

**THE GENDER DIMENSIONS OF
POVERTY IN EGYPT**

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Working Paper 0127

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Abstract

Gender dimensions of poverty are addressed, using the recent Household Expenditure, Income and Consumption Survey of 1999/2000 for Egypt. Disparities between males and females living in poor households were assessed. Poverty measures of males and females were found to be significantly different, in both urban and rural areas, where higher levels are observed among females than males. Poverty is more prevalent in Upper Egypt, where poverty measures are twice as large as the national level. The poor, both men and women are uneducated, out of labor force or unemployed, work in the private sector, have higher percentage of child labor. According to logistic regression, females are more likely to be poor than males, holding other factors constant. The probability of being poor increases as the number of individuals who work in agriculture or services and/or are illiterate increases. Female-headed households are smaller in size, have lower individual per earner ratio, and have higher per capita expenditure and income.

I. Introduction

Egypt has been successful in reversing a trend of declining growth that persisted since the mid 1980's. Real GDP grew at an average of 4.0 percent since 1990, real per capita GDP grew at 1.8 percent, and inflation has been brought down from a high of 21.1 percent in 1991/92 to 7.2 percent in 1995/96. The budget deficit was reduced to 1.3 percent of GDP as of 1995/96, and the balance of the current account improved. Most macro economic indicators point to the success of Egypt's structural adjustment program in achieving macro economic stability. Egypt now enjoys a strong fiscal stance, which would buttress its efforts to embark on the "high-growth" trajectory predicted by the World Bank (1997). These achievements however, must be viewed within the context of the challenges that Egypt must still contend with, notably unemployment and poverty.

Adjustment measures can hurt population groups in three ways. First, as earners of income through their employment status and real wage levels. Second, as consumers, their standard of living can suffer from changes in the prices of goods and services. Third, as beneficiaries of government social services, some population groups are likely to suffer from price increases, falling wages and from reductions in the coverage and quality of the social services. For the poorest of the poor who get financial assistance from the state, the decline in the real value of their social benefits will represent an additional burden. Furthermore, restructuring measures that would cause loss of employment could create poverty for the households of those concerned. Subsidy removal will lead to the additional deterioration of the living standards of the poor who spend a large share of their income on subsidized goods and services. Moreover, the inflationary impact will lead to a redistribution of income against the fixed income receivers.

However, these costs are deemed unavoidable until economic and structural reform is completed and the Egyptian economy is back on track. The hardship associated with the costs of adjustment is likely to be felt before the intended beneficial effects. It is therefore important, in order to determine the degree of social equity and the political sustainability of the reform under consideration, to make an overall assessment of how various population groups are likely to be affected during the adjustment period, in particular, vulnerable groups. The long-run success of this reform package is clearly dependent upon the government's ability to protect the most

vulnerable segments of its society. Moreover, the status of women is often more critically affected than men by any economic changes. Poor women are triply disadvantaged: they live under the same harsh conditions as poor men; they suffer from culture and policy biases which undervalue their contribution to development; and as heads of households, they face the same problems as men while having the primary responsibility for the care of children, elderly and for housework.

The feminization of poverty is a new concept in the literature. It indicates the vulnerability of women to economic conditions. However, it is not thoroughly appraised in Egypt. Few researchers considered the gender dimension of poverty. Among those were Nassar 1997, El-Laithy 1997, Datt 1998 and El-Laithy 2000. However, none have related gender disparities with determinants of poverty in its gender dimension. The effectiveness of policy interventions in reducing poverty, especially for women, depends on the quality and timeliness of the information available for tracing changes in poverty over time and for monitoring progress in the social well-being of the poor.

There is no shortage of poverty estimates for Egypt, but the quality of the estimates varies, and the comparability over time and across regions is poor. Even with the same data set, different poverty estimates abound. Debates about the methods of poverty measurement are common; views differ on how individual welfare should be measured, how cut-off points should be set to distinguish between classes, and what measures should be used. Examples of such controversies are World Bank (1990), Korayem (1994), El-Laithy (1996), Cardiff (1997) and El-Laithy and Osman (1997). One of the major differences is the construction of the food basket and the unit of consumption. For instance, Korayem (1994) and Cardiff (1997) used a hypothetical diet to construct the food basket and they also used households as their units to measure welfare. However, as will be discussed later, using the household as the unit of consumption can be misleading. The World Bank (1991), El-Laithy (1996), El-Laithy and Osman (1997), Datt (1998), and El-Laithy et al. (1999) used per capita expenditure within the household to place households above or below the poverty lines.

As far as gender poverty is concerned, Nassar (1997), and Datt (1998) have provided estimates on poverty levels by gender but they did not provide information on the characteristics of the poor by gender. El-Laithy (1996)

demonstrated a detailed picture on the gender dimension of poverty, however here the unit of analysis in setting the poverty line and poverty measures was the household. However, using the household as the unit of analysis is debatable as will be discussed later.

- The study addresses the following questions:
- Does poverty in Egypt have a woman's face?
- Has poverty among women been linked to their conditions in the labor market, and their education levels?
- Are Women particularly at risk in poor households?

This study presents a consistent picture of the extent of poverty at all levels of analysis. The study derives poverty measures for male and female-headed households, and for males and females in poor households. We also investigate the characteristics of males and females in poor households in terms of their education, employment, child labor, as well as some other characteristics. The study is divided into seven sections. Section (1) gives a brief introduction of the issue at hand. In section (2) concepts for the identification of the poor, that is; poverty lines and poverty measures are investigated. Section (3) is concerned with the place of residence of the male and female poor households, by regions and governorates. Other characteristics of those groups in terms of education and employment status are presented in section (4). Factors that determine poverty are identified using logistic analysis. Section (5) is designed to focus on the characteristics of female-headed households; FHH, compared to male headed households; MHH. Section (6) summarizes strategies adopted by the poor to cope with poverty. In section (7) the Human Poverty Index is introduced and measured. Finally, the conclusion is in section (8), where the main findings of this study are presented.

II. Conceptual Issues in Measuring Poverty

Poverty is much more than merely low income. It transcends the simple concepts to reflect poor health and education, knowledge deprivation and communication, inability to exercise human and political rights and the absence of dignity, confidence and self-respect.

Using monetary income or consumption to identify and measure poverty has a long tradition. Most quantitative poverty analysis is based on household income and expenditure surveys. This approach has become important for policy makers. Because it is based on nationally representative samples, it allows inferences about the conditions and evolution of poverty at the national level. Moreover, since household surveys collect information beyond monetary income or consumption, the approach makes it possible to obtain a broader picture of well-being and poverty, so as to investigate the relationships among different dimensions of poverty, and to test hypotheses on the likely impact of policy interventions.

Defining poverty as multidimensional raises the question of how to measure overall poverty and how to compare achievements in the different dimensions. One dimension might move in a different direction from another. Health could improve while income worsens. Or an individual might be "income poor" but not "health poor." Or one country might show greater improvement in health than in vulnerability, while another shows the converse. This brings the question of the relative value of the different dimensions. In other words, what weights can be assigned to the different dimensions to allow comparisons across countries, households, or individuals and over time?

This study is based on income poverty. Other dimensions of poverty will be analyzed through examining deprivation in different dimensions experienced by the income-poor, and section six deals with human poverty adopting a more broad definition of poverty.

Poverty is an elusive concept. The indicator deployed in the definition of poverty varies with the purpose of the policy maker. Determining who the poor are, requires specifying what is meant by poor and poverty. For this purpose, two questions have to be answered; first, what is the "standard of living" indicator to be used to measure welfare? Second, how are the poor to be distinguished from the non-poor? In other words, defining poverty requires the selection of a welfare criterion to draw a line -which divides population into poor and non-poor. However, poverty estimates may vary with the choice of the welfare indicator and the unit of measurement i.e. household versus individual, or income versus expenditure.

2.1. Welfare Indicator

There are different approaches to measuring welfare or well-being (Ravallion, 1994). Two approaches exist: the welfarist and the non-welfarist approach. Poverty comparisons according to the *welfarist approach* would focus only on individual utilities or preferences. The limitation with this approach is that, there exists a different utility function for each individual, and therefore the behavior of the individual cannot be taken to represent the well-being of the society as a whole.

The *non-welfarist approach*, on the other hand, measures welfare in terms of a money metric indicator, defined as the amount of money required – given a set of prices and the assumption of utility maximization – to attain a particular level of utility. Several standards of living indicators may be used, such as total income or expenditure, or the proportion of household budget spent on food. However, there are other factors determining the standard of living and affecting welfare that cannot be readily reduced to a single monetary measure. Examples of such factors are access to education, access to basic health services, and access to safe potable water and basic housing amenities. The *basic needs approach* becomes particularly suited for measuring poverty in developing countries, since it bases poverty comparisons in the deprivation from certain commodities and resources (both food and non-food) that are deemed essential to afford a minimum level of well-being within a given society. Strictly interpreted, this can mean the inability of individuals to attain adequate or minimum nutrition, clothing, or shelter; or more broadly, it encompasses those factors that *enable* the command of individuals over resources, such as being healthy and literate.

2.2 Units of Measurement

Household surveys record outlays by the household on various commodities, and no attempt is made to inquire as to who actually consumes what. Our main interest lies in individual welfare. But since surveys are designed to collect expenditure at the household level only, some adjustment is required to the household-level indicators to reflect more accurately the well-being of the individuals within it. Using the household as the unit of consumption can be misleading, since households vary in number of members. Larger households with certain per capita consumption could be placed above the poverty line while smaller

households with a higher per capita consumption would be placed below the line. This is an error because individual members of the smaller household are probably better off than their counterparts in the larger household. The opposite approach uses individual poverty lines based on per capita consumption to place households above or below the poverty lines. This implies that there are no economies of scale within the household and would tend to overstate the poverty line. To correct for this, adult equivalence scale should be used to take into account differences in the age and gender structure of households.

It has often been asserted that additional household members, particularly children, are less "costly", in the sense of requiring additional expenditures to maintain the welfare levels of original household members, relative to the initial cost of attaining that level of welfare by a household composed of a single person or a childless couple. This assertion is supported by both common experience and economic reasoning. Durable goods such as radios and refrigerators can be enjoyed by additional household members at no extra cost. Even in the case of food, children consume less food than adults. Applying an adult equivalent scale means that some members will be assigned a weight between zero and unity, depending on their age. Thus instead of dividing total expenditure simply by the number in the household, each household member is assigned a weight depending on age and the sum of the weights is used to divide total expenditure, though this will inevitably make the analysis more complex. Glewwe (1988) showed two definitions of poverty that correspond most closely to the adjusted per capita consumption definition; these are unadjusted per capita consumption and per capita food consumption. These indicate that it may not be necessary to estimate adult equivalent scales when dividing the value of household consumption by household size. But, it seems clear that household consumption should not be used, since it is trivial to divide it by household size. Therefore, in this study, we use per capita expenditure as the basic welfare indicator. An illustration of how household expenditure can be misleading in poverty evaluation will be discussed in section 3.5.

Using per capita expenditure as the basic welfare indicator assumes that household expenditure is divided equally among household members. Obviously, males and females within a household may not get the same

share. However, it is common for most poverty analysis to use this indicator.

2.3. Income versus Expenditure

Using expenditure rather than income data is supported by the argument that: (1) Expenditure is a better indicator of life cycle welfare than income because the latter may fluctuate over time while consumption is allocated more evenly (smoothed) over time, poor households are likely to be purchasing and consuming only a narrow range of goods and services, their incomes may well derive from a variety of sources, many of which can be seasonal in nature; (2) Savings may be regarded as delayed consumption, so that it does not change welfare levels; (3) Consumption data are likely to be more reliable than income data because the former are regarded as less sensitive information from the perspective of the survey respondents; and finally, (4) consumption data are preferable because it is difficult to measure the incomes of people who operate their own business. Records of family businesses are often not kept. Note, however, that there are several other factors determining the standard of living and affecting welfare which may not be reduced to a single monetary measure. Examples of such non-measurable factors are: access to education, quality of education, health care and its quality, availability of drinking water and of basic housing amenities, besides other social elements. Given the empirical problems of evaluating the non-measurable factors, an expenditure based criterion will be used.

