

## Methodology

# Household Expenditure and Income Survey (2014 – 2015)

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## First: Background of the Survey

### 1.1 Introduction

The household expenditure and income survey is a key statistical survey and implementing this type of surveys is difficult and complex since it addresses the issues of spending, consumption and income. As well as it includes interviewing households (Emirati and non-Emirati) and asking them about sensitive variables. In addition, spending and income are subject to seasonal influence during the months or seasons of the year, so it requires field follow-up for a full year, which means high costs to incurred, time to consumed, and effort to exert. In order to provide economic and social databases that reflect the reality of the household expenditure and income. Most developed countries implement a survey on household spending and income due to the significance of this kind of survey in multi-purpose use as it provides population and social data about the household expenditure and income in order to provide several social and economic indicators about the community's reality. Whereas these indicators are essential for the developmental plans and programs which are widely-used in the evaluation and studying of the appropriate standard of living for the individual as well as in measuring the welfare of the population in society.

### 1.2 Objectives of the Survey

The household expenditure and income survey is one of the surveys that helps examine the social and economic levels for households, identify welfare of society, as well as identify patterns of household spending and consumption. The general objectives of the survey can summarized as follows:

1. Identifying the consumables spending patterns prevailing in the society of the Emirate of Dubai.
2. Identifying the averages of household and individual's spending on various commodities and services, and how these are influenced by social characteristics such as nationality, educational level, and marital status.
3. Providing weights reflecting the relative importance of the various items of spending which are used in building the consumer prices index.

4. Calculating quantities and values of consumption of commodities and services and estimating future demand.
5. Measuring the rate of inflation.
6. Identifying the categories of household income and the availability of food security for them.
7. Studying the impact of the high level of prices of commodities and services to consumers.
8. Studying the wages levels and their impact on the domestic consumer spending (such as housing, education, and health).
9. Providing the needs of National Accounts System of data needed for the preparation of national accounts on the final consumption of the domestic sector.
10. Providing particular data for the calculation of various indicators of poverty including poverty lines, rates, and gaps in addition to providing the data needed to assess the level and direction of the welfare of households and individuals.
11. Providing particular data for the preparation of food budget on individual's consumption of food calorie.
12. Identifying the activities of the unorganized sector, including agriculture which is within the household sector (outside the agriculture establishment), and its importance to the national economy.

## Second: Target Population and Survey Sample Frame

### 2.1 Target Community:

The household expenditure and income survey targets all population groups residing in the Emirate of Dubai. Population in the Emirate of Dubai categorized into the following groups:

1. **Emirati population** living in households: An Emirati household defined as one or more UAE nationals who share together food and drink and most of them are relatives.
2. **Non-Emirati population:** These are further categorized into:
  - a. Non-Emirati individuals living in households: A non-Emirati household defined as one or more non-UAE nationals who share food and drink and most of them are relatives.
  - b. Non-Emirati individuals residing in collective households. A collective household defined as two or more individuals, irrespective of their nationalities, who share together a house and might share food, but might not be relatives.

The rest of the population of workers who live in apartment buildings for the workers' residence who work in different companies and projects called the labor camps.

### 2.2 Survey Sample Frame:

The sample frame defined as a list of the units from which the survey sampling carried out. The model frame for sampling is the latest frame encompassing all the (units) of the phenomenon or community in question. One of the most important characteristics that should be available in the frame is that it should be complete, including all the units in question. Provision of such frame in accordance with the above conditions is necessary for selecting the sampling units with according to specific and known possibilities in order to apply the scientific foundations in estimations and to disseminate the results.

### Third: Survey Sample

#### Sampling Households:

The target community of this survey is all the population residing in the Emirate of Dubai, which categorized into the following categories: Emiratis, non-Emiratis, and labor camps. The survey used the clusters sampling method where the population divided into three clusters compatible with the three population categories. The sample size in each cluster estimated so that the sample results are representative at the level of Emiratis, non-Emiratis, and labor camps. The sample size is 1,800 households for each cluster, both Emiratis and non-Emiratis, and 720 workers for the labor camps. The survey sample designed according to the international practices and recommendations in this regard. This survey will last for a full year.

The household frame updated in 2013 that included 141,000 households adopted, in addition to all labor camps. The frame distributed to count units each of the size of 100 households for sampling in two phases. The first phase of sampling counting units carried out according to the PPS method, randomly, and in the second phase, 16 households were sampled from each counting unit sampled in the first phase, which means 12 Emirati households and 4 other households to handle non-response. The survey sample distributed in each cluster to 12 months for collecting data of the sample household for each month. Due to the difficulty of carrying it out during the whole year with the household due to non-response cases and the fact that households do not continue to respond for long periods as confirmed by the experience of various States in this area.

