Palestinian Central Bureau of Statistics

Time Use Survey 1999/2000

User's Guide

June, 2002

Concepts and Definitions

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

Time Spent in Various Activities:
Time spent by all persons in hours and minutes, (males or females), in carrying out different paid or unpaid work and activities divided by total sample size. This concept also refers to time spent in housekeeping, child or elderly care, and other work and activities during the period of the survey.

Average Time Spent By Individuals in Practicing Activities:
Time spent for all persons who practiced activities in hours and minutes, (males or females) in carrying out different paid or unpaid work activities divided by total persons who did the activities. This concept also refers to time spent in housekeeping, child or elderly care, and other works and activities during the period of the survey.

Work in Establishments:
This concept refers to paid or unpaid work for establishments, irrespective of the nature of the activity. It includes the actual working hours in the economic establishments; short breaks during work; on the job training; seeking work. It also includes moving from one place to another for purposes related to carrying out such activities.

Primary Production Activity (Not in Establishments)
It includes productive activities such as agricultural activities to meet basic needs; animal husbandry (poultry, fish …etc); hunting; collecting wild plants from forests; wood and stone carving and sculpturing; water collection; purchase and sales of goods. It also includes moving from one place to another for purposes related to carrying out such activities. The output of primary production activities could be for consumption purposes and meeting the needs of the household. However, this product could be for sale or barter.

Income Generation Services and Reproduction of Goods (Not in Establishments):
This concept involves activities such as production of goods and services outside the scope of establishments for purposes related to income generation, such as processing and preservation of food, cereals, and meat. It also includes preparing and selling of food, drinks and bread; textile and leather production and sale and related occupations; dwelling building and expansion; small – scale trade; sales in the streets; shoe cleaning; production and installation of machines; repairs and maintenance of tools and equipment; transportation and computer services; baby-setting, beauty care, hairdressing, message …etc. It also includes moving from one place to another for purposes related to carrying out such activities; …etc.

Housekeeping and Household – Oriented Shopping Activities:	This concept includes activities such as cocking and fetching drinks; meal preparation; cleaning and housekeeping; clothes cleaning and ironing, bed sheets; household shopping (of all household commodities, appliances, food and supplies). Housekeeping also includes house management, supervision and bills payment, house improvements and maintenance, breeding household pets (such as cats, birds …etc) It also includes moving from one place to another for purposes related to carrying out such activities.
Child, Patient, and Elderly Care within the Household:	This concept applies to activities involving physical care of children and household members suffering from illness, disability and elderly (e.g. showering, dressing, feeding …etc). It also includes teaching, training and instructing children besides accompanying them to various places such as schools, kindergarten, and playgrounds. It also includes accompanying adults in having personal care services, such as haircutting and receiving medical treatment …etc. This concept also applies to watching children and adults in need of care; and movement from one place to another for purposes related to carrying out such activities.
Society Services and Assisting Other Households:	Such activities include social work services such as repairs, construction, and other collective work such as cocking in public occasions. The concept also refers to voluntary work through organizations; participation in local and unofficial groups meetings such as tribal meetings and unions/organizations meetings; participating in civil responsibilities such as voting and mobilization; unofficial assistance to relatives, friends, neighbors; and movement from one place to another for purposes related to carrying out such activities.
Education Services:	It refers to a wide range of pertinent activities such as enrollment in school or university; attending classes and lectures; having breaks in educational facilities; taking part in cultural and political activities; doing home-works; ancillary – complementary educational activities (additional courses during free time outside the official education hours); work related orientations (training courses); and movement from one place to another for purposes related to carrying out such activities.
Cultural and Social Activities:	It refers to a wide range of pertinent activities such as taking part in social occasions (e.g. wedding parties, birthdays ceremonies…etc); participation in religious occasions and activities inside and outside the house (e.g. participation in religious occasions and prayers in the mosque or the church) …etc. This concept also applies to social chatting and meetings inside or outside the house such as discussions, visits, and meetings in public places with household members, friends …etc. Other activities classified under this category include

indoor or outdoor sports activities; playing cards; crosswords and puzzles; and other free time activities. Finally, this category involves practicing hobbies (arts, music …etc); visiting museums, exhibitions, cinema, parties, theatre; and movement from one place to another for purposes related to carrying out such activities.

