Palestinian National Authority
Palestinian Central Bureau of Statistics

Computer, Internet and Mobile Phone Survey, 2004

User Guide

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Table of Contents

Introduction

The Palestinian Central Bureau of Statistics (PCBS) has published the Palestinian statistical data to decision makers on population facts in Palestinian society. Accordingly, it carried out several surveys on different categories of the Palestinian society, one of which has been designated to Computer, Internet and Mobile Phone Survey, 2004.

1.2 Objectives of the Survey
The main objective of this survey is to provide statistical data on Information and Communication Technology in Palestine can be summarized in the following:-

- The possession of PCs, telecommunication means
- Access to the Internet.
- Prevalence of computers and access to the Internet.

Definitions and Explanations

Age: The completed age in years of the enumerated person, which is the difference between the date of birth and the date of interview. The exact age is the time elapsed between the day of birth and a given day, including parts of a year.

Date of Birth: It refers to the date in which the person was born. It is normally comprised of three cells: day, month and year according to the official identification documents such as the birth certificate, passport, …etc.

Enumeration Area: A group of housing units (about 150 housing unit) with clear boundaries on the ground, it may constitute one locality or part of a locality.

Head of Household: The person who usually lives with the household and is recognized as head of household by its other members. Often he/she is the main decision-maker or responsible for financial support and welfare of the household at the time the survey is conducted.

Household Membership: Persons staying in the dwelling unit at the time of an interview are considered members of the household if (1) the dwelling unit is their usual or only place of residence, or (2) a place of residence is maintained for them here and elsewhere, but they spend most of their time in this residence.

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

Mobile Phone: The mobile phone that belongs to any telecommunication company.

Pilot Survey: Duplication of the final proposed survey design on a small scale from beginning to end.

Reference Date: The date referred to in calculating the vital rates and ages. In this survey, it is 20/07/2004.

Type of Locality: Localities have been divided into three types: Urban, Rural and Camps

Urban: Any locality with population of 10,000 persons or more. This applies to all governorates/districts centers regardless of their size. Besides, it refers to all localities whose populations vary from 4,000 to 9,999 persons provided with (at least) four of the following services: public electricity network, public water network, (post office), health center with a fulltime physician and a school offering a general secondary education certificate.

Rural: Any locality with population of less than 4,000 persons or with population varies from 4,000 to 9,999 persons but lacking the four aforementioned elements.

Camp: It refers to any locality referred to as a refugee camp and administered by the United Nations Refugees and Work Agency in the Near East (U.N.R.W.A.).

Survey Questionnaire:

The Questionnaire for the Computer, Internet and Mobile Phone Survey, 2004, consists of three parts:

The First Part: It is composed of the following:-

First Section: It is composed of identification data, quality control criteria, households members data that include data on demographic, social and economic characteristics such as: age, sex, refugee status, education and main profession.

Second Section: Data on characteristics of housing.

The Second Part: household Questionnaire:

It is composed of questions about having computer, access to the Internet, telecommunication means and use of recreation devices.

The Third Part: Questionnaire of Persons aged 10 years and over:

Use of Computer, access to the Internet, having Mobil Phone.

Data Set Linkage

The data set consists of three files , so to merge files into one data file there is need for key variables that were shown in the following table:

File Name	Content	Key Variables
roster	Data about household members	Serial: Questionnaire's serial number in the sample.
Family	Household data	Serial: Questionnaire's serial number in the sample
persons	Data on persons (aged 10 years or more)	Serial: Questionnaire's serial number in the sample

Target Population:

The target population consists of all Palestinian households that usually reside in Palestine. As for individual data, the target population is the Persons aged 10 years and over.

Sampling Frame:

The survey frame is the list of enumeration areas peculiar to the 1997 Population, Housing and Establishment Census. Enumeration areas is a residential area containing about 150 housing units.

Sample Size:

The sample size is 7,557 households, of which 4,992 households in the West Bank and 2,565 households in Gaza Strip. About 6,779 households have been interviewed 4,508 in the West Bank and 2,271 households in Gaza Strip.