2.4. Poverty Lines

Poverty lines define the consumption standards that must be reached if a person is not to be deemed poor. Poverty lines can be absolute, relative or subjective. Much of the literature on poverty has been concerned with the respective merits of absolute and relative measures of poverty. An *absolute poverty line* will classify two persons at the same real consumption level as poor or non-poor, irrespective of the time or place. The common approach is to define an absolute poverty line (based on the cost-of-basic-needs concept) in terms of the estimated cost of a food bundle that achieves a stipulated energy intake, and which is consistent with the consumption behavior of the poor. This is known as the food poverty line, which is then augmented by an allowance for expenditure on essential non-food goods.

2.5. Poverty Measurements

It has become standard practice in poverty comparisons to use the Foster-Greer-Thorbecke class of decomposable poverty measurements. It is given

$$\text{by: } p_{\alpha} = 1/n \sum_{i=1}^q [(z - y_i)/z]^{\alpha} \quad (2)$$

where y_i denotes income or expenditure of the i -th poor individual, z is the poverty line, q is the number of individuals whose consumption or income is less than the poverty line, and n is the population size, $\alpha=0, 1$ or 2 depends on which poverty measure is used. These include three indices: the head count, the poverty gap and the poverty severity indices.

The *head count index* (P0) is a measure of the prevalence of poverty. It denotes the percentage of households who are poor – as defined by the poverty line - as a proportion of total population. This measure however, is insensitive to the distribution of the poor below the poverty line. This is captured by the following two indices, P1 and P2. The *poverty gap index* (P1), is a measure of the depth of poverty and it denotes the gap between the observed expenditure levels of poor households and the poverty line. Assuming perfect targeting, the poverty gap index indicates the amount of resources (transfers) needed to bring all households in poverty up to the poverty line. The *poverty severity index* (P2) measures the degree of inequality in distribution below the poverty line and it gives greater weight to households at the bottom of the income (or expenditure) distribution.

To illustrate, suppose that, as a result of a policy change, 10 percent of income is redistributed from a poor household whose income level places it at 30 percent below the poverty line to a household who is placed at 50 percent below the poverty line. The head count index in this case would not change, since the size of the redistribution does not afford either household to move up to the poverty line. The poverty gap index would not change either, since the redistribution occurred at levels below the poverty line. The effect of this redistribution policy will be captured by the P2 index, as the position of the lower level household in the distribution would improve.

2.6 The Data

The principle survey instrument for this study is the most recent Household Income, Expenditure and Consumption Survey (HIECS) conducted by

CAPMAS in 1999/2000 (from October 1999 to September 2000). This survey is a national representative survey of 48 thousands households. The survey was administered over 12 months, with 10 visits to the household over a period of one month to collect detailed data on food. Basic information about all household members was collected. The information includes age, gender, education, occupation, economic activity, employment status housing conditions as well as household income, income earners and income sources. A household diary is kept for one full month, where all food consumption expenditure transactions for all household members were recorded. Expenditure on food items included imputed value of own-produced commodities where these have marketed equivalents. Expenditure of non-food items were collected for the previous three months or the previous year depending on the type of commodity. The annualized sum of monthly or quarterly household expenditures was then used to construct the consumption basket for total annual household expenditures. This survey is the most disaggregated and comprehensive survey on household expenditure, consumption and income available in Egypt.

However, estimating the number of poor men and women independently is difficult, if not impossible, because consumption data are collected at the household level. Thus we will evaluate gender disparities for males and females in poor households, rather than assess the gender gap between male- and female-headed households. Two reasons are behind this choice; firstly it is too common, particularly in rural areas, that the elder son is considered as the head of household even though he is not the main decision maker or the main income provider. Secondly, poverty status of a household is determined by the characteristics of all its members, including gender decomposition, and not the gender of the head of household. For instance, in poor households girls are less likely to be enrolled at school compared to boys of the same household, this is one of the gender disparities that we would like to capture.

2.7 Estimating the Poverty Line in Egypt

Using the unit data for the HIECS survey of 1999/2000, the cost-of-basic-needs was used to construct absolute *per capita* urban/rural poverty lines. The poverty line is thus the sum of the food and non-food poverty lines. In estimating *the food poverty line*, the composition of the required diet necessary to attain a stipulated food energy intake is set to accord with

observed consumption patterns of the poor. The food poverty line is set at the cost of achieving a minimum food energy intake of 2200 calories per capita per day (equivalent to 3000 calories in adult equivalence units)¹. The nutrition bundle making up the food poverty line is typical of the consumption patterns and composition of households in the lowest 40 percent of the expenditure distribution. The cost of obtaining the selected diet is evaluated using actual prices for 1999/2000 for each urban and rural areas. Thus relative quantities observed in the diet of the poor, and the prices they face, are maintained in constructing the poverty line.

The cost of the selected diet was evaluated using actual prices. In 1999/2000, the cost of such a diet is LE 902 in urban areas and LE 707 in rural areas. In order to evaluate the non-food expenditure, Engel's curves were fitted by which the food share is regressed on log total expenditure relative to the cost of basic food needs, augmented for household size. That is, $s_i = \alpha + \beta \log(x_i/z^f) + \gamma h_i$ (1),

where s_i is the food share, x_i denotes total per capita expenditure, z^f is the food poverty line, estimated previously, and h_i is the household size.

Following Engel's law, the non-food allowance can be estimated in two ways; (i) by regressing the food share against total expenditures and identifying the non-food share in the expenditure distribution of households whose expenditure on *food* is equivalent to the food poverty line; or (ii) by identifying the share of non-food expenditure for households whose *total* expenditure is equivalent to the food poverty line. The former approach yields an "upper" bound of the poverty line, while the latter yields a "lower" bound or the "ultra" poverty line, since it defines the total poverty line in terms of those households that had to displace food consumption to allow for non-food expenditures, deemed to be a minimum indispensable level of non-food requirements. Absolute poverty lines have been widely used in developing countries since poverty research is dominated by the

¹ The 2200 per capita caloric intake is based on the recommended daily allowance for given levels of activity and standard weights of the Egyptian population by the Institute of Nutrition (Shaheen, 1995). These recommendations are in line with the nutritional standards set by the FAO/WHO.

concern for the attainment of basic needs and the achievement of well-being in absolute terms. The estimated lower and upper poverty lines are presented in table (1).

2.8. Poverty Measurements by Gender

In the following, we investigate gender difference among poor households rather than differences between female- and male-headed households. However, we also present poverty levels for male- and female-headed households.

In 1999/2000, overall poverty in Egypt stood at 20.15 percent, using the lower poverty line (Table 2). Thus almost 20.15 percent of the population in Egypt, or approximately 12.9 million, could not obtain their basic food and non-food needs. The poverty gap index was 3.78 percent, implying an average poverty deficit of the poor of LE 211. Using the upper poverty line, overall poverty in Egypt rises to 49.6 percent, representing almost 30.28 million individuals. Poverty levels are higher in rural areas, based on both the lower and upper poverty lines. The difference in poverty measurements between urban and rural areas is wider when using the upper poverty line, indicating an expenditure distribution that is more skewed towards the lower levels in urban areas. In 1999/2000, almost 4.79 million people in urban areas (representing 18.44 percent of urban population) were poor i.e. could not attain minimum food and non-food requirements, compared to 7.5 million in rural areas (representing 21.41 percent).

In each region, the percentage of poor females is slightly higher than that of males. Table 2.a and 2.b, and figures (1) and (2) illustrate the P_0 indices for various regions by gender, using lower and upper poverty lines. There are significant differences (at 5 and 1 percent level of significance) in the incidence of poverty measured by P_0 index for males and females in rural, with higher rates for females. It attained 21.85 percent for females compared to 20.98 percent for males, in rural areas. The corresponding figures in urban areas are 18.7 percent and 18.2 percent, respectively, which are significantly different at only the 5 percent level.

Besides, females are overrepresented among all poor in both urban areas and rural areas. They constitute 50.1 percent of poor persons, which exceeds their share in the population by 0.9 percentage points.

Regional Poverty in Egypt

It is believed that there is a strong spatial dimension, in welfare, among and within regions. Regions and governorates among regions vary, not only in wealth and natural resources, but also in the way-- social and public services are distributed.

In urban areas, the incidence of poverty is the highest in Upper Egypt. Using the lower poverty line, poverty incidence is the highest in urban Upper Egypt (36.33 percent), followed by rural Upper Egypt (34.68 percent) and is least in the Metropolitan region (9.01 percent) (tables 2.a and 2.b). Differences in poverty measures across regions are statistically significant. The ranking of regions remains unchanged when using the upper poverty line. Seventy percent of individuals living in Upper Egypt are considered poor. In general, rural areas in all regions have lower poverty measures than their urban counterparts. It seems that because poverty in the Metropolitan region is relatively low, overall urban poverty is lower than rural poverty.

As far as gender disparities are concerned, for both males and females, the incidence of poverty follows the same pattern as the aggregate one, with higher poverty measures for females than males. There are statistical differences between the percentage of the poor among males and females that are significant in Metropolitan, Lower Urban and all regions in rural areas. Moreover, for both males and females, the shares of Upper Egypt to the national poverty are more than double the corresponding shares in population, and their shares to overall poverty increase as α increases, reflecting again the low standard of living of the poor in this region. Actually, the Upper Egypt region contributes by about 50 percent to urban poor and 70 percent to rural poor. The opposite conclusion can be observed for all other regions, particularly the metropolitan region. Although Metropolitan population represents nearly 47 percent of males and females, its shares to urban poverty measures do not exceed half this figure and these shares decrease as α increases, indicating better living standards of the poor, relative to other regions.

2.9. Poverty Map

Regional poverty measures mask significant differences across governorates. The incidence, depth and severity of poverty vary

considerably within each region. Table (4.a) and (4.b) present the incidence of poverty for various governorates by gender in urban and rural areas respectively.

Urban Poverty. As seen from Table (4.a), irrespective of gender, the poverty indices of all governorates in *Upper Egypt* exceed the corresponding indices at the overall urban levels. Poverty incidence is highest in the governorate of Assiut being almost 24 times the level in Port Said (the governorate with the lowest incidence). Assiut is followed by Sohag and Beni-Suef governorates. Except Giza and Menia, the percentage of the poor in all Upper Egypt governorates are more than double the overall urban measure. Urban Giza is considered as a part of Greater Cairo. Development programs in Menia may have contributed successfully in reducing poverty, as Menia was considered among the poorest governorates in the 1995/96. Moreover, all governorates in Upper Egypt contribute to national poverty by a proportion greater than their share in population.

The above observed patterns hold for male and female poverty measures. The incidence of poverty is higher among females than males in only four governorates. The gap between male and female measures reached -2.79 percentage points in Beni-Suef and 2.30 percentage points in Fayoum, indicating deteriorated standards of living among females, compared to males, in Beni-Suef and relative better living standards among females in Fayoum.

In *Lower Egypt*, Qalubia, Beheira, Menofia and Sharkia governorates are the only governorates where poverty measures exceed the overall urban level, for both the male and female population. Differences between female and male measures ranged from 0.09 percentage points in Damietta to 2.67 percentage points in Sharkia. All females' figures are larger than males' except for Dakhliya and Gharbia.

For the *Metropolitan governorates*, the incidence of poverty in Cairo amounts to 8.71 and 8.84 percent, ranking 6-th among the urban governorates. Although poverty is not high in Cairo, 13 percent of urban males or females live in Cairo. However, the representation of the poor in Cairo is only half its population urban share. Alexandria also contributes a large share in urban poor (8.3 percent of urban poor males and 9.18 percent of urban poor females).

Rural poverty. As shown in Table (4.b) and regardless of gender, poverty levels vary among governorates in rural areas. Similar to their urban counterparts, poverty measures in rural Upper Egypt governorates are above the national average, except for Giza and Aswan. Assiut has the largest poverty index, followed by Sohag and Beni-Suef governorates. With the exception of Giza and Aswan, the contributions to the national poverty indices in governorates of Upper Egypt exceed their shares in total population. Assiut, Sohag and Beni-Suef governorates contribute by 32 percent to the rural poor. There are no poor persons in Damietta.

