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A PROFILE OF POVERTY IN EGYPT: 1997

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ABSTRACT

This paper presents a profile of poverty in Egypt for 1997. It assesses the magnitude of poverty and its distribution across geographic and socioeconomic groups, provides information on the characteristics of the poor, illustrates the heterogeneity among the poor, and helps identify empirical correlates of poverty.

The poverty profile is constructed using data from the recently completed Egypt Integrated Household Survey, a nationwide, multiple-topic household survey, carried out by the International Food Policy Research Institute in coordination with the Ministry of Agriculture and Land Reclamation and the Ministry of Trade and Supply.

Reference poverty lines that take into account regional differences in food and nonfood prices, age and composition of poor households, and food and nonfood consumption preferences are used to determine incidence, depth, and severity of poverty. The characteristics of the poor are analyzed. These characteristics include household composition, dwelling type, educational attainment and access, labor force participation and distribution, child immunization levels, payment transfers, agricultural landholdings, and access to community facilities.

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1. INTRODUCTION

Poverty reduction is arguably the ultimate goal of all development, and by implication, of development policy. An important element in the information kit of the policymaker is a profile of poverty. Using standard methodology to describe the extent and nature of poverty in a country or region. The profile assesses the magnitude of poverty and its distribution across geographic and socioeconomic domains, provides information on the characteristics of the poor, illustrates the heterogeneity among the poor, and helps identify empirical correlates of poverty.

Household surveys are an indispensable tool for studying distributional and poverty issues. This study uses data from the recently completed Egypt Integrated Household Survey (EIHS) to construct a poverty profile for Egypt for 1997 (see Section 2 for more details on the survey). There are, of course, other household surveys available for Egypt, most notably those conducted by the Central Agency for Public Mobilization and Statistics (CAPMAS). The most recent of these surveys is the Household Income, Expenditure and Consumption Survey (HIECS) for 1995–96. However, the HIECS surveys are (as the name suggests) primarily income and expenditure surveys, and the range of topics they cover is considerably smaller than that in the EIHS. The EIHS thus provides an opportunity to construct a rich poverty profile. Also, the household-level data from the

EIHS enhance the possibilities for analysis beyond what can be readily accomplished from the grouped, tabulated data that are typically available in the HIECS surveys.

The next section of this paper describes the 1997 EIHS. It also describes how our key measure of individual welfare, total consumption per person, was constructed from the survey data. Section 3 is methodological; it details our approach to the construction of poverty lines and poverty measurements. In Section 4, we present our estimates of absolute poverty in Egypt at the national, sectoral, and regional levels. We also discuss how our estimates compare with those from alternative sources. Section 5 presents our main results of the poverty profile; the ten subsections explore different dimensions of poverty in Egypt. The final section offers a summary of principal findings and some concluding observations.

2. DATA

EGYPT INTEGRATED HOUSEHOLD SURVEY

The primary data used in this paper are from the Egypt Integrated Household Survey, a nationwide, multiple-topic household survey carried out by IFPRI in coordination with the Ministry of Agriculture and Land Reclamation and the Ministry of Trade and Supply. Fieldwork began during the first week of March 1997 and concluded in the third week of May 1997. The survey questionnaire consisted of 18 sections on a series of topics that integrated monetary and nonmonetary measures of household welfare and a variety of household behavioral characteristics.

The questionnaire was administered to 2,500 households from 20 governorates using a two-stage, stratified selection process. In the first stage, 125 primary sampling units (PSU) were randomly selected with probability proportional to size. The second stage of the process entailed randomly selecting 20 households from each PSU. The design of the survey also stratified selection on the following five regions of Egypt: Metropolitan, Lower urban, Lower rural, Upper urban, and Upper rural.[1]

The advantage of a two-stage process over a pure random selection process is that it dramatically reduces the scope of fieldwork and therefore reduces the cost of the survey. The disadvantage is that standard errors resulting from two-stage samples tend to be significantly larger than those resulting from pure random samples. For more information on the EIHS, including more details on the sample design, strata weights, and fieldwork, see Appendix 1.

TOTAL HOUSEHOLD EXPENDITURE

Throughout this paper, per capita consumption is used as the basic measure of individual welfare. While this measure fails to incorporate some important aspects of individual welfare, such as consumption of public goods (for example, schools, health services, public sewage facilities), it is a useful aggregate money metric of welfare that reflects individual preferences conditional on prices and incomes. The use of either

[1] This regional classification for Egypt has been used often in the tabulation of data from the Household Income and Expenditure Surveys conducted by the Central Agency for Public Mobilization and Statistics (CAPMAS). It has also been commonly deployed in the literature on poverty in Egypt (see, for instance, El-Laithy and Osman 1996, Korayen 1994, and Ali, El-Laithy, Hamza, et al. 1994).

income or consumption as a measure of welfare are defensible choices and, in principle, should produce fairly similar results for many issues.

The decision to use total expenditure rather than income as the measure of individual welfare is motivated by the following considerations. First, income can be interpreted as a measure of welfare *opportunity*, while consumption is interpretable as a measure of welfare *achievement* (Atkinson 1993). Since all income is not consumed, nor is all consumption financed out of income, consumption is arguably a more appropriate indicator if we are concerned with realized (rather than potential) welfare. Second, individuals use savings and credit to smooth fluctuations in income and therefore consumption provides a more accurate measure of an individual's welfare over time.[2] Third, some researchers and policymakers believe that survey respondents are more willing to reveal their consumption patterns than their income.[3] Finally, in developing countries, consumption is measured better than income because of the difficulties in defining and measuring income for the self-employed, who tend to form a relatively large proportion of the work force.

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[2] Economic theory suggests that individuals respond to fluctuations in income streams by saving in good periods and drawing from their savings in lean periods. Even though the permanent-income hypothesis is often rejected by available data, households perform enough smoothing of consumption to render consumption a better measure of long-term welfare. For a survey like the EIHS, which obtains measures of income and consumption at only one point in time, using consumption as a welfare measure becomes all the more important.

[3] Some support for this conjecture comes from the fact that household survey data sometimes show that direct estimates of household savings are greater than savings estimated as income *minus* consumption. But reverse examples also exist. See Kochar (1997) for a discussion of this issue.

The measure of total consumption used in this paper is quite extensive and draws upon responses to several sections of the household survey. In brief, consumption is measured as the sum of total food consumption, total nonfood nondurable good expenses, estimated use value of durable goods, and an actual or imputed rental value of housing. Below is a brief description of each of these components. Appendix 2 documents total consumption in greater detail.

Food consumption includes food that the household has purchased, grown, and received from other sources for 123 food items. Nonfood (nondurable) consumption is the sum of expenditures on 45 nonfood items, including fuel, clothing, schooling, health, cleaning items, and tobacco.

The use value of durable goods is constructed for 22 items by estimating rates of depreciation for each item and using estimated interest rates from the EIHS data. These two estimates are then used to calculate what the rental price of the item would be if the household did not own it. This price is considered the appropriate prorated expense the household incurs for the use of the durable good.

Most households in the survey reported how much they paid in rent or, if they owned their houses, for how much they could rent them out. These responses were used as the housing rental expenses. For those respondents who could not answer this question, an imputed rental value of their housing was assigned to them. This imputed value was derived by regressing the rental information on housing characteristics of those who reported a rental value. From these regressions, and with information on the housing

characteristics of those who did not report, it was possible to impute rental values for the nonreporters.

3. POVERTY LINES AND MEASURES

This paper follows the cost-of-basic-needs methodology to construct region-specific poverty lines (Ravallion 1994). Using this approach, the total poverty line (z) is constructed as the sum of a food (z^F) and a nonfood poverty line (z^N). But the reference poverty line for each of the five regions—Metropolitan, Lower urban, Lower rural, Upper urban, and Upper rural—varies. Differences in the poverty lines reflect variations in the food and nonfood prices across the five regions. The poverty lines also incorporate regional differences in the food and nonfood consumption preferences and size and age composition of relatively poor households. The region-specific poverty lines are derived as follows.

MINIMUM CALORIC REQUIREMENTS

The first step in defining the food poverty line requires the construction of a minimum daily food basket anchored to normative nutritional requirements. We first estimate minimum caloric requirements for different types of individuals. Using tables from the World Health Organization (1985), caloric needs are separately specified for urban and rural individuals, by sex and 13 age categories. For individuals over 18 years of

age, WHO's recommended daily allowances are differentiated by weight and activity levels. The average weights of men and women over 18 years of age are assumed to be 70 and 60 kilograms, respectively. Urban individuals are assumed to need 1.8 times the average basal metabolic rate (BMR) and rural individuals 2.0 times the average BMR. These assumptions appear reasonable for the Egyptian context. Table 1 documents the caloric needs used to generate the minimum food basket used in the definition of the poverty line.

The next step is to estimate the average composition of households within each regional stratum. The EIHS data are used to estimate the number of children and adults within each age-sex category for the average *relatively poor* household[4] from each of the five regions. These average household characteristics for each region and the caloric needs for each age-sex category produce the minimum daily requirements for the typical relatively poor household in each region. The minimum daily per capita caloric requirements used to estimate the poverty lines are 2,430 for Metropolitan; 2,360 for Lower urban; 2,499 for Lower rural; 2,380 Upper urban; and 2,431 for Upper rural.[5]

[4] The term *relatively poor* here indicates all households whose per capita nominal expenditure is less than the median level of nominal per capita expenditure for the entire sample.

[5] Notice that this approach falls short of a full-scale application of equivalent scales insofar as the differential needs enter only into the calculation of the poverty lines for the five regions, and do not affect the measurement of individual welfare *within* regions.

TYPICAL FOOD BUNDLE OF RELATIVELY POOR HOUSEHOLDS

Once the minimum caloric needs have been estimated, the next step is to determine how costly it is to obtain the minimum level of calories. We determine the cost of the

Table 1 Minimum daily caloric requirements by sector and gender

	Urban		Rural	
Age categories	Male	Female	Male	Female
0 to 1 year	820	820	820	820
>1 to 2 years	1,150	1,150	1,150	1,150
>2 to 3 years	1,350	1,350	1,350	1,350
>3 to 5 years	1,550	1,550	1,550	1,550
>5 to 7 years	1,850	1,750	1,850	1,750
>7 to 10 years	2,100	1,800	2,100	1,800
>10 to 12 years	2,200	1,950	2,200	1,950
>12 to 14 years	2,400	2,100	2,400	2,100
>14 to 16 years	2,600	2,150	2,600	2,150
>16 to 18 years	2,850	2,150	2,850	2,150
>18 to 30 years	3,150	2,500	3,500	2,750
>30 to 60 years	3,050	2,450	3,400	2,750
Over 60 years of age	2,600	2,200	2,850	2,450

Source: Caloric requirements are from WHO (1985, Tables 42 to 49).
Notes: Requirements used are for men weighing 70 kilograms and for women weighing 60 kilograms. Urban individuals are assumed to need 1.8 times the basal metabolic rate (BMR), while rural individuals are assumed to need 2.0 times the average BMR. Children under one year of age are assigned the average caloric need of children either 3–6, 6–9, or 9–12 months old.

calories by how they are obtained, on average, by poor households, rather than by pricing out a recommended diet or the cheapest way of obtaining the calories. Within each

region, the average level of consumption for each of the 123 food items is estimated for those households with total expenditure less than the median level. Appendix 3 Tables 25–29 list in detail the grams, calories, and cost of these five region-specific food bundles, which reflect average consumption levels of the relatively poor households.

These average food bundles may contain more or less calories than the normative requirements for each of the five regions determined above. The food poverty lines are then derived by the following equation:

$$z^f = \frac{\text{Minimum Caloric Requirement}}{\text{Calories in Average Food Bundle of Poor Households}} * \text{Cost of the Average Food Bundle}.$$

The resulting food poverty lines (in per capita monthly figures) for each region are as follows: LE 50.18 for Metropolitan, LE 45.94 for Lower urban, LE 44.29 for Lower rural, LE 45.19 for Upper urban, and LE 40.36 for Upper rural. These food poverty lines reflect average differences in prices, household composition, and consumption preferences across the five regions.

MINIMUM NONFOOD CONSUMPTION OF RELATIVELY POOR HOUSEHOLDS

While the cost of the minimum food bundle is derived from estimated physiological needs, there is no equivalent methodology for determining the minimum nonfood bundle. In this paper, we follow two methods for determining the nonfood bundle, one of which is

used to construct our reference (total) poverty line, while the other is used to determine the ultra or extreme poverty line.[6]

For our reference poverty line, the cost of basic nonfood consumption is defined as the amount of nonfood spending by the typical household, for which per capita expenditure on *food* is just equal to the food poverty line. Thus, if x^N is per capita expenditure on nonfood, x^F is per capita expenditure on food, and x is total per capita expenditure, then the nonfood poverty line can be written as

$$z^N = E\{\, x^N \mid x^F = z^F \,\} .$$

Of course, there may well be no individual household whose per capita food expenditure is exactly equal to the food poverty line, and even if such a household were to exist, it is not obvious that the nonfood poverty line should be based solely on a single household's preferences for nonfood consumption. Thus, instead of searching for a household whose food expenditure just equals z^F, we examine the expenditure patterns of all households whose food expenditures are in the neighborhood of the food poverty line.[7] Using these households, the cost of the minimum nonfood bundle, z^N, is estimated

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[6] We reject the notion that the food poverty line alone is a sufficient indicator of poverty. Using only the food poverty line implies that households need only sufficient food to be deemed nonpoor. This is a belief we do not hold, and there is no empirical support for this view. In virtually all settings, the poor devote a nontrivial proportion of their budget to nonfood consumption. The EIHS data show that for those households deemed to be poor, 42 percent of their budget is used for nonfood consumption.

[7] In the case of the reference poverty line, we define the neighborhood of z^F so that there are more than 20 observations to support the estimate of z^N. In effect, though, significantly more than 20 observations were realized for the reference poverty line.

nonparametrically as the weighted average nonfood expenditure. In constructing the average, observations closer to z^F are given a higher weight. The weighting scheme follows a kernel with triangular weights (Hardle 1990).

For the second method, the cost of basic nonfood consumption is defined as the amount of nonfood spending by the typical household whose *total* expenditure is just equal to the food poverty line. Thus, the nonfood poverty line can be written as

$$z^N = E\{ x^N \mid x = z^F \} .$$

This definition of minimum nonfood consumption is the ultra poverty line. As with the first method, this definition reflects the average nonfood expenditures of those individuals whose total expenditures are in the neighborhood of the food poverty line and the average is estimated using the triangular kernel method.[8] The reference and ultra poverty lines differ only in their allowance for basic nonfood consumption; the reference line permits a more generous allowance for nonfood consumption.

Table 2 lists the food poverty line, the reference and ultra poverty lines, and the implicit relative (spatial) price indexes by region. By definition, the differences observed in the poverty lines reflect different costs of obtaining minimum consumption bundles in the five regions. In this paper, the poverty line for the Metropolitan region is treated as a

[8] There are fewer households meeting this criterion than in the previous method (households whose food expenditure is equal to the food poverty line), and so we define the neighborhood of z^F to ensure that there are more than 10 observations supporting the estimate of z^N. In effect, though, many more than 10 observations were realized for the reference poverty line.

baseline and the spatial price indexes are the ratio of each region's poverty line to the poverty line for the Metropolitan region.

Table 2 Poverty lines and spatial price indexes by region

Region	Food poverty line	Reference poverty line	Ultra poverty line	Relative price index
Metropolitan	50.18	129.19	75.36	1.000
Lower urban	45.94	101.72	67.52	0.787
Lower rural	44.29	85.38	64.76	0.661
Upper urban	45.19	101.36	67.51	0.785
Upper rural	40.36	82.81	53.37	0.641

Notes: Poverty lines are monthly, per capita figures in Egyptian pounds. The Metropolitan poverty line is used as a base line to create the relative price index, which is simply the ratio of each region's reference poverty line to the base line.

