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Appraisal of Poverty Indicators

Based on

The Household Expenditure Survey

2005

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Department of Statistics**

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Summary of the main results

- Based on the Household Expenditure Survey of 2005, the general poverty line in Jordan amounted to JD 504 annually in 2005, thus increased by 28.6% compared to 2002.
- The poverty ratio (percentage of individuals whose expenditure is below the poverty line) was 14.7 % in 2005 (against 14.2 in 2002). The poverty rate in rural areas was 22.8% (against 18.7% in 2002). In urban areas, it amounted to 13.1% (compared with 12.9 % in 2002).
- There were no significant changes in the poverty gap indicators (total amount required for raising the levels of poor individuals consumption to the poverty line level) and severity of poverty (the disparity among poor individuals) during the years 2002 and 2005.
- In view of the small size of the sample, the results at the governorate level, could not be derived.

Introduction

Poverty is a multi-economic and social dimensions phenomenon. The concept of poverty varies from one country to another. But it is generally agreed that poverty is a case of material deprivation mainly characterized by a decline in quality and quantity of food consumed, deterioration of health, educational level, housing conditions and deprivation from ownership of durable goods and other tangible assets.

Whereas poverty represents deep rooted and inter-related problems which have to be steadily confronted and mitigated scientifically and gradually. The first of these problems is to determine who are the poor, and quantitatively assess the size and severity of their poverty. Therefore , this stage is concerned with poverty measurement.

The first official study on poverty measurement in Jordan took place in 1987 (Al Suqoor and others 1989). This study included a calculation of the standard household line of poverty according to the food basket method, to determine the percentage of all households suffering from abject poverty and absolute poverty. Other poverty indicators were also calculated. In 1994 and 2001, the World Bank updated the poverty lines for 1987 based on the Consumer Price Index.

During 2004 and after the issuance of the results of the Household Expenditure and Income Survey, conducted on a sample of 12792 households at the sub-district level, a study on poverty was prepared and carried out through the World Bank experts in cooperation with a counterpart team formed for this purpose, of personnel of various ministries and public institutions. This study included the calculation of poverty lines and indicators, percentages and gaps and determination of poverty pockets. In the light of the results of this study a detailed report was drafted on the poverty results and their relationship with social variables such as education, employment, unemployment, health, etc.

To update the previously calculated poverty lines and indicators in the light of the results of the Household Expenditure and Income Survey of 2002, the Department of Statistics began late in 2004 the preparatory stage of implementing the Household Expenditure Survey of 2005 on a sample of 3192 households at the Kingdom's level. Afterwards, the stage of updating the poverty lines and indicators started in the light of the survey results. This report includes s the main results of the survey.

Methodology of poverty measurement

The method of calculating the poverty lines and indicators in this study is the same as the one adopted previously by the World Bank expert and the counterpart national team, to assess the poverty indicators of 2002.

The World Bank's method consists of four main stages, and may be summarized as follows:

Phase I: To estimate the daily calorie requirements of the Jordanian individual, while observing the body physiological structure by sex, body weight in kilograms, in addition to observance of difference in daily body activity performed by the individual based on the characteristics of individuals from the Household Expenditure Survey (2005) sample.

Phase II: To estimate the actual calorie intake by individuals in 2005, through conversion of quantities of goods consumed by individuals into calories, using a previously prepared conversion formula based on the FAO data and standards in addition to those of the Ministries of Health and Agriculture. These formulas enable the conversion of the quantities in the food basket of the Jordanian consumer in 2005 in kilograms into calories.

Phase III: To calculate the calorie unit cost by dividing the total daily expenditure of the individual on food by the number of calories consumed by him, using the unit cost of calorie for the first quintile of population. The line of food poverty per household is calculated by multiplying the calorie requirement per individual according to his/her body weight, age, sex and daily physical activity by the average calorie unit cost. Meanwhile the general food poverty line is the weighted average poverty lines of all individuals of the sample.

