



**Palestinian National Authority
Palestinian Central Bureau of Statistics**

**Household Survey on Information and
Communications Technology, 2011**

User Guide

December, 2011

Table of Contents

Introduction

Definitions and Explanations

Survey Questionnaire

Data Set Linkage

Filtering and Grouping of Respondents

Target Population

Sample Size and Design Frame

Weighing

Variance Calculation

Data Collection

Reference Period

Response Rate

Data Quality

Derived Variables

Introduction

The main objectives of the Households Survey about Information and Communications Technology, 2011 is to provide statistical data on Information and Communication Technology for the Palestinian Households in the Palestinian Territory; in particular to provide statistical data on the possession telecommunication means, prevalence of computers and access to the Internet, possession and Use of Recreation Devices.

Concepts and Definitions

Information Technology and Communications (ICT):

It is used to describe the tools and the process to access, retrieve, store, organize, manipulate, produce, present, and exchange information by electronic and other manual automated means.

Website:

Location on the World Wide Web identified by a web address. Collection of web files on a particular subject that includes a beginning file called a home page. Information is encoded with specific languages (Hypertext mark-up language (HTML), XML, Java) readable with a Web browser, like Netscape's Navigator or Microsoft's Internet Explorer.

Internet:

A worldwide public computer network. Organizations and persons can connect their computers to this network and exchange information across a country and/or across the world. Internet provides access to a number of communication services, including the World Wide Web and carries email, news, entertainment and data files.

E-mail:

A means for the exchange of messages, texts, and attached files among Internet or intranet users.

Internet Use:

For the purposes of this survey, defined as the basic uses of the Internet (during the last twelve months), such as access to certain sites, reading newsletters, and downloading files or programs from the Web.

Computer Use:

For the purposes of this survey, defined as the basic use of the computer (during the last twelve months), such as opening the computer and files, creating, copying, pasting, and saving files.

E-Commerce:

The conducting of business communication and transactions over computer networks and through individual computers linked to the Word Wide Web. Strictly defined, e-commerce is the buying and selling of goods and services and the transfer of funds through digital communications.

Satellite:

A satellite stationed in geosynchronous orbit that acts as a microwave relay station, receiving signals sent from a ground-based station, amplifying them, and retransmitting them on a different frequency to another ground-based station. Satellites can be used for high-speed transmission of computer data.

Main Telephone Lines:

A telephone line connecting the subscriber's terminal equipment to the public switched network and which has a dedicated port in the telephone exchange equipment.

Mobile Phone:

The mobile phone that belongs to any telecommunications company.

Integrated Services Digital Network (ISDN):

A digital access technique for both voice and data. This is a digital alternative to an analog public switched telephone service and carries data or voltages consisting of discrete steps or levels, as opposed to continuously variable analog data. ISDN enables digital transmission over the PSTN.

Asymmetric Digital Subscriber Line (ADSL):

A form of DSL, a data communications technology tool, that enables data transmission over copper telephone lines faster than a conventional modem.

Modulator\Demodulator (MODEM):

A hardware device that enables a computer to transmit and receive information over telephone lines. The modem is responsible for converting the digital data used by the computer into an analog signal used on phone lines and then converting it back once received at the other end.

Dial-up Internet Access:

A form of Internet access via a telephone line. The client uses a modem connected to a computer and a telephone line to dial into an Internet service provider's (ISP) node to establish a modem-to-modem link, which is then routed to the Internet.

Digital Subscriber Line (DSL): An Internet connection via modem and dial-up software utilizing the Public Switch Telecommunications Network (PSTN).

Wireless:

Includes fixed wireless, mobile wireless, and satellite Internet connections.

Flash Memory: A non-volatile computer memory that can be electrically erased and reprogrammed. It is a technology that is primarily used in memory cards and USB flash drives for general storage and transfer of data between computers and other digital products.

Digital Camera:

A camera that takes video or still photographs, or both, digitally by recording images on a light-sensitive sensor.

Household:

It is one person or a group of persons with or without a family relationship who live in the same dwelling unit, share meals, and make joint provisions for food and other essentials of living.

Household Membership:

Persons staying in the dwelling unit are considered members of the household if the dwelling unit is their usual or only place of residence.

Reference Date:

The reference date for the survey was the last twelve months from 01/07/2011.

Survey Questionnaire

The questionnaire for the Information and Communications Households Survey, 2011, consisted of two main parts:

1. Household questionnaire:

This was composed of questions regarding computer processing, access to the Internet, and possession of various media and computer equipment.

2. Questionnaire for individuals aged 10 years and over:

Questions relating to computer use, access to the Internet, and possession of a mobile phone

Data Set Linkage

The data set for users consists of two primary files that are related by identification variables (keys). A description of the files is below.

File Name	Content	Identification Variable
Family. dat	Family Data	IDSAM: questionnaire serial number
Persons. dat	Person (10 years and over) Data	IDSAM: questionnaire serial number

Filtering and Grouping of Respondents

Units of analysis (Other units are generally derived from these) and filtering instructions are as follows:

Unit	file	Filtering
Family	Family. Dat	Households that interview result were completed or partially completed.
Person	Person. dat	Persons with interview result were completed.

Target Population

The target population consisted of all Palestinian households that usually reside in the Palestinian Territory. As for individual data, the target population was individuals aged 10 years and over at the time of the reference date

Sample size and Design Frame

The estimated sample size for the Information and Communications Households Survey 2011 was 4,448 households, of which 3,048 households were in the West Bank and 1,400 in the Gaza Strip.