POVERTY MEASURES

In the following analysis, we will use three poverty measures:

1. The head-count index (H), given by the percentage of the household population with a consumption per capita less than the poverty line. The index measures the incidence of poverty.
2. The poverty gap index (PG), defined by the mean distance below the poverty line expressed as a proportion of that line, where the mean is formed over the entire population, counting the nonpoor as having a zero poverty gap. This measure reflects the depth of poverty, as well as its incidence.

3. The squared poverty gap index (SPG), introduced by Foster, Greer, and Thorbecke (1984), and defined as the mean of the squared proportionate poverty gaps. Unlike the poverty gap index, this measure reflects the severity of poverty, because it is sensitive to distribution among the poor.[9]

All three poverty measures are members of the Foster-Greer-Thorbecke (FGT) class. The FGT measure of individual poverty is

$$p_{\alpha,i} = [\max((1 - x_i/z), 0)]^{\alpha} \qquad \alpha \geq 0 ,$$

where x_i is consumption expenditure of the i*th* person in a population of size n, z denotes the poverty line, and α is a nonnegative parameter. Aggregate poverty is simply the mean of this measure across all persons, giving

$$P_{\alpha} = \sum_{i=1}^{n} p_{\alpha,i}/n .$$

The head-count index is obtained when $\alpha = 0$; the poverty gap index is obtained when $\alpha = 1$; and the squared poverty gap index has $\alpha = 2$.

[9] A transfer of income from a poor person to a poorer person (for example) will not alter either the head-count index or the poverty gap index, but it will decrease the squared poverty gap index. Furthermore (and unlike the Sen 1976 or Kakwani 1980 distribution sensitive measures of poverty), the squared poverty gap index satisfies the "subgroup consistency" property, namely that if poverty increases in any subgroup (say the urban sector), and it does not decrease elsewhere then aggregate poverty must also increase (Foster and Shorrocks 1991).

Some of the profile tables below will also provide estimates of consumption inequality using the Gini coefficient, *G*, which is defined as

$$G = \frac{2}{\mu N(N-1)} \sum_i \sum_j | x_i - x_j |,$$

where x is consumption, μ is average consumption, and N is the sample size. The double summation takes the sum of all possible pairings of x's. Since there are a total of $N(N-1)/2$ possible pairings of x, G is the average value of all absolute deviations between x's and it is measured relative to the mean, μ, of the x's.[10]

One interpretation of the Gini is in the context of a Lorenz curve. After ranking all persons by per capita consumption, the Lorenz curve plots the cumulative percent of total consumption (or income) on the cumulative percent of population. From this graph, it is possible to determine what percent of total consumption is realized by, say, the poorest 30 percent of the population. A Lorenz curve that is a straight 45-degree line would represent perfect equality, where everyone had the same consumption. The area between the 45-degree line and the Lorenz curve gives a measure of the extent of inequality. The Gini coefficient is interpretable as the ratio of the area between the actual Lorenz curve and the 45-degree line of perfect equality and the area of the triangle underneath the 45-degree line.

[10] One factor that makes calculation of the Gini coefficient somewhat more complex than described here is that each household member is assigned a per capita income equal to the average household income. This means that when ranking individuals, all members of a given household will be tied. Deaton (1995) shows how to correct for this.

4. POVERTY IN EGYPT

POVERTY IN EGYPT: 1997

Table 3 shows that the mean nominal value of per capita consumption in Egypt during 1997, as estimated from the EIHS data, is LE 173.44 per month. The mean value of consumption in the urban sector is LE 228.04 per person per month while in the rural sector, it is LE 132.71. These average levels of consumption, though, fail to reflect cost-of-living differences across sectors and strata. As mentioned above, because the poverty lines incorporate regional differences in the cost of obtaining a minimum bundle of food and nonfood goods, the ratio of poverty lines can be interpreted as spatial price indexes for the poor.

In this paper, we use the poverty line for the Metropolitan region as a base and express real figures (those that have been adjusted for the spatial price differences) in terms of the cost of living in the Metropolitan region. Using the reference poverty lines for different regions to make this adjustment, average (real) per capita expenditure at Metropolitan prices is LE 227.71 in the nation, LE 260.17 in the urban sector, and LE 203.49 in the rural sector. Not surprisingly, the gap in average real consumption levels in urban and rural Egypt is dramatically smaller than the gap in the nominal consumption levels. Nonetheless, the gap is still significant and shows that even after adjusting for

Table 3 Poverty measures by sector, region, and nation, 1997

Regions	Population share	Mean consumption (LE/person/month) Real	Mean consumption (LE/person/month) Nominal	Head-count index	Poverty gap index	Squared poverty gap index	Gini coefficient
Urban	0.43	260.17	228.04	23.06	5.65	2.05	0.37
		(12.29)	(11.23)	(2.59)	(0.77)	(0.33)	(0.02)
Rural	0.57	203.49	132.71	29.07	7.46	2.93	0.32
		(6.34)	(4.13)	(2.19)	(0.89)	(0.48)	(0.01)
Upper	0.37	236.18	165.44	27.08	6.95	2.73	0.37
		(10.53)	(7.60)	(2.55)	(0.83)	(0.40)	(0.02)
Lower	0.63	222.72	178.13	26.16	6.53	2.45	0.33
		(8.03)	(7.25)	(2.20)	(0.83)	(0.43)	(0.01)
Strata							
Metropolitan	0.19	250.04	250.04	26.07	6.72	2.43	0.37
		(20.38)	(20.38)	(4.61)	(1.35)	(0.60)	(0.03)
Lower urban	0.12	229.08	180.37	24.20	5.39	1.95	0.33
		(15.25)	(12.01)	(4.23)	(1.27)	(0.56)	(0.02)
Lower rural	0.32	204.24	134.98	26.95	6.85	2.65	0.30
		(8.28)	(5.47)	(2.95)	(1.35)	(0.74)	(0.02)
Upper urban	0.12	308.63	242.14	17.05	4.20	1.50	0.38
		(26.99)	(21.18)	(3.96)	(1.16)	(0.47)	(0.03)
Upper rural	0.25	202.55	129.84	31.74	8.23	3.30	0.34
		(9.87)	(6.33)	(3.32)	(1.11)	(0.55)	(0.02)
Nation		227.71	173.44	26.50	6.69	2.55	0.35
		(6.39)	(5.35)	(1.67)	(0.61)	(0.31)	(0.01)

Notes: Standard errors are in parentheses and are corrected for both the stratification and two-stage design of the sample. The standard errors for per capita consumption and the poverty measures are estimated using Stata's *svymean* command. The standard errors for the Gini coefficients are estimated by a bootstrap procedure that replicates (n = 1,000) the sample design. Real per capita expenditure results from using the price level in the Metropolitan region as the base for the other regions.

cost of living differences, on average urban individuals have significantly higher standards of living.[11]

When comparing Upper and Lower Egypt, the spatial price adjustments have the effect of reversing the ranking of mean consumption levels. In nominal terms, average

[11] For both the real and nominal average consumption levels, tests for equality of the means are strongly rejected. The p-values for both of these tests are essentially zero (p = 0.00).

consumption in Lower Egypt is LE 178.13 per person per month, which is 8 percent higher than average consumption in Upper Egypt.[12] When adjusted for spatial price differences, though, Upper Egypt has a higher per capita consumption level, with an average value of LE 236.18, compared to Lower Egypt (LE 222.72). While this rank reversal is interesting and informative about the importance of the differences in living costs across Egypt, it is also important to note that neither of these differences are statistically significant.[13]

Using reference poverty lines and per capita consumption levels, Figure 1 shows that 26.5 percent of the Egyptian population or 15.7 million persons are living in poverty in 1997.[14] In the rural sector, which comprises about 57 percent of the population, 29.1 percent of the population is living in poverty.[15] In the urban sector, 23.1 percent of the population is living in poverty. Table 3 shows that the incidence of poverty is significantly higher in rural than in urban regions, but that there is no statistically significant difference between Upper and Lower Egypt.

Table 3 also shows that the incidence of poverty is the worst in the Upper rural region, where 32 percent of the population lives in poverty. The next worst are the Lower

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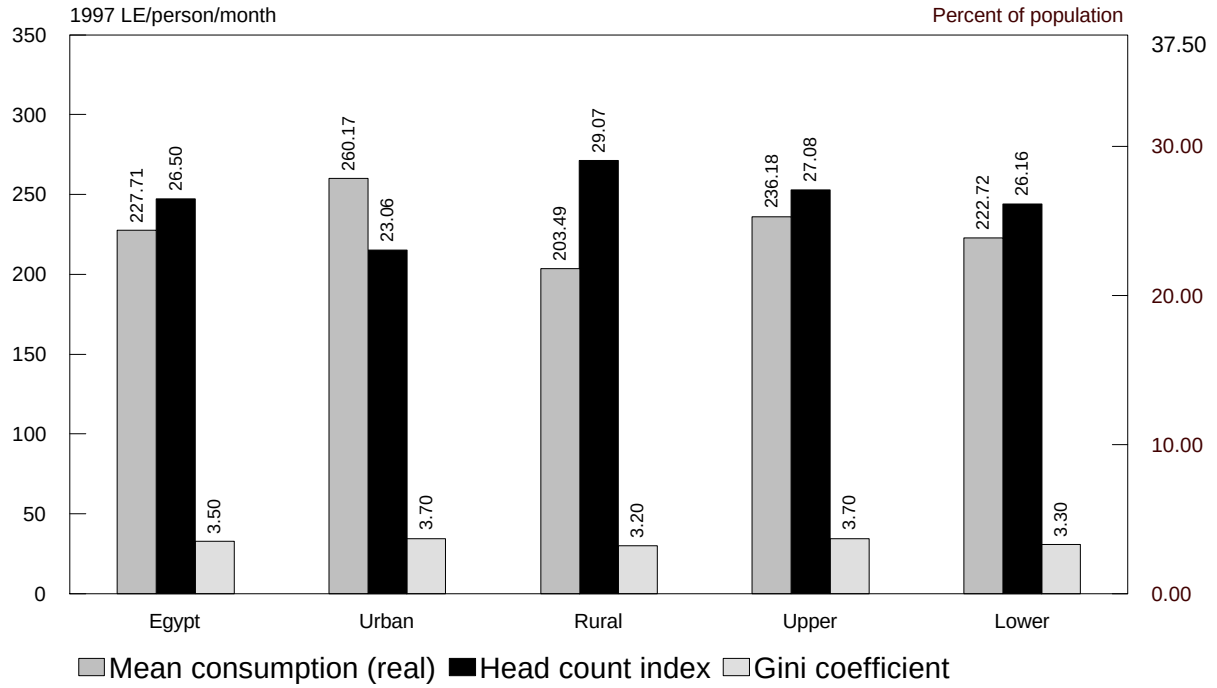
[12] A test for whether these two means are different fails to reject the null hypothesis of equality at the $\alpha = 0.1$ level. The probability value of this test is 0.226.

[13] The p-value for the test of whether the average real (adjusted for spatial price differences) level of consumption is the same across Upper and Lower Egypt is 0.308. At this level the null hypothesis of equal means is not rejected, and suggests that the difference between the means is not statistically significant.

[14] The population estimate used for 1997 is the 1996 CAPMAS census population estimate.

[15] The estimated population share is derived from 1996 CAPMAS estimates.

Figure 1 Poverty, inequality, and average standards of living by region



Note: The Gini coefficients have been multiplied by 10 so as to be within the range 0-10. See Table 3 for data.

rural region, with 27 percent of the population in poverty, and the Metropolitan region, with 26 percent of the population in poverty. The regions with the lowest incidence of poverty are Lower urban (with a head-count index of 24 percent) and Upper urban (with a head-count index of 17 percent). The large standard errors for these estimates suggest caution in placing too much emphasis on the rankings of the poverty measures by the five regions.[16]

The poverty gap index for the nation is 6.7, which implies an average poverty deficit for the poor (the proportionate shortfall of their average consumption from the poverty line) of 25 percent. As with the head-count index, the poverty gap is the worst in the Upper rural region, followed by the Lower rural region. This ranking recurs for the squared-poverty-gap index. While the poverty-gap and squared-poverty-gap indexes are the worst in the rural regions, the Gini coefficient, measuring inequality in per capita consumption, is worse in the urban region.[17]

Note that Table 3 estimates reflect differences in the cost of living across regions. The region-specific poverty lines presented in Table 2 show that obtaining the minimum consumption bundle is significantly more expensive in the Metropolitan region than any other area. In particular, the Metropolitan poverty line is 56 percent higher than the poverty line for Upper rural Egypt.

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[16] For example, there is no statistically significant difference between the head-count indexes for the Lower rural, Metropolitan, Lower urban, and Upper rural regions. However, the head-count index for Upper urban is significantly different from the head-count indexes for Lower rural and Upper rural.

[17] In the case of the Gini coefficients, the difference between the worst region and the region with the least inequality is statistically significant. The p-value for testing the null hypothesis of no difference is 0.026.

Given the magnitude of the change in the poverty lines when adjustments are made for differences in prices, it is worthwhile comparing the results in Table 3 with poverty estimates that reflect no adjustments in the cost of living. Table 4 presents the results from reestimating the poverty measures without adjusting for price differences and fixes the head-count index for the nation at 26.5 (the same as in Table 3). When there is no accounting for price differences across regions, there are stark differences in the poverty

Table 4 Poverty measures by sector, region, and nation, nominal consumption, 1997

Regions	Population share	Mean consumption (LE/person/month) Real	Mean consumption (LE/person/month) Nominal	Head-count index	Poverty gap index	Squared poverty gap index	Gini coefficient
Urban	0.43	260.17	228.04	12.85	2.82	1.00	0.37
		(12.29)	(11.23)	(1.87)	(0.48)	(0.22)	(0.02)
Rural	0.57	203.49	132.71	36.66	9.66	3.89	0.32
		(6.34)	(4.13)	(2.49)	(0.98)	(0.55)	(0.01)
Upper	0.37	236.18	165.44	31.34	8.55	3.43	0.39
		(10.53)	(7.60)	(2.67)	(0.93)	(0.47)	(0.02)
Lower	0.63	222.72	178.13	23.63	5.70	2.20	0.36
		(8.03)	(7.25)	(2.18)	(0.79)	(0.45)	(0.02)
Strata							
Metropolitan	0.19	250.04	250.04	9.82	1.84	0.72	0.37
		(20.38)	(20.38)	(2.71)	(0.60)	(0.33)	(0.03)
Lower urban	0.12	229.08	180.37	17.22	3.87	1.38	0.33
		(15.25)	(12.01)	(3.72)	(1.05)	(0.43)	(0.02)
Lower rural	0.32	204.24	134.98	34.20	8.61	3.38	0.30
		(8.28)	(5.47)	(3.56)	(1.43)	(0.83)	(0.02)
Upper urban	0.12	308.63	242.14	13.19	3.14	1.05	0.36
		(26.99)	(21.18)	(3.52)	(0.95)	(0.36)	(0.03)
Upper rural	0.25	202.55	129.84	39.77	11.06	4.53	0.34
		(9.87)	(6.33)	(3.57)	(1.30)	(0.67)	(0.02)
Nation		227.71	173.44	26.50	6.76	2.65	0.37
		(6.39)	(5.35)	(1.68)	(0.60)	(0.33)	(0.01)

Notes: Standard errors are in parentheses and are corrected for both the stratification and two-stage design of the sample. The standard errors for per capita consumption and the poverty measures are estimated using Stata's *svymean* command. The standard errors for the Gini coefficients are estimated by a bootstrap procedure that replicates (n = 1,000) the sample design. Real per capita expenditure results from using the price level in the Metropolitan region as the base for the other regions.

measures across regions and across the two tables. For example, rural regions with a head-count index of 36.7 percent are significantly worse-off than urban regions, which have a head-count index of 12.9 percent.[18] Similarly, the head-count index of 31.3 percent for Upper Egypt is significantly higher than the head-count index of 23.6 percent for Lower Egypt.