Phase IV. To calculate the non-food poverty line, regress the Logarithm of the dependent variable. (Food poverty line divided by the average per capita food expenditure). The total poverty line is the value of the average independent variable = 100.

- Subtract the total poverty line from the food poverty line to produce the non-food poverty line.

Main Results of the Poverty 2005

- The value of the poverty line is estimated by using household expenditure surveys' data, taking into account that the poverty line equals the total cost of commodities required to satisfy the consumption needs of the household. The cost of basic food consumption requirements is determined according to the body's calorie requirement.

- The average daily calorie requirement per capita amounted to 3289 calories per day, against 3209 calories per day in 2002. This increase is attributed to the slight differences in the age structure of population during the past years.

- The average cost per 1000 calories was JD 0.379 in 2005 against JD 0.327 in 2002, with a 16.2% increase.

- A view of table (1) reveals that the average cost per 1000 calories for the first quintile of the population consumption is JD 0.237 compared with JD 0.488 for the highest quintile. This indicates that the first quintile (the lowest expenditure category, which

mostly includes the poor category, resorts to meet its calorie requirements by depending on low-cost goods as compared with the high expenditure quintile).

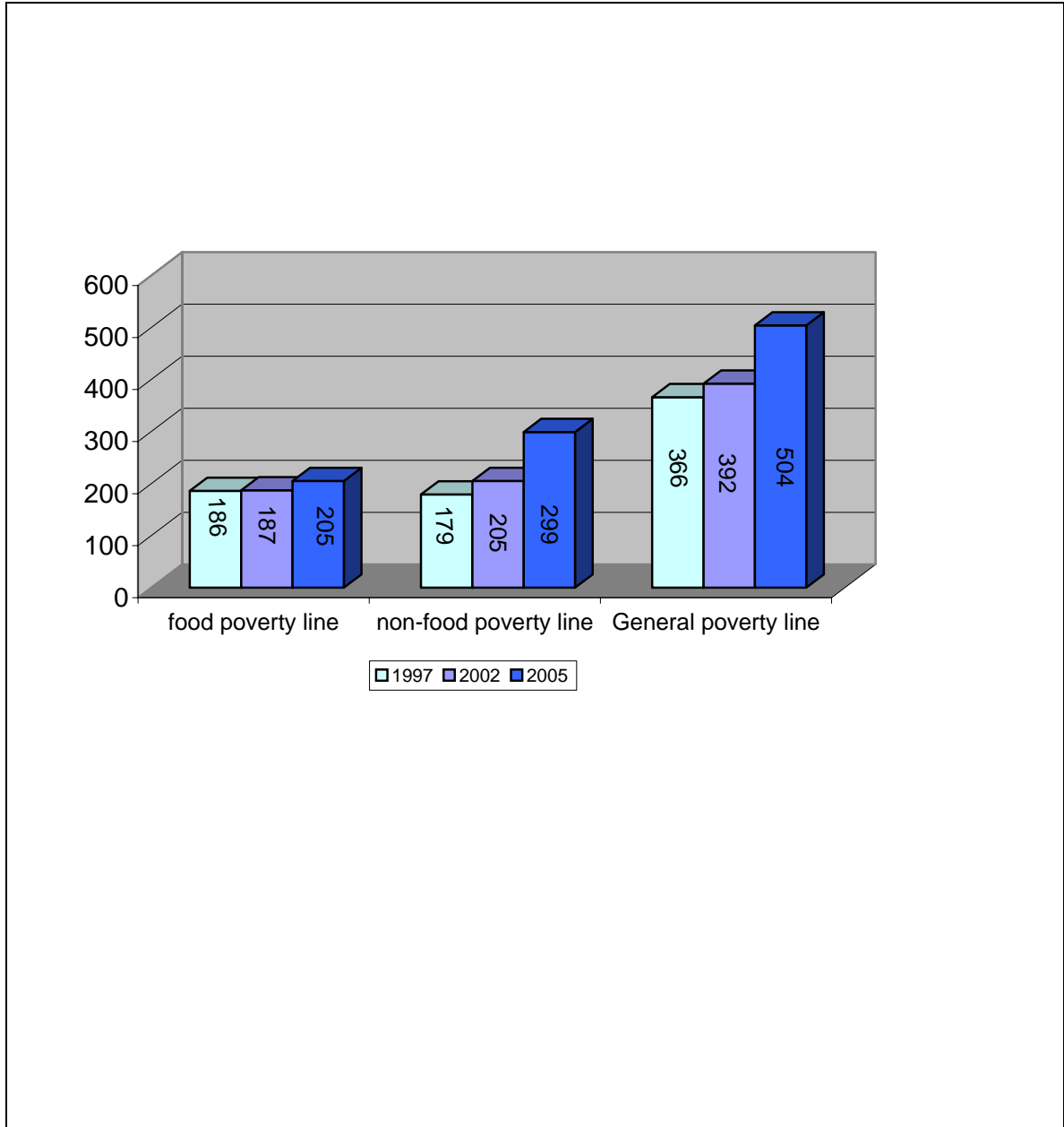
Table No.1–Average cost per 1000 calories in JD by expenditure quintiles of households and by years

