Survey Methodology

National Survey on Household Budget, Consumption and Standard of Living (EBCNV), Tunisia, 2005

(Translated by ERF)

Introduction

Economic growth and social development, which were registered in the country, had the greatest impact on the development of the level of living conditions of households in all areas as nutrition, housing, health, education, culture and entertainment. In order to assess the development, the National Institute of Statistics (INS) periodically carries out a national survey on expenditure and consumption of households. This is done on the occasion of the preparation of development plans. In the scope of the preparatory work of the eleventh plan (2007-2011), the completion of survey in this area in 2005 was done and it is considered to be the eighth of its kind. This process started in the field and at the level of all Governorates of the country at the beginning of May 2005 and lasted a full year till the end of April 2006.

The aim of this survey is to identify the current level of living standards of households through their food consumption and expenditure, thus comparing this level with what it was during the previous years. The survey is also concerned with studying other aspects of the households' living conditions and the extent of their benefit from the collective services such as education and health.

This survey includes a sample consisting of about 13400 households which are representative of all occupational and social items and were chosen according to statistical and scientific methods. This sample is distributed to 1116 census district of all Governorates of the Republic with its cities and villages and rural areas. The households comprising the sample were chosen according to several controls including the number of household members and number of household members working and occupation of the household head. The survey sample has been distributed equally to all the months of the survey year so that seasonal changes in household consumption can be taken into account. The survey consists of three axis which are the axis of household expenditure and the axis of nutrition and the axis of collective services. The axis of expenditure includes the total sample of households (13400 households), the axis of nutrition includes half the number of households in the sample of expenditure (6700 households) while the axis of collective services as education and health includes only one third of the sample in the axis of expenditure (4450 household).

The survey adopts the method of daily direct contact with households for a week, followed by two other visits after ten days. During this period all the expenditures spent by households to acquire various goods and services are collected. In addition to the expenditures by households during the reference period, a follow-up is done to either periodically or on the acquisition of

permanent goods or during family occasions or religious holidays or emergency events so as to be familiar with all aspects of the expenditure, to enable estimating the annual expenditure of the households.

Concerning the Nutrition Survey, this operation is carried through contacting the households by agents twice a day for a week to weight the quantities of the food prepared for cooking and household consumption.

The objective of the axis of collective services is to identify the extent of utilization of education and health services, and health insurance by households.

Survey methodology on household expenditure

1. The objectives of the expenditure axis

A- Identify the level of household expenditure

The study of the households' budget is of paramount importance for basic statistics to enable the country to closely identify the level of household expenditure and stand on the disparities between the various segments of the society, and between cities and villages and rural areas and between different geographical areas and the development of this data compared with the past years.

B- Identify the structural expenditure

The aim of this survey is to analyze the budget of the Tunisian household and to categorize it to the various expenditure groups as food, housing, nutrition, clothing, health care, education, culture, transportation, and welfare. This could be used to estimate the average expenditure for each article of the food and non-food articles. The study of the budget structure enables revising the weight of goods and services which is included in the structure of the base year for the household's consumer price index.

C- Study the characteristics of the households in need

This survey aims to examine the size and characteristics of households in need and estimate the proportion of households which still live on a modest income below the poverty threshold. Furthermore, it aims to identify the geographical areas and social groups, which are still suffering from poverty.

D- Demand elasticity measures

The aim of this survey is to estimate the needs of the country from all food and non-food items in the coming years, depending on the probabilities of income growth rate and the proportion of the population growth on one hand, and on the weights of the demand elasticity extracted from this survey results on another hand.

2. Sample Design

A- <u>Sample Selection</u>

The survey includes a sample of households where 13.392 households represent all social types and areas reaching 0.61 % of the total number of households in the country (approximately 61 households per 10,000 households). This sample had been withdrawn according to statistical and scientific methods and is distributed across 1116 districts of all Governorates of the country with its cities, villages and rural areas. It has been selected according to statistical and scientific methods from all districts of the census of population and housing 2004.

In order to improve the accuracy of the estimates derived from the results, this survey was relying on the methods of the stratified sampling. Accordingly, the districts which constitute the sample were distributed to sample strata according to the governorate and the living area, which has been classified according to the degree of urbanization and density of population, and on the other hand, according to the belonging of the district to the municipal area (large cities–medium and small cities) and the non-municipal area (The basic and secondary blocks and the isolated houses)

1- Districts of large cities: The city of Tunis and its suburbs and cities of Bizerte, Kairouan, Sousse, Sfax and their suburbs, where large cities were classified as large cities; which are the cities that their population exceeds 100.000 inhabitants. It was important to integrate municipalities located in the suburbs with large municipalities and coastal areas.