From a poverty perspective, poverty alleviation program should target poor females and poor males in Assiut, Sohag and Beni-suef governorates. Poor regions in Cairo and Alexandria are also important, where large segments of urban poor are concentrated, and should also be targeted.

III. Poverty Profile for Egypt

There are two sets of major socio-economic variables directly correlated to poverty: the status variables and the input and process variables. Status indicators reflect the income earning and survival opportunities of the poor. Typically, these relate to the socio-demographic profile of the poor, such as age and household composition, educational attainment and employment status, and are therefore referred to as the *characteristics* of the poor. Input and process indicators, on the other hand, are used to identify the major factors contributing to poverty, or the sources of poverty. As an example, if we should want to investigate the health conditions among the poor, child mortality would be the health status indicator, government health expenditure per capita the input indicator, and the number of visits to a maternal and child health care the process indicator.

This section will deal with the first set of indicators, the characteristics of the poor. Low income is not the only feature of poverty. Poverty is often associated with lower education levels, limited access to labor markets, poor housing conditions or limited access to basic services of water and sanitation. An examination of the distribution of welfare in Egypt should therefore focus on the characteristics of those populations falling below a given poverty line, in addition to their numbers. This analysis is of particular value to policy makers entrusted with the design and targeting of poverty alleviation strategies. The section will provide a profile of the poor,

in terms of employment characteristics, sector of employment, educational attainment, child labor and housing conditions of the poor. The next section concludes with a logistic analysis to determine the probability of being poor based on non-monetary indicators. The analysis is based on a model that includes socio-demographic variables, mainly related to education, employment, and other indicators of housing conditions and ownership of durable goods.

3.1. Education Characteristics

Education is the strongest correlate of poverty, insofar as it determines the command of individuals over income earning opportunities through access to employment. Education was typically found to have a high explanatory power to observed patterns of poverty. The correlation between education and welfare has important implications for policy, particularly in terms of the distributional impact. This subsection will discuss the educational characteristics of the poor in terms of their educational attainment.

In 1999/2000, the proportion of illiterate individuals or individuals with no certificate aged ten years and above was 35.7 percent of total surveyed population, while 17.9 percent had basic education, and only 6.7 percent were university grades or above (Table 5). This pattern is more pronounced by gender. As seen from Table 5, individuals with higher educational attainment levels are found in urban areas, particularly males. Significant variations can be traced between males and females, with larger shares of illiterate females and lower shares for males. Specifically, in urban areas, the incidence of illiteracy among males reached 15 percent and about 30.4 percent among females. The corresponding figures in rural areas are 46 percent for males and 66 percent for females.

Table (5) gives the educational attainment levels of individuals by gender and poverty groups in Egypt. These figures indicate the significance of education as a determinant of poverty in Egypt. Poverty is inversely correlated with educational attainment. The correlation is stronger for females than males. Among the poor, poor females are more represented in lower levels of education, indicating that the poor are more likely to be illiterate females. Differences between male and female figures show that illiteracy is more widespread among poor girls than boys. Due to the limited resources of poor households, they have to select some of their children not

to go to school. Most of the poor households choose girls, and hence girls in poor households do not enroll at schools at all, or they are taken out of school very early.

The great majority of the poor have attained only primary level education or no education at all. Specifically, 25.75 percent of the poor population was illiterate, in urban areas and 35.3 percent in rural areas. Out of those, males represent 38.5 percent in urban areas and 36.3 percent in rural areas. Moreover, only 1.79 percent of the poor in urban areas had university education (64 percent were males). The corresponding figure for rural areas is 1.09, 80 percent of them were males. This implies that even a moderate amelioration in the educational attainment of individuals is likely to have a significant impact in lifting them from the ranks of the poor. It also implies the need to provide better and affordable education for girls in poor areas particularly rural areas.

As Table (5) shows, poverty is highest for both illiterate males and females (36 percent for P0 among males and 28 percent among females). Besides, the incidence of poverty for the illiteracy level among males is larger than females, reflecting that illiterate males are more likely to be poor than their female counterparts. Similar patterns can be observed in rural areas. However, poverty measures for the illiterate category in urban areas are higher than those in rural areas, indicating that education in urban areas plays a more important role in obtaining adequate income and hence averting poverty.

In investigating the extent to which educational status of the head of household brings about differences in the welfare of households, it was found that over 44 percent of the poor population lived in households whose head was illiterate. This is compared to only 3.5 percent for poor individuals whose head attained university education and above. That is, poor males or females are more likely to live in a household with an illiterate head. On the other hand, the incidence of poverty is highest among the illiterate category, indicating that individuals who live in households with illiterate heads are more likely to be poor. This is also the case for the rural areas in general. However, in many households, the head may be an elder family member who is no longer the main contributor to household income, and thus his or her educational level may not be the most relevant indicator of the effect of education on levels of welfare.

The above analysis of the correlation between poverty levels and education is still lacking, since it does not account for the impact of the household head's educational level on the educational attainment of the household members, and hence the effect on differences in welfare levels. The relationship between education levels of the household head and the members was therefore investigated. Such relationship can explain how poverty is transferred from one generation to another. A typical scenario can be described as follows. Start with a household whose head is illiterate and with no productive assets and trace the path through his children. The children are very likely to be malnourished, a consequence more of the ignorance of the parents than the unavailability of proper food, and of the poor sanitary conditions in which they live. These children therefore become more prone to diseases, which further diminishes their physical capabilities. They also have no place in formal schools. Even if they join, due to the constrained economic conditions of their households, they will soon drop out to join the labor market. Under these circumstances, many of them would be virtually illiterate, and in the absence of adequate vocational training facilities, these children face the hurdles of life braced with very poor skills. The cycle is complete when the spouse is of the same characteristics, and poverty is thus perpetuated across the different generations. Given such a scenario, it seems clear that education is very powerful, though not the only instrument to enable individuals to break with the cycle of poverty.

El-Laithy et al. (1999) shows that there exist a strong relationship between the education status of the head of household and that of the household members. Based on the HIECS survey of 1995/96, and at the national level, 74 percent of illiterate individuals belong to households whose head is illiterate. On the other hand, 47 percent of individuals living in households with illiterate heads are illiterate. Generally, members of a household are more likely to have similar educational levels as their heads; this relation is stronger in urban areas than in rural areas.

3.2 Employment Characteristics

Out of the HIECS, 1999/2000 sample and in urban areas, 31.8 percent were employed, 2.99 percent unemployed, 65.21 percent out of the labor force

and out of the human force². Males are over-represented in the working category; they represented 74.23 percent of working individuals, 45.26 percent of unemployed, 39.33 percent of individuals in the out of the labor force and out of the human force categories. Compared to urban areas, a larger percentage of working individuals was observed in rural areas and smaller percentages in the unemployed and out of labor force categories. However, similar to urban areas, males were over-represented in the employed category.

The employment characteristics of the poor by region and gender will be analyzed in terms of their employment status, sector of employment and child labor.

3.2.1. Employment Status

Substantial variations in poverty measures according to the **employment status of individuals** are observed at all levels of analysis: urban/rural and gender (Table (6)). The majority of the poor share similar employment characteristics; in both urban and rural areas, they are females who are out of the labor force. Thus, the poor depend heavily on income transfers and remittances. Individuals in the unemployment, out of labor force, or out of human force categories were overrepresented in the poor group. Working individuals on the other hand were less represented in the poor group compared to their representation in the population. Differences between their share in the poor group and in population amounted to 2.96 and 1.71 percentage points for males and females in urban areas and 3.18 and 1.36 percentage points in rural areas. To conclude, in both urban and rural areas, poor individuals are more likely to be females in the out of labor force category (32.8 percent of urban poor are females in the out of labor force category and 26.12 percent of rural poor follow the same characteristics).

In urban areas, males or females who are employed have the lowest poverty measures, *unemployed* have the highest incidence of poverty (23.01 percent and 22.39 percent, respectively). However, individuals in this category represent less than three percent of total population surveyed. Even though poverty measures for the category *unemployed new graduates* are below the

² According to CAPMAS classification, people under 15 and above 65, and handicapped

overall levels of poverty, 1.71 percent of the total poor belong to this category i.e. almost twenty times that of unemployed individuals with previous job experience. This points to the vulnerability of new graduates to poverty due to the inability of the economy to generate sufficient job opportunities. The incidence of poverty among individuals in the out of labor force category ranked the second (about 21 percent for both males and females).

A similar pattern of employment was observed for the *rural region*. The employed category dominates other working categories for both poor and non-poor groups, with a smaller percentage for the poor groups. Moreover, there is a higher representation of the out of labor force and out of human force categories among poor groups compared to the non-poor and among Egyptians as a whole.

Among poor individuals, 80.06 and 88.35 percent live in households with working heads in urban and rural areas, respectively. The corresponding figures for population as a whole are 77.79 and 87 percent. Thus male or female poor belong to households that have relatively more working heads than the typical household does. This implies that it is not the lack of work opportunities per se that causes households to be poor, rather the size of income that is procured through the occupations of the poor. This could be due to the lower remuneration per unit time of work of the poor or to the seasonal or temporary nature of work, or both. Thus, the employed poor pay a heavy price for being compelled to work in order to survive; in low earnings, long working hours and harsh working conditions that drastically curtail their well-being. Poor workers have to accept whatever pay and employment condition available. Evidence reflects the fact that unemployment does not appear to be the major problem among the poor but rather underemployment and stagnating wages.

3.2.2. Sector of Employment

In 1999/2000, employment was dominated by the private sector. In urban areas, 58.41 percent of employed individuals worked in the private sector (80 percent of them were males), 32.83 percent worked for the government, out of which 60.7 percent were males and 7.96 percent for the public sector. A larger percentage of private sector employment is observed in rural, and

smaller percentages for government and public sectors, compared to urban areas.

Employment in the government or in a government-owned corporation (public sector) also exhibits a correlation with welfare levels. Almost 13.7 percent of males and 6.4 percent of females employed in the government are poor, and they contribute to urban poverty by 17.3 percent for males and 5.23 percent for females. Their contribution to urban poverty is far less than their representation in the sample. Conversely, 18.31 percent of males and 24.67 percent of females working in private entities are poor; they are over-represented in the poor group by more than seven percentage points, for both males and females. Among poor males 71.36 percent and 76.91 percent of poor females work in the private sector, where the informal sector is dominant, jobs are insecure, and long hours and difficult working conditions are common. On the other hand, 28.35 percent of poor males and 22.95 percent of poor females are working in the government and public sector where jobs are secure, they are health and socially insured. The above figures indicate the vulnerability of poor working females, where a large proportion have insecure jobs, with no health and social insurance.

The vulnerability of poor working women is more pronounced in rural areas, compared to poor working males (97.64 percent of poor working females work in the private sector, compared to 81.46 percent for poor working males).

Within each region, and for males and females, poverty measures are highest for the private sector compared to other sectors of employment. All of these measures are above the national average. Moreover, in urban areas, the poor are more likely to be males who work for private employers; 53 percent of all poor were males employed in the private sector, and 18.33 of them were females working in the private sector. The corresponding figures for rural areas are 52.1 and 35 percent.

3.3. Child Labor

The main causes contributing to child labor are either educational or economic in nature.

The household decision about whether a child goes to school or works is influenced by an interaction of two factors; return of education and

opportunity costs. Child labor could be a consequence of low quality and high cost of education; it is also due to the need of the income gained by a working child. An in depth study in Greater Cairo revealed that the children's financial contributions represented on average between 30.7 percent of their household income (the children's estimates) and 22.8 percent (the mothers' estimates).