| Quintiles | 2002 | 2005 | % |
|------------------|-------------|-------------|----------|
| Quintile 1 | 0.2217 | 0.2372 | 7.0 |
| Quintile 2 | 0.2627 | 0.2833 | 7.9 |
| Quintile 3 | 0.2953 | 0.3164 | 7.2 |
| Quintile 4 | 0.3251 | 0.3720 | 14.4 |
| Quintile 5 | 0.4139 | 0.4879 | 17.9 |
| All persons | 0.3265 | 0.3793 | 16.2 |

The poverty line method is based on dividing society into two categories; the poor category and the non-poor category, through what is called a poverty line. The absolute poverty line and the indicators derived from it is the most appropriate method for poverty measurement in developing countries. It is also sometimes called the general poverty line. It is defined as the total cost of the required basket of goods needed to satisfy the basic consumer needs such as food, clothing, housing, education, health and other basic requirements. In addition to the absolute poverty line, there is the food poverty line which equals the total cost of commodities required to satisfy the basic consumer needs in the form of food only.

- The general poverty line per annum amounted to JD 504 against JD 392 in 2002, namely it recorded a 28.6 % increase. The following chart indicates the poverty lines in the years 1997, 2002 and 2005.
- The precipitate annual food poverty line amounted to JD 205 or JD 17.1 per month against JD 187 in 2002, namely it has increased by 9.6 %. The non-food poverty line amounted to JD 299 per capita annually compared with JD 205 in 2002, namely it increased by 45.9%.

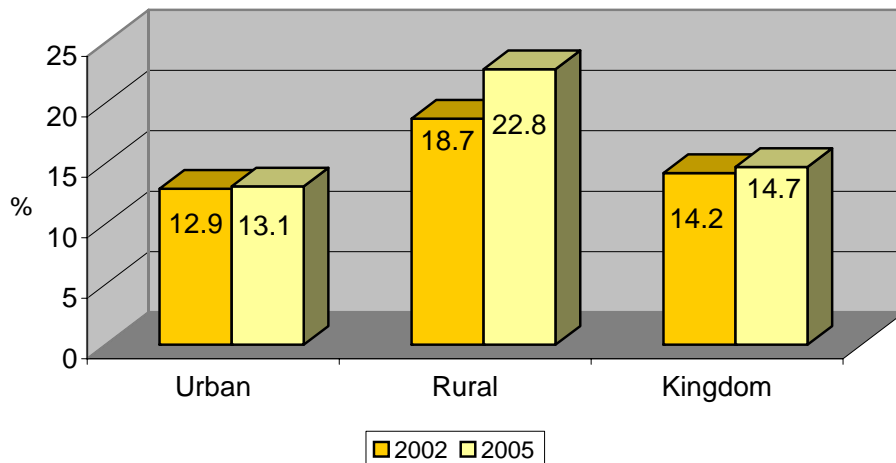
Poverty lines in 1997, 2002 and 2005.