### Fourth: Stages of the Survey

The survey phases included a set of overlapping and integrated processes that required the cooperation of specialists from DSC in different phases of the work to develop the work plan and timetable for the implementation of the plan, provide all personnel categories required for timely implementation, and assignment of tasks, as well as their workplaces. These included the following:

1. Sample design and selection.
2. Questionnaire design and preparation of the instructions manual.

3. Test and develop forms, instructions, software, data collection and processing.
4. Preparation for the stage of the field work such as developing devices, programs, data collection, and field, office, and electronic auditing instructions and developing the coding manual.
5. Selection of the survey staff and training them on the method of data collection and auditing the data collected.
6. Electronic survey data collection by using Smart Tablet PCs.
7. Data audited and sent electronically and directly from the field to DSC using the latest smart technologies.
8. Electronic auditing and coding of the data.
9. Correcting the data errors.
10. Database setup in its final form.

### **Fifth: Main Documents of the Survey:**

The survey documents included all of the forms and instruction manuals for supervisors and staff as well as the electronic and office audit rules. Below is a brief overview of these key documents:

#### **5.1 Survey Form:**

The survey form consists of two main sections:

##### **First: Survey Form:**

Part of its data completed during the first visit in the beginning of the month, and the other part completed in the end of the month. It includes the following:

**Cover Page:** It includes the introductory data, which includes:

- Name and number of area, category name and number, number of counting area, unique number, regulation number of the building (government/private), name of the owner of the building, building type, type of dwelling unit, location of the unit, household serial number in the sample, household type, household head name, phone number.

**Characteristics of Housing:** This section includes data showing the housing properties which include:

- Building type, electricity and water source, type of housing, type of ownership, housing surrounding (pollution, noise, etc.), air-conditioning type, type of gas used in the kitchen, how to get rid of garbage, durable commodities owned by the household, productive activities for the household.

**Household Members Data:** This section includes a list of the household members and their characteristics in terms of educational status, marital status, employment status, occupation, and economic activity.

## **Second: List of Commodities:**

The list of commodities or the so-called basket of consumer categorized according to the UN recommendations for the National Accounts System under the Classification of Individual Consumption according to Purpose (COICOP). The list of commodities consists of a category of spending and consumption that given serial numbers according to significance for the household, starting with the categories of food commodities, clothing, housing, education, transportation, and communication. Each category includes a number of significant commodities. The number of commodities in all categories is 667 commodities and services.

## **5.2 Instructions Manual:**

The Instructions Manual contains all the definitions and concepts used in the survey as well as the detailed instructions for field staff of all supervisory and executive levels. It also contained a detailed explanation of all the questions and concepts contained in the form of various sections and classifications used for each, in addition to how to collect data in a way that ensures collection of data at the highest possible integrity and accuracy. The manual also included the basic audit rules that must be followed by workers at various levels in auditing the forms with a focus on completion of the form, the logical relationships between answers, and how to detect and correct errors.

## **5.3 Coding Manuals:**

All relevant fields coded using the most recent international classifications and used at DSC such as the classification of professions and nationalities. These are:



- Classification of Countries and Nationalities (UN 2014).
- International Standard Classification of Education (ISCED); ISCED Fields of Education and Training, 2013.
- International Standard Classification of Occupations (ISCO).
- The International Standard Industrial Classification of All Economic Activities, Rev. 4 "ISIC4".

## Sixth: Survey Staff

### 6.1 Functional Structure of Survey Staff

Coordination of work and ensuring smooth implementation of the plan requires an organizational structure of the survey that identifies the hierarchical structure of staff, and defining the functions of each job in a coherent and hierarchical system, which achieves good governance, clarity of authorities, accuracy of registration, and smooth implementation. It also ensures review rules implemented in the field and ensures ease of supervision. In addition, the nature of work in household expenditure and income survey is different from other functional works in terms of being a temporary process that takes place in a specific period, and by members, some of them had not exercised this work before. Therefore, all employees in the survey are trained extensively on work related to implementation of the survey in the sense that an employee does start his/her work only after full understanding of all definitions, instructions, and practical steps.

#### Functional structure of the survey shows the following:

- Survey Technical Manager.
- Survey Field Manager.
- Survey General Supervisor.
- Supervisor of Technical Office.
- Follow Up Administrative.
- Field Supervisor.
- Male/Female surveyor.
- Analyst/Programmer.
- Auditor/Editor.

## 6.2 Researchers Selection and Training:

Staff selected on various supervisory and executive levels according to several bases, including previous experience in censuses, statistical surveys, poll studies, knowledge of the geographic areas, use of maps and educational qualification. As the majority of them were BA holders, proficiency in using the smart devices specified for data collection, in addition to proficiency in the English language and other languages. A plan for training field staff and other staff of the survey developed before beginning data collecting from fields. A specialized team from DSC organized a training course for Arabic-speaking staff and another for English-speaking staff that included the objectives of the survey, data collection method, data confidentiality, how to identify sample families, as well as using maps and sample lists. The training also included the practical part and ability to use Smart Tablet PCs to identify the extent of skill of staff in using it in the field. The training also included interviewing techniques, how to deal with families, and overcoming difficulties. In addition, many office and field practical pre-experiments for filling in the form and detecting the errors that appear, Because of those applications conducted. Staff was also trained on office data processing, audit rules, how to detect errors, and correct them to ensure consistency of answers. It is noteworthy that at the end of the training course a test for all survey staff, of various supervisory and executive levels, was organized on the basis of which the process of selection of survey staff was largely identified.