Mass Media Use Activity:	This concept involves reading newspapers, books, magazines; watching television or video films; listening to radio; computer use; and movement from one place to another for purposes related to carrying out such activities.
Personal and Self Care Activity:	This concept refers to the works carried out by the individual (male or female) to meet his biological and other personal and self care needs such as sleep and other related activities (such as staying awake in the bed); preparing and arranging the bed to sleep; relaxing in the bed because of sickness ….etc. Other similar activities involve having meals and drinks; personal health care (having a shower, dressing and undressing, teeth – brushing, beard shaving, taking medicine …etc); relaxing while doing nothing; praying and personal religious contemplation (praying, praising God, reading religious books); and movement from one place to another for purposes related to carrying out such activities.
Place of Activity:	It refers to the place in which any of the various types of activities are performed by the individual (male or female). Place of activity could be any of the following places:

1. Place of Residence (home): It refers to the dwelling of the person who carried out the activity, in which he / she lives on a permanent basis.

2. Area Surrounding Place of Residence (home): It refers to the area and or garden and other type of facilities surrounding the dwelling of the person who carried out the activity.

3. House of other People: It refers to the house (other than the house of the doer) in which the person was while performing the activity. Usually, such a house belongs to other related individuals such as relatives, friends, …etc.

4. Place of Work or Study: It refers to any place in which the person was while carrying out work related activity, such as the premises of governmental and non – governmental institutions, markets, and commercial outlets, factories …etc. It refers to any place in which the person was while carrying out educational activities such as school, university and any other educational institution.

5. Public Places and Facilities: It includes parks, coffee shops, restaurants, public squares, streets and any other public facility.

6. Moving Place (Means of Transportation): It refers to any place or means in which the person was while carrying out the activity, including the various types of means of transportation, like cars, busses, bicycles …etc and any other unmentioned place of activity.

Transportation (Travels): This concept refers to the movements of the individual (male or female) from a place to another for purposes related to carrying out different activities, using various means of transportation..

Means of Transportation: The means of transportation used by the individual in moving from place to another. These means include walking, private vehicles such as cars and bicycles, public means of transportation such busses and taxis and any other unmentioned means of transportation.

Survey Questionnaire

The Time Use Survey Questionnaire consists of three main sections:

1. **Household Questionnaire**: This questionnaire involves the identification data and the household members records. It also contains the demographic and economic background characteristics for the household members, in addition to data on household properties and levels of income.

2. **Individuals (10 years and above) Questionnaire**: This questionnaire is related to the randomly selected individuals to complete the time record. The individual questionnaire involves data on the educational and employment status of the individual along with information on the cultural status. This section is comprised of two main parts: A part targeting males and a part targeting females. This section aims to provide basic data on the individuals to relate them to the data derived from the time record.

3. **Daily Record Questionnaire:** This questionnaire involves data on the activities of the individuals and the time spent in rendering those activities. This record also shows whether the activity was performed in return for a wage or unpaid, along with information on whether the individual was accompanied by other individuals while performing the activity. Likewise, this record indicates the means of transportation used in performing the various activities in a 24 hours basis. In the adopted record of the Palestinian Time Use Survey, the day was divided into temporal intervals varying from 15 minutes during the day and 30 minutes after midnight until 6:00 morning.

Data Description

The data set available for users consists from six Primary Files that can be related by the key variables identified in the following table:

File Name	Describtion	Key
INF1	Record Identification	IDNUM
INF2	Household List	IDNUM + Number of Person (Person)
INF3	Household Questionnaire	IDNUM
INF4	Individuals Questionnaire	IDNUM + Number of Person (Person)
INF5	Daily Recode	IDNUM + Number of Person (Person)
WFINAL	Eeight Files for Person who Filled the Dailly Record	IDNUM + Number of Person (Person) only for Daily Record

Target Population

The target population of the Time Use Survey consists of all individuals in the age group 10 years and over who are usually resident in the Palestinian Territory.

Sample and Frame

The sampling frame is comprised of a comprehensive sample selected from the 1997 Population, Housing and Establishments Census. This comprehensive sample consists of geographically approximate areas (in terms of number of households), namely the enumeration areas used in the 1997 Census. The enumeration areas were used as primary sampling units in the first stage of the sampling process.

Sample Design
The sample size for this survey consists of 8,038 individuals selected from 4,019 households. The sample of the Time Use Survey is a multistage stratified cluster random sample. The first stage involved the selection of a stratified random sample comprised of 240 enumeration areas. The second stage involved the selection of an average of 17 households in every selected enumeration area. The third stage involved the random selection of two household members, one male and one female in the age group 10 years and above. The selection of household members from the households selected in the field is done by using random (KISH) tables.