- The poverty rate indicator measures the relative importance of poor people in the society. It is measured either for individuals being equal to the percentage of the poor population; or for households as percentage of poor households. The poor population rate is usually larger than the poor households rate because poor households are larger in size in the average than non-poor households.

- The poor population rate in the Kingdom amounted to 14.7% against 14.2 % in 2002, at a slight increase by 0.5 percentage points. At the household level, the poor households rate in the Kingdom in 2005 was 11.0 % against 10.5 % in 2002.
- At the governorate level, the results of the study showed significant differences in poverty rates between the years 2002 and 2005 in various governorates. These differences are attributed to the scale size of the sample in 2005, and for not being representative at the governorates level. This was verified through the calculation of the sampling error of the rates of poverty at the governorate level. It was found out that the amount of sampling error ranged between 11% in Zarqa' Governorate and 24.5% in Balqa' Governorate. This indicates the inaccurate representation by the sample, of the poverty rates at the said level. But, at the Kingdom's level, the amount of sampling error in the poverty line was 5% which indicates a credible representation by the sample for the poverty rate at the Kingdom's level.
- The poor population rates in urban and rural areas in 2005 were 13.1% and 22.8% respectively against 12.9% in urban areas and 18.7% in rural areas in 2002.

Urban and rural poverty rates in 2002 and 2005



- The urban and rural poverty rates in the years 2002 and 2005 show that the pace of poverty in rural areas is faster than in urban areas. This appears clearly from the above percentages. It is observed that the rate of poverty in rural areas increased by 4.1 percentage points while it increased by 0.2 percentage points in urban areas.
- Households with more than ten members have witnessed noticeable poverty. The poverty rate reached 37.2% and diminished gradually to 1.1% in households with a size of 1-2 members.
- Poverty rates according to educational qualifications of the household head shows that households whose head has no educational qualifications were the highest namely, 15.4% and those whose heads have secondary education or less were 12.7%, while those whose heads have a Bachelor's degree, higher diploma or Master's degree dropped to 2.3%. The sample did not show households whose heads hold a Ph.D degree.
- The poverty gap indicator measures the size of the gap between expenditure of the poor and the level of poverty line. For the purpose of comparison between time periods, they vary as to size of population, and price levels. The poverty gap indicator is calculated as a percentage of the total value of consumption of the whole population when the level of consumption of each of them equals the poverty line. The poverty gap in 2005 witnessed a minor drop from 3.3% in 2002 to 3.2% in 2005.
- In addition to the poverty gap, the severity of poverty indicator measures the disparity among the poor. Whenever the value of the extreme poverty indicator is higher, the poverty gap becomes wider and deeper. The scale of poverty severity was stable between 2002 and 2005 and was in the range of 1.1%.

Table2 below shows the values of the most important indicators derived from this study:

Table No. 2 : The most important poverty indicators in 2002and 2005

| Indicator | 2002 | 2005 |
|--|---------------|---------------|
| Average share per individual in calories/day | 2309 | 2389 |
| Average cost in JD for every 1000 calories (general average) | 0.3265 | 0.3793 |
| Average cost in JD for every 1000 calories at the first quintile | 0.2217 | 0.2372 |
| General annual poverty line per capita | 392 | 504 |
| Food annual poverty line in JD per capita | 187 | 205 |
| Percentage of poor households / Kingdom | 10.5 | 11.0 |
| Percentage of poor population/Kingdom | 14.2 | 14.7 |
| Percentage of poor urban population. | 12.9 | 13.1 |
| Percentage of poor rural population | 18.7 | 22.8 |
| Poverty gap % | 3.3 | 3.2 |
| Severity of poverty % | 1.1 | 1.1 |