Table 5 presents the same information as Table 3 (poverty measures adjusted for price differences by sector, region, and nation) except that the ultra poverty line is used to define who is poor. When using the ultra poverty line, the head-count index falls to 8.6 percent for the nation. Both the ultra and reference poverty lines suggest that the incidence of poverty is the worst in rural regions, and that there is no significant difference between Upper and Lower Egypt.

COMPARISON OF POVERTY ESTIMATES TO OTHER SOURCES

Poverty is measured in this paper by estimating household consumption per capita (our chosen welfare indicator) and its distribution across households and poverty lines. Different estimates can arise due to differences in both data and methodology. It is useful to compare levels of poverty from the EIHS data with estimates from other sources.

An obvious comparison is with estimates based on the Household Income, Expenditure, and Consumption Survey (HIECS) carried out from October 1995 to

[18] This difference between the two head-count indexes is highly significant with a Z-statistic of 7.65 and a p-value of 0.00.

Table 5 Ultra poverty measures by sector, region, and nation, 1997

Regions	Population share	Mean consumption (LE/person/month) Real	Nominal	Head-count index	Poverty gap index	Squared poverty gap index	Gini coefficient
Urban	0.43	241.74	228.04	5.27	1.03	0.34	0.37
		(11.67)	(11.23)	(1.02)	(0.26)	(0.12)	(0.02)
Rural	0.57	168.66	132.71	11.14	2.65	0.93	0.32
		(5.37)	(4.13)	(1.68)	(0.59)	(0.25)	(0.01)
Upper	0.37	210.90	165.44	7.95	1.77	0.62	0.37
		(9.37)	(7.60)	(1.32)	(0.34)	(0.15)	(0.02)
Lower	0.63	193.40	178.13	9.03	2.07	0.71	0.35
		(7.50)	(7.25)	(1.49)	(0.53)	(0.23)	(0.02)
Strata							
Metropolitan	0.19	250.04	250.04	3.99	0.90	0.40	0.37
		(20.38)	(20.38)	(1.28)	(0.44)	(0.26)	(0.03)
Lower urban	0.12	201.32	180.37	7.30	1.36	0.36	0.33
		(13.40)	(12.01)	(2.41)	(0.47)	(0.14)	(0.02)
Lower rural	0.32	157.07	134.98	12.66	3.02	1.02	0.30
		(6.37)	(5.47)	(2.66)	(0.99)	(0.42)	(0.02)
Upper urban	0.12	270.30	242.14	5.21	0.90	0.22	0.38
		(23.64)	(21.18)	(1.84)	(0.37)	(0.09)	(0.03)
Upper rural	0.25	183.33	129.84	9.23	2.17	0.80	0.34
		(8.93)	(6.33)	(1.75)	(0.47)	(0.22)	(0.02)
Nation		199.88	173.44	8.63	1.96	0.67	0.36
		(5.87)	(5.35)	(1.06)	(0.36)	(0.15)	(0.01)

Notes: Standard errors are in parentheses and are corrected for both the stratification and two-stage design of the sample. The standard errors for per capita consumption and the poverty measures are estimated using Stata's *svymean* command. The standard errors for the Gini coefficients are estimated by a bootstrap procedure that replicates (n = 1,000) the sample design. Real per capita expenditure results from using the price level in the Metropolitan region as the base for the other regions.

September 1996 by the Central Agency for Public Mobilization and Statistics (CAPMAS). Using these data, Cardiff (1997) estimated a national head-count ratio of 44 percent. That is almost two-thirds higher than the head-count ratio presented in this paper. Some of this difference can be due to differences in the poverty lines used. For instance, the Institute of National Planning (Egypt 1996) used the same HIECS data to estimate a national head-

count indexes of 23 percent. El-Laithy and Osman (1996) reported head-count index estimates of 45 and 50 percent for rural and urban Egypt, respectively (48 percent for the nation as a whole), using the same data but higher poverty lines. How much of the difference in the EIHS and HIECS estimates is due to differences in the poverty lines used.

To address this question, we applied our reference poverty lines to the HIECS data, after deflating them for change in the consumer price level between the two surveys. This exercise yielded a national head-count index of 50.5 percent for 1995–96, confirming that the large differential between EIHS and HIECS-based estimates is not attributable to differences in poverty lines.[19]

It is important also to look at estimates of per capita consumption from the two surveys. The EIHS data generate an estimate of average per capita, yearly (nominal) consumption for 1997 at LE 2,081.25. Using the HIECS data, Cardiff (1997) estimated average per capita consumption during the time of the survey to be LE 1,342.46. Adjusting this estimate to 1997 LE using the CPI results in an estimated average per capita consumption level of LE 1,417.64.[20] Per capita consumption as estimated in this paper with the EIHS data is 47 percent larger than Cardiff's estimate using the HIECS data.

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[19] The estimated head-count indexes for the five regions, Metropolitan, Lower urban, Lower rural, Upper urban, and Upper rural, were 40.1, 37.2, 50.1, 46.2, and 67.2, respectively. With the exception of Upper urban, the poverty rankings of the other regions are the same as with the EIHS 1997 estimates.

[20] All adjustments for inflation are made using CPI data from *International Financial Statistics* (IMF 1997).

Differences of this magnitude in estimated levels of mean consumption are sure to have large effects on poverty estimates. In fact, these differences are consistent with a typical absolute elasticity of the head-count index with respect to mean consumption of about 2.

This raises the harder question of why we observe such large differences in the estimates of mean consumption. The consumption components of the EIHS and HIECS surveys are quite similar, so one could expect comparable estimates of per capita consumption. However, we can point to one potential source of difference—the value of the services from durable goods. While both surveys include information on durable goods, in the HIECS-based consumption measure the durable-goods-related components account for about 3 percent of total consumption,[21] while they account for about 16 percent of the EIHS-based consumption measure. To ascertain the contribution of this differential, we also estimated EIHS poverty measures using per capita consumption net of use value of durables. This produced a national head-count index of 33.3 percent, accounting for about a third of the poverty differential. The rest must be located in other components of consumption.[22]

Another source with which to compare is Egypt's national income accounts. According to these accounts, per capita private consumption in 1995 was LE 2,513.93.

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[21] The HIECS-based consumption measure includes the value of actual purchase of durable goods over an annual reference period, while our consumption measure estimates an opportunity cost-based value for the flow of services of currently possessed durable goods (see Appendix 2).

[22] A thorough cross-validation of estimates from the two sources would be greatly facilitated by access to the household-level data from the HIECS.

Adjusting this figure to LE in 1997 prices yields an estimate of per capita consumption of LE 2,803.64.[23] This estimate of per capita consumption is 35 percent greater than the estimate used in this paper.

A poverty threshold that is frequently used for comparing poverty rates across countries is the poverty line set at US$1 per day in 1985 dollars. Using this poverty line, the World Bank (1997) estimated the head-count index for Egypt in 1991 to be 7.6 percent. Table 6 compares head-count indexes for countries neighboring Egypt as well as regional averages for parts of the developing world. These head-count indexes help place the EIHS estimates in an international context.

A further comparison can be made between the dollar-a-day poverty line, adjusted to LE 1997, and the EIHS data. The international poverty line of 1985 US$1 per person per day, when converted to April 1997 Egyptian LE, using the 1985 purchasing power parity (PPP) for private consumption from the Penn World Tables, Mark 5.6 (see Summers and Heston [1991] for further details on the construction of PPP estimates), and the consumer price indexes from the International Financial Statistics (IMF 1997), produces a poverty line of LE 56.82 per capita per month. To estimate a head-count index that is comparable to the World Bank's 7.6 percent estimate, there is no need to adjust for spatial price differences. Without spatial price adjustments and using

[23] This figure reflects only adjusting for inflation between 1995–96 and 1997. No attempt is made to reflect growth in private consumption between 1995–96 and 1997.

Table 6 Poverty rates using the international dollar-a-day poverty line

Country	Survey Year	Head-count Index
Egypt	1990-91	7.6
Jordan	1992	2.5
Algeria	1988	1.6
Morocco	1991	1.1
Tunisia	1990	3.9
Middle-East and North Africa	1993	4.1
Eastern Europe and Central Asia	1993	3.5
Latin America	1993	23.5
East Asia	1993	26.0
South Asia	1993	43.1
Sub-Saharan Africa	1993	39.1
Developing world	1993	29.4

Source: World Bank 1997.

the LE 56.82 (per capita, per month) poverty line, the EIHS data produced a head-count index of 7.1 percent.[24]

5. CHARACTERISTICS OF THE POOR

HOUSEHOLD COMPOSITION AND HEADSHIP

Table 7 shows the average household size and composition for poor and nonpoor households. The results are presented for Egypt as a whole as well as by sector. The overall average household size in Egypt is 5.82. We find that poorer households tend to be relatively larger; the average household size declines from about 8.0 for the ultrapoor

[24] An alternative exercise is to adjust the LE 56.82 (1985-dollar-a-day) poverty line for the spatial price variation observed in the EIHS data. In this case the estimated head-count index from the EIHS data for 1997 is 5.6 percent.

Table 7 Household size, composition, and dependency ratios for poor and nonpoor households

	Average household size (1)	Number of household members in the age group: Less than 5 years (2)	5 to 15 years (3)	15 to 60 years (4)	More than 60 years (5)	Age missing (6)	Dependency Ratios: Total (7)	Child (8)	Aged (9)	Number of observations
Urban										
Poor	6.33	0.71	1.62	3.47	0.36	0.17	77.5	67.1	10.4	194
	(0.19)	(0.07)	(0.13)	(0.11)	(0.06)	(0.05)				
Nonpoor	4.68	0.45	0.91	2.82	0.34	0.16	59.5	47.6	11.9	919
	(0.10)	(0.03)	(0.05)	(0.06)	(0.02)	(0.03)				
All	4.98	0.50	1.04	2.93	0.35	0.16	64.5	52.6	11.9	1,113
	(0.11)	(0.03)	(0.06)	(0.06)	(0.02)	(0.03)				
Rural										
Poor	7.84	1.29	2.34	3.42	0.39	0.41	117.5	106.1	11.4	333
	(0.26)	(0.08)	(0.09)	(0.13)	(0.03)	(0.09)				
Nonpoor	6.26	0.84	1.59	3.30	0.41	0.13	86.0	73.6	12.4	982
	(0.21)	(0.05)	(0.07)	(0.11)	(0.02)	(0.02)				
All	6.65	0.95	1.78	3.33	0.40	0.20	94.0	82.0	12.0	1,315
	(0.20)	(0.05)	(0.06)	(0.10)	(0.02)	(0.03)				
All Egypt										
Ultrapoor	7.98	1.41	2.44	3.37	0.43	0.33	127.0	114.2	12.8	157
	(0.25)	(0.10)	(0.13)	(0.14)	(0.08)	(0.11)				
Poor	7.21	1.05	2.04	3.44	0.38	0.31	100.8	89.8	11.0	527
	(0.18)	(0.06)	(0.08)	(0.09)	(0.03)	(0.06)				
Nonpoor	5.44	0.64	1.24	3.05	0.37	0.14	73.7	61.6	12.1	1,901
	(0.11)	(0.03)	(0.04)	(0.06)	(0.02)	(0.02)				
All	5.82	0.72	1.41	3.13	0.37	0.18	79.9	68.1	11.8	2,428
	(0.11)	(0.03)	(0.04)	(0.06)	(0.02)	(0.02)				

Notes: The total dependency ratio is defined as ratio of the number of members in the age groups 0–15 years and above 60 years to the number of members of working age (15–60 years), that is [(2) + (3) + (5)] * 100/(4). The child dependency ratio is the ratio of the number of members in the age groups 0–15 years to the number of members of working age (15–60 years), that is [(2) + (3)] * 100/(4), while the aged dependency ratio is the ratio of the number of members above 60 years to the number of members of working age (15–60 years), that is (5) * 100/(4). Standard errors (corrected for sample design) in parentheses.

to about 5.4 for the nonpoor. These differences are statistically significant. Thus, on average, there are more than two extra persons in the ultrapoor household relative to the nonpoor household. This finding is consistent with similar evidence for Egypt and other countries, whenever per capita indicators are used as measures of individual welfare.[25] Per capita indicators, of course, do not allow for economies of household size in consumption, but the results do indicate that such economies would have to be substantial to reverse the observed positive relation between poverty and household size. This positive relation holds for both rural and urban sectors, although average household sizes tend to be higher in rural areas.

The typical Egyptian household has 1.5 adult males of working age (15–60 years),[26] 1.6 adult females of working age, 0.7 children under age 5, 1.4 children between the ages of 5 and 15 years, and 0.4 elderly persons above 60 years of age. (The information on age is missing, on average, for 0.2 household members.) Like household size, household composition also differs by the level of poverty. The key result is that poorer households tend to have higher dependency ratios. The dependency ratio is defined as the ratio of the number of members in the age groups 0–15 years and above 60 years to the number of members of working age (15–60 years). The ratio is expressed as a percentage. The

[25] For documentation of the evidence on this see Lipton and Ravallion (1995). Also see Lanjouw and Ravallion (1995) for a discussion of how the poverty-household size relation is modified by the presence of economies of size in consumption.

[26] This is the notion of working age commonly used by demographers (see for instance, Shryock et al. 1976). The actual working age of individuals of course depends in part on their standard of living, and can often be lower especially for the poor in developing countries.

dependency ratio is 127 percent for the ultrapoor, 101 percent for the poor (who include the ultrapoor) and 74 percent for the nonpoor. This pattern also holds for urban and rural sectors individually.