Sample Design:

The sample strata have been designed on two levels:
1) First level: the governorate (16 governorates).
2) Second level: type of locality (urban, rural and camps).

Response Rates:

Households and Eligible persons aged 10 years and over and their Response Rate by Region and Type of Locality

Sample and Response Rate	Region			Type of Locality		
	Palestine	West Bank	Gaza Strip	Urban	Rural	Camps
Households	7,557	4,992	2,565	4,008	2,376	1,173
Households Interviewed	6,779	4,508	2,271	3,971	1,791	1,017
Response Rate of Households	89.7	90.3	88.5	99.1	75.4	86.7
Males Interviewed (10 years and over)	3,146	2,031	1,115	1,840	816	490
Females Interviewed (10 years and over)	3,081	1,986	1,095	1,799	805	477

Weights and Estimations:
Weights have been calculated for each sampling unit. Weight reflect the sampling procedures. To make the weighing procedure feasible and simple, we assumed that the households have been selected directly within the EA.

Adjusted weights is 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,1997 and the time of carrying out the survey.

Furthermore, when adjusting weights and estimation of the size of population in Palestine and their distribution according to age groups in the midst of the third quarter, 2004. Therefore, the results, changes and ratios of this survey represent the reality in Palestine during that period.

Variance Estimation:
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 Work team 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.

Reference Date:

This survey was conducted during the period July 20th,2004 until August 24th, 2004 with the reference date is constituting the date of the interview.

Pilot survey:
The pilot survey is a miniature reflection of the main Survey. It was designed to include the entire aspects and characteristics for the purpose of carrying out the Survey and included checking training, fieldwork, Survey's questionnaire, interviewing, data processing, and the sample.

A sample of 72 households was selected from Ramallah and Al-Bireh governorate representing urban, rural and camp localities. An enumeration area was selected in each locality and then a cell was chosen from each enumeration area.

The fieldwork commenced on May 24th, 2004 and went on for 3 days then a meeting with interviewers was held in order to discuss their remarks. The questionnaire and training manuals and other documents were then evaluated and amended in accordance with the recommendations.

Data Collection:

Instructions and Training manual
The training manual covered all aspects dealing with fieldwork and filling in questionnaires. Moreover, it dealt with the tasks of each fieldworker, interviewing, and questionnaires' completion. More training manuals for supervisors and editors were prepared in order to secure team training and success of project. A training course was held in Ramallah and in Gaza city between July 10-15 with the participation of 80 trainees, 51 in the West Bank and 29 in Gaza Strip. Training lasted for 6 days for fieldworkers and additional one days for supervisors, editors, and assistants.

The training of trainees was divided into two parts: **The first part** discussed general issues such as designing statistical surveys, reaching selected households, interviewing, tasks and duties and running the fieldwork. **The second part** emphasized the objectives of the Survey and allowed exercises on filling in questionnaires.

Main fieldwork
A plan for the fieldwork for both regions was placed. At this stage, the fieldwork team and the tools (questionnaires, maps, sample lists) were prepared. Two teams were set up to carry out the fieldwork:

Team one: It included 41 interviewers, 9 supervisors, and 7 assistants. They were divided in the northern, middle, and southern areas of the West Bank.

Team two: Included 26 interviewers, 4 supervisors and 2 assistants. They were divided in the northern, central, and southern parts of Gaza Strip.

Data editing in the field
The project's management developed a clear mechanism for editing the data and trained the team of editors accordingly. The mechanism was as follows:

- Receiving completed questionnaires on daily basis;
- Checking each questionnaire to make sure that they were completed and that the data covered all eligible. Checkes also focus on the accuracy of the answers to the questions.

- Returning the uncompleted questionnaires as well as those with errors to the field for completion.
- Re-interviewing 10% of the sample households using a special questionnaire for the supervisors to ensure the accuracy of the data when compared to the interviewers' completed questionnaires.

Following up and supervision
Special follow-up patterns were designed for handing in and receiving questionnaires for all levels as well as 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 fieldwork coordinator and the project's administration explaining the completed interviews, refusal cases, the inapplicable cases such as vacant housing units, interviews were results were not determined, and the cases that could not be communicated (after three contact attempts). The reports also included the technicians and coordinators' supervisory field visits.