Stratification
Four levels of Stratification were made:
1. Stratification by Governorates.
2. Stratification by place of residence which comprises:
   (a) Urban   (b) Rural   (c) Refugee Camps
3. Stratification by classifying localities excluding governorate capitals, into three strata based on levels of ownership of durable goods in households within selected localities.
4. Stratification by size of locality (number of households)

Estimation Procedure

Weights have been calculated in a way which takes into account compensation for incomplete cases that occurred during data collection, in addition to the distribution of population by region, sex and age structure according to the population estimates for 1999.

After testing different methods of calculation, the following formula was adopted to calculate the variants for Time use survey.

$$w_{hg} = (T'_h/r_h)*f_g$$

Where,

h = Symbol of stratum of individual according to the design.
g = Symbol of group according region, sex age group.
w_{hg} = Indvidual final weight.
T'_h = No. of individuals in the stratum according to census, 1997 fram.
r_h = No. of respondings of the sample in stratum $_h$.
f_g = The percentage between total of adjusted weights and the total population according to group -$_g$ (region, sex and age groups).

This methodology ensure:

- Mainting the impact of sample design.
- Reducing the bais due to of non responding
- Representing the total population according to region, sex and age groups by the end of 1999.

Calculation of Variance

Variance Calculation in the Estimates

It is essential to calculate the standard errors in the estimates of the survey in order that the user can have an idea on the credibility and precision of the estimates. Ultimate cluster method at the first level was used in the calculation of variance by using CENVAR package.

$$v(\hat{R}_A) = \frac{1}{\hat{X}_A^2}\left[v(\hat{Y}_A) + \hat{R}_A^2 v(\hat{X}_A) - 2\hat{R}_A cov(\hat{X}_A, \hat{Y}_A)\right]$$

$$cov(\hat{X}_A, \hat{Y}_A) = \sum_{h=1}^{H} \frac{n_h}{n_h - 1} \sum_{i=1}^{n_h} \left(\hat{X}_{Ahi} - \frac{\hat{X}_{Ah}}{n_h}\right)\left(\hat{Y}_{Ahi} - \frac{\hat{Y}_{Ah}}{n_h}\right)$$

$$\hat{Y}_{Ahi} = \sum_{j \in A} w'_{hij} y_{hij}$$

$$\hat{Y}_{Ah} = \sum_{i} \sum_{j \in A} w'_{hij} y_{hij}$$

$$\hat{X}_{Ahi} = \sum_{j \in A} w'_{hij} x_{hij}$$

$$\hat{X}_{Ah} = \sum_{i} \sum_{j \in A} w'_{hij} x_{hij}$$

$$v(\hat{Y}_A) = cov(\hat{Y}_A, \hat{Y}_A)$$
$$v(\hat{X}_A) = cov(\hat{X}_A, \hat{X}_A)$$

Calculation of Estimates

To arrive at an adjusted weight, we divide the total (output of the multiplication of the variable value by weight) by the total weights. The estimation formula of a certain percentage between two variables in a partial society is comprised of the output of the division of the estimated total for the two variables in the partial society.

$$\hat{R}_A = \frac{\hat{Y}_A}{\hat{X}_A} = \frac{\sum_s w'_{hij} y_{Ahij}}{\sum_s w'_{hij} x_{Ahij}}$$

Where,

$\hat{R}_A$ = Estimated for the ratio of two variables, $_{y/x}$ in sub-population $_A$.

$\hat{X}_A$ = Estimted total for variable $_x$ in sub-population $_A$.

$\hat{Y}_A$ = Estimated total for variable $_y$ in sub-population $_A$.

w'_{hij} = Final (adjusted) sampling weight for the element $_j$- of cell $_i$ - the sample PSU in stratum $_h$.

h = The character of the sub-stratum with in the estimation domain.
i = The sample PSU (cell).
j = The unit of analysis or element.
A = Subset of elements poceesing agiven attribute, that is belonging sub-population.

y_{Ahij} = Observed value of variable $_y$ of the $_i$ in the sample PSU in stratum $_h$ for sub-pobulation $_A$.

x_{Ahij} = Observed value of variable $_x$ for $_j$ in the element of $_i$- the sample PSU in stratum $_h$ for sub-pobulation $_A$.