2- Districts of medium and small towns which represent the Municipal area except for major cities.

3- The districts of the basic blocks of the non-municipal area. The basic block is every residential area that its population surpasses 400 inhabitants during the 2004 census.

4- Districts of non-municipal in a natural area (isolated houses and secondary blocks)

This classification is closely related to the household income level and their livelihood pattern.

The districts' sample has been withdrawn with probabilities that are appropriate to the number of households in the district. This is done according to the results of the Census of Population and Housing of 2004 as for the four classes. The sample size differs from a governorate to the other; however, it was considered that the sample size should not be less than 36 districts in each governorate.

In each selected district, 12 original households were withdrawn and 12 substitutive households in each census district representing all the district's households in terms of its size, number of people working in it and occupational and social category of the household head.

The list of names of household heads (original and substitutive list), who will be covered by the survey, should been prepared, as well as their residence addresses. Thus, the interviewer should contact them personally. In case the household was not found because of long absence or a change of the place of residence, then the interviewer must revisit the household's residence to verify their absence and contact his/her supervisor for substitution, according to the list of special substitutive households.

The following table shows the actual distribution of the districts and households in the sampling frame, in addition to the distribution of the sample district and households according to the governorates and geographical areas

The distribution of the sample districts and households, according to the governorates

Governorate	Total Number		Sample Size		Percentage of households in the sample
	Districts	*Households*	*Districts*	*Households*	
Tunisia	3628	244018	96	1152	0.47
Ariana	1536	101327	48	576	0.57
Ben Arous	1691	117901	60	720	0.61
Manouba	1008	70750	36	432	0.61
Territory of Tunisia	7863	533996	240	2880	0.54
Nabeul	2174	162691	60	720	0.44
Zaghouan	473	33532	36	432	1.29
Bizerte	1799	119976	60	720	0.60
The northern east	4446	316199	156	1872	0.59

Governorate	Total Number		Sample Size		Percentage of households in the sample
	Districts	Households	Districts	Households	
Beja	972	68584	36	432	0.63
Jendouba	1307	92877	36	432	0.47
Kef	876	59107	36	432	0.73
Siliana	666	48448	36	432	0.89
The northern west	3821	269016	144	1728	0.64
Sousse	1876	124519	60	720	0.58
Monastir	1480	100967	48	576	0.57
Mahdia	1201	79197	36	432	0.55
Sfax	2822	198565	72	864	0.44
The middle east	7379	503248	216	2592	0.52
Kairouan	1572	107923	60	720	0.67
Kasserine	1186	79448	48	576	0.73
Sidi Bouzid	1113	76771	36	432	0.56
The middle west	3871	264142	144	1728	0.65
Gabes	975	69703	36	432	0.62
Medinine	1328	90000	36	432	0.48
Tataouine	408	26575	36	432	1.63
The southern east	2711	186278	108	1296	0.70
Gafsa	959	65926	36	432	0.66
Tozeur	302	20485	36	432	2.11
Kebili	383	26549	36	432	1.63
The southern west	1644	112960	108	1296	1.15
Total	31735	2185839	1116	13392	0.61

B- Characteristics of the sample households

The distribution of households and population, according to the area

Area	Number of households in the sample	Number of weighted households	Number of weighted population
Municipal	7632	1517349	6547027
Non-municipal	4685	706800	3487459
Total	12317	2224149	10034486

The distribution of households and population, according to the region

Region	Number of households in the sample	Number of weighted households	Number of weighted population
Territory of Tunisia	2522	547446	2286552
The northern east	1679	323117	1398196
The northern west	1632	279403	1213527
The middle east	1697	273563	1362530
The middle west	2315	500290	227312
The southern east	1210	181822	927634
The southern west	1262	118508	568735
Total	12317	2224149	10034486

The distribution of households and population, according to occupational and social category