Data Processing:

Preparation of Data Entry Programme
At this stage data entry programme has been prepared using ACCESS package. Data entry screens have been designed. Also, rules of entry have been put, in a manner that guarantees successful entry of questionnaires and verification instructions to check data after each entry. These instructions examine the variables on the questionnaire level.

Data Entry
After having designed data entry programme and testing it to verify readiness; and, after having trained staff on dealing with data entry programme, data entry started on July 31[st,], 2004 and was completed on September 27th, 2004. The process of data entry was correlated with receipt of questionnaires from the field, whereby 15 staff members have been engaged in data entry and verification of questionnaires. Data entry has taken place during two shifts, morning and evening, to secure achievement of data entry on time

Data Quality:

Introduction
Sampling rather than comprehensive enumeration has been used to collect data in this survey. Therefore it is liable to two kinds of errors. First, the sampling error (statistical error) and second, the non-sampling error (non-statistical error). By sampling error is meant the errors resulting from sample designing and this is computed simply. Variance and effect of sample design has been computed for Palestine, the West Bank and Gaza Strip.

Non-statistical errors are probable in all stages of the project, during data collection or processing. This is referred to as a non-response errors, the response errors, interviewing errors, and data entry errors. To avoid errors and reducing their effects, specialized experts in medical concepts and terms have exercised a great effort to train interviewers intensively. They have been trained how to carry out the interview, what to take up and what to avoid, carrying out a pilot survey. Practical field training has been assigned three days during the training course.

Also data entry staff has been trained on entry programme that was examined on the pilot survey data and questionnaires received during the time of field training carried out during the training course. To have a fair idea on the situation and limiting obstacles, there has been continuous contact with supervisors and editors through regular visits to the regional offices

and regular meetings. Also, problems faced by interviewers have been discussed to clarify any issues faced them.

Evaluation of Demographic and Social Data
There are different methods to evaluate data varying according to subjects and they include:
1. Frequency of missing values and responses like "other" or "Do not know" and examining data inconsistency between the different sections like birth date and other sections.

2. Comparison of survey data with other external sources of countries similar in situation to Palestine; and also, with results of surveys related that have been completed in Palestine like the Population, Housing and Establishments Census-1997 and other Surveys.

Demographic Characteristics Related to Birth Date:
Eligible individual is identified according to birth date obtained from birth certificate, identity card or any other official document. There could be some errors in age of individuals with no such documents. Accuracy in identifying birth date is due to the fact that the survey focuses on specified age groups, as age is all-important in shaping the individual's opinion. We have based our computation of age on the individual's birth date and date of interview 20/07/2004.

Errors on recording age result from age reporting while providing information; the lack of comprehending the question peculiar to age; and, error of data entry on age. Most important: the ignorance of actual age by the respondent. Errors of reporting age are common to all surveys and this survey is no exception. However; the level of errors committed and the risk encountered varies from one survey to another. It is worth noting that when questions relating to the whole number of years of age and birth dates have been posed, official documents have been used to obtain data for this survey.

Derived Variables:

Name Variable	Values Variable	Description Variable
Type	1. Urban 2. Rural 3. Camps	Type of Locality
govern	1. Jenin 5. Tubas 10. Tulkarm 15. Nablus 20. Qalqiliya 25. Salfit 30. Ramallah & Al-Bireh 35. Jericho 40. Jerusalem 45. Bethlehem 50. Hebron 55. North Gaza 60. Gaza 65. Deir Al-Balah 70. Khan Yunis 75. Rafah	Governorate
Region	1. West Bank 2. Gaza Strip	Region

Computer regular training courses?	Code
DOS	01
Windows	02
Excel	03
Word	04
Access	05
PowerPoint	06
Outlook	07
Internet and E-mail	08
AutoCAD	09
Computer maintenance	10
UNIX	11
NOVELL	12
ORACLE	13
SPSS	14
Website design	15
Painter programs	16
Photoshop	17
Network	18
CorelDraw	19
Writer programs	20