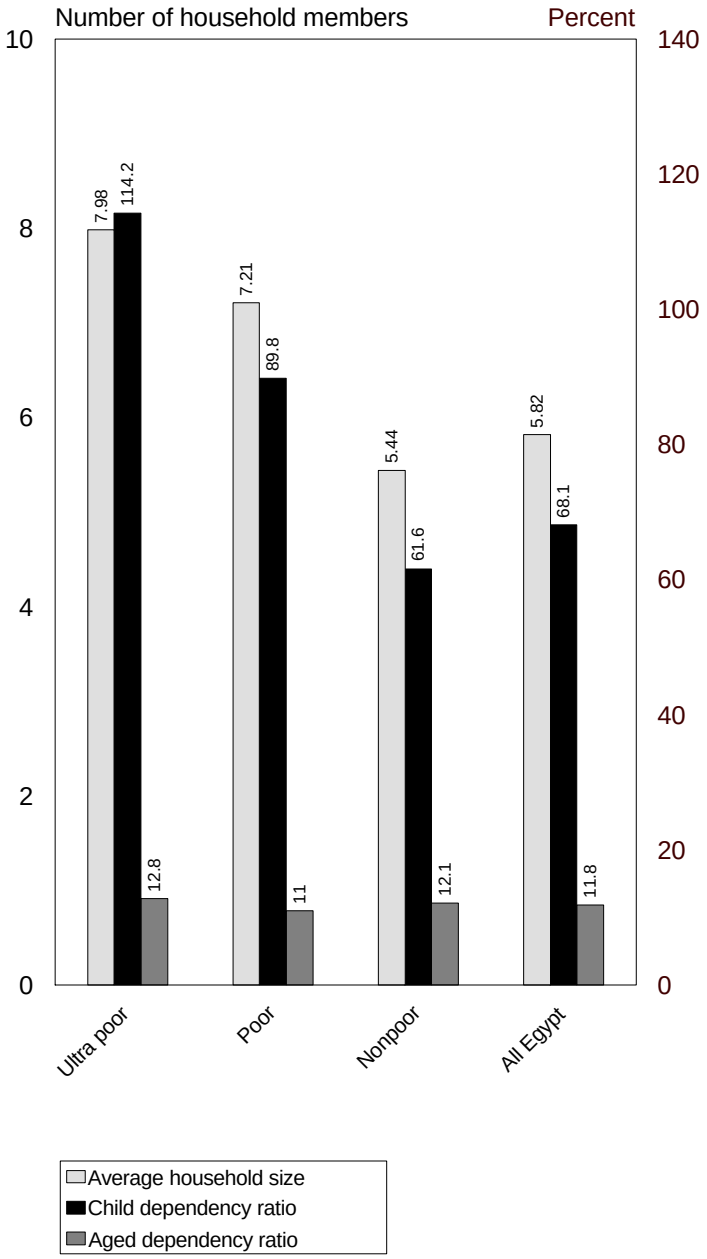
The total dependency ratio is defined as the sum of the child dependency ratio (the ratio of 0–15 year olds to those of working age) and the aged dependency ratio (the ratio of above-60 year olds to those of working age). Table 7 and Figure 2 show that the difference between the poor and the nonpoor households' total dependency ratios is almost entirely accounted for by the difference in the child dependency ratio rather than the dependency ratio for the aged, which is quite flat (11–12 percent across the poor and the nonpoor). On average, relative to the nonpoor, the poor households have one extra child to support for every four adult members of working age.

Table 8 presents poverty indexes by gender of the head of the household for rural and urban sectors separately. Except for average per capita real total consumption per month, all measures imply a higher level of poverty among female-headed households, especially in the urban sector.

The head-count index in the urban sector is almost 12 percentage points higher for female-headed households than for male-headed households and this difference is statistically significant.[27] The average per capita real total consumption per month is nearly LE 13 higher for female-headed households than for male-headed households in

[27] A test of whether the two means are different rejects the null hypothesis of equality at the $\alpha = 0.1$ level.

Figure 2 Average household size and dependency ratios



Note: See Table 7 for data.

Table 8 Poverty rates by sex of household head

Household type	Average per capita real total consumption per month	Head-count index	Poverty gap index	Squared poverty gap index	Number of observations
	(LE)				
Urban					
Female-headed households	271.50 (33.10)	33.46 (5.00)	7.34 (1.78)	2.55 (0.85)	104
Male-headed households	258.78 (11.44)	21.79 (2.03)	5.44 (0.77)	1.98 (0.32)	960
Rural					
Female-headed households	201.56 (10.95)	36.27 (5.15)	9.69 (1.67)	3.89 (0.76)	206
Male-headed households	203.74 (6.45)	28.13 (2.54)	7.17 (0.90)	2.81 (0.49)	1,121
All Egypt	227.70 (6.39)	26.50 (1.67)	6.69 (0.61)	2.56 (0.31)	2,451

Notes: Household headship is self-reported. Standard errors are in parentheses and are corrected for both the stratification and two-stage design of the sample.

the urban sector; however, this difference is not statistically significant.[28] The near equality of per capita expenditures combined with a higher head-count index for female-headed household possibly implies a higher degree of income inequality among female households compared to male households. In the rural sector, the head-count index is about 8 percentage points higher for female-headed households, but this difference is not statistically significant.[29]

[28] It is not significant at the $\alpha = 0.10$ level.

[29] It is not significant at the $\alpha = 0.10$ level.

Both the poverty gap and the squared poverty gap indexes indicate a higher intensity of poverty for female-headed households. However, the differences are small and are not statistically significant in both urban and the rural sectors.

DWELLING CHARACTERISTICS

Table 9 provides information on the type of dwelling by poverty levels. Two types of dwelling characteristics are chosen for analysis: ownership of dwellings and structure of dwellings. In the household survey, each household was asked whether it owned the dwelling it resided in. They were also asked to identify the main materials used in the construction of the dwelling. Since the outer walls and the roof form the main part of the dwelling, information on these are utilized. Walls and roofs were classified as made from either permanent or nonpermanent materials. Permanent roofing materials are those constructed from concrete, cement, tiles/slates, and wooden planks. Nonpermanent roofing materials are those constructed from straw/thatch or mud. Likewise, permanent walls are those made of cement, brick, stones, or concrete. Nonpermanent walls are constructed from unbaked bricks or wood/branches.

Table 9 indicates that ownership of dwelling varies substantially by rural and urban sectors. About 90 percent of households in the rural sector (poor and nonpoor) own their dwellings, while only about half of the urban dwellers own theirs. Also, ownership in the urban sector is about 10 percentage points higher for the nonpoor (56.79 percent) than for the poor (46.57 percent).

Table 9 Dwelling characteristics

	Structure of dwelling				Ownership of dwelling			
	Roofing material		Structure of walls					
	Permanent	Non-permanent	Permanent	Non-permanent	Number of observations	Percent that own	Percent that rent	Number of observations
Urban								
Poor	92.70	7.30	94.59	5.41	197	46.57	53.43	197
Nonpoor	97.81	2.19	97.36	2.64	927	56.79	43.21	923
All	96.63	3.37	96.72	3.28	1,124	54.43	45.57	1,120
Rural								
Poor	75.26	24.74	75.8	24.11	334	91.67	8.33	334
Nonpoor	88.98	11.02	84.53	15.47	993	92.42	7.58	991
All	84.99	15.01	82.02	17.98	1,327	92.20	7.80	1,325
All Egypt								
Ultrapoor	79.06	20.94	82.7	17.3	159	75.78	24.22	159
Poor	81.74	18.26	82.84	11.16	531	74.91	25.09	531
Nonpoor	92.93	7.07	90.27	9.73	1,920	76.51	23.49	1,914
All	90.8	9.2	89.3	10.8	2,451	76.08	23.92	2,445

Notes: Permanent roofing materials are those constructed from concrete, cement, tiles/slates, and wooden planks. Nonpermanent roofing materials are those constructed from straw/thatch or mud. Permanent walls are those constructed from cement, brick, stones, or concrete. Nonpermanent walls are those constructed from unbaked bricks or wood/branches.

Most dwellings in Egypt are made from permanent materials. However, dwellings are more likely to be built of permanent materials in the urban (about 97 percent for both roofs and walls) compared to the rural areas (84.99 percent for roofs and 82.02 percent for walls). In both urban and rural areas, the percentage of persons living in dwellings without permanent structures (roofs or walls) is higher for the poor than for the nonpoor. This difference between the poor and the nonpoor is greater in the rural sector than in the urban sector. In the rural sector, while the poor and nonpoor do not differ much in the ownership of their dwellings, there is greater difference in the types of dwellings they own and live in. In contrast, though relatively fewer of the poor in urban areas own the dwellings they live in, differences in basic dwelling structures are small.

EDUCATION

Table 10 lists average years of schooling and literacy by sector and gender for the poor and nonpoor. All information presented in this section is only for those individuals who are over 15 years of age. This is to ensure that our analysis does not capture many continuing students and to allow for comparability with other published tables. The differences in schooling between the poor and nonpoor are quite stark and statistically significant.[30] The average years of schooling for the nonpoor is 7.0 years, while the poor have attended school for 4.4 years, on average. This education gap between the poor and nonpoor exists across all four levels of analysis: poor females, poor males, poor urban residents, and poor rural residents. For example, nonpoor women average 5.7 years of schooling, while poor women have 45 percent less schooling, or 3.1 years.

There are also significant differences in years of school attendance across different types of poor people. While poor women and rural residents have, on average, just over three years of schooling, poor men and urban residents have, on average, more than 5.5 years of schooling.

[30] All differences in school attainment and literacy discussed in this section are statistically significant, with p-values of essentially zero (p=0.00).

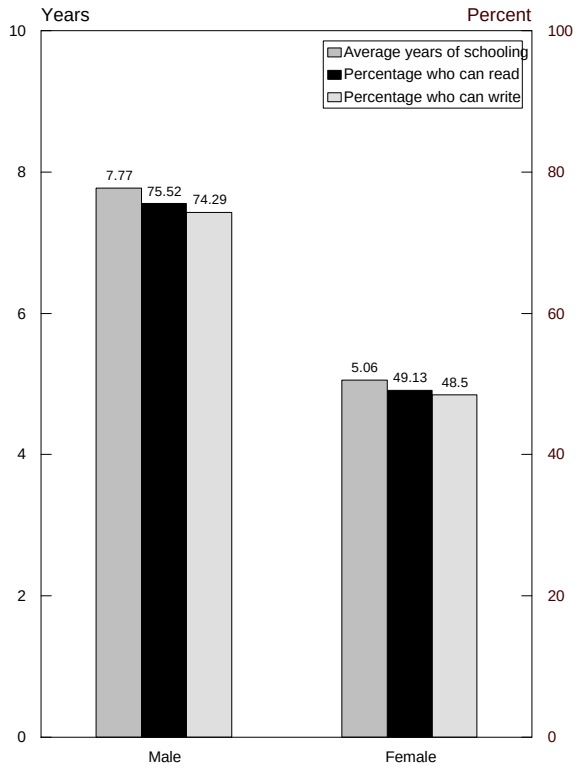
Table 10 Years of schooling and literacy by sector, gender, and nation

	Average years of schooling	Percentage who can read	Percentage who can write	Number of observations
Urban				
Poor	5.65	60.60	59.31	736
	(0.29)	(2.86)	(3.06)	
Nonpoor	8.76	80.00	79.23	2,833
	(0.26)	(1.49)	(1.52)	
All	8.10	75.85	74.97	3,569
	(0.26)	(1.52)	(1.57)	
Rural				
Poor	3.47	39.23	38.27	1,218
	(0.23)	(2.38)	(2.43)	
Nonpoor	5.42	54.03	53.06	3,574
	(0.22)	(1.83)	(1.86)	
All	4.93	50.31	49.35	4,792
	(0.20)	(1.66)	(1.72)	
Male				
Poor	5.74	63.53	62.01	945
	(0.24)	(2.33)	(2.42)	
Nonpoor	8.36	79.08	77.94	3,204
	(0.19)	(1.19)	(1.21)	
All	7.77	75.52	74.29	4,149
	(0.18)	(1.15)	(1.19)	
Female				
Poor	3.14	34.01	33.30	1,009
	(0.21)	(2.40)	(2.47)	
Nonpoor	5.67	53.86	53.26	3,203
	(0.19)	(1.67)	(1.67)	
All	5.06	49.13	48.50	4,212
	(0.17)	(1.46)	(1.50)	
All Egypt				
Ultrapoor	3.14	37.18	36.01	580
	(0.30)	(3.32)	(3.43)	
Poor	4.40	48.35	47.25	1,954
	(0.19)	(2.01)	(2.09)	
Nonpoor	7.02	66.45	65.58	6,407
	(0.18)	(1.31)	(1.33)	
All	6.41	62.22	61.30	8,361
	(0.16)	(1.21)	(1.24)	

Notes: Figures are for individuals 15 years of age and older. Average years of school refers to the total number of school years attended. Zero values are given for never attending school. The sample design effect for average (national) schooling is 6.45, for able to read is 4.73, and for able to write is 5.01.

The results on literacy are very similar in nature. At the national level, 66.5 percent of the nonpoor can read (65.6 percent can write), while only 48.4 percent of the poor can read (47.3 percent can write). As with years of schooling attendance, overall, women have lower literacy levels than men (as illustrated in Figure 3), and significantly fewer rural residents can read or write than urban residents. The gap in literacy between the poor and nonpoor is also significant across all four levels of analysis, and poor women and poor rural residents have the lowest literacy levels. Only about 34 percent of poor women and 39 percent of poor rural residents are able to read or write.

Figure 3 Years of schooling and literacy by gender



Note: See Table 10 for data.

Table 11 provides similar information in a somewhat different format. In this table, the highest class completed is presented by sector, gender, and the nation for the poor and nonpoor. Figure 4 presents the distribution of highest class completed for the nation by poverty status. Overall in Egypt, 48 percent of individuals over 15 years of age have not completed primary schooling. For the poor, 64 percent have not completed primary schooling and 76 percent of the ultrapoor have not, though 44 percent of the nonpoor have. The failure to complete primary schooling is significantly worse for the poor across gender and sector categories. Poor women are the worst off with less than 26 percent of them completing primary school or better.

Tables 12 and 13 list the primary reasons stated for leaving school for those finished with schooling and the reason for never attending for those who have no schooling. These two tables contain information that is quite useful to the policymaker. Tables 10 and 11 show clearly that the poor obtain significantly less schooling than the nonpoor, and a reasonable policy goal is to reduce this gap. Tables 12 and 13 provide important evidence on the likely success of various policies to increase school attendance and continuity. In particular, Table 12 makes it very clear that school accessibility is not at all the reason for not continuing in school. Only 10 percent of the poor give accessibility as a reason for never attending (Table 13).