Data of the HIECS reveal that there exists a strong relationship between the welfare level of a household, as measured by per capita expenditure, and the percentage of working children. As shown by table 8, in urban areas, substantial differences exist, between the poor and non-poor and between males and females, in this respect. Children, particularly girls, in poor households are more likely to work; 2.37 percent of girls and 2.07 percent of boys in poor households had to work, compared to 0.77 percent and 0.96 percent for males and females in non-poor households. The difference in percentages between the poor and non-poor households is wider in urban areas than in rural areas. Obviously, poor households depend partly on their children's earnings on one hand, and they cannot afford the educational costs on the other hand.

3.4. Housing Conditions

Housing conditions are an important measure of welfare, both directly through increased utility, and indirectly through their impact on health. The health status of individuals is positively related to access to potable water and sanitation. Since the survey does not collect information directly pertinent to the health status of individuals in the sample, access to basic services of water and sanitation will be taken as a proxy indicator for the health conditions of the poor.

Table (8) gives the distribution of access to potable water by poverty status for the different regions. Access to piped drinking water in Egypt has improved significantly over the past decade, reaching about 79 percent of the population in 1996 (UNDP, 1997). Access is achieved either through indoor sources or through pumps located outside the dwelling. This is in addition to well water. Indoor sources of drinking water are more common among the better off individuals, while the other sources are more predominant among the poor.

Dwellings with publicly supplied water were less common among the poor, but much of that may be attributed to differences in coverage between urban and rural areas. In fact, rural areas have lower proportions of individuals connected to public water networks than the overall average. In *urban areas*, the differences in access between the poor males and females were marginal (97.29 percent and 97.32 percent for males and females, respectively). Differences across poverty groups are even wider in *rural areas*. Only 75.55 percent of poor males and 75.68 percent of poor females had access to potable water compared to 85.63 percent and 85.35 percent of the non-poor males and females, respectively.

3.5 Total Household Expenditure

Ravallion (1992) indicates that per capita consumption, as a welfare indicator, is preferable to household consumption. Using household consumption as the ranking variable underestimates the measurement in question, because household consumption does not reflect the number of members that constitute the household. Furthermore, poorer households tend to be larger in size than richer households. With household consumption as a variable, smaller households (which are typically richer) are more likely to be classified as poor simply because they are smaller, while larger households (which are typically poorer) are likely to be classified as rich. On a per capita basis, however, smaller households with higher per capita consumption would be ranked as richer than larger households with lower per capita consumption. This is confirmed by the figures in table (9).

Table (9) indicates the percentage of the poor and the contribution of each household expenditure category to poverty. This table provides a good example of how ranking households according to their household expenditure can be misleading. If there is a one to one correspondence between household and per capita expenditure, poor individuals will be represented only in lower brackets of household expenditure. In fact, this is not true, since about three percent of individuals in urban areas and 6 percent in rural areas who live in households whose total expenditure ranged from 14,000 to 40,000 pounds per year, were classified as poor according to their per capita expenditure. If we use household expenditure as the welfare criteria, those households will not be classified as poor. Moreover, only two to three percent of the poor were presented in the first

household category. This confirms the fact that the distribution of individuals according to household expenditure may be different than the distribution of the same individuals with regard to per capita expenditure within the households simply because households vary in size.

VI. Factors Correlate to Poverty

To establish the relative role of the different factors in the configuration of the poverty profile in Egypt, it is necessary to isolate their individual effects. This can be achieved by assuring the probability of an individual being poor as a function of the various personal characteristics. Since some variables being examined are categorical variables, the way to technically handle their relationship is by fitting a logistic regression. In a logistic regression, the probability of being poor is estimated by maximum likelihood logistic model, in closed form as:

$$P_{ij} = \frac{\exp(\delta_i Z_{ij})}{\sum_{k=1, \dots, K} \exp(\delta_k Z_{kj})}$$

Where $\delta_i Z_{ij}$ represents the known or non stochastic component for individual j. The Z variables include: educational attainment, employment, economic activity, sex variables, as well as age, household size, water source, average durable goods and dependency ratio.

Therefore, the relationship between the probability of being poor on one hand, and the dependency ratio, the education level, the main activity, employment status, sex as well as the age of the head of household, and the housing characteristics of households such as number of persons per room, access to potable water, and ownership of some durable goods were evaluated on the other hand. This was achieved by fitting the probability of being poor, as a function of the various personal and human capital characteristics, which are assumed to influence poverty status.

Using the unit level data of HIECS, the performance of several indicators was assessed. The analysis is applied at the urban and rural levels and is based upon lower poverty lines.

Table (11) gives the percentage of correct classifications for poor and non-poor individuals, for the two models. These are the percentage of the poor

(or non-poor) individuals who are also classified, by the model, as poor (or non-poor). For instance, the percentage of the poor individuals who were classified by the model as poor is 50.65 percent in urban areas. The performance of both models in classifying the poor was satisfactory, although the urban model performed better. The overall percentage of correct classification for both models attained 85.18 percent and 82.19 percent for urban and rural areas respectively. The chi-square tests show that the coefficients, taken as a group, are significantly different from zero at one percent level of significance.

However, both models perform better in identifying the non-poor. This implies higher homogeneity in the characteristics of the non-poor than the poor. The poor, especially in urban areas, are less homogeneous.

One of the benefits of such an analysis is the ability to assess the impact that a change in a particular factor would have on the probability of an individual being poor, if all other factors are kept constant. The results of the logistic models are given in Tables (10), (11) and (12) including the estimated coefficients, the odds ratio, and marginal effects for explanatory variables included in the model. The odds are the ratio of the probability of being poor and the probability of not being poor. The odds ratio gives the change in the odds of being poor as opposed to not being poor, in response to a one unit increase in the explanatory variables. Hence, smaller odds ratio than unity implies that higher values of the independent variable are associated with decreasing poverty. Similarly, odds ratio greater than one indicates that an individual with a higher value of the independent variable is more likely to be classified in the poor class. The *logistic coefficient* could be interpreted as the change in log odds associated with one unit change in the explanatory variables. The marginal effect is the percentage change on the probability associated with a unit change in the explanatory variables. The marginal effect for each variable has been calculated at the mean values of the independent variables. A more revealing approach is to assign different values to target characteristics and simulate the resulting probability of being poor while maintaining all other variables at the national mean values. In this context, it is possible to assess the probability of being poor for given factors, and comparisons can then be made across characteristics. Simulated probabilities of being poor as well as percentage changes in poverty levels are presented in Table (11). The simulation

approach is probably most fruitful in analyzing characteristics that allow for high degree of differentiation, such as education or employment.

In urban areas, the probability of being poor, for the reference individual is 18.3 percent for males and 18.51 percent for females. It is 21 percent and 23 percent for rural residences

The most important determinant of poverty status is education. Educational levels (particularly secondary and university levels) have strong and positive significant effects on the likelihood of being poor. The coefficient for the illiterate variable equals 1.0034, and 0.8739 and their odds ratios equal 2.7276 and 2.3961, in urban and rural areas, respectively. This could be interpreted as follows; in urban areas, when the illiterate variable decreases by one percent, while the values of all other variables remain unchanged, the ratio between the probability of being poor and the probability of being non-poor will be decreased by 2.7276 percent. The largest change in odds ratios is for the illiterate, and read and write variables. Thus illiteracy rate is a good indicator for identifying the poor. Moreover, when a person has a university education, the probability of being poor reaches 10.31 percent for men and 9.81 percent for women. On the other hand, the relation between education levels and poverty status is stronger in urban areas than in rural areas, for both males and females. Among the various characteristics considered, education allows for a substantial degree of differentiation with respect to the probability of being poor. The probability of being poor, while maintaining all other variables at the national mean values, ranges on average from 25 percent and 24 percent respectively for males and females with no education in urban areas to about 10 percent for those with secondary education and above. In other words, the percentage of the poor is 24 percent if all the population were illiterate, while it would reach 16 percent if all population had a secondary level of education. Differences in rural areas are wider (27 percent versus 13 percent). The largest impact of education on poverty reduction is found when a person, male or female, moves from the secondary to the university category of education; changes are as large as 9 percentage points.

Furthermore, if a person who is employed becomes unemployed, the likelihood of being poor increases by 11 percentage points for both males and females in urban areas and by 5 percentage points in rural areas. Changes in the probability of being poor, if he becomes out of the labor

force is smaller than the unemployment effects, where changes reach only 2 percentage points in urban areas and 0.5 percent in rural areas.

Simulation analysis allows us to assess the impact of being a female on her poverty status, while keeping all other variables constant (unchanged). The probabilities of being poor were estimated at unchanged levels of all variables, except the gender variable which takes the value of one for a male and zero for a female. The results show that, being a female increases the probability of being poor by 2.3 percentage points in urban areas and by 4.79 percentage points in rural areas.

As far as other variables are concerned, age, dependency ratio, number of persons per room tend to be correlated negatively with the probability of being poor. Effects are stronger for males than females. It is estimated that if the dependency ratio is increased by one percent, the odds ratio would be increased by 1.59 and 1.53 percent for urban and rural areas, respectively. We observe that the greater the household size, the higher the probability that any particular person is classified as a poor person.

Furthermore, working in agriculture and services in urban areas, increases the probability of a person to be classified as poor. The impact of economic activity on changes in probabilities is slightly stronger for females than males.

As far as the marginal effect is concerned, it is estimated that an additional unit in the dependency ratio, increases the probability of a person being poor by about 0.07 in both urban and rural areas and for men and women alike. The risk of an individual being poor diminishes as the level of education rises and to lesser extent as the head's age rises. It increases, on the other hand, with the increase in the percentage of unemployed, construction and manufacturing workers. Besides, the probability of being poor decreases, as households are more likely to have potable water also as its durable goods increases. Accordingly, individuals classified as poor are *more likely to have* a higher dependency ratio, be illiterate and unemployed, or working in services, or in agriculture. They are also less likely to have older heads and to have secondary and university levels of education.

The overall results can be summarized as follows. Generally, it appears that education and employment have the best record in identifying the poor.

Having indoor water network ownership of durable goods is a good indicator for identifying the poor.

The simulation analysis allows us also to assess the impact of two or more characteristics at the same time. By distinguishing the independent effect of each of these factors, the simulation analysis allows a better understanding of their corresponding interaction. For example, when we combine education levels with activity variables, simulation analysis showed that the probability of being poor of a person, who is illiterate and works in services, is 27.241 percent and 30.225 percent for males and females, respectively. This probability decreases to 18.42 percent for a male who has secondary education and also works in services. The corresponding probability for a female is 20.72 percent. This pattern is more revealing than it would have been, if we consider educational status alone without taking into account, the type of activity.

V. Female-Headed Households; An Overview

Generally, throughout this paper, the head of a household is defined as the one who is mainly responsible for supporting his/her family and takes decisions concerning family members. Most surveys, including HIECS, ask about some characteristics of the head of household and in many classes of the society, men are considered of higher social status than women, especially in rural areas, and hence the eldest son may be regarded as the head of the household even if he is relatively young and he is not the breadwinner.

Female-headed households (FHHs) represent a significant segment of Egyptian households. Estimates ranged from 16 percent to 22 percent of total households. In the most recent HIECS survey conducted by CAPMAS, FHHs represent 15.14 percent of total households surveyed (the total number of households in the sample, is 47949 households, distributed proportional to size- among all governorates of Egypt. A lower percentage of Female headed households is observed in rural areas than in urban areas (14.64 percent versus 15.47 percent), where women should not live alone if they are divorced or widowed and where extended families are more frequently observed. Nevertheless, the highest percentage is found in the Metropolitan region and the lowest in the Frontier governorates.