Occupational and social category of the household head	Number of households in the sample	Number of weighted households	Number of weighted population
Managers and professionals	630	134491	588330
Associate professionals	525	97224	448182
Other associates	1007	191682	882666
Employee in industry, trade and services	829	158875	766009
Self-employed in industry, trade and services	432	76032	372588
Non-agricultural workers	3276	581598	2883283
Farmers	1288	206426	1094132
Agricultural workers	343	49922	251271
Unemployed	251	42595	202944
Retired	1587	308322	1282865
Others inactive	1403	252983	794439
Outside household support	746	123999	467777
Total	12317	2224149	10034486

The distribution of households according to the household size

Household size	Number of households in the sample	Number of weighted households	Number of weighted population
From 1 to 2 members	1918	351815	592892
From 3 to 4 members	4178	793543	2852557
From 5 to 6 members	4275	775254	4183164
From 7 to 8 members	1473	236503	1735187
More than 9 members	473	67034	670686
Total	12317	2224149	10034486

3. Survey methodology on household expenditure

This survey aims at collecting data on the goods acquired by the household during a certain period in order to consume, as well as, the services which benefited the household during the same period. This data entails the type of commodity or service, its origin, its value and quantity, and this is for all materials, in addition, the source of the manufacturing component as for clothes, footwear, home furniture and equipment, as well as the month of acquisition for major expenditures only.

The source of goods and services can be categorized as follows:

1- Goods purchased at present with retail or wholesale or half wholesale price.Materials purchased in installments.Food from owned farming land, or from breeding animals in the house, which is expressed in household own-production.
2- Gifts and grants received by the surveyed household.
3- Material received from other source.

The manufacturing or production of goods and services could be:

- Tunisian production
- Imported

In order to ensure accuracy in data collection, the interview method and direct contact with members of the household is used, where the cost of goods and services are recorded at the day of its acquisition and a follow-up for a certain period of time is done. A follow-up of expenditures for almost a month is done, so as not to cause any inconvenience for the households because of the repeated visits over the year. The program of visits is as follows:

- The household is visited every day for a week to ask about all the acquired goods and services (7 daily visits).
- Then the household visits take place after 10 days from the date of the last daily visit to record its acquisitions during this period (first decadal visit) for example, if the date of the last visit was 07 / 08 / 2005, the date of the first decadal would be 18 / 08 / 2005.
- This visit is reiterated for the second time (second decadal visit) to cover the expenses of the household during 4 consecutive weeks; 7 days + 2 x 10 days = 4 weeks.

In order to avoid inconvenience for the household with successive visits, visits are done every 10 days. The household has to be informed in advance so as not to forget what has been acquisitioned during this period (first decadal and second decadal). For this purpose, every household is provided with a form to record the acquisition of goods and services.

It should be noted that the four weeks specified to record the households' acquisitions through direct interview should be enough especially for current and traded expenditures. However, it would not be adequate to estimate major expenditures related to goods and services that are repeated infrequently throughout the year. For this category of goods, it has been relied on mainly memory, where the household is interviewed and asked about the expenses that were carried out during the 11 months preceding the date of the search, as well as the month of the survey. This kind of major expenditure does not happen except

rarely during the year, and households would not easily forget important amounts which they spent during this period.

In order to accurately compile all expenditures for goods and services of all members of the household, who are engaged in an economic activity or have an income, they are interviewed and questioned about the goods and services that they bought to meet their needs and the needs of the rest of the household members. Often, the head of the household pays for the main collective expenditures that benefit all members of the household who are active and in-active.

In addition to this type of expenditure of collective benefit, the head of the household has personal expenditures that benefit him/ her and also pays for the personal needs of the individuals who are in his bail as young children and the in-actives, and that of the rest of the members of the household. In addition, the actives, students, retirees, unemployed people and all who have personal expenses to meet their personal needs. On this basis, the household expenses survey has been designed in two parts, where one part is for collective expenses and the other is for personal expenses.

4. The estimate of the survey's expenditure

The estimate of the survey's expenditure

	Value	Percentage
Cash expenditure	1623.4	89.2
Investment in housing*	52.8	2.9
Self-production	25.5	1.4
Gifts	30.9	1.7
Benefits in kind	3.6	0.2
Default lease	83.7	4.6
Total	1820	100.0

(*) Investment in housing: Investment in housing includes the expenses of buying a home or land to build a home in addition to the costs of construction. It also includes the draw of housing loans through calculating the outstanding value during the year 2005.