In contrast, all of the financially related reasons (such as need to work at home or schooling too expensive) are important determinants both for never attending and for leaving school. There are few differences between the poor and nonpoor for never

Table 11 Highest class completed by sector, gender, and nation

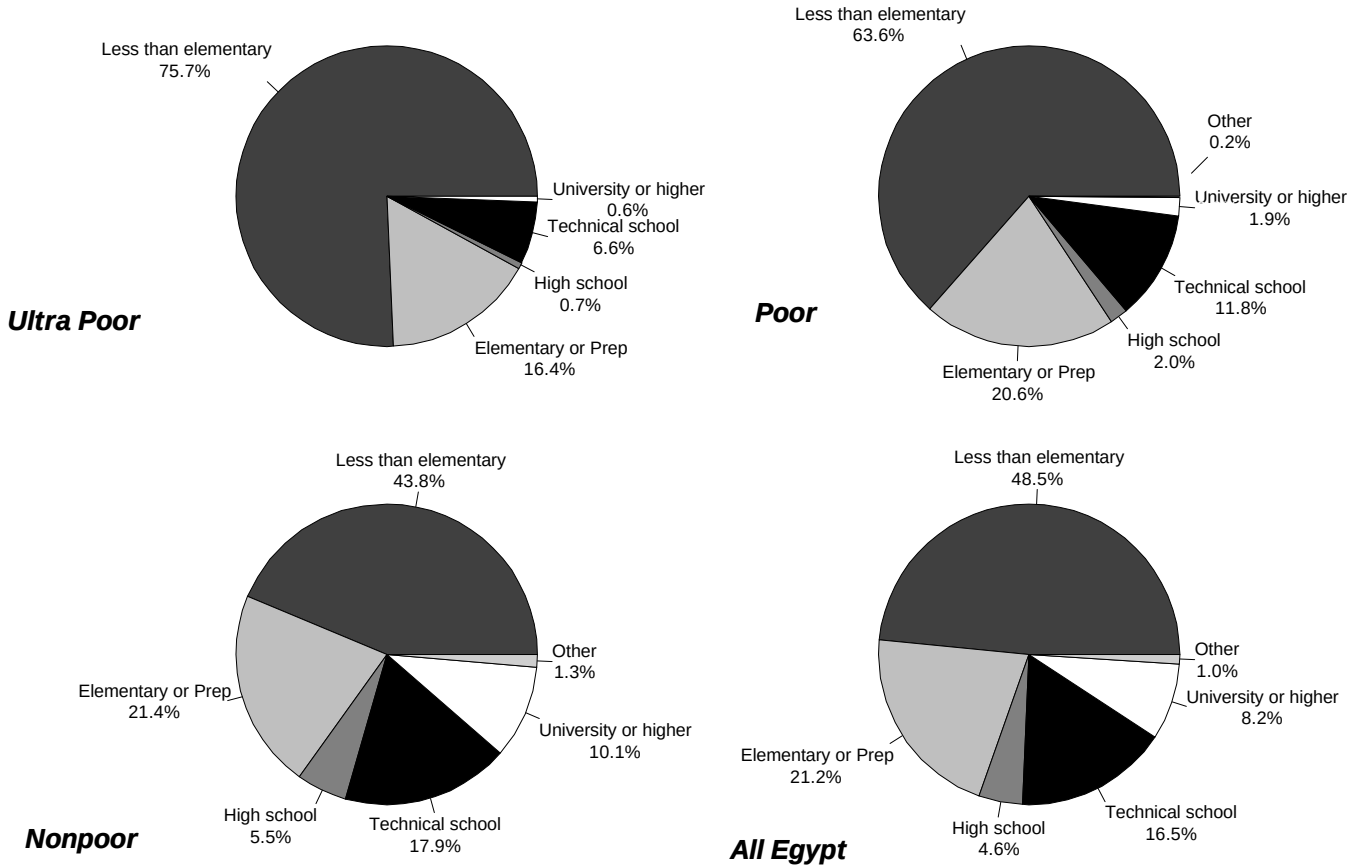
	Less than elementary	Elementary or preparatory	High school	Technical school	University or higher	Other	Number of observations
			(percent)				
Urban							
Poor	52.38	26.67	3.23	14.34	3.07	0.32	753
Nonpoor	30.36	23.35	8.20	20.79	15.29	2.01	2,911
All	35.05	24.05	7.14	19.42	12.68	1.65	3,664
Rural							
Poor	71.78	16.08	11.05	9.92	1.11	0.07	1,266
Nonpoor	56.18	19.68	2.94	15.22	5.41	0.57	3,683
All	60.12	18.77	2.47	13.88	4.32	0.44	4,949
Male							
Poor	52.28	27.10	3.21	14.40	2.67	0.35	985
Nonpoor	33.00	25.41	6.51	19.95	13.40	1.73	3,290
All	37.46	25.80	5.74	18.67	10.92	1.41	4,275
Female							
Poor	74.46	14.26	0.78	9.27	1.23	0.00	1,034
Nonpoor	54.61	17.48	4.41	15.83	6.88	0.79	3,304
All	59.32	16.71	3.55	14.27	5.54	0.60	4,338
All Egypt							
Ultrapoor	75.63	16.43	0.70	6.59	0.64	0.00	600
Poor	63.57	20.56	1.97	11.79	1.94	0.17	2,019
Nonpoor	43.84	21.43	5.46	17.88	10.13	1.26	6,594
All	48.46	21.23	4.64	16.46	8.21	1.00	8,613

Notes: Responses listed are for individuals 15 years of age and older. Less than Elementary refers to the case where respondents report that they did not have any schooling, or they completed less than elementary school.

attending school, with one of the exceptions being that financial reasons are somewhat more important for poor men and poor rural residents than their nonpoor counterparts.

For those who have attended school in the past and have left school, there are important poor-nonpoor differences. Of the nonpoor, 20 percent state financial reasons for leaving school while these account for 31 percent of the poor leaving school. Similarly, the poor are more likely to state that they have no desire to continue schooling than the nonpoor (27 percent versus 17 percent). The importance of financial factors

Figure 4 Percentage distribution of persons 15 years or older by highest class completed



Note: See Table 11 for data.

Table 12 Primary reason for leaving school by sector, gender, and nation

	Completed schooling	School not accessible	Financial reasons	No desire to continue	Other reasons	Number of observations
			(percent)			
Urban						
Poor	41.39	00.00	31.01	25.81	1.79	413
Nonpoor	65.11	0.37	15.06	14.01	5.45	1,856
All	60.65	0.30	18.06	16.23	4.76	2,269
Rural						
Poor	34.28	2.31	31.91	29.39	2.11	408
Nonpoor	46.59	1.38	25.81	21.02	5.20	1,675
All	44.18	1.57	27.00	22.66	4.60	2,083
Male						
Poor	37.90	1.13	35.48	25.01	0.47	517
Nonpoor	58.17	0.80	22.24	17.84	0.96	2,088
All	54.11	0.86	24.88	19.28	0.86	2,605
Female						
Poor	38.62	0.90	24.85	31.33	4.31	304
Nonpoor	55.26	0.84	16.34	16.05	11.52	1,443
All	52.28	0.85	17.86	18.78	10.23	1,747
All Egypt						
Ultrapoor	23.95	0.91	40.78	32.56	1.80	199
Poor	38.18	1.04	31.42	27.43	1.93	821
Nonpoor	56.96	0.82	19.79	17.10	5.34	3,531
All	53.36	0.86	22.01	19.08	4.69	4,352

Notes: Reasons listed are for individuals 15 years of age and older. School not accessible refers to the case where respondents report that no further schooling is available and/or school is too far away. Financial reasons include the cases where respondents report that school is too expensive, they had to help at home, they had to support the family, and/or they had to help with family business. No desire to continue includes the cases where respondents report that they are not willing to attend school, their parents did not want them to continue school, and/or their academic progress was poor. Other reasons include all male teachers and leaving school for marriage.

suggests that higher income levels for the poor would help to reduce the poor-nonpoor gap in school attainment. The lack of desire to continue schooling is more difficult to interpret. This could possibly be linked to school performance of the poor or their perceived returns from extra schooling.

The information on accessibility and financial reasons suggests that increasing years of schooling for the poor does not require building more schools but requires

Table 13 Primary reason for never attending school by sector, gender, and nation

	School not accessible	Financial reasons	No desire to attend	Other reasons	Number of observations
		(percent)			
Urban					
Poor	9.77	48.27	41.08	0.88	240
Nonpoor	5.84	44.11	46.97	3.08	567
All	7.04	45.39	45.16	2.41	807
Rural					
Poor	9.47	52.87	36.24	1.42	728
Nonpoor	8.89	49.00	40.78	1.33	1,555
All	9.07	50.22	39.35	1.36	2,283
Male					
Poor	10.97	62.30	23.84	2.89	319
Nonpoor	9.38	57.02	30.84	2.76	645
All	9.91	58.79	28.50	2.80	964
Female					
Poor	8.84	46.14	44.57	0.45	649
Nonpoor	7.38	43.43	47.74	1.46	1,477
All	7.82	44.25	46.78	1.15	2,126
All Egypt					
Ultrapoor	6.35	56.64	35.92	1.09	344
Poor	9.55	51.55	37.63	1.27	968
Nonpoor	7.98	47.55	42.61	1.85	2,122
All	8.48	48.80	41.05	1.67	3,090

Notes: Reasons listed are for individuals 15 years of age and older. School not accessible refers to the case where respondents report that no further schooling is available and/or school is too far away. Financial reasons include the cases where respondents report that school is too expensive, they had to help at home, they had to support the family, and/or they had to help with family business. No desire to attend includes the cases where respondents report that they are not willing to attend school or their parents did not want them to go to school. Other Reasons include all male teachers and leaving school for marriage.

reducing the opportunity cost of going to school. Attending school is too costly for the poor either because of direct costs or because it reduces the amount of time they can work at home. These costs are evidently high for the poor relative to the perceived pecuniary and nonpecuniary returns from further schooling. Augmenting household income of the poor seems to be an important means of addressing the policy goal of reducing the schooling deficit of the poor.

LABOR FORCE PARTICIPATION AND UNEMPLOYMENT

Table 14 presents results for the pattern of labor force participation among the poor and the nonpoor by gender and by rural and urban sectors. Because persons enter the labor force at an early age in most developing countries, choosing age cutoff points to determine labor force status is anything but straightforward. Men, women, and children work in rural Egypt; likewise, child labor in urban-based enterprises is also widely prevalent, especially in the informal sector. Because of these considerations, an age band that arbitrarily (and, therefore, potentially wrongly) classifies younger and older persons as not part of the labor force was not used in this analysis. Instead, we used data on the primary occupation of all household members above six years of age over a 12-month recall period. We then made an initial distinction between those who participate in the labor force and those who do not. Full-time students and those who responded as being unavailable for work (for whatever reasons) during the past 12 months were classified as not being in the labor force. On the other hand, any individual who was reported to be working or available for work during the past 12 months was classified as belonging to the labor force. Those in the labor force were further classified as either being currently employed or currently unemployed. Hence, each row of Table 14 provides the percentage distribution of persons of age six and above across the different labor participation status categories.

In general, the table indicates that differences in participation status are more closely associated with gender than with poverty levels. The data also suggest that there

Table 14 Labor force participation

	In labor force			Not in labor force			
	Percent currently working (1)	Percent currently unemployed (2)	Percent in labor force (3 = 1 + 2)	Percent student (4)	Percent unavailable (5)	Percent not in labor force (6 = 4 + 5)	Number of observations
Urban							
Male							
Poor	51.44	5.13	56.57	32.67	10.75	43.42	537
Nonpoor	53.32	4.77	58.09	31.78	10.12	41.90	1,863
All	52.89	4.85	57.74	31.99	10.27	42.26	2,400
Female							
Poor	12.26	6.03	18.29	29.34	52.36	81.70	505
Nonpoor	15.97	5.63	21.60	30.40	48.00	78.40	1,815
All	15.13	5.72	20.85	30.16	48.98	79.14	2,320
All urban	34.28	5.28	39.56	31.09	39.35	70.44	4,720
Rural							
Male							
Poor	54.41	3.93	58.34	32.69	8.97	41.66	960
Nonpoor	57.30	3.28	60.58	32.10	7.32	39.42	2,545
All	56.52	3.46	59.98	32.26	7.77	40.03	3,505
Female							
Poor	8.31	5.76	14.07	24.90	61.02	85.92	1,011
Nonpoor	9.75	5.12	14.87	25.90	59.22	85.12	2,516
All	9.34	5.30	14.64	25.62	59.73	85.35	3,527
All rural	32.82	4.38	37.20	28.92	33.87	62.79	7,032
All Egypt							
Ultrapoor	31.08	5.05	36.13	29.88	31.88	61.76	945
Poor	31.41	5.14	36.55	29.63	33.82	63.45	3,013
Nonpoor	34.17	4.65	38.82	29.96	31.22	61.18	8,739
All	33.46	4.78	38.24	29.88	31.88	61.68	11,752

Note: Based on 11,752 responses for persons aged 6 years or older.

are some differences across urban and rural sectors. The following observations can be made about the results presented in Table 14:

- Labor force participation rates for females are only a small fraction of those for males. In the urban sector, 57.74 percent of males above six years of age report

themselves to be in the labor force. The corresponding rate for females is only 20.85 percent, less than half the male rate. The difference is even greater in the rural sector, where only 14.64 percent of females reported participating in the labor force, compared to 59.98 percent of males. Participation rates remain essentially the same across poverty levels in both rural and urban sectors. At the national level, they only vary from 36.13 percent for the ultrapoor to 38.82 percent for the nonpoor.

- Nonparticipation in the labor force does not preclude work at home (work that is not directly devoted to income-generating activities). A large proportion of the female population is not in the labor force because they are not available for work outside the home. This result, too, holds across poverty levels and across rural and urban sectors. About 49 percent of females six years or older are reported to be unavailable for work in the urban sector. About 60 percent of them are not available for work in the rural sector.
- The proportion of persons who are not in the labor force because they are full-time students is fairly uniform across gender or poverty levels. However, among females, this proportion varies slightly across rural and urban sectors. About 26 percent of females in the rural areas are students, while the corresponding percentage for urban areas is about 30 percent.
- The proportion of unemployed persons in the population aged six years and above is 4.78 percent for Egypt as a whole. This proportion also does not vary significantly

across poverty levels (5.05 percent for the ultrapoor compared to 4.65 percent for the nonpoor). It is, however, one percentage point higher in the urban sector, but the sectoral differences are not significant. It is also marginally higher for females in both rural and urban sectors, though the differences are, again, not significant.

- It should be noted that percentages of the unemployed among the population aged 6 years and above are different from the usual notion of unemployment rates, which are expressed as percentages of those participating in the labor force. Thus, for instance, given the large gender differences in participation rates, the implied unemployment rates (among those participating in the labor force) for males and females turn out to be about 8 and 27 percent, respectively, in the urban sector, and about 6 and 36 percent, respectively, in the rural sector. Hence, there is more than a threefold difference between female and male unemployment rates in Egypt.

DISTRIBUTION OF THE LABOR FORCE

Table 15 presents our results on the distribution of the labor force (those working or available for work) across various types of employment by sector, gender, and poverty levels. Employment type has been classified into five categories: casual labor, farming, salaried work, self-employment, and unemployed. Analysis is based on data for 4,448 individuals who responded as participating in the labor force during the 12 months prior to the survey. The results indicate important differences in type of employment across the

Table 15 Distribution of labor force by type of employment

	Percent working as				Percent	Number of
	Casual wage laborer	Farmer	Salaried employee	Self-employed	Unemployed	observations
Urban						
Male						
Poor	41.74	3.27	27.36	18.56	9.07	303
Nonpoor	17.70	2.19	51.67	20.23	8.21	1,082
All	23.13	2.43	46.18	19.85	8.41	1,385
Female						
Poor	18.68	3.63	30.95	13.75	32.99	90
Nonpoor	5.78	1.78	60.42	5.97	26.05	392
All	8.33	2.14	54.58	7.51	27.42	482
Rural						
Male						
Poor	39.42	24.90	21.34	7.61	6.73	556
Nonpoor	24.39	28.21	30.78	11.22	5.41	1,534
All	28.35	27.33	28.29	10.27	5.76	2,090
Female						
Poor	20.18	17.67	9.07	12.16	40.93	138
Nonpoor	11.99	21.31	24.05	8.20	34.45	353
All	14.20	20.32	19.99	9.28	36.20	491
All Egypt						
Male						
Ultrapoor	42.32	21.05	19.35	10.78	6.50	269
Poor	40.34	16.28	23.74	11.97	7.67	859
Nonpoor	21.39	16.55	40.14	15.25	6.67	2,616
All	26.08	16.48	36.08	14.44	6.91	3,475
Female						
Ultrapoor	29.07	7.51	4.27	15.96	43.19	70
Poor	19.51	11.41	18.82	12.87	37.39	228
Nonpoor	8.59	10.61	43.97	6.98	29.85	745
All	11.13	10.80	38.11	8.35	31.61	973
All male and female	22.7	15.2	36.5	13.1	12.5	4,448

Note: Percentages are based on responses from 4,448 individuals who reported either that they had worked or that they had been available for work in the 12 months prior to the survey..

poor and the nonpoor, and also across gender and sector categories. For this reason, gender differences are tabulated right up to the national level. The following results are noted.