The sampling frame consisted of all areas enumerated in 2007. Each enumeration area consists of buildings and housing units comprising an average of around 123 households. These enumeration areas were used as primary sampling units (PSUs) in the first stage of the sampling selection.

The sample strata have been designed on two levels:

- 1- Governorate
- 2- Locality type (urban, rural, refugee camp)

Weighing

The weight of statistical units (sampling units) in the sample is defined as the mathematical inverse of the selection probability, where the sample of the survey is a three-stage stratified cluster sample. Thus, the weights are calculated for each stage and the household weight is the multiplication of the two weights.

Adjusted weights are important to reduce bias resulting from non-responses. Also “adjusting” has given consideration to demographic changes since the time of the Population, Housing and Establishments Census of 2007 and the time of carrying out the survey.

Furthermore, weights were adjusted in line with the estimation of the size of population in the Palestinian Territory and distribution according to age group in the middle of the second quarter of 2011. Therefore, the results, changes and ratios of this survey represent the reality in the Palestinian Territory during that period.

Variance Calculation

It is necessary to compute standard errors of the principal survey estimations, so that a user can identify the accuracy of estimations and the survey reliability. Total error of the survey can be divided into two kinds: statistical errors; and, non-statistical errors. Non-statistical errors are related to the procedures of statistical work at different stages such as the failure to explain questions in the questionnaire, unwillingness or inability to provide correct responses, bad statistical coverage, etc. These errors depend on the nature of the work, training, supervision, efficiency of design, and conducting with all the various related activities.

The working team in the spared no effort at the different stages, to minimize non-statistical errors; however, it is difficult to estimate numerically such errors due to absence of technical computation methods based on theoretical principles to tackle them.

On the other hand, statistical errors can be measured. Frequently they are measured by the stranded error, which is the positive square root of the variance. The variance of this survey has been computed by using the “programming package” CENVAR whereby the method of Ultimate Cluster is used to calculate variance.

Data Collection

Instructions and Training manual

The training manual covered all aspects related to field work and filling in of the questionnaires. It included the tasks of each field worker, interviewing practices, and completion of the questionnaires. Additional training manuals were drawn up for supervisors and editors for team training and to ensure the success of the project.

The training was divided into two stages: The first dealt with general issues such as the design of statistical surveys, reaching selected households, interviewing, tasks and duties, and performing field work. The second stage stressed the objectives of the survey and exercises on filling in questionnaires

Data editing in the field

The managers of the project developed a clear procedure for editing data and trained the team of editors accordingly. The procedure was as follows:

- Receipt of completed questionnaires on a daily basis.
- Checking each questionnaire to ensure that they were complete and that the data covered all eligible individuals. Checks also focused on the accuracy of the answers to the questions.

Returning incomplete questionnaires, as well as those with errors, to the field for completion

Following up and supervision

Special follow-up schedules were designed for the delivery and receipt of questionnaires at all levels, in addition to monitoring the daily accomplishments of the interviewers. Supervisors had the task of allocating work to the teams using the map and the list. They provided daily and weekly reports to the field work coordinator and project managers on the completed interviews, cases of refusal or non-response, such as vacant housing units, indeterminate interview results, or where the case subjects could not be reached (after three attempts at contact). The reports also included notes on supervisory field visits by technicians and coordinators.

Data Processing

Both data entry and tabulation were performed using the ACCESS and SPSS software programs. Data entry was organized in two files corresponding to the main parts of the questionnaire. A data entry template was designed to reflect an exact image of the questionnaire and included various electronic checks: logical check, range checks, consistency checks, and cross-validation. Complete manual inspection of results was performed after data entry and questionnaires containing field-related errors were corrected.

Reference period

The reference date for the survey was the last twelve months from 01/07/2011.

Response Rates

Households and Eligible Individuals (10 years and over) and Response Rate by Region, 2011

Sample and Response Rate	Region		
	Palestinian Territory	West Bank	Gaza Strip
Households	4,448	3,048	1,400
Households Interviewed	3,930	2,658	1,272
Response Rate of Households	93.9	93.9	94.0
Males Interviewed (10 years and over)	1,855	1,236	619
Females Interviewed (10 years and over)	1,957	1,334	623
Response Rate of Individuals	85.7	84.4	89.0

Data Quality

Since the data reported here are based on a sample survey and not on complete enumeration, they are subjected to two main types of errors: sampling errors and non-sampling errors.

Sampling errors are random outcomes of the sample design and are, therefore, easily measurable.

Non-sampling errors can occur at various stages of the survey implementation in data collection and data processing and are generally difficult to be evaluated statistically. They cover a wide range of errors, including errors resulting from non-response, sample frame coverage, data processing and response (both respondent and interviewer-related). The use of effective training and supervision and the careful design of questions are measures that have direct bearing on the magnitude of non-sampling errors and, hence, on the quality of the resulting data.

Technical Notes

We have been maintaining the tools of survey methodology in a line with a series of surveys, to enable researchers and to make comparisons. According to the fact that this survey is attached to the labor force survey, the questionnaire was shortened to be limited to the most important indicators of ICT, and to maintain the same methodology in the selection of the individual (10 years above) by KISH table, we met 1% of a sample of individuals by telephone, and that was after the completion of the family questions that directly related to the individual and control the quality.

Derived Variables

Variable name	Description	Values
Region	Region	1. West Bank 2. Gaza Strip
loctype	Type of locality	1. Urban 2. Rural 3. Camps