The main characteristics of FHH compared to MHH can be summarized as follows:

- As far as employment status is concerned, 30.98 percent of female-headed households living in urban areas participated in the labor force. The rest depend largely on income transfers. In rural areas the participation rate is 70 percent for female-headed households. The corresponding figures for men are 91.6 percent and 97.9 percent, reflecting a better employment status and more secure income for males.
- FHH are smaller in size compared to MHH for both urban and rural areas, with larger household size in rural areas. Average household size for MHH in urban areas is 4.58 persons, while it is 3.16 for FHH. Difference in household size between MHH and FHH is wider in rural areas, where the difference reached more than two persons.
- Income earners have to support more individuals in MHH than FMM. In urban areas every income earner in a MHH has to support 2.64 individuals including himself, while the corresponding figure is 1.72 for FHH. The same observation holds for rural areas (3.06 compared to 2.24). This may be due to the fact that most females who head their households are widows with grownup children.
- The ratio of individuals in the labor force to total individuals is larger in MHH than FHH in both urban and rural areas.
- In urban areas, the percentage of individuals who live in a household headed by an illiterate female is about three times as large as those who live in a household headed by an illiterate male. This percentage is twice as large in rural areas.
- Average per capita expenditure and income are larger in FHH than MHH. This may be explained by the smaller household size and smaller individual to income earner ratio.
- Another important aspect of the differentiation between FHH and MHH is the difference in income sources. According to HIECS, 1999/2000 see table (16), wages are the most important source of income for males especially in urban areas, accounting for 46.03 percent of income of male headed households in urban areas and 35.36 percent for their rural counterpart. The second most important source of income for the MHHs is farm income in rural areas (representing 32.78 percent of

males' income) and non-agricultural projects, in urban areas (32.78 percent). While pensions and remittances either from inside or outside Egypt, represent 45.92 percent of the income of female-headed households in urban areas and 40.64 percent in rural areas, reflecting the heavy dependence of FHH on income transfers, and where the inflationary impact of ERSAP on the living standards is the greatest.

- As far as **expenditure** is concerned, similar expenditure distributions are observed for male and female-headed households. However, individuals in male-headed households are more represented in lower expenditure brackets than female-headed households. The opposite is true for higher expenditure brackets, where FHH are more represented. This is true for both urban and rural areas. The relationship between the percentage of households headed by women and their expenditure is stronger in rural areas than in urban areas. The relation between expenditure brackets and headship disparities by gender may be different than what is available in the literature. This is so because the unit of measurement in the study is different than what is commonly used). Most literature bases its unit of analysis on household expenditure, while we argue that this is a misleading approach. As we observe, from table (17), female-headed households have smaller household size and larger earner/individual ratio. Thus, if expenditure distribution is based on household expenditure rather than per capita, male-headed households will be placed in higher expenditure brackets just because they are larger in size. This is also supported by the fact that average expenditure per female-headed household is significantly lower than that of a male-headed one, (in urban areas LE 12460 for female compared to LE 8979 for male), while the average per capita expenditure is higher within FHH than MHH, for both urban and rural areas.
- Table (18) presents the percentage of the poor for male and female-headed households. It shows that the percentage of poor individuals in female-headed households is slightly lower than the percentage in male-headed households (18.63 percent for MHH versus 17 percent for FHH in urban areas and 21.58 percent and 19.81 percent for MHH and FHH, in rural areas, respectively). This is not surprising, as we mentioned above, female-headed households are smaller in size, have

higher per capita income and expenditure and lower individual per earner ratio. This result may be different than previous results on gender poverty disparities. However, most of these studies were based on household income or expenditure as the unit of measurement. Following this approach, smaller households (which may be richer), such as female-headed households, are more likely to be classified as poor simply because they are smaller, while larger households (which are typically poorer) are likely to be classified as rich.

Based on focus group discussions performed for a research project on "Enhancing the Socio-Economic Status in Egypt" by SRC at AUC, most poor women, in the focus groups, indicated that self-employed without employing others (most of them are street vendors) is the most obvious income source for unskilled women with little or no education who cannot find a job elsewhere. Better educated women prefer to be employed in the government or public sector, in spite of its low wage rates, because of their short effective working hours and low level of needed effort and so they do not have to be away from home for long hours and also because of their insurance benefits. The private sector is suitable only for unmarried young women who have little responsibilities at home.

The findings in this section and sections two and three are supported by two recent papers by Lampietti et al. (2000) and Quisumbing et al. (2001). The first paper reviewed poverty assessment of 70 developing countries, most of them are World Bank assessments. Similar to the approach adopted in this paper, the criteria, in most reviewed studies, were income or expenditure per capita within the household. They also reached similar conclusions; that while women appear to be at a disadvantage over the range of welfare indicators, this disadvantage is not clearly amplified for those below the poverty line or in low-income countries. Moreover, when indicators and poverty lines are drawn in a consistent manner across different data sets, the evidence suggests that female-headed households are worse off than male-headed households in only a limited number of countries. The review of Poverty Assessments suggests that in 43 percent (25 of 58) of the countries reviewed the incidence of poverty is higher among female- than male-headed households. In another 17 percent (10 of 58) of countries this disadvantage only applies for certain categories of female-headed households, such as de jure households. In twenty-six percent (15 of 58) of

countries there does not appear to be a difference in the incidence of poverty between female- and male-headed households. Interestingly, in 14 percent (8 of 58) of countries, there appear to be less female- than male-headed households in poverty.

As far as the Middle East and North Africa region is concerned, there is no evidence from the poverty assessments that female-headed households have a higher incidence of poverty than male-headed households in MENA. In Jordan and Morocco, female-headed households appear to have a lower incidence of poverty than male-headed households. In Egypt, Datt et al. (1997) found that while female-headed households have a higher incidence of poverty, the results are not statistically significant.”

The second study addressed poverty in 10 developing countries. Similar to previous studies on gender and poverty, their results show weak evidence that females, as well as households headed by females, are over-represented among the poor. While female-headed households are worse off in terms of a number of poverty measures, these differences are statistically significant in one-fifth to one-half of the datasets, depending on the poverty measure used. Furthermore, stochastic dominance analysis reveals that differences between male- and female-headed households (and between males and females) are insufficiently large to generalize that females are unambiguously worse off in the entire sample of 10 developing countries.

VI. Human Poverty Index

Amartya Sen considers poverty as the deprivation of basic capabilities rather than merely as low income. Thinking about poverty therefore entails attention to both income and non-income needs. The annual UNDP Human Development Report introduced more telling definitions and measurements of poverty such as the Capability Poverty Measure and Human Poverty Index. The Capability poverty measure is intended to complement income measures of poverty, it focuses on human capabilities, as HDI does. But rather than examining the average state of people's capabilities, it reflects the percentage of people who lack basic, or minimally essential, human capabilities. Besides the Human Development Report, the UNDP 1997 introduced the Human Poverty Index, which is a combined index of the percentage of people expected to die before the age of 40, adult illiteracy rate, the percentage of individuals with no access to health services and with

no potable water and the percentage of children who are severely under weight.

Like many other concepts, human poverty is larger than any particular measure, including the HPI. As a concept, human poverty includes many aspects that cannot be measured—or are not being measured. It is difficult to reflect them in a composite measure of human poverty. Critical dimensions of human poverty excluded from the HPI for these reasons are lack of political freedom, inability to participate in decision-making, lack of personal security, inability to participate in the life of a community and threats to sustainability and intergenerational equity.

Data obtained from the 1995 Egypt Demographic and Health Survey (EDHS) and the Population Census 1996, provide the basis for estimating human poverty index at the national and geographical levels, by gender, in Egypt.

Human Poverty Index measures deprivation in three dimensions; deprivation in longevity is measured by the percentage of persons not expected to live till the age of 40, deprivation in knowledge and communications is measured by adult illiteracy rate and finally deprivation in decent standard of living, it is measured by a composition of percentage of individuals with no access to health services, no access to safe drinking water and the percentage of children under five who are under weight.

Gender indicators are available for the first two deprivation dimensions, but there is no gender distinction for the third dimension of deprivation. We decided to use number of persons for every 100,000 health units as an indicator for access to health services. It is assumed that differences in this indicator depend on the distribution of public services among governorates. Therefore no distinction between males and females with respect to access to health was assumed. The same assumption was applied for the percentage of persons with no access to safe water. Furthermore, as an underweight indicator was not provided by gender and governorate, we used ‘mortality under age five’ as an indicator of the health condition of children. Thus HPI was constructed by gender and at the governorate level. Table 19 provides the deprivation indicators as well as the HPI.

Substantial disparities, by gender, among regions and between governorates within regions, can be observed from table 19.

As most human development indicators show, Metropolitan governorates are the least deprived in the dimension of longevity, followed by Lower Egypt region, while Upper Egypt is the most deprived region in this respect. The female indicator is smaller than the male indicator for every governorate. For instance, the percentage of females expected to die before the age of 40 is two-thirds the figure for males in the metropolitan region, while it represents 85 percent of the males' figure, at the national level.

The widest disparities between males and females and between regions is found in the second dimension of deprivation; namely knowledge, which is measured by adult illiteracy rate. At the national level, the female illiteracy rate is 70 percent higher than the male's. Aswan and Menofia exhibit the largest gender gap, while Damietta has the smallest. Furthermore, the Metropolitan region has the smallest illiteracy rate for both males and females, while illiteracy rates in Upper Egypt are double the corresponding figures in the Metropolitan region. The above figures indicate vast regional bias in the distribution of health and education services against governorates in Upper Egypt. As was mentioned before, no gender distinctions have been made for access to health services and to safe water. Hence gender variation in the third deprivation indicator stems from disparities in 'mortality under age five'.

In general, the Human Poverty Index reached 29 percent for males and 35 percent for females. As in the case of all poverty indicators, the Metropolitan region has the least human poverty (20 percent for males and 21 percent for females). Human poverty indices for males and females, in Upper Egypt are nearly twice the corresponding figures in the Metropolitan region. The gender gap in the human poverty index amounted to 6 percentage points in the Lower Egypt region and it is even higher in the Upper Egypt region, where the gender gap reached 9 percentage points. Male HPI ranged from 14.12 percent to 43.53 percent, while HPI for females ranged from 16 percent in Port Said and 52.77 percent in Sohag.

On the other hand, the human poverty index for females is higher than males for every governorate in Egypt, except Cairo and Damietta. In

general, the female to male ratio with respect to HPI is 1.2, while it is 1.5 in Sohag.

Just as the illiteracy rate, the access to health services and malnutrition indicator are very high in Egypt. The Human Poverty Index is higher than income poverty indices. This index reached 32.3 percent for Egypt as a whole. The gender gap in HPI is mainly due to disparities in the illiteracy rate. Therefore, the key element in the eradication of poverty and the reduction of gender disparities is to eradicate female illiteracy and increase enrollment rates for girls, particularly in the Upper Egypt region.

VII. How The Poor Are Adapting to Poverty

This part depends on focus group discussions performed for a research project on "Enhancing the Socio-Economic Status in Egypt" by SRC at AUC. The survival strategies that were adapted by the poor, as indicated by poor women in focus groups are:

- As cash income of a household plays an important role in determining the standard of living, low income groups seek to increase the sources of cash income for the household by diversifying and exploiting all viable possibilities; by working longer hours, having more than one job, forcing their children to work.
- For the majority of the poor, wages alone do not cover basic needs. Wages must be supplemented by non-cash income from other activities. Childcare and housework are essential elements of wage-supplementation, although their value is rarely incorporated into family-income analyses. Similarly, the efficient management of cash outlays, using family members to make improvements in the home, and producing goods at home for self-consumption are vital non-market activities.
- Reducing expenditure on essential services such as health and education, and expensive food items. Most of the low-income focus groups participants are illiterate, they all agree that education is very important for their children and most of them think that education is more important for girls than boys, as boys can always learn a craft and earn reasonable income. Out of eleven women, three had girls who had dropped out of school because of school costs. However, reducing expenditure on education- with increases in school fees even in public

schools- implies that poor households force their children to drop out from schools.

- Poor women depend greatly on charity from relatives and neighbors and they get monthly income transfers from mosques, upon which they rely for medical care and private lessons for their children. They share with other neighbors from a common pool of savings to meet any extra expenses.
- Most poor women try very hard to own durable goods, as, ownership of durables is regarded as a saving strategy since durables can be sold for cash.

VIII. Conclusion and Implication of Targeting Strategies for Poverty Alleviation

The study attempted to show a poverty profile that differentiates between males and females in poor households. The study used the income poverty concept and applied the most recent data sets of HIECS survey.