- The poor are more likely to be casual wage laborers than the nonpoor. This result is persistent across the urban and rural sectors and across gender. In the urban sector, about 42 percent of the male poor work as casual laborers compared to 18 percent for male nonpoor. Likewise, the percentage of poor females working as wage laborers in the urban sector (18.68 percent) is more than three times that of nonpoor females (5.78 percent). These differences are carried over to the rural sector, though the magnitude of the differences is not as high. The difference in magnitude is caused by a higher proportion of rural nonpoor, both males and females, working as casual labor. Note that though casual labor is the most important source of employment for poor males in both urban and rural sectors, such is not the case for females in the urban sector: more poor females are employed as salaried workers (30.95 percent) than as casual laborers. For poor women in the rural sector, however, casual labor is the most important employment source. At the national level, the proportion of the work force working as casual laborers is highest among the ultrapoor for both males and females.
- The pattern in salaried work is the reverse of that in casual laboring. In the urban sector, about 60 percent of the nonpoor women and 52 percent of the nonpoor men are salaried workers. The proportion of the poor working as salaried workers is lower by almost half for both males and females. The relative importance of salaried work drops for both the poor and the nonpoor in the rural sector, especially for females. While salaried work, as noted before, is the most important source of

employment for poor females in the urban areas, it is the least important source for this group in the rural sector.

- Though the poor-nonpoor difference in the proportion of the labor force engaged in farming is not as strong as in the case of casual laboring, there is nevertheless an interesting urban-rural difference. In the urban sector, the proportion of the labor force in farming is slightly greater for the poor, both male and female, while the opposite is the case in the rural sector. The poor-nonpoor difference is also larger in the rural sector.
- The proportion of those working who are self-employed is higher among males than among females, especially in the urban sector. However, while the proportion of self-employed is higher for the nonpoor than for the poor among males in both the rural and urban sectors, the reverse is true for females. Poorer females are more likely to be self-employed than less-poor females in both the rural and urban sectors.
- Unemployment rates, here defined as the proportion of those in the work force that are unemployed, are strikingly higher for females than for males in both urban and rural sectors. At the national level, an overall unemployment rate of 6.91 percent for males contrasts with a rate of 31.61 percent for females. Also, the rates are consistently higher for the poor than for the nonpoor for both males and females in the urban as well as the rural sectors.

- Overall, Table 15 suggests that the poor—because of their low skills—tend to be concentrated in relatively low paying jobs in the casual labor market. Poor females in the urban sector, however, appear to be able to find low-paying salaried work.

Table 16 describes the distribution of the labor force participants across industries. Industries are classified into six categories: agriculture and forestry, manufacturing, construction, trade and services, community and personal services, and others. All industries except community and personal services are self-explanatory. The community and personal services sector includes activities such as public administration and defense, personal and household services, as well as activities related to recreation and culture.

At the national level, agriculture and forestry employs the largest number of persons (26.46 percent), followed by manufacturing (18.38 percent). Community and personal services (17.2 percent) and trade and services (15.82 percent) follow close behind. However, there is some variation in the industry-wise distribution of the labor force across poverty levels and between urban and rural sectors. There are also some gender-based differences, which are illustrated in Figure 5. The salient points are noted below:

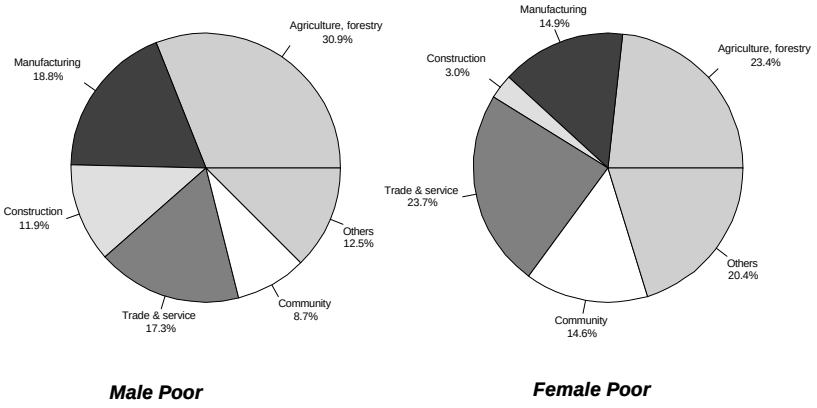
- As expected, agriculture and forestry, which does not include agro-industries, employs the bulk of the working force in the rural sector (40.94 percent for males and 38.11 percent for females) but not in the urban sector (7.65 percent for males

Table 16 Distribution of the labor force by industry

	Percent in						
	Agriculture, forestry	Manufacturing	Construction	Trade and services	Community and personal services	Others	Number of observations
Urban							
Male							
Poor	8.65	29.97	14.13	22.99	7.71	16.54	271
Nonpoor	7.33	28.52	9.28	21.21	19.59	14.07	988
All	7.65	28.88	10.46	21.64	16.70	14.67	1,259
Female							
Poor	4.46	21.63	0.64	28.11	26.60	18.57	60
Nonpoor	5.22	12.50	0.78	10.56	46.34	24.59	288
All	5.07	14.27	0.75	13.95	42.53	23.43	348
Rural							
Male							
Poor	43.43	12.44	10.61	14.10	9.24	10.18	500
Nonpoor	39.89	13.20	7.53	11.86	15.39	12.13	1,396
All	40.94	12.98	8.43	12.52	13.57	11.56	1,896
Female							
Poor	39.09	9.31	5.03	20.01	4.67	21.90	75
Nonpoor	37.73	7.34	0.88	9.21	27.52	17.32	221
All	38.11	7.89	2.04	12.23	21.13	18.60	296
All Egypt							
Male							
Ultrapoor	38.04	15.51	7.70	17.34	5.97	15.43	247
Poor	30.89	18.77	11.88	17.31	8.69	12.47	771
Nonpoor	26.11	19.68	8.27	15.82	17.17	12.95	2,384
All	27.42	19.43	9.26	16.23	14.84	12.82	3,155
Female							
Ultrapoor	24.77	11.61	3.90	32.45	8.03	19.25	38
Poor	23.38	14.90	3.04	23.68	14.61	20.39	135
Nonpoor	19.09	10.30	0.82	9.98	38.31	21.49	509
All	20.09	11.37	1.34	13.17	32.80	21.24	644
All	26.46	18.38	8.22	15.82	17.20	13.92	3,799

Note: Based on responses from 3,799 individuals who reported that they were currently employed and who indicated their industry of employment.

Figure 5 Percentage distribution of the poor by industry of employment



Note: See Table 16 for data.

and 5.07 percent for females). Further, dependence on agriculture is marginally higher for the poor than for the nonpoor in the rural sector, for both males and females.

- Manufacturing is much more urban-based than rural-based. It is also the single most important source of employment for males, poor and nonpoor, in the urban sector (28.88 percent). There is, however, a marked difference in the case of females. The percentage of poor urban women working in manufacturing (21.63 percent) is almost twice that of nonpoor urban women (12.5 percent). In the rural sector, manufacturing employs about 13 percent of males and 8 percent of females.
- Construction is largely an industry for male employment, both in urban and rural sectors. Less than one percent of urban females and 2.04 percent of rural females are employed in this industry. Some variations across poverty levels can be

observed. In the urban sector, dependence on the construction industry for employment is slightly higher for poor males (14.13 percent) than for nonpoor males (9.28 percent). A similar variation is found between poor and nonpoor females in the rural sector.

- Trade and services, where 21.64 percent of the urban males are employed, is the second most important industry of employment for this group. As with manufacturing, no marked differences in employment rates for poor and nonpoor males are observed for this industry, though there is a noticeable rural-urban difference. Only 12.52 percent of rural males are employed in trade and services. There is, however, an important poor-nonpoor difference in the case of females. Poor females are more likely to be employed in trade and services than nonpoor females in both rural and urban sectors.
- The industry classified as community and personal services is quite heterogenous—it includes occupations as diverse as defense and household services. Notwithstanding the diversity, community and personal services are far more important sources of employment for females than males. At the national level, 32.80 percent of females are employed in this sector, making it the most important industry for employment for this group. Only 14.84 percent of males are employed in this industry. The importance of this industry for employment is considerably higher in the urban than in the rural sector, especially for females. This importance also varies across poverty levels. For both males and females, more nonpoor than

poor are employed in this industry. The poor-nonpoor difference is especially high for females. In the urban sector, for example, the percentage of nonpoor women in this industry (46.34 percent) is markedly higher than the corresponding percentage for poor women (26.60 percent).

POVERTY LEVELS BY INDUSTRY OF EMPLOYMENT

In constructing poverty profiles by industry of employment, it is commonplace to classify households according to the principal occupation of the head of the household. This practice neglects occupational diversity within the household (not to mention multiple occupations for the individuals themselves). We construct an occupational poverty profile that does not ignore this diversity. We first assign all working *individuals* to their reported industry of employment. Poverty measures for each industry of employment are then computed, assuming that (1) each individual's consumption is given by the per capita consumption of the household to which (s)he belongs (this approach is consistent with the standard-of-living indicator we have been using), and (2) each individual's weight is given by the ratio of household size to the number of working individuals in the household. The poverty rate for any industry can thus be interpreted as referring to the population dependent on that industry for their livelihood. Table 17 reports the three poverty measures—the head-count index, the poverty gap index, and the squared poverty gap index—by industry of employment. These measures are shown for the reference as well as the ultra poverty line.

Table 17 Poverty rates by industry

Industry	Average real per capita total consumption per month (LE)	Poverty Line: Head-count index	Poverty Line: Poverty gap index	Poverty Line: Squared poverty gap index	Ultra Poverty Line: Head-count index	Ultra Poverty Line: Poverty gap index	Ultra Poverty Line: Squared poverty gap index	Number of observations
Agriculture, forestry	197.52	30.50	8.23	3.30	12.18	3.00	1.05	1,067
	(7.75)	(2.38)	(1.01)	(0.54)	(2.01)	(0.64)	(0.26)	
Manufacturing	208.70	26.80	6.58	2.46	7.22	1.56	0.60	667
	(7.33)	(3.07)	(0.97)	(0.46)	(1.44)	(0.43)	(0.25)	
Construction	201.65	35.56	8.71	3.44	7.82	2.36	1.15	300
	(11.39)	(4.55)	(1.59)	(0.87)	(2.62)	(0.88)	(0.52)	
Trade and services	231.89	30.61	8.02	3.08	10.41	2.42	0.76	514
	(11.27)	(3.01)	(1.06)	(0.52)	(2.07)	(0.60)	(0.28)	
Community and personal services	275.64	14.63	3.12	1.16	3.15	0.83	0.29	689
	(14.48)	(2.29)	(0.58)	(0.28)	(0.91)	(0.30)	(0.12)	
Others	224.9	25.81	6.12	2.11	9.95	1.38	0.33	522
	(9.37)	(3.03)	(0.85)	(0.36)	(1.85)	(0.33)	(0.11)	
All Egypt	224.64	26.87	6.76	2.59	8.77	1.99	0.70	3,799
	(6.47)	(1.71)	(0.63)	(0.33)	(1.10)	(0.38)	(0.17)	

Notes: Poverty indexes are computed at the household level. Whenever a household had members working in more than one industry, household size was allocated to different industrial sectors in proportion to the number of members working in each industrial sector. There were a limited number of households for which information on employment source was missing. For this reason, the All Egypt estimates in this table vary slightly from those presented in Tables 3 and 5. Standard errors are in parentheses and are corrected for both the stratification and two-stage design of the sample.

Construction, agriculture, and trade and services appear to be the employment sectors that are characterized by higher levels of poverty relative to the rest. These three sectors exhibit head-count indexes upwards of 30 percent. The head-count index is higher in the construction sector (35.56 percent) than the trade and services (30.61 percent) and agriculture (30.50 percent) sectors. This ranking largely reoccurs when the poverty gap measures are used: construction has the highest poverty rates, no matter which poverty

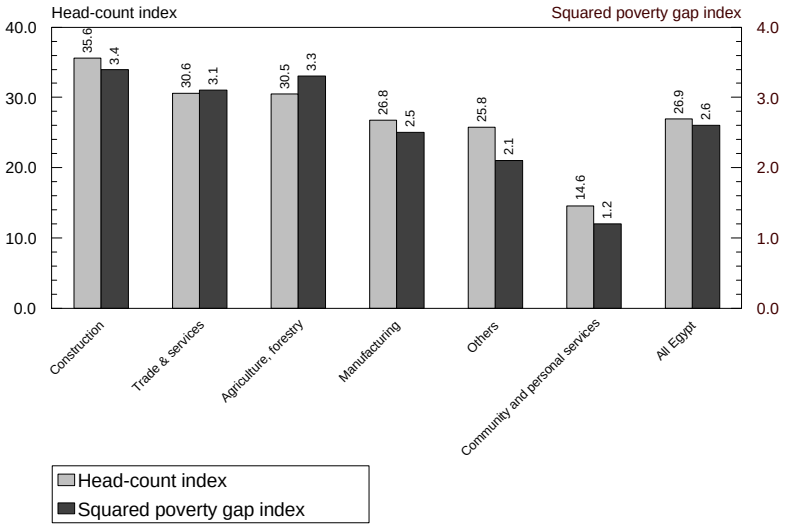
measure is used, but agriculture and trade and services reverse rank (Figure 6). The differences in the measured rates between agriculture and trade, however, are very small. In fact, we are unable to reject the hypothesis that poverty rates (using any of the three measures) are the same across the construction, agriculture, and trade sectors. The average level of real per capita total consumption expenditure is significantly higher in the trade and services sector compared with the agriculture and construction sectors. Because poverty rates are similar in the three sectors, this may imply a higher degree of inequality within the trade and services sector.

The manufacturing sector has a head-count index of 26.8 percent, a poverty gap index of 6.58, and a squared poverty gap index of 2.46; none of these is as high as the corresponding indexes for agriculture, construction, and trade and services.

Poverty levels in the community and personal services sector are distinctly lower than those in any of the other sectors. The poverty measures for this sector are at least less than one-half of those in agriculture, construction, and trade and services. These differences *are* statistically significant.

When the ultra poverty line is used, the poverty rates in all industries are, of course, lower relative to those for the reference poverty line, but the rankings of sectors change somewhat. For instance, while community and personal services continues to be the sector with the least number of poor employees, the ultrapoor head-count indexes for both agriculture (12.18 percent) and trade and services (10.41 percent) are higher than the index for construction (7.82 percent). However, as is the case for the reference poverty

Figure 6 Poverty rates by industry of employment



Note: See Table 17 for data.

line, the differences in poverty rates across sectors are mostly insignificant, with the exception of the community and personal services sector, which has significantly lower poverty rates than for all the other sectors.

CHILD IMMUNIZATION

According to World Health Organization (WHO) guidelines, by the age of 12 months, all children should receive BCG and measles vaccinations, three doses of the DPT vaccine, and three doses of polio vaccine. Table 18 reports results for immunization of 1–5 year old children from poor and nonpoor households in Egypt. The results are based on self-reported immunization information from the EIHS households. Several points are notable.

Table 18 Immunization of children from poor and nonpoor households

	Percent of 1–5 year old children								
					Whose place of most recent immunization was:				
	Ever immunized	Fully immunized	Partially immunized	Who have immunization card	Primary health center	Hospital	Private clinic/ other	Missing not applicable	Number of observations
Urban									
Poor	89.7	61.1	28.8	79.6	79.2	7.0	3.7	10.1	129
Nonpoor	88.0	65.4	22.7	84.6	78.1	6.0	4.0	11.9	405
All	88.5	64.3	24.2	83.4	78.4	6.2	3.9	11.5	534
Rural									
Poor	89.2	59.7	29.5	80.7	82.4	4.7	1.9	11.0	417
Nonpoor	88.2	63.0	25.1	80.3	80.3	6.2	1.5	12.0	786
All	88.5	61.9	26.7	80.4	81.0	5.7	1.7	11.6	1,203
Male									
Poor	88.5	61.3	27.2	81.6	79.6	6.4	2.5	11.5	268
Nonpoor	87.4	63.9	23.5	81.0	79.6	6.2	1.4	12.8	590
All	87.7	63.1	24.6	81.2	79.6	6.2	1.8	12.4	858
Female									
Poor	90.2	58.8	31.5	79.2	83.3	4.3	2.3	10.1	278
Nonpoor	88.9	64.0	24.9	82.8	79.4	6.0	3.5	11.1	601
All	89.3	62.4	27.0	81.7	80.6	5.5	3.1	10.8	879
All Egypt									
Ultrapoor	84.6	58.8	25.8	77.9	74.9	5.4	4.0	15.8	201
Poor	89.4	60.0	29.3	80.4	81.5	5.3	2.4	10.8	546
Nonpoor	88.1	63.9	24.2	81.9	79.5	6.1	2.5	12.0	1,191
All	88.5	62.7	25.8	81.4	80.1	5.9	2.4	11.6	1,737

Note: Full and partial immunization are self-reported. The missing/not applicable category includes children who were never immunized.

