
5. Confidentiality of data
6. Balance between meeting the needs of users and the pressure on the data providers
7. Integrity, experience accumulation and creativity
8. Cost of producing official statistics and its usefulness

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<sup>26</sup> Palestinian Central Bureau of Statistics, 2006. Code of Practice for Palestine's Official Statistics. Ramallah-Palestine.

**There are also work actions in specific areas with a significant impact on the process of documenting good practices:**

1. Coordination between the components of the statistical system.
2. Permanent coordination between national, regional and international statistical agencies.
3. Data quality management.
4. Making data available through disseminating it in websites and statistical bulletins.
5. Confidentiality of data
6. Enabling public services departments to play their role of documenting and providing users with data.
7. Archiving and documenting data.
8. Professionalism.

# Chapter IV

## Sources of Statistical Data

Official data of any country are obtained from three main sources:

**First:** Censuses

**Second:** Sample surveys

**Third:** Administrative records

Below are the sources of data with the necessary details:

### 4.1 Censuses

Census is defined as the total process of collecting, classifying, processing, analyzing, assessing, disseminating and providing statistical data about population numbers and distribution according to demographic, social and economic characteristics in a specified reference period, and also to all persons within the borders of the state and citizens who are inside the borders of the state on a temporary basis.

Censuses are usually carried out every ten years, states and their statistical devices take charge of supervising their implementation, because census is considered as a form of sovereignty over the land.

This implies that every individual living within the borders of the state in a specific moment of time and at a certain date must be counted, and that their demographic, social and economic characteristics are recorded in their reference period date separately from the characteristics of the other family members. Censuses aim basically at:

1. Collecting and disseminating demographic, social and economic data about the population in order to provide the state with the official requirements of inhabitants, housing and establishments data, which will be required by the national development plans, and the needs of decision-makers, planners and researchers, in addition to providing data according to the international recommendations and requirements.
2. Providing an updating the preview framework for all regions, especially for economic, social and demographic surveys.
3. Conducting specialized statistical researches, which take place in the sampling manner such as workforce surveys, household expenditure and income surveys, demographic surveys and researches like fertility, mortality, migration, health and education researches, research on housing, and any surveys carried out by other entities.
4. Creating a broad base of data and use it as a reliable basis in conducting studies and researches that will be required by development programs.
5. Providing demographic data and indicators periodically to measure the change in demographics over time, and conduct local, regional and international comparisons, and review and assess population projections, estimates and future forecasts.
6. Updating review frameworks

## **4.2 Sample Surveys**

It is the data that results from actions by official statistical agencies, research centers, universities and researchers of collecting data about a specific subject or area by using a random representative sample of the community, in the various economic, social, demographic, environmental demographic and other areas.

## **4.3 Administrative Records**

It is the data that results from the routine work carried out by ministries and government institutions legally responsible for the administration and operation of the various activities of multiple registration systems, which result from routine operations carried out. This includes population record, education record, commercial business record, workforce record, tax record, handicapped record, health record, births and deaths record, criminal record and others.

These records require a legal authority to compel citizens, upon whom these laws are applicable, to abide by them and act accordingly; an official authority be it a Ministry or an institution following the registration process in one of the areas.

In general, these records lack the comprehensiveness of coverage in registration and the accuracy and quality of information recorded. At the same time, they are not usually updated on a timely basis unless a citizen asks for a service in this area. Such records in developing countries need to continuously developed, particularly in terms of making laws and legislation, and organizing the registration process and procedures in an acceptable accuracy and comprehensiveness.

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