A thorough examination of Egypt's data for the purpose of constructing a comprehensive set of policies to reduce poverty is beyond the scope of this study. However, to devise policies to assist the poor requires accurate identification of the key characteristics of the poor, to successfully target the benefits toward them. The poverty profile for Egypt, discussed throughout this study, describes the characteristics of the poor in Egypt. This profile can be used to describe the most efficient targeting mechanisms to implement strategies for poverty alleviation. The data can also be used to analyze the causes of poverty, which is helpful in formulating feasible policies to alleviate poverty. Investigating the characteristics of the poor and causes of poverty requires extensive research. This study attempted to provide such information. We present only a few examples that demonstrate the use of this profile for policy formulation and targeting.

The key elements of attacking poverty are through building and enhancing all types of assets. Promoting economic assets, especially labor, credit, land, access to health and education services are only some parts of the multidimensional strategy to attack poverty. Increasing social and political assets of the poor, through solidarities and groups of actions, are also important to help them fight poverty themselves.

Successful-and financially feasible- interventions to reduce poverty must be based on some mechanism for targeting assistance to the poor. Although the explicit goal of all types of strategies is to reduce poverty, they are likely to benefit some non-poor as well. Given that funding for such programs is limited, steps must be taken to target benefits toward the poor. It is useful to distinguish between two types of targeting: direct targeting and characteristics targeting. Direct targeting explicitly identifies individual households as poor or non-poor and directly provides benefits to the former group and/or withholds them from the latter. The form targeting takes depends on the ability of governments to identify the vulnerable poor. If the poor can be identified on a household or individual level, transfer payments or some other form of direct assistance can reduce their vulnerability. This approach is labeled as direct targeting. An important example is the provision of food or medical care to elderly and disabled individuals, to households whose members display clear signs of malnutrition, or to individuals who have special needs, such as pregnant and lactating women. A serious problem with direct targeting is that the 'screen' needed to identify the poor is expensive to construct.

If providing assistance directly to the vulnerable poor is not feasible, intervening on the basis of the characteristics of the poor may be required. This we refer to as characteristic targeting. For instance, if the poor are concentrated in certain regions or districts, the provision of public services to those areas could be increased. However, characteristic targeting has two potential drawbacks. First, some non-poor households may possess the same characteristics as the poor, and hence receive benefits (leakage drawback). Second, not all poor households may possess the characteristics necessary to benefit from the intervention and hence they are not reached (under-coverage drawback). The success of characteristic targeting depends on the ability of program designers to minimize these leakages. Of course, some inefficiencies may have to be accepted to achieve distributional objectives during the period of adjustment but these should be temporary and must be kept to a minimum. Accurate identification of the key characteristics of the poor, and feasible policies that could change them, require competent and timely research.

Perhaps the most basic characteristics of the poor are where they live, their sex and their education levels. The study shows that the percentage of poor

females is slightly higher than males. The study shows the percentage of poverty in rural areas to be at 21.85 percent for females compared to 20.98 percent for males. The corresponding figures for urban areas are 18.7 percent and 18.2 percent, respectively. Simulation analysis shows that being a female increases the probability of being poor by 2.3 percentage points in urban areas and by 4.79 percentage points in rural areas.

About 36 percent of males and females in urban Upper Egypt are poor and 67 percent are moderately poor. Clearly, any policy to reduce poverty in Egypt must focus on this region. Furthermore, most of the non-poor live in Metropolitan and Lower Rural regions. Thus, there is some geographic separation of the poor from the non-poor. As 59.6 percent of the poor live in rural areas, about 60 percent of them would benefit from any interventions in rural areas, and leakage would go to about 49 percent of the non-poor. The leakage of any intervention could be reduced, when geographical targeting is combined with characteristic targeting.

At the governorate level, poverty alleviation programs should target poor females and poor males in Assuit, Sohag and Beni-suef governorates. Interventions in Menia governorate should carefully be evaluated to determine the underlying factors contributing to their effectiveness in alleviating poverty. Poor regions in Cairo and Alexandria are also important, where large segments of urban poor are concentrated, and should also be targeted.

The characteristics that are most significant for the purposes of identifying the poorest individuals in Egypt are education levels, employment categories, and sector of employment. Results of logistic regression concluded that individuals classified as poor are *more likely to have* a higher dependency ratio, be illiterate and unemployed, or work in construction, services, or in agriculture. They are also *less likely to have older heads and to have secondary and university levels of education.*

More specifically, the breakdown of individuals by characteristics of the poor reveals that education is the single best indicator of poverty in Egypt today. It suggests that the poorest may be located according to their education level, and that programs to improve educational facilities-particularly those providing technical training and that are designed especially for women- and to keep children in school represent social

investment programs with potentially very high medium to long run returns. It also makes clear the skewed nature of unemployment and suggests that during subsequent recessions those who lose their jobs will be among the poorest population groups. Thus during future structural adjustment programs some type of employment generation for the very poor in urban areas is recommended.

To conclude, it is quite remarkable that poverty differences are not large between males and females, despite the massive discrimination against women in terms of access to and control of resources. However, income-based poverty measures relate to only one aspect of poverty. As the Human Poverty Index reveals, some social indicators, notably education indicators, differ more widely between males and females. Differences in education, labor force participation, sector of employment, child labor and other social and health indicators may be more important indicators of differences in well-being along gender lines.

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Figure 1: The Incidence of Poverty by Gender and Region, in Urban Areas

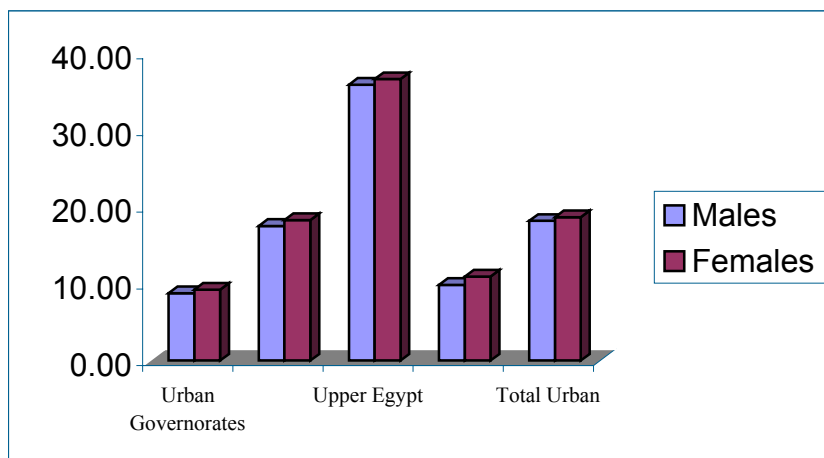


Table 1: Regional Poverty Lines (L.E.)

Region	Food Poverty Line	Regional Poverty Lines	
		Upper	Lower
Urban	902	1952.9	1297
Rural	707	1324.6	955

Table 2.a: The Incidence of Poverty by Region, Using Lower Poverty Line, (%)

Urban Regions	% of the poor		Contribution to poverty		Total Individuals	
	Males	Females	Males	Females	Males	Females
Urban Governorates	8.78*	9.24	22.52	23.33	29596	29196
Lower Egypt	17.55*	18.32	24.41	25.01	16054	15785
Upper Egypt	35.97	36.70	52.20	50.82	16751	16011
Border Governorates	9.86	10.97	0.86	0.84	1010	884
Total Urban	18.20**	18.69	100.00	100.00	63411	61876
Rural Regions	% of the poor		Contribution to poverty		Total Individuals	
	Males	Females	Males	Females	Males	Females
Lower Egypt	10.83***	11.72	28.10	29.16	27931	26930
Upper Egypt	34.32	35.06	70.74	69.63	22192	21488
Border Governorates	10.60	11.89	1.16	1.22	1181	1108
Total Rural	20.98***	21.85	100.00	100.00	51304	49526

Notes: *Difference between male and female index is significant at the 10%level of significance; **Difference between male and female index is significant at the 5%level of significance; ***Difference between male and female index is significant at the 1%level of significance.

Table 2.b: The Incidence of Poverty by Region, Using Upper Poverty Line, (%)

Urban Regions	% of the poor		Contribution to poverty		Total Individuals	
	Males	Females	Males	Females	Males	Females
Urban Governorates	29.19***	30.04	29.73	30.59	29596	29196
Lower Egypt	55.00	55.49	30.39	30.55	16054	15785
Upper Egypt	67.25	67.56	38.77	37.73	16751	16011
Border Governorates	32.07*	36.25	1.11	1.12	1010	884
Total Urban	45.82*	46.33	100.00	100.00	63411	61876
Rural Regions	% of the poor		Contribution to poverty		Total Individuals	
	Males	Females	Males	Females	Males	Females
Lower Egypt	40.85***	42.25	43.06	43.42	27931	26930
Upper Egypt	66.24*	67.12	55.48	55.04	22192	21488
Border Governorates	32.87*	36.38	1.47	1.54	1181	1108
Total Rural	51.65***	52.91	100.00	100.00	51304	49526

Notes: *Difference between male and female index is significant at the 10%level of significance; **Difference between male and female index is significant at the 5%level of significance; ***Difference between male and female index is significant at the 1%level of significance.

Source: Calculated from Household Income, Expenditure and Consumption Survey, 1999/2000.

Table 3.a: Poverty Measures and Contribution to Poverty by Region in Urban Areas, (%)

	Lower Poverty Line P0				Upper Poverty Line P0				% of Individuals	
	Index		Cont to Poverty		Index		Cont to Poverty		Male	Female
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Urban										
Governorates	8.78	9.24	22.52	23.33	29.19	30.04	46.67	47.18	46.67	47.18
Lower Egypt	17.55	18.32	24.41	25.01	55.00	55.49	25.32	25.51	25.32	25.51
Upper Egypt	35.97	36.70	52.20	50.82	67.25	67.56	26.42	25.88	26.42	25.88
Border										
Governorates	9.86	10.97	0.86	0.84	32.07	36.25	1.59	1.43	1.59	1.43
Total Urban	18.20	18.69	100.00	100.00	45.82	46.33	100.00	100.00	100.00	100.00
	Lower Poverty Line P1				Upper Poverty Line P1				% of Individuals	
	Index		Cont to Poverty		Index		Cont to Poverty		Male	Female
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Urban										
Governorates	1.64	1.79	20.05	20.80	6.84	7.15	24.80	25.57	46.67	47.18
Lower Egypt	2.92	3.16	19.28	19.88	13.52	13.99	26.58	27.04	25.32	25.51
Upper Egypt	8.69	9.19	59.98	58.72	23.24	23.71	47.69	46.48	26.42	25.88
Border										
Governorates	1.65	1.71	0.69	0.60	7.49	8.43	0.93	0.91	1.59	1.43
Total Urban	3.83	4.05	100.00	100.00	12.87	13.20	100.00	100.00	100.00	100.00
	Lower Poverty Line P2				Upper Poverty Line P2				% of Individuals	
	Index		Cont to Poverty		Index		Cont to Poverty		Male	Female
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Urban										
Governorates	0.52	0.58	18.95	19.62	2.57	2.73	22.61	23.34	46.67	47.18
Lower Egypt	0.85	0.95	16.75	17.34	4.97	5.23	23.73	24.20	25.32	25.51
Upper Egypt	3.09	3.37	63.73	62.57	10.61	11.01	52.84	51.67	26.42	25.88
Border										
Governorates	0.46	0.46	0.57	0.47	2.75	3.04	0.83	0.79	1.59	1.43
Total Urban	1.28	1.39	100.00	100.00	5.30	5.51	100.00	100.00	100.00	100.00

Source: Calculated from Household Income, Expenditure and Consumption Survey, CAPMAS, 1999/2000.