The poor population

Keeping up with the evolution of the international methodologies used in poverty assessment in developing countries, the National Institute of Statistics (INS) adopted a new methodology for calculating the incidence of poverty for the year 2005, instead of the old methodology used since 1980. The new methodology aims at estimating the poverty line and calculating the incidence of poverty represented in the percentage of the population whose annual expenditure level does not exceed this defined line.

1. **An overview of the old methodology**

   Calculating the rates of poverty in Tunisia started in 1980, relying on the methodology used at that time by the World Bank and data from National Consumption Survey, which was carried out during that year. The poverty line consists of two components: food expenses that have been estimated on the basis of the cost of the daily minimum calorie consumption need per capita. While the second component is the non-food expenses that have been estimated by expenditure structure of the population existing in the second quintile (20%) of the distribution of the population according to the expenditure levels. Since then, updated assessment of the poverty line is carried out upon developing the consumer price index, as well as, measuring poverty on the basis of these updates and on the results of the five-year consumption surveys until 2000. The results of this evaluative work showed that the incidence of poverty according to the old methodology had been reduced from 12.9% in 1980 to 4.2 % in 2000.

2. **An overview of the new methodology**

   The new adopted methodology by the INS in 2005 enables calculating poverty line and identifying the poor population, which is represented by the population living below the poverty line in extreme poverty. The poverty line consists of two components: food expenses that have been estimated depending on the cost of the daily optimal calorie consumption need. The second component is the non-food expenses that have been estimated by expenditure structure of the reference population, and by using statistical model that is based on the assumption that total expenditure is equal to the food expenditure, this in turn allows estimating a minimum bound for the non-food expenditures.

3. Comparing the two methodologies

The two methodologies differ in the standards concerned with determining the incidence of poverty, whereas the old methodology of 1980 is based on calculating poverty line relying mainly on two selected reference classes of low-income households, in each of the urban and rural areas. On the other hand, the new methodology relies on one class of population in calculating the poverty line. In addition, the new methodology is based on the optimal need of calories (2213 Kcal per person per day) to assess the food component of the line of poverty. In this way, the new methodology exceed the minimum needs of calories (1807 Kcal per person per day) adopted by the old methodology.

4. Poverty line according to the new methodology

According to the new methodology, poverty line is calculated based on the one reference population class whose annual spending level ranges from 360 to 480 dinars. Estimating the food component of the poverty line depended on the optimal need of calories by prices extracted from the cost of food consumption comparison and the corresponding amount of calories intake. These intakes are presented on the level of each of the non-municipal and municipal areas as follows:

Average calorie per capita and their optimum and minimum need and percentage coverage

Area	Average calorie consumption per capita (1)	Average optimum calorie need per capita (2)	Minimum calorie need per capita (3)	percentage coverage
Municipal	2285	2204	1813	103.7%
Non-municipal	2405	2230	1796	107.8%
National	2328	2213	1807	105.2%

The estimation of poverty lines (in dinar)

Area	Poverty Line
Big cities	489
Rest of the municipal areas	429
Non-municipal	378
The national level	**400**

Percentage of poverty according to municipal or non-municipal

	Percentage of poverty	Number of poor population	Number of poor households
Municipal	1.9	128392	21181
Non-municipal	7.1	248050	38516
The national level	3.8	376442	59697

Percentage of poverty according to the area

Region	Percentage of poverty	Number of poor population	Number of poor households
Territory of Tunisia	1.4	30918	5164
The northern east	2.7	37920	6673
The northern west	3.1	37736	6458
The middle east	12.8	174911	26898
The middle west	1.2	28305	4845
The southern east	3.8	35239	4950
The southern west	5.5	31413	4709
Total	3.8	376442	59697

Percentage of poverty according to occupational and social category

	Percentage of poverty	Number of poor population	Number of poor households
Mangers, Professionals and Associates	0.4	7685	1321
Non-agricultural Employee and Self-employed	2.3	26348	3657
Non-agricultural workers	5.4	156811	24125
Farmers	5.5	59869	8796
Agricultural workers	10.6	26564	4315
Unemployed	17.4	35362	5747
Inactive	2.5	63803	11736
Total	3.8	376442	59697

Percentage of poverty according to the household size

	Percentage of poverty	Number of poor population	Number of poor households
From 1 to 4 members	0.9	31036	9441
5 or 6 members	3.1	127719	23311
7 or 8 members	8.4	145496	19722
More than 9 members	10.8	72191	7223
Total	3.8	376442	59697