Appendix

Explanations on poverty line increase in 2005 as Compared with 2002

- A glance at the components of the general poverty line, namely the food poverty line and the non-food poverty line shows the following:
 - * It is observed that the increase in the food poverty line was natural. It had risen from JD187 per capita annually in 2002 to JD 205 in 2005 namely by 9.6%. In contrast, the inflation rate in the prices of food commodities between the years 2002 and 2005 did not exceed 12.8%. This indicates that the poor population tended to meet their food requirements by resorting to cheaper and lower quality foodstuff substitutes. Consequently, the severity of prices' inflation had a lesser impact on them. Therefore, the increase in the food poverty line had a reasonable and expected effect on the increase in the general poverty line.
 - * Clear increase in the general poverty line is attributed to the clear increase in the non-food poverty line from JD 205 per capita in 2002 to JD 299 per capita in 2005, namely at the rate of 45.8%, while the Consumer Price Index shows an inflation at the rate of 6% in the prices of non-food commodities.
 - * The relative importance of expenditure of the poor on the group of non- food commodities in 2002 were 53.9% and increased in 2005 to 55.5%. This indicates that the poor had directed major part of their expenditure to non-food commodities and services while reducing their expenditure through consuming cheaper and lower food quality.
 - * The increase in the relative importance of non –food commodities lends certainly more importance to the non-food poverty line, influencing the general poverty line. Table (1) shows the relative importance from the total non-food poverty line according to sub-items of expenditure, in addition to the percentage of each item's contribution to the increase in the poverty line (percentage points) between 2002 and 2005.
 - * It is noticed from table (1) that there are three expenditure groups whose total relative importance constituted 68.5% of the total expenditure of the poor individual on non-food commodities, out of 46% (increase in the amount of non-food poverty line). These groups constituted 30.9 percentage points between 2002 and 2005. These expenditure items are: housing and appurtenances which constituted (in 2005) the highest relative importance 38.3% of the total expenditure of the poor population on non-food commodities, and 13.6 percentage points of the increase in the non-food poverty line. Expenses on fuel and lighting come next with a relative importance of 16.2% and a contribution of 9.7

percentage points. Finally come the expenditure on transport with a relative importance of 14% and a contribution of 7.6 percentages of contribution points of the total increase in the non-food poverty line.

Table (1) Relative importance and percent share of non-food items of expenditure in increasing the non-food poverty line

| Expenditure group | Relative importance of expenditure by the poor in 2002 (%) | Relative importance of expenditure by the poor in 2005 (%) | Percentage of contribution the increase in non-food poverty line |
|--------------------------------------|--|--|--|
| Housing and appurtenances | 42.3 | 38.3 | 13.6 |
| Fuel and lighting | 13.9 | 16.2 | 9.7 |
| Transport | 12.9 | 14 | 7.6 |
| Personal care | 6.2 | 7.3 | 4.4 |
| Men's clothing | 2.1 | 2.7 | 1.9 |
| Shoes | 1.9 | 2.5 | 1.8 |
| Education | 3 | 3.2 | 1.7 |
| Health care | 3.4 | 3.5 | 1.7 |
| Women's clothing | 1.3 | 1.8 | 1.3 |
| Other consumer expenditure | 0 | 0.8 | 1.2 |
| Perfumes | 3.2 | 3 | 1.2 |
| Children's clothing (boys and girls) | 2.8 | 2.7 | 1.1 |
| Household utensils | 0.7 | 1.1 | 0.9 |
| Furniture and entertainment | 0.8 | 1.1 | 0.8 |
| Knitting and embroidery | 0.1 | 0.1 | 0 |
| House supplies | 0.7 | 0.3 | -0.2 |
| Furniture and carpets | 1.2 | 0.7 | -0.2 |
| Communications | 3.4 | 0.7 | -2.4 |
| Total | 100 | 100 | 46 |

- On the other hand, communications constituted 0.7% of the total expenditure of the poor on non-food commodities, and contributed to the decline of the non-food poverty line by 2.4 percentage points, while expenditure on household supplies, furniture and carpeting constituted 1% of the total expenditure per capita on non-food commodities in 2005 which represents a decline of the non-food poverty line by 0.4 percentage point between 2002 and 2005.