Means and proporation are special types of ratios. In the case of the mean, the variable $_X$, in the denominator of the ratio, is defiined to equal "1" for each element, so that denomiator is the sum of weight in the sub-population.

In the case of the proporation, the variable $_X$ in the denominator is also defined to equal "1" for all elements. In additions the variable, $_Y$ in the numerator is binomial and is defined to equal either "0" or "1". Depending on the absence or presence of a specified attribute in the element observed.

Reference Date

This survey was implemented during the period May 8th 1999 – May 7th 2000, i.e. one complete calendar year.

Data Collection

Field Work
The project management team put forward a criteria for the selection of field work team. A training course for the interviewers was organized attended by 31 trainees. The training comprised of two main parts, theoretical and practical. Interviewers were selected based on their performance in the test organized at the end of the training course. A distinguished group of interviewers was selected from competent and qualified staff among those who worked for three continuous years in the Palestinian Expenditure and Consumption Survey, which is very much similar to the Time Use Survey in terms of data collection methods. Another team comprised of 14 interviewers was formed as an alternate team. The training

was conducted in two areas, in Ramallah city in the West Bank, and in Gaza city in Gaza Strip.

The next stage of the fieldwork was the preparation of fieldwork requirements, including the provision of all fieldwork requirements to all teams operating in the field (questionnaires, maps, and sample lists). This stage also involved the preparation of regional offices, means of communication, the design of appropriate forms for follow up and measurement of the qualitative and quantitative achievements in the field.

The fieldwork team is comprised of one fieldwork coordinator, two coders, distributed into four field teams – three in the West Bank and one in Gaza Strip. Each field team comprises one supervisor and 2-3 field workers.

The fieldwork had been carried out during the period 8/5/1999 - 7/5/2000. Eleven questionnaires in average were collected every day.

Questionnaire completion required three visits from the interviewers:

1. **First Visit**: During this visit, the interviewers completed the household identification data as well as the selection of the individuals randomly in accordance with a certain form based on the alphabetical order for individuals aged 10 years and over using KISH tables. The first visit was conducted one day prior to the reference date for selecting two individuals on a random basis.

2. **Review Visit**: This visit was carried out in the reference date. During this visit, the interviewer reviewed the records of the randomly selected individual, coupled with a revision of the accuracy of the procedure adopted in the recording process and carrying out the necessary corrections, if any.

3. **Delivery / Reception Visit**: This visit was carried out in the day follows the reference date. During this visit, the interviewer carries out a final revision of the records and receiving them after ensuring that all temporal periods are completed in the register in an accurate and correct way.

The administration of Field Work Directorate designed special forms to ensure sufficient fieldwork monitoring. Field workers and supervisors carried out their activities in accordance with these forms. Likewise, the fieldwork coordinator conducted intensive fieldwork visits to supervise field work in all areas. The Project management team was provided with the visits programs to carry out field visits to follow up work in the field.

Response Rates

Four thousand and nineteen households were selected representing the Palestinian Territory, 2,583 households in the West Bank and 1,436 in Gaza Strip. The following table shows the status of the questionnaires at the end of fieldwork.

Region	Completed questionnaires	Incompleted Questionnaires					Total
		Refusal	The household could not be contacted	Vacant (uninhabited dwelling unit)	Inapplicable cases	Others	
West Bank	2318	47	83	46	16	73	2583
Gaza Strip	1363	10	13	28	3	19	1436
Total	**3681**	**57**	**96**	**74**	**19**	**92**	**4019**

Note: Complete: includes completed and partially completed.

The response rate in the Palestinian Territory was 96%, with significant difference between the West Bank and Gaza, in the West Bank it was 94.7%, while in Gaza Strip it was 98.3%.

Data Quality

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

Sampling Errors
Sampling errors are random outcomes of the sample design, and are easily measurable when the sample is a random one. In this survey, a staratified cluster random sample is used which made it easy to estimate the sampling errors (Variances) which found to vary between 1% and 5% for the national level estimates.