## Seventh: Fieldwork Phase

This section contains a brief summary of the stages of the fieldwork, which included the conduct of fieldwork and the audit office with ease procedures.

### 7.1 Organizing Fieldwork:

The fieldwork was organized and implemented in a manner that ensures easy and accurate collection of the survey data. Work distributed to all sectors and planned areas in the Emirate. Field operations management was within the main center of the survey administration. The distribution of the technical staff to the working areas was in terms of the volume of work in each sectors, how far sample sites are distributed and how easy connection and communication.

## 7.2 Data Collection Method:

Determination of the method of collecting data facilitates the work of those involved in the survey and develops a clear picture for them to continue work, both technically and administratively. The data collection process is as follows:

- The field supervisor identifies the locations of the sample households on the map, locates their locations in the field, and informs the female staff member about the sample households through direct field visit for households.
- The surveyor fills in the date of housing properties, individuals, and income during the first field visit to the household and delivers the daily expenses form, and explains how to fill in the data on a daily basis with regard to spending within a week of commodities and services. Whether all or part of the price is paid or postponed, or a gift in-kind or from the household's organization, and whether the commodities were all consumed or some of them. Unless the commodities produced by the household, in this case only the commodities consumed by the household are registered.
- The male/female surveyor during the second field visit to the household receives the fill-in forms of the daily expenses book for the last week, in order to be review, collected, and checked in terms of consistency, then entering them to the Smart Tablet PCs. Every week, the same process repeated for four visits per month.

## Eighth: Data Processing Phase

The use of smart technologies in the survey and data communications on a regular basis from the field to the central databases was of major impact in making sure the completed data about families is stored and saved after data collection, in addition to timely obtain backups from all Smart Tablet PCs of the staff after making sure they are audited and approving them in their final form by the supervisor. In addition, a special register was prepared and automated that shows the progress of the various operations in all sample areas and the completed family's data flow between staff at the supervising office.

## 8.1 Display and Dissemination of Results

The survey results will be displayed through the smart statistical system for the Emirate of Dubai available at the Dubai Statistics Center via the interactive statistical system and the statistical indicators system as well as through a specialized publication that reviews the major findings of the survey, as well as through a detailed analytical report for the final survey results that includes all tables on the characteristics of families and individuals and all major sections of the form. Those inputs disseminated in several ways:

1. DSC Website;
2. DSC's Smart System.
3. Periodical press news that highlight the survey results.

## Ninth: Main Definitions

### Households:

It is an individual or more who share a house and another aspect of living arrangements, who form together one living unit that spends on its consumer needs of commodities and services from the combined revenue it has either its source is one individual of the household members or more, and they may be relatives. The household also defined as one or more persons living together and they jointly provide food or other basic needs of living, and these persons can collect their income and they can have a common budget, may be relatives, may be not relatives, or a combination of the two.

The household-maids who do not live in the same place will be exclude even if the household provides them with food and some expenses. The household, in the household expenditure and income survey, includes Emirati and non-Emirati households.

### Collective household:

It is a group of individuals (2 or more) irrespective of their nationalities who share together a house, but they do not share food and other expenses, and usually are not relatives. A collective household does not have a head and it is often of the same sex, i.e. males or females. Collective households in the household expenditure and income survey are only a non-Emirati.

### Labor Camps:

It is a group of laborers (50 or more) individuals working in the same enterprise, reside in the same collective housing, and do not share food, and the housing is supervised by the employer (government or private) and in the form of a (single or multi-storey building, separate rooms, caravans, warehouses, etc.) and often these buildings are employer-owned or rented.

### Household Spending:

The money spent on buying commodities and services used for life purposes, as well as the value of commodities and services received by the household from the employer for household consumption, in addition to the money that is spent on fees and taxes (non-investment), Zakat, insurance, gifts, donations, interest on debt, and other consumer matters.

### Head of the Household:

One of the usual household members (according to the definition of household) who is +15 years old and regarded by the rest of its members as the head. The head of the household is not required to be the eldest, the one with the biggest income, or of a particular sex (male or female). S/he is not required to be relate to most of its members. However, s/he is required to be an adult and sane, and is included among its members at the time of the survey.

### Consumer Spending:

Cash spent on buying commodities and services used for the purposes of life, and the value of commodities and services received by the household from the employer and allocated for household's consumption. This also includes the value of commodities provided to the household as gifts, commodities that consumed during the registration period of household production, and the estimated value of owned house rent. Total consumption (consumer spending) = cash spending on food and other than food + own production of food and other than food (including rent).

### Income

The cash or in-kind revenue earned by the individual or household during a specific period such as week, month, or year.

Income consists of the following sources:

- Salaries and wages.
- Income from private business.
- Income from property.
- Transferred income (retirement pensions, transfers from non-profit institutions, subsidies, transfers from household members, social insurance, end of service indemnities, and compensations).
- Self-production (self-production of food and non-food, and rent).

### **Tenth: Improvement Plans:**

- Increasing sample coverage.
- Updating the form in consistence with the emerging requirements.
- Continuous update of the internationally accredited methodologies and classifications.
- Improving the staff training methodology.