* It may be concluded from the above that the increase in the general annual poverty line per capita resulted directly from a noticeable increase in the non-food poverty line, which is directly attributed to the increase in expenditure by the poor on housing, appurtenances, fuel, lighting and transport.

* In other words, the poor individuals directed major part of their expenditure on non-food commodities which caused a major displacement in the amount of non-food poverty line. This may be attributed to the following:

- The relative changes in prices: the relative prices of non-food commodities have declined as compared with those of food commodities. This has led to an increase in the consumption of non-food commodities because of the decline in their prices, and consequently greater expenditure. On the other hand, there is a number of non-food items whose prices have clearly increased such as fuel, lighting, and transport. Because these items are basic and their consumption can not be reduced considerably, their share in the household expenditure has increased.
- Changes in the patterns of consumption of the Jordanian society: The non-food commodities constituted the major part of household expenditure as compared with food commodities.

Table No.2 shows the relative prices of non-food commodities in 2005 as compared with those in 2002. The relative price of the sub-items of expenditure is the product of dividing the index number of said sub-item by the general index number in 2005. A clear rise is observed in the relative prices of fuel, lighting, and transport which was reflected on a clear percent contribution of said sub-groups to the increase in the non-food poverty line.

* The notable, noticeable 28.6 % increase in the general poverty line between 2002 and 2005 was not accompanied by a noticeable increase in the percentage of poverty. The percentage of poor individuals amounted to 14.7% in 2005 against 14.2% in 2002.

A glance at the expenditure of individuals in Jordan shows that it had increased by around 38% between 2002 and 2005. This movement in the average expenditure of individuals between the said two years was not confined to non-poor individuals but to the poor as well. The average expenditure by the poor individual has increased by 31%. Naturally the movement in average expenditure is accompanied by a movement in the poverty line, while the poverty rate remained constant.

How did the poor adapt to the clear jump in the poverty line and maintained approximately the same proportion, while their number has not increased? Surely the answer is that the subsidy policies and cash assistance provided by the Government to most sectors of the population has helped them to adapt with the existing economic situation and the noticeable rise in prices etc. Additionally, the individuals sought new sources of income or tended to cover their expenditure by selling their fixed assets.

Table No.2 : Relative prices by sub- groups of expenditure

| Expenditure group | Relative prices 2002 (base year) | Relative prices 2005% |
|--|---|------------------------------|
| Communications | 100 | 73.0 |
| Men's wear | 100 | 84.7. |
| Men's shoes | 100 | 85,6 |
| Women's shoes | 100 | 85.9 |
| Furniture and carpets | 100 | 86.4. |
| Women's wear | 100 | 86.7 |
| Children's wear | 100 | 87.5 |
| Household utensils | 100 | 87.6 |
| Girls' shoes | 100 | 87.7 |
| Culture and entertainment | 100 | 87.8 |
| Children's shoes | 100 | 88.4 |
| Dress making and embroidery | 100 | 88.8 |
| House detergents | 100 | 91.6. |
| House supplies | 100 | 94.3 |
| Expenditure on housing and appurtenances | 100 | 96.2 |
| Personal care | 100. | 97.6 |
| Other expenditure | 100 | 100.1 |
| Medical care | 100 | 104.6 |
| Education | 100 | 107.1 |
| Fuel and lighting | 100 | 110.1 |
| Transportation | 100 | 118.5 |
| Total non-food commodities . | 100 | 97.5 |

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