- Nearly 90 percent of all children have had at least some vaccination. About 63 percent were reported to have had full immunization, while about 26 percent had partial immunization. We are unable to assess exactly what partial immunization implies, but it is likely to be context-dependent, and we should expect regional variations in what it represents. Full immunization is also self-reported by the respondents; the EIHS did not have separate questions on individual vaccinations.

- Following WHO guidelines, the Egypt Demographic and Health Survey (DHS) 1995 defined full immunization as comprising BCG and measles vaccinations and three doses of the DPT and polio vaccines. Using this definition, the Egypt DHS 1995 estimated a full immunization rate of 68.4 percent among 12–59 month old children (El-Zanaty et al. 1996). This is comparable with the EIHS estimate of 62.7 percent, despite the differences in the approach of the two surveys.
- The percentage that was ever immunized is about the same for children from poor and nonpoor households. However, poverty seems to make some difference to the completion of the immunization program. Full immunization is reported for about 59 percent of the ultrapoor children, 60 percent of the poor, and 64 percent of the nonpoor.[31] This suggests that partial immunization is more of a problem for the poor and the ultrapoor than for the nonpoor, but the differences are not large. That two out of every five poor and ultrapoor children fail to be fully immunized should be a matter of some concern to Egyptian policymakers.
- There is not much variation to this pattern across rural and urban sectors. Similarly, there is also no evidence of gender differentiation in the rates of full or partial vaccination. The poor-nonpoor differences in the full immunization rate also persist across both sectors and both genders, although the poor-nonpoor differential is somewhat higher for 1–5 year old girls than for 1–5 year old boys.

[31] Strictly speaking, these are children from ultrapoor, poor, and nonpoor households.

- In general, if a child was ever immunized, there also exists an immunization card for her or him. Overall, immunization cards exist for about 80 percent of the 1–5 year old children; this proportion occurs across sector, gender, and the poor-nonpoor groups. There is almost universal reliance on the primary health centers (PHCs) for getting children vaccinated. For Egypt as a whole, in about eight of every nine cases, the PHCs are reported to be the place of the most recent vaccination. This proportion is also highly uniform across sector, gender, and poor-nonpoor categories.

TRANSFERS

Our results for transfer payments and receipts of Egyptian households are presented in Table 19. The households were asked about transfer payments and receipts over the 12 months prior to the date of interview. The table shows the value of transfers—both cash and in-kind—per capita per month. The transfers have also been adjusted for spatial price differences, and are expressed in Metropolitan-region prices.

- The average value of transfers (including cases without any reported transfers) received by an Egyptian household is only about LE 6.34 per capita per month. The average transfer payment made by a household is LE 1.24, thus indicating a net transfer receipt of LE 5.10 per capita per month. This net transfer represents about 2.2 percent of the mean per capita expenditure. An overall *positive* net average

Table 19 Transfer receipts and payments by poor and nonpoor households

	Mean expenditure per capita	Mean transfer receipt per capita	Mean transfer payment per capita	Mean net transfer receipt per capita	Number of observations
	(LE/person/month at 1997 Metropolitan region prices)				
Urban					
Poor	97.53	3.61 [19.2]	0.26 [5.6]	3.35 [23.2]	197
	(1.82)	(0.92)	(0.14)	(0.90)	
Nonpoor	308.90	9.18 [21.9]	1.71 [14.0]	7.46 [30.9]	927
	(11.85)	(3.03)	(0.41)	(2.84)	
All	260.17	7.90 [21.2]	1.38 [12.1]	6.52 [29.1]	1,124
	(12.29)	(2.36)	(0.32)	(2.22)	
Rural					
Poor	96.04	4.14 [21.8]	0.42 [11.0]	3.72 [25.6]	334
	(2.25)	(1.07)	(0.12)	(1.04)	
Nonpoor	247.53	5.62 [20.6]	1.43 [18.8]	4.18 [29.4]	993
	(6.18)	(1.05)	(0.28)	(1.05)	
All	203.49	5.19 [21.0]	1.14 [16.6]	4.05 [28.3]	1,327
	(6.35)	(0.87)	(0.21)	(0.85)	
All Egypt					
Ultrapoor	69.49	3.71 [17.1]	0.37 [9.0]	3.34 [20.9]	159
	(1.61)	(1.39)	(0.17)	(1.39)	
Poor	96.59	3.94 [20.8]	0.36 [9.0]	3.58 [24.7]	531
	(1.57)	(0.75)	(0.09)	(0.73)	
Nonpoor	274.97	7.21 [21.2]	1.56 [16.7]	5.65 [30.1]	1,920
	(6.43)	(1.47)	(0.24)	(1.40)	
All	227.71	6.34 [21.1]	1.24 [14.6]	5.10 [28.7]	2,451
	(6.39)	(1.13)	(0.18)	(1.07)	

Note: The transfer receipts and payments include both cash and in-kind transfers. The figures in square brackets [ ] are the percentages of population (in households) reporting nonzero transfers. The standard errors are given in parentheses ( ). The standard errors take into account sample stratification and clustering.

transfer for *all* households in Egypt probably reflects, in part, a surplus of transfer receipts from abroad over transfer payments abroad.

- The small size of average transfers reflects the fact that only a relatively small proportion of the population reports receiving or making transfer payments. More than 70 percent of the population in Egypt lived in households that neither received nor made any transfer payments. There is little variation in this proportion across urban and rural sectors, although the proportion tends to be higher for the nonpoor than for the poor. While the proportion of the population reporting transfer receipts is quite similar for the poor and the nonpoor, a significantly larger proportion of the nonpoor report making transfer payments.
- In absolute terms, per capita net transfer receipts are larger for nonpoor households (LE 5.65 per person per month) than for poor households (LE 3.58), although the reverse is true for net receipts as a proportion of per capita expenditure (2.1 percent against 3.7 percent, respectively). However, the differences are neither large nor significant. There is not much sectoral variation to this pattern.

AGRICULTURAL LANDHOLDINGS

In order to examine the relationship between land, agriculture, and poverty, poverty indexes were computed for households differentiated by their access to or use of agricultural land. About 39 percent of the households in the rural sector reported agricultural cultivation. A very small number of households in the urban sector also

reported agricultural cultivation, but these were not included in the analysis because urban households face significantly different economic opportunities (especially in the labor market) and including them is likely to confound relationships.

Table 20 tabulates poverty indexes by cultivator status as well by the size of land cultivated. Rural households cultivating any amount of land, including rented or sharecropped land, were classified as cultivators. The rest were classified as noncultivators. Cultivating households were then ranked by per capita land cultivated and classified as "small" if they were below the 25th percentile, "medium" if they were between the 25th and the 75th percentile, and "large" if above the 75th percentile. Our results indicate the following:

- Within rural Egypt, the incidence of poverty is significantly higher among noncultivators than among cultivators. Nearly 35 percent of the noncultivators live below the poverty line, while only 22.84 percent of the cultivators fall into this category.
- Both severity measures—the poverty gap index and the squared poverty gap index—are significantly higher for noncultivators than for cultivators.
- The head-count index bears a negative relationship with the size of land cultivated, falling from a high of 35.28 percent for small farmers to 23.82 percent for medium farmers to 7.08 percent for large farmers. The difference in the head-count index between large and small cultivators is statistically significant.

Table 20 Poverty rates by agricultural landholding characteristics

Landholding status	Average per capita real total consumption per month (LE)	Head-count index	Poverty gap index	Squared Poverty gap index	Number of observations
Cultivator status					
Cultivator households	209.95 (8.47)	22.84 (2.75)	5.23 (0.96)	1.96 (0.47)	510
Noncultivator households	197.61 (7.90)	34.76 (2.97)	9.49 (1.18)	3.82 (0.64)	817
Rural Egypt	203.49 (6.35)	29.07 (2.19)	7.46 (0.89)	2.93 (0.48)	1,327
Farm-size status					
Large farms	267.28 (17.38)	7.08 (2.88)	2.15 (0.89)	0.86 (0.39)	140
Medium farms	204.15 (11.53)	23.82 (3.54)	4.93 (1.02)	1.71 (0.49)	239
Small farms	168.94 (7.90)	35.28 (5.61)	8.63 (2.15)	3.45 (1.09)	131
All farms (rural Egypt)	209.95 (8.47)	22.84 (2.75)	5.23 (0.96)	1.96 (0.47)	510

Notes: Urban households are excluded. Poverty rates by farm size are obtained only for cultivator households. Cultivator households are classified as "small" if per capita cultivated land is less than 0.07 feddan, "medium" if per capita cultivated land is between 0.07–0.24 feddan, and "large" if per capita cultivated land is 0.25 feddan or greater. Standard errors are in parentheses and are corrected for both the stratification and two-stage design of the sample.

- Both the poverty gap and the squared poverty gap indexes bear a clear negative association with the size of cultivated land. As with the head-count index, the difference in severity of poverty between the large and small cultivators are statistically significant.

Land cultivated per capita controls for family size and therefore provides a more accurate description of a household's ownership of or access to land. Hence we use per capita landholding rather than total cultivated area per household in Table 20. Nonetheless, we also constructed poverty estimates using total area operated. The head-count indexes when using total area cultivated were the following: 32.63 percent for small cultivators, 22.81 percent for medium cultivators, and 13.97 percent for large cultivators. It should be noted, however, that ignoring household size involves the extreme assumption of perfect (or infinite) economies of household size in access to land.

In any case, both results (based on either per capita or total area cultivated) indicate that access to land and the opportunities to undertake agricultural cultivation has an important bearing on the well-being of the rural Egyptian household.

ACCESS TO COMMUNITY FACILITIES

Table 21 lists information on access to 9 community facilities[32] The large majority of all persons are within one-half hour of all 13 facilities.[33] More than 85 percent of all persons are within one-half hour of schools, a hospital, a bus stop, a road, local shops, and a weekly bazaar. Between 65 percent and 75 percent of all individuals are close to the other facilities, including a market center, an agricultural extension center, an agricultural cooperative office, a village bank, and a commercial bank.

Table 21 places persons in three categories: those whose travel time to a facility is one-half hour or less, those who typically travel for more than half an hour, and missing values. We present missing values as a category because one possible explanation of a missing value is that the respondent does not know how long it takes to travel to a facility and this can mean that the facility is further than one-half hour away.[34]

In comparing travel time to facilities, there is only one significant difference in the distribution of responses for the poor and nonpoor.[35] Travel time to a commercial bank is different for the poor (71 percent are within a half hour travel time) and nonpoor (77

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[32] Four facilities are excluded from the table because the travel time for more than 95 percent of the responses (by both poor and ultrapoor) is less than half an hour.

[33] This measure of time ignores the mode of transportation. The measure of time to a facility only captures travel time and does not control for whether someone travels by foot or vehicle to the facility.

[34] Our presumption is that even if someone does not often use a facility, but it can be reached within a half hour, they will know the travel time.

[35] We test for joint differences in the distribution of the three categories (less than half hour, more than half hour, and missing) across the two types of persons (either poor and nonpoor or ultrapoor and not ultrapoor). The (nonparametric) test used is the χ^2 test for independence of distributions.

Table 21 Travel time to nearest facility

	Half an hour or less	More than half an hour	Missing	Number of observations	P values
		(percent)			
Middle School					
Ultrapoor	93.30	6.70	0.00	159	0.003
Non-ultrapoor	97.18	2.50	0.32	2,291	
Nation	96.94	2.77	0.30	2,450	
Secondary School					
Ultrapoor	85.63	13.67	0.70	159	0.033
Non-ultrapoor	90.35	8.15	1.50	2,291	
Nation	90.05	8.50	1.45	2,450	
Hospital					
Ultrapoor	93.78	5.61	0.61	159	0.004
Non-ultrapoor	97.25	1.92	0.83	2,291	
Nation	97.03	2.16	0.81	2,450	
Bazaar					
Ultrapoor	89.15	7.81	3.04	159	0.305
Non-ultrapoor	91.13	5.15	3.72	2,291	
Nation	91.00	5.32	3.68	2,450	
Market					
Ultrapoor	64.92	14.28	20.80	159	0.024
Non-ultrapoor	74.23	11.49	14.28	2,291	
Nation	73.65	11.66	14.69	2,450	
Ag. Extension					
Ultrapoor	74.66	7.79	17.55	159	0.000
Non-ultrapoor	64.63	3.92	31.45	2,291	
Nation	65.27	4.16	30.57	2,450	
Ag. Cooperative					
Ultrapoor	78.69	5.97	15.34	159	0.000
Non-ultrapoor	67.15	2.97	29.87	2,291	
Nation	67.88	3.16	28.96	2,450	
Village Bank					
Ultrapoor	74.69	9.66	15.65	159	0.000
Non-ultrapoor	65.65	3.78	30.57	2,291	
Nation	66.22	4.15	29.63	2,450	
Commercial Bank					
Ultrapoor	68.15	16.19	15.66	159	0.002
Non-ultrapoor	76.42	15.47	8.11	2,291	
Nation	75.90	15.51	8.59	2,450	

Notes: Tabulation does not include four facilities because the travel time for more than 95 percent of the responses (by both poor and ultrapoor) is less than half an hour. These excluded facilities are Primary School, Bus Stop, Road, and Local Shops. P-values are to test the hypothesis that the response distribution across the three categories (less than half an hour, more than half an hour, and missing) for the ultrapoor differs from that for the non-ultrapoor. Low P values indicate that we can reject the hypothesis that there is no difference in distributions.

percent can reach within a half hour). Otherwise there are no significant differences at all between the poor and nonpoor in terms of travel time to a community facility.

In contrast, there are significant differences in the distribution of travel time across those who are ultrapoor and those who are not. Table 21 presents the distribution of travel time by the three categories, for the nation, the ultrapoor, and the non-ultrapoor. The ultrapoor have substantially more limited access to facilities such as schools, hospitals, and markets, but have closer access to agricultural extension, agricultural cooperatives, and village banks. There are significant differences in travel time to 8 of the 9 facilities listed in Table 21. The difference in the percentage of the ultrapoor and non-ultrapoor who are within half an hour of a facility is largest for market center, agriculture extension center, agricultural cooperative office, village bank, and commercial bank.

6. CONCLUSION

About 15.7 million persons, or about 26.5 percent of the population, were deemed to be poor in Egypt in 1997. (This estimate relies on the 1996 CAPMAS census population estimates and a poverty line corresponding to 3,150 calories per day for an adult male in urban areas and 3,500 calories per day for an adult male in rural areas, while also allowing for basic nonfood expenditure.) Of these poor, 5.1 million are deemed to be ultrapoor. (This estimate is based on the same population numbers and uses a lower poverty line that corresponds to the same caloric norms, but makes a less generous allowance for basic nonfood expenditure.)