Non-Sampling Errors
Non-Sampling errors in this survey result from the peculiarities of this survey in addition to the fact that this survey is based on a specific date (reference day) in which the person fills in his/her activities throughout 24 hours. Some difficulties were faced in this survey regarding the data collection which resulted in a non-response problem of about 8% of the selected sample, however, this percentage is considered a low one in such surveys and it is believed that no big bias has occurred as a result because of two reasons: First, such non-response has been expected after conducting the pilot test, and thus the sample has been increased by about 10% to substitute for the expected non-response. Second, the non-response is found to be randomly distributed. Following are examples on the cause of the non-response:

- Unavailability of the randomly selected individual as a result of his absence in work outside or due to his study abroad, which resulted in the incompleteness of his record.

- Unavailability of the household as a result of absence in work outside or travel outside the country.

- Non-response cases, in which some households refused to cooperate or provide data.

An attempt was made to decrease as much as possible the effects of these errors on data quality. The following methods were adopted to achieve this purpose:

1. Selecting the work team from highly qualified and competent staff experienced in surveys.

2. Hold training courses for the work team on various pertinent topics such as questionnaire, sample, and fieldwork.

3. Postpone the completion of the record by the absentee, provided the reference day will be the same day in the coming week.

4. Adjust weights to make up for the incomplete cases.

General Assessment of Data Quality:
In accordance to the methods used during all steps of implementing this survey, including the preparation phase, we ensure that the data of this survey is of high quality in all means.

Derived Variables

Variable Describtion	Value Label	Variable Name
Occupation	11: Lesgislators and Senior Officials Management 12: Corporate Managers 13: General Managers	Ho6 on file (inf3) In9 on file (inf4)
	21: Physical, Mathematical and Engineering Science Professionals 22: Life Science and Health Professionals 23: Teaching Professionals 24: Other Professionals	
	31: Physical and Engineering Science Associate Professionals 32: Life Science and Health Associate Professionals 33: Teaching Associate Professionals 34: Other Associate Professional	
	41: Office Clerks 42: Customer Services Clerks	
	51: Personal and Protective Services Workers 52: Models, Salespersons and Demonstrators	
	61: Market- Oriented Skilled Agricultural and Fishery Workers	

	62: Subsistence Agricultral and Fishery Workers	
	71: Extraction and Building Trades Workers 72: Metal, Machinery and related Trades Workers 73: Precision, Handicraft, Printing and Related Trades Workers 74: Other Craft and Related Trades Workers	
	81: Stationary-plant and Related Operators 82: Machine Operators and Assemblers 83: Drivers and Mobile-plant Operators	
	91: Sales and Services Elementary Occupations 92: Agricultral, Fishery and Related Labourers 93: Labourers in Mining, Construction, Manufacturing and Transport	
2. Level of Education	1: Illiterate 2: Can Read and Write 3: Elementary 4: Preparatory 5: Secondary 6: Associate Diploma 7: Bachelor and Above	Ho3 on file (inf3) P1_in3 on file (inf4) P2_in3 on file (inf4)
3. Years of Schooling	0: 0 1: 1-6 2: 7-9 3: 10-12 4: 13+	Ho2 on file (inf3) In2 on file (inf4)

Data Processing

Data processing involved a set of activities and processes in order to prepare the survey questionnaires for analysis. These activities and processes included: coding, data entry, data editing, and data cleaning stage.

In order to assure accurate and consistent coding, the coding process was centrally implemented in the offices of the Fieldwork Directorate. In this stage, the activities recorded by the interviewers were coded based on a special coding manual at the third digit level. On the other hand, the occupations were coded in accordance with the International Classification of Occupations (ISCO-88) at the third – digit – level.

The Data Entry Program was designed using ORACALE package, taking into consideration the following characteristics:

1. Matching the questionnaire in terms of form, sequence, and skips.

2. Automatic editing of entered values during data entry.

3. User friendly and ability to modify what has been already entered.

Three types of editing have been adopted to ensure the highest possible type of accuracy, namely:

1. Editing during data entry: All entered data have been checked for every question separately along with the basic links and consistency relations among related questions

2. Post Data Entry Sample Editing: About 10% of entered questionnaires were completely reviewed and matched with the entered values in order to immediately correct any possible errors or settle any differences among entered values.

3. Consistency: Special programs have been designed to examine logical relations between the different entered values. Upon detecting any inconsistency, then all mistakes discovered are corrected.

In the data cleaning stage, errors reports are reviewed and edited through consistency and matching techniques to identify causes of errors. Based on the findings of this revision, appropriate measures and decisions were taken, i.e. either correction of values entered in a wrong way or returning questionnaires to the field when errors are due to questionnaire completion mistakes