Table 3.b: Poverty Measures and Contribution to Poverty by Region in Rural Areas, (%)

	Lower Poverty Line P0				Upper Poverty Line P0				% of	
	Index		Cont to Poverty		Index		Cont to Poverty		Individuals	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Lower Egypt	10.83	11.72	28.10	29.16	40.85	42.25	43.06	43.42	54.44	54.38
Upper Egypt	34.32	35.06	70.74	69.63	66.24	67.12	55.48	55.04	43.26	43.39
Borders	10.60	11.89	1.16	1.22	32.87	36.38	1.47	1.54	2.30	2.24
Total Rural	20.98	21.85	100.00	100.00	51.65	52.91	100.00	100.00	100.00	100.00
	Lower Poverty Line P1				Upper Poverty Line P1				% of	
	Index		Cont to Poverty		Index		Cont to Poverty		Individuals	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Lower Egypt	1.30	1.46	19.75	20.86	7.70	8.15	33.29	33.90	54.44	54.38
Upper Egypt	6.58	6.88	79.38	78.29	19.05	19.52	65.43	64.78	43.26	43.39
Borders	1.36	1.45	0.87	0.85	7.03	7.72	1.28	1.32	2.30	2.24
Total Rural	3.59	3.81	100.00	100.00	12.59	13.07	100.00	100.00	100.00	100.00
	Lower Poverty Line P2				Upper Poverty Line P2				% of	
	Index		Cont to Poverty		Index		Cont to Poverty		Individuals	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Lower Egypt	0.28	0.33	15.28	16.72	2.22	2.40	27.35	28.16	54.44	54.38
Upper Egypt	1.93	2.07	84.07	82.69	7.32	7.57	71.55	70.73	43.26	43.39
Borders	0.28	0.29	0.64	0.59	2.12	2.32	1.10	1.12	2.30	2.24
Total Rural	0.99	1.09	100.00	100.00	4.42	4.64	100.00	100.00	100.00	100.00

Source: Calculated from Household Income, Expenditure and Consumption Survey, CAPMAS, 1999/2000.

Table 4.a: The Percentage of The Poor by Gender and Governorates in Urban Areas and their Contributions to Urban Poverty

	% of the Poor		Contribution to Poverty		Total Individuals	
	Males	Females	Males	Females	Males	Females
Cairo	8.71	8.84	13.30	13.24	17621	17323
Alexandria	10.71	11.93	8.39	9.18	9042	8896
Port Said	2.61	2.61	0.32	0.33	1411	1464
Suez	3.86	4.51	0.51	0.59	1522	1513
Damietta	3.55	3.64	0.26	0.24	831	758
Dakhlia	21.75	21.25	3.99	3.98	2119	2167
Sharkia	25.58	28.25	5.52	5.95	2489	2437
Qalubia	15.04	17.07	2.74	3.12	2100	2112
Kafr Elsheikh	12.14	12.35	1.62	1.55	1543	1455
Garbia	13.44	12.84	2.78	2.65	2384	2389
Menofia	25.79	26.99	2.91	2.98	1300	1279
Behera	19.75	19.92	4.01	3.85	2344	2237
Ismailia	7.27	8.21	0.59	0.68	944	951
Giza	20.95	22.30	11.34	11.20	6247	5809
Beni-Suef	49.03	51.82	5.21	5.49	1226	1225
Fayoum	41.34	39.04	3.35	3.03	935	897
Menia	22.61	23.88	2.93	2.98	1497	1442
Assuit	62.71	63.54	11.30	10.72	2079	1951
Sohag	58.37	57.36	8.56	8.04	1693	1621
Qena	34.94	34.54	4.43	4.30	1462	1440
Aswan	34.36	33.86	3.31	3.33	1111	1137
Luxour	41.02	40.83	1.78	1.73	501	489
Red Sea	12.89	9.87	0.24	0.16	217	182
New Valley	11.53	14.42	0.21	0.23	206	186
Matrouh	17.43	18.93	0.30	0.31	196	191
North Sinai	6.97	8.59	0.12	0.14	196	187
South Sinai	0.00	0.00	0.00	0.00	195	138
Total	18.20	18.69	100.00	100.00	63411	61876

Source: Calculated from Household Income, Expenditure and Consumption Survey, CAPMAS, 1999/2000.

Table 4.b: The Percentage of the Poor by Gender and Governorates in Rural Areas and their Contributions to Rural Poverty

	% of the Poor		Contribution to Poverty		Total Individuals	
	Males	Females	Males	Females	Males	Females
Damietta	0.00	0.00	0.00	0.00	904	851
Dakhlia	16.24	16.53	6.84	6.62	4535	4332
Sharkia	12.70	13.70	5.68	5.70	4818	4502
Qalubia	8.83	9.17	2.34	2.19	2848	2587
Kafr Elsheikh	4.66	5.53	1.04	1.26	2408	2459
Garbia	7.93	9.39	2.65	3.17	3594	3650
Menofia	19.48	21.56	5.82	6.16	3217	3089
Behera	7.15	7.98	3.33	3.58	5019	4852
Ismailia	7.22	8.68	0.39	0.49	588	608
Giza	14.55	16.83	4.38	4.58	3241	2942
Beni-Suef	51.16	51.60	12.93	12.48	2721	2618
Fayoum	33.64	34.33	7.05	6.55	2256	2065
Menia	23.73	25.56	9.02	9.42	4094	3989
Assuit	55.97	56.36	16.50	15.31	3174	2939
Sohag	42.19	42.05	12.55	12.54	3202	3226
Qena	26.20	26.81	4.88	5.24	2003	2117
Aswan	18.40	16.46	1.66	1.54	969	1009
Luxour	35.82	36.63	1.77	1.97	532	583
Red Sea	4.76	4.28	0.10	0.10	231	252
New Valley	6.72	7.97	0.15	0.15	243	205
Matrouh	15.72	17.54	0.33	0.37	224	230
North Sinai	24.77	26.47	0.58	0.59	253	243
South Sinai	0.00	0.00	0.00	0.00	230	178
Total	20.98	21.85	100	100	51304	49526

Source: Calculated from Household Income, Expenditure and Consumption Survey, CAPMAS, 1999/2000.

Table 5: The Incidence of Poverty by Education Status and Gender

	Urban					
	% of the poor		% Contribution to poverty		Total Individuals	
	Males	Females	Males	Females	Males	Females
Illiterate	36.16	27.71	9.92	15.83	6336	13200
Read and write	22.59	18.87	8.31	5.43	8496	6652
Basic education	18.33	18.86	10.20	9.39	12849	11503
Secondary	13.13	11.83	7.48	6.12	13162	11948
Above secondary & below university	9.79	8.55	0.91	0.65	2154	1747
University	3.24	2.68	1.14	0.64	8156	5523
Above university	1.12	1.10	0.02	0.01	400	135
Total	18.20	18.69	49.95	50.05	63411	61876
	Rural					
	% of the poor		% Contribution to poverty		Total Individuals	
	Males	Females	Males	Females	Males	Females
Illiterate	27.30	24.04	12.81	22.47	10129	20171
Read and write	18.90	18.87	7.45	3.99	8507	4559
Basic education	18.35	16.87	8.11	5.54	9540	7095
Secondary	13.31	10.08	4.78	2.17	7744	4648
Above secondary & below university	8.17	6.22	0.32	0.11	834	395
University	6.81	3.69	0.56	0.10	1773	590
Above university			0.00	0.00	32	4
Total	20.98	21.85	49.87	50.13	51304	49526

Source: Calculated from Household Income, Expenditure and Consumption Survey, CAPMAS, 1999/2000.

Table 6: The Incidence of Poverty by Working Status and Gender

	Urban					
	% of the Poor		% Contribution to Poverty		Total Individuals	
	Males	Females	Males	Females	Males	Females
Employed	16.13	14.59	20.65	6.48	29575	10265
Unemployed	23.01	22.39	1.69	1.99	1695	2050
Out of Labor Force	19.25	18.87	18.24	32.84	21892	40210
Out of Human Force	21.14	21.59	9.38	8.74	10249	9351
Total	18.20	18.69	49.95	50.05	63411	61876
	Rural					
	% of the Poor		% Contribution to Poverty		Total Individuals	
	Males	Females	Males	Females	Males	Females
Employed	18.58	19.20	20.87	11.79	24253	13258
Unemployed	16.82	12.81	0.60	0.61	773	1028
Out of Labor Force	22.12	21.95	17.43	26.12	17008	25690
Out of Human Force	25.54	26.24	10.97	11.61	9270	9550
Total	20.98	21.85	49.87	50.13	51304	49526

Source: Calculated from Household Income, Expenditure and Consumption Survey, CAPMAS, 1999/2000.

Table 7: The incidence of poverty by Sector of Employment and gender

	Urban					
	% of the Poor		% Contribution to Poverty		Total Individuals	
	Males	Females	Males	Females	Males	Females
Government	13.68	6.38	17.31	5.23	7984	5168
Economic organization	5.23	6.25	0.05	0.02	66	16
Public	9.71	3.75	4.28	0.24	2782	409
Private	18.31	24.67	54.35	18.33	18718	4686
Cooperative	0.00	0.00	0.00	0.00	25	5
NGO	14.29	5.88	0.05	0.02	21	17
Foreign	3.27	0.00	0.07	0.00	137	30
total	16.16	14.55	76.17	23.83	29733	10331
	Rural					
	% of the Poor		% Contribution to Poverty		Total Individuals	
	Males	Females	Males	Females	Males	Females
Government	13.91	4.66	10.36	0.78	5262	1182
Economic organization			0.00	0.00	13	1
Public	10.85	14.94	1.43	0.06	928	29
Private	20.37	20.65	52.06	35.23	18052	12054
Cooperative			0.00	0.00	34	10
NGO			0.00	0.00	6	2
Foreign			0.00	0.00	11	0
Total	18.58	19.20	63.92	36.08	24306	13278

Source: Calculated from Household Income, Expenditure and Consumption Survey, CAPMAS, 1999/2000.

Table 8: Water Source, Average Durable Goods and Percentage of Child Labor by Poverty Group and Gender

	Urban			
	Poor		Non Poor	
	Males	Females	Males	Females
Connected to Piped Water	97.29%	97.32%	99.21%	99.20%
Average Durable Goods	6.17	6.14	9.23	8.94
Child Labor	2.07%	2.37%	0.77%	0.96%
	Rural			
	Poor		Non Poor	
	Males	Females	Males	Females
Connected to Piped Water	75.55%	75.68%	85.63%	85.35%
Average Durable Goods	4.13	4.10	5.97	5.88
Child Labor	3.57%	3.08%	2.25%	3.08%

Source: Calculated from Household Income, Expenditure and Consumption Survey, CAPMAS, 1999/2000

Table 9: Total Household Expenditure by Poverty Groups

	Urban					
	% of the Poor		Contribution to poverty		Total Individuals	
	Males	Females	Males	Females	Males	Females
1000-3999	62.20	44.61	2.22	2.66	825	1380
4000-7999	46.34	44.89	25.52	26.08	12724	13424
8000-13999	17.28	17.52	19.56	19.04	26149	25108
14000-30999	2.90	2.68	2.65	2.26	21158	19477
40000 & ABOVE	0	0	0.00	0.00	2555	2487
Total	18.20	18.69	49.95	50.05	63411	61876
	Rural					
	% of the poor		Contribution to poverty		Total Individuals	
	Males	Females	Males	Females	Males	Females
1000-3999	51.65	37.72	3.18	3.83	1327	2190
4000-7999	34.04	34.37	28.24	28.68	17912	18012
8000-13999	14.84	15.48	15.91	15.33	23152	21385
14000-30999	6.29	6.39	2.54	2.29	8716	7747
40000 & ABOVE	0	0	0	0	197	192
Total	20.98	21.85	49.87	50.13	51304	49526

Source: Calculated from Household Income, Expenditure and Consumption Survey, CAPMAS, 1999/2000

Table 10: Coefficients and Odds Ratio for Logistic Regression by Region

	Urban		Rural	
	Coefficient	Odds Ratio	Coefficient	Odds Ratio
Household size	0.42	1.52	0.24	1.27
Age of head of household	-0.01	0.99	0.00	1.00
Sex	-0.15	0.86	-0.26	0.77
Education				
Illiterate	1.00	2.73	0.87	2.40
Read and Write	0.82	2.28	0.61	1.85
Basic Education	0.71	2.03	0.61	1.85
Secondary Education	0.50	1.65	-0.03	0.97
Above Secondary	-0.03	0.97	-0.25	0.78
University Degree	-0.06	0.94	-0.36	0.70
Economic Activity				
Agriculture	0.16	1.17	-0.48	0.62
Mining	-0.06	0.94	-0.55	0.58
Manufacturing	-0.31	0.73	-0.75	0.47
Electricity and Gas	-0.36	0.70	-1.11	0.33
Construction	-0.12	0.89	-0.38	0.68
Trade	-0.06	0.94	-0.63	0.53
Transportation	-0.17	0.84	-0.47	0.62
Finance & Insurance	0.12	1.13	-0.55	0.58
Services	0.22	1.25	-0.37	0.69
Working Status				
Employed	-0.09	0.91	-0.10	0.91
Unemployed	0.55	1.74	0.16	1.17
Out of Labor Force	0.03	1.03	-0.07	0.93
Water Source				
Indoors Water	-0.65	0.52	-0.23	0.80
Out doors	0.89	2.44	0.27	1.32
Dependency Ratio	0.46	1.59	0.42	1.53
Persons per room	0.14	1.15	0.51	1.67
Average no of durable goods	-0.40	0.67	-0.31	0.73
Constant	-1.09		-2.89	

Source: Calculated from Household Income, Expenditure and Consumption Survey, CAPMAS, 1999/2000

Table 11: Probabilities of Being Poor by Region and Gender, %

	Urban				Rural			
	Males	Females	Change for Males	Change for Females	Males	Females	Change for Males	Change for Females
Reference	18.31	18.54			21.96	23.40		
Education								
Illiterate	24.99	23.98	6.69	5.45	27.83	27.08	5.87	3.68
Read and Write	21.78	20.87	3.48	2.33	22.93	22.27	0.97	-1.14
Basic Education	19.88	19.02	1.57	0.49	22.90	22.24	0.94	-1.16
Secondary Education	16.74	15.99	-1.57	-2.55	13.52	13.08	-8.44	-10.32
Above Secondary	10.58	10.07	-7.73	-8.47	11.09	10.73	-10.87	-12.68
University Degree	10.31	9.81	-8.00	-8.72	10.13	9.79	-11.83	-13.61
Economic Activity								
Agriculture	19.10	19.34	0.79	0.80	22.03	23.47	0.07	0.07
Mining	15.97	16.18	-2.34	-2.36	20.83	22.22	-1.13	-1.18
Manufacturing	12.85	13.02	-5.46	-5.52	17.66	18.89	-4.30	-4.51
Electricity and Gas	12.30	12.46	-6.01	-6.07	12.99	13.95	-8.97	-9.45
Construction	15.21	15.41	-3.09	-3.12	23.65	25.17	1.69	1.77
Trade	15.95	16.16	-2.36	-2.38	19.45	20.77	-2.51	-2.63
Transportation	14.52	14.71	-3.78	-3.82	22.07	23.52	0.11	0.12
Finance & Insurance	18.52	18.75	0.21	0.21	20.85	22.24	-1.11	-1.16
Services	20.11	20.36	1.81	1.82	23.94	25.47	1.98	2.07
Working Status								
Employed	17.12	16.67	-1.19	-1.87	21.42	22.69	-0.54	-0.71
Unemployed	28.22	27.58	9.91	9.04	26.11	27.56	4.15	4.16
Out of Labor Force	19.26	18.77	0.95	0.23	21.94	23.23	-0.02	-0.17
Water Source								
Indoors Water	18.07	18.30	-0.24	-0.24	20.63	22.01	-1.33	-1.39
Out doors	50.70	39.47	32.39	20.94	30.03	31.09	8.07	7.69
% of correct classification	85.18				82.19			

Source: Calculated from Household Income, Expenditure and Consumption Survey, CAPMAS, 1999/2000

Table 12: Marginal Effects From Logit Model for Being Poor by Region and Gender.

	Urban		Rural	
	Males	Females	Males	Females
Household size	0.063	0.063	0.042	0.044
Age of head of household	-0.002	-0.002	0.000	0.000
Sex	-0.022	-0.022	-0.045	-0.047
Education				
Illiterate	0.150	0.152	0.150	0.157
Read and Write	0.123	0.124	0.105	0.110
Basic Education	0.106	0.107	0.105	0.110
Secondary Education	0.074	0.075	-0.005	-0.005
Above Secondary	-0.005	-0.005	-0.044	-0.046
University Degree	-0.009	-0.009	-0.061	-0.064
Economic Activity				
Agriculture	0.024	0.024	-0.081	-0.085
Mining	-0.009	-0.009	-0.094	-0.098
Manufacturing	-0.047	-0.047	-0.129	-0.135
Electricity and Gas	-0.054	-0.055	-0.191	-0.200
Construction	-0.017	-0.017	-0.066	-0.069
Trade	-0.009	-0.009	-0.108	-0.113
Transportation	-0.025	-0.026	-0.081	-0.085
Finance & Insurance	0.018	0.018	-0.093	-0.098
Services	0.033	0.034	-0.063	-0.066
Working Status				
Employed	-0.014	-0.014	-0.017	-0.018
Unemployed	0.083	0.083	0.028	0.029
Out of Labor Force	0.008	0.008	-0.012	-0.012
Water Source				
Indoors Water	-0.097	-0.098	-0.039	-0.041
Out doors	0.133	0.134	0.047	0.049
Dependency Ratio	0.069	0.070	0.073	0.076
Persons per room	0.021	0.021	0.088	0.092
Average no of durable goods	-0.059	-0.060	-0.054	-0.056
Constant				

Source: Calculated from Household Income, Expenditure and Consumption Survey, CAPMAS, 1999/2000

Table 13: Gender of Head of Household by Region

Region	Male	Female
Urban	84.53	15.47
Rural	85.36	14.64
Urban Governorates	83.95	16.05
Urban Lower	84.24	15.76
Urban Upper	85.70	14.30
Urban Frontier	89.98	10.02
Rural Lower	85.93	14.07
Rural Upper	84.40	15.60
Rural Frontier	89.86	10.14
Total	84.86	15.14

Source: calculated from the HIECS Survey, CAPMAS.

Table 14: Main Characteristics of Individuals by Gender and by Region

	Urban		Rural	
	Males	Females	Males	Females
Average Expenditure	2745.79	2726.22	1445.74	1434.15
Gini	0.37	0.37	0.23	0.23
Average no in household	2.21	2.15	2.67	2.58
Illiteracy rate	27.95	39.15	48.33	66.01
Participation rate	58.82	23.45	59.54	35.74

Source: Calculated from the HIECS Survey, 1999/2000, CAPMAS.

Table 15: Main Characteristics of Head of Household by Gender

	Urban		Rural	
	Males	Females	Males	Females
% headship	84.53	15.47	85.36	14.64
Household size	4.58	3.16	5.55	3.51
Illiteracy of head of household	19.80	56.26	42.73	84.56
Safe water source	98.86	98.83	83.50	82.25
Participation rate of individuals	34.91	33.80	39.29	36.23
Average per capita income	3269.12	3413.87	1716.46	1856.33
Average household income	14962.43	10776.56	9529.01	6518.95
Average per capita expenditure	2722.44	2844.56	1428.37	1547.71
Average household expenditure	12460.32	8979.41	7929.65	5435.14
Earners per household	1.73	1.83	1.81	1.57
Individual per earner	2.64	1.72	3.06	2.24

Source: Calculated from the HIECS Survey, 1999/2000, CAPMAS.

Table 16: Income Sources by Gender Headship and Region, (%)

	Urban		Rural	
	Males	Females	Males	Females
Wages and salaries	46.03	30.26	35.36	17.36
Agriculture projects	2.44	1.13	32.78	21.47
Non- agr projects	26.44	11.28	13.75	6.94
Real estate	7.28	8.34	9.79	13.34
Financial Assets	4.20	3.07	0.52	0.26
Others income sources	13.61	45.92	7.81	40.64
Total	100	100	100	100
Total income LE	363676944	47934129	156132817	18318245

Source: Calculated from the HIECS Survey, 1999/2000, CAPMAS.

Table 17: Distribution of Individuals by Expenditure Brackets, Gender of Head of Household and Region, (%)

Per capita Expenditure Brackets	Urban		Rural	
	Male Headed	Female Headed	Male Headed	Female Headed
	250-	0.63	0.44	1.83
600-	6.94	6.74	23.07	21.55
1000-	15.31	13.67	34.02	30.93
1400-	25.65	23.13	27.40	27.48
2000-	26.14	27.72	10.90	14.01
3000-	11.03	12.94	1.89	3.13
4000-	8.10	8.79	0.69	1.04
6000-	3.96	4.34	0.18	0.45
10000+	2.23	2.21	0.03	0.06
Total	100.00	100.00	100.00	100.00

Source: Calculated from the HIECS Survey, 1999/2000, CAPMAS.

Table 18: Percentage of Poor Individuals by Gender of Head of Household and Regions

Region	Male Headed	Female Headed
Urban	18.63	17.00
Rural	21.58	19.81
Urban Governorates	8.8	10.5
Urban Lower	18.00	17.39
Urban Upper	36.91	31.00
Urban Frontier	10.25	13.00
Rural Lower	11.35	10.38
Rural Upper	35.29	29.74
Rural Frontier	10.66	17.86

Source: Calculated from the HIECS Survey, 1999/2000, CAPMAS.

Table19: Human Poverty Index by Gender and Governorates, 1996

	% of Persons Expected to Die Before the Age of 40		Illiteracy Rate		Deprivation from A Decent Standard of Living		Human Poverty Index	
	Males	Females	Males	Females	Males	Females	Males	Females
	Cairo	13.23	8.59	18.24	30.57	41.60	31.20	24.36
Alexandria	5.73	4.96	18.59	31.31	18.03	18.03	14.12	18.1
Port Said	7.94	5.15	16.43	26.67	24.97	18.74	16.45	16.85
Suez	7.72	4.77	16.3	32.11	24.31	17.42	16.11	18.10
urban governorates	10.43	7.14	18.2	30.68	32.8	25.97	20.47	21.26
Damitta	8.16	4.77	29.42	36.44	26.33	18.74	21.3	19.98
Dakhlia	8.82	9.54	27.8	46.23	28.28	35.02	21.63	30.26
Sharkia	11.68	9.73	31.21	53.33	38.67	37.43	27.19	33.50
Qalubia	14.11	9.54	25.22	46.44	44.41	34.73	27.91	30.24
Kafr Elsheikh	8.82	7.44	36.28	58.57	27.83	27.15	24.31	31.05
Garbia	10.14	9.73	23.96	45.87	31.96	35.41	22.02	30.34
Menofia	14.55	10.11	25.22	48.94	45.79	36.79	28.52	31.95
Behera	13.89	11.07	35.42	60.23	44.03	40.62	31.11	37.31
Ismailia	11.02	8.4	22.98	40.49	34.8	30.67	22.93	26.52
lower Egypt	11.58	9.52	29.03	50.35	36.67	34.87	25.76	31.58
Giza	16.09	16.98	24.99	43.87	50.89	61.89	30.66	40.92
Beni-Suef	20.94	19.27	38.99	53.38	68.28	72.18	42.74	48.28
Fayoum	14.77	12.98	45.02	69.35	46.68	47.36	35.49	43.23
Menia	20.94	17.17	40.64	70.11	69.00	65.87	43.53	51.05
Assuit	20.94	15.07	39.91	65.6	66.51	55.69	42.45	45.45
Sohag	15.65	19.27	37.8	67.99	51.23	71.04	34.89	52.77
Qena	13.67	11.07	32.2	57.25	46.88	44.58	30.92	37.64
Aswan	17.2	17.75	22.21	44.13	54.13	64.52	31.18	42.13
Upper Egypt	17.57	16.13	34.81	58.84	56.45	59.68	36.28	44.88
Frontier	14.57	12.83	22.75	41.68	52.29	52.88	29.87	35.80
Total	14.00	12.00	28.80	49.34	44.31	43.89	29.04	35.07

Source: Population Census 1996, CAPMAS and Demographic and Health Survey, 1995.