Poverty rates are observed to be significantly higher in the rural sector, and about 63 percent of the poor live in rural areas. The rural sector accounts for about the same proportion of national poverty for each measure of poverty: head-count, poverty-gap, and squared-poverty-gap indexes. When considering different poverty lines, this proportion changes because the rural sector comprises about 74 percent of the ultrapoor.

Our results do not show differences in poverty between Upper and Lower Egypt. In this respect, our findings depart from the conventional wisdom that Upper Egypt is substantially poorer than Lower Egypt. One important reason for the difference in our results is that we, perhaps alone, allow for regional differences in the cost of living (and basic nonfood needs). Conventional wisdom has been founded on poverty studies that have ignored spatial price differentials. Indeed, when we suppress spatial differences in poverty lines, our data show a regional poverty profile that is more in accordance with conventional expectations.

The lack of a sharp regional poverty profile suggests that (geographical) targeting to each region is unlikely to reduce poverty substantially unless combined with other, stronger correlates of absolute poverty. The results do suggest, though, that there is scope for using sectoral targeting to reduce poverty due to the large difference in poverty between urban and rural sectors.

Other aspects of the Egyptian poverty profile indicate that, on average, the poor tend to have larger household sizes and higher dependency ratios. The higher dependency

ratios for the poor, however, are almost entirely due to the extra children, rather than the aged, that they have to support per adult of working age.

We find that the poor are more likely to live in dwellings without permanent walls or roofs, and the urban poor are somewhat more likely to live in dwellings they do not own.

The poor's access to infrastructure and public facilities (measured by the travel time to the nearest facility) tends to be similar to that of the nonpoor. The relevant distinction here seems to be between the ultrapoor and the rest. The ultrapoor have substantially less access to facilities such as schools, hospitals, and markets, but have greater access to agricultural extension, cooperatives, and village banks.

Our data show that female-headed households are more likely to be poor and also have higher measures of the depth and severity of poverty. In the urban sector, 33 percent of female-headed households are living in poverty, while about 22 percent of male-headed households are poor. In the rural sector, the head-count indexes are 36 percent for female-headed and 28 percent for male-headed households. The differences in the measures of the depth and severity of poverty are not statistically significant (reflecting, in part, the relatively small number of female-headed households in the sample), though the difference in the incidence of poverty across male- and female-headed households is statistically significant.

The poor and the nonpoor tend to have similar rates of labor force participation, although female participation rates are only about one-fourth to one-third the male

participation rates. On the other hand, of those who are labor force participants (either working or available for work), unemployment rates tend to be higher for the poor than for the nonpoor. Far more striking, however, are the differences in the male and female unemployment rates, the latter rate being more than four times higher, despite already low female participation.

In terms of the primary occupation, the poor tend to be concentrated in relatively low-paying jobs in the casual labor market. This is particularly true of poor males. Poor women, if they are not unemployed, tend to be evenly split between casual wage and regular salaried employment. In terms of the primary industry of employment, the poor are overrepresented (relative to the working population as a whole) in the agricultural, construction, and trade and services sectors, while they are underrepresented in the manufacturing, and community and personal services sectors. Correspondingly, poverty rates are found to be highest among those dependent on the agricultural, construction, and the trade and services sectors for their livelihood. We do not find evidence of a sharp poverty profile by industry of employment, though we do find that those dependent on the community and personal services sector have significantly lower rates of poverty than those dependent on agriculture, construction, and trade and services. These results suggest that policies promoting the latter three sectors are likely to be more important to the poor.

Within the rural sector, we find that noncultivators are significantly poorer than cultivators, and there is an inverse relation between per capita land cultivated and poverty.

Our analysis also looked into performance indicators in the social sectors. For instance, our results for child immunization reveal that the poor have lower full immunization rates for their children than do nonpoor households. One of the more striking set of findings relates to the differences between the poor and the nonpoor in their educational attainments. Our results indicate a significant literacy and schooling gap between the poor and the nonpoor. On average, the poor have 2.6 fewer years of schooling than the nonpoor, and their literacy rate is 27 percent lower than that for the nonpoor. The poor-nonpoor education gap cuts across sector and gender categories. Equally, there is a stark gender education gap that cuts across sector and poverty levels. Thus, only a third of the poor females (15 years and older) can read or write, while more than 60 percent of poor males can read and write. Better education is an important non-income dimension of welfare. Hence there is a strong case for raising educational attainments nationwide. The case for closing the education gap of the poor is even stronger. Our results also show that augmenting educational attainment of the poor does not require building more schools, but, instead, reducing the poor's opportunity cost of attending schools and increasing their returns from extra schooling, both of which suggest the importance of income-generating activities as a policy instrument.

Poverty profiles are descriptive tools of analysis that provide broad pointers to policymakers and are arguably an indispensable first stage of sound policy analysis. The characterization of poverty in Egypt presented in this study provides many examples of such pointers, and we hope it has set the stage for the next round of antipoverty policy analysis.

APPENDIX 1
DESIGN AND FIELDWORK OF THE EGYPT INTEGRATED HOUSEHOLD SURVEY

The data used in this paper are from the Egypt Integrated Household Survey (EIHS), a nationwide, multiple-topic household survey carried out by IFPRI in coordination with the Ministry of Trade and Supply (MOTS) and the Ministry of Agriculture and Land Reclamation (MALR). The questionnaire consists of the following 18 sections or topics: Household Information, Housing Characteristics, Access to Facilities, Migration, Subsidized Food Expenses, All Food Expenses, Nonfood Expenses, Health, Anthropometrics, Maternity History, Childcare, Wage Employment, Farming, Livestock Ownership, Nonfarm Enterprises, Credit and Savings, Remittances and Transfers, and Other Income.

The questionnaire has been separated into male and female components to reduce the time required to answer the questionnaire. In the typical case, the male questionnaire was administered by a male interviewer to the male head of household (who it is assumed knows the most about household expenses) and similarly the female questionnaire was administered by a female interviewer to (most typically) the wife of the head of the household (who it is assumed knows the most about household eating habits). The male questionnaire contains most of the sections that deal with sources of income and large expenses, while the female questionnaire contains the sections that focus on tending to the house, including eating patterns, health care, and smaller, more frequent expenses.

SAMPLE DESIGN

The questionnaire was administered to 2,500 households from 20 governorates, using a two-stage, stratified selection process. The sample frame used for the selection process was supplied by the Central Agency for Public Mobilization and Statistics (CAPMAS) and is based on the 1986 Egypt census frame and a 1993 listing of households in selected primary sampling units. This sample frame is used by CAPMAS as a master sample for much of their survey work. It consists of 492 sampling units, 296 of which are urban and 196 are rural.

Households were selected from the master sample in a two-stage process. The first stage entailed randomly selecting 125 primary sampling units (PSU) with probability proportional to size from the master sample. Table 22 provides a list of the 125 PSUs. In the second stage, 20 households were randomly selected from each PSU. The advantage of a two-stage process relative to a pure random selection process is that it dramatically reduces the scope of fieldwork and therefore reduces the cost of the survey. The disadvantage is that standard errors resulting from two-stage samples tend to be significantly larger than those resulting from pure random samples.

With a representative sample of 2,500 households, it is possible to examine average characteristics of the poor at the national level and in most dichotomous categories, such as urban-rural or Upper Egypt-Lower Egypt. To enable a more extensive analysis, the sample was stratified on five regions of Egypt: Metropolitan, Lower urban, Lower rural,

Table 22 Primary sampling units

	PSU Number	Governorate	PSU	Urban/Rural
Metropolitan Egypt	101	Cairo	Borham	Urban
	102		Arab Eltaweela	Urban
	103		Masaken Elzawya	Urban
	104		Elsabteya	Urban
	105		Mahmasha	Urban
	106		Shagaret Mariam	Urban
	107		Masaken Elameria	Urban
	108		Elmasaken Elektesadia	Urban
	109		Elbasateen Elgharbia	Urban
	110		Alzahraa wa masaken	Urban
	111		Alhadaek	Urban
	112	Alexandria	Sedi Beshr Kebly	Urban
	113		Elhadra Kebly	Urban
	114		Elmahrousa	Urban
	115		Dana	Urban
	116		Aldekhela	Urban
	117		Gheit El enab Shark	Urban
	118		Bou Alneo wa Eleskandarani	Urban
	119	El Suez	Feisal	Urban
Lower Egypt	120	El Esmaailia	Elsheik Zayed	Urban
	121		Al kasasein al kadima	Rural
	122		Nefisha	Rural
	123	Domiat	Elroda	Urban
	124		Shat Gariba	Rural
	125		Almahmoudia	Rural
	126	El Dakahlia	Thani	Urban
	127		Kafr El Badamas	Urban
	128		Elmataria	Urban
	129		Bahout	Rural
	130		Alnazal	Rural
	131		Bektares	Rural
	132		Demas	Rural
	133	El Sharkia	Alkareen	Urban
	134		Mashtool El Souk	Urban
	135		Elwalga	Rural
	136		Natoura	Rural
	137		Shebein Alnekaria	Rural
	138		Manshaat Abou Omar	Rural
	139		Mashtoul Elkady	Rural
	140	El Kalyoubia	Kaloub Elbalad	Urban
	141		Shark Elreyah	Urban
	142		Soubra Elbalad	Urban
	143		Mostorod	Urban
	144	El Kalyoubia	Begam	Urban
	145		Bahteem	Urban
	146		Alshoubak	Rural
	147		Gaziret Bali / Ezbet Elhasabinah	Rural
	148		Elgabal Elasfar	Rural
	149		Elkhosousy	Rural
	150		Meit Kananah	Rural
	151		Kafr Elhareth	Rural

(continued)

Table 22 (continued)

	PSU Number	Governorate	PSU	Urban/Rural
Lower Egypt (continued)	152	Kafr El Sheik	Fouh	Urban
	153		Kafr Elhamrawi	Rural
	154		Elhadadi	Rural
	155		Abyanah	Rural
	156	El Gharbia	Nasser	Urban
	157		Al Imam Al Hussein	Urban
	158		Mahalet Marhoum	Rural
	159		Kafr Dima	Rural
	160		Kanamat Alnabah	Rural
	161		Belkina	Rural
	162	El Menoufia	Tala	Urban
	163		Aldeyabia	Rural
	164		Fisha Alkobra	Rural
	165		Alremaly	Rural
	166		Menouf	Urban
	167	El Beheira	El Mahmoudia	Urban
	168		Alnamaria	Rural
	169		Badr	Rural
	170		Sharnoub	Rural
	171		Berseik	Rural
	172		Kombaniat Abou Keir	Rural
Upper Egypt	173	El Giza	El Dokki	Urban
	174		El Talbia	Urban
	175		Abou Ketada	Urban
	176		Madinat El Awkaf	Urban
	177		Abd El Naeem	Urban
	178		Al Mounira Al Gharbia	Urban
	179		AL Hawamdia	Urban
	180		Madinat Al Tahrir	Urban
	181		El Haram	Urban
	182		Kafr Hakim	Rural
	183		Monshaat El Kanater	Rural
	184		Meet Rahina	Rural
	185		Al Moatamadia	Rural
	186		Gazaia	Rural
	187		Alkadia	Rural
	188	Beni Suef	Baba	Urban
	189		Gazirat Al mosaada	Rural
	190		Alnouweera	Rural
	191	El Fayoum	Senouras	Urban
	192		Sanhour Alkeblia	Rural
	193		Alrouda	Rural
	194		Al kasemia	Rural
	195		Abou Kesah	Rural
	196	El Menya	Thaleth	Urban
	197		Matai	Urban
	198		Saft El Khemar	Rural
	199		Abar El Wakf	Rural
	200		Bani Ali	Rural
	201		Ibshaat	Rural
	202		Tala	Rural

(continued)

Table 22 (continued)

PSU Number	Governorate	PSU	Urban/Rural	
Upper Egypt (continued)	203	El Menya	Kalba	Rural
	204	Asyout	Alwalidia	Urban
	205		Alsharikat	Urban
	206		Nagea Sabae	Rural
	207		Shatb	Rural
	208		Almatmar	Rural
	209		Alzewaya	Rural
	210		Almatbae	Rural
	211	Sohag	Sakolta	Urban
	212		Algeladia	Rural
	213		Yalsafora	Rural
	214		Aldayabat	Rural
	215		Awlad nouseir	Rural
	216		Albaskia	Rural
	218	Kenna	Al Oksor	Urban
	219		Kenna Thaleth	Urban
	220		Aldeer	Rural
	221		Alselmia Al Haeet	Rural
	222		Dankeen	Rural
	223		Alrawateb	Rural
	224		Alrayania	Rural
	225	Aswan	Edfu	Urban
	226		Kom Ombo	Rural

Upper urban, and Upper rural. Table 22 maps all PSUs to their respective governorate and stratum.

The stratification meant that instead of allowing the data to be completely self-weighted, the design required that a fixed number of households fell in each stratum. Table 23 below lists the number of households assigned each stratum and the expected number of households resulting from a (nonstratified) self-weighting design.

FIELDWORK

The questionnaire was field-tested in slightly more than 20 households during November 1996. These households were located in geographically diverse regions,

Table 23 Distribution of households by strata

Metropolitan	Lower Urban	Lower Rural	Upper Urban	Upper Rural
A. Planned Distribution of Households:				
380	380	680	380	680
B. Realized Distribution of Households:				
374	376	657	374	670
C. Average Household Size:				
4.9545	4.8803	6.4094	5.1283	6.9881
D. 1996 CAPMAS Population Estimates (thousands):				
11,004.818	7,108.22	18,703.221	6,860.23	14,779.35
E. Expected Distribution with Self-Weighting (1996 population estimates):				
552.6	362.4	726.0	332.8	526.2
F. Weighting Factors:				
1.477587	0.963758	1.105033	0.889888	0.785350
G. Expansion Factors:				
5939.0	3873.7	4441.5	3576.8	3156.6

Note: Row E shows the expected distribution of the 2,451 sample households if the sample were self-weighted. This is derived by first estimating the number of households in each stratum by dividing population (Row D) by average household size (Row C). The ratio of households in each stratum to the total number of households is then multiplied by the sample number of households (2,451). Row F provides the weights that are necessary for any estimates aggregated over strata. (Within strata estimates need no correcting weights.) These weights are the ratio of the expected number of households with self-weights (Row E) and the actual number of sample households (Row B). Row G provides the expansion factor for individual observations. For example, each sample individual in the Metropolitan stratum represents 5,939 Individuals. This factor is derived by dividing the 1996 population estimates for each stratum (Row D) by the sampled number of individuals in each stratum (Row B * Row C).

including Cairo, Alexandria, Aswan (both urban and rural), and villages in Ismailia and Beni-Suef. The pretesting resulted in further revisions to the questionnaire. In order to reduce the length and complexity of the survey, we decided at this point to treat the section on anthropometrics in the household questionnaire as a separate survey administered by a team trained in the measuring and weighing of children.

During two weeks in February 1997, the IFPRI team held intensive training sessions for the 108 interviewers selected to administer the household survey (excluding the anthropometrics section). Ninety-eight of the interviewers came from MALR and 10 came from MOTS. These training sessions were held at the Center for Management Development in Qanater, and were day-long programs consisting of lectures, examples, and question and answer periods. During this period male and female interviewers were grouped into pairs to form interviewer teams, interviewer teams were assigned households, and supervisors were assigned interviewer teams.

There were two levels of supervisors. The first level of 15 supervisors from MALR was directly responsible for the interviewer teams. The other set of supervisors was responsible for spot checking all interviewers and supervisors and consisted of staff from IFPRI and the Central Laboratory for Food and Feed.

Fieldwork began during the first week of March 1997 and concluded in the third week of May 1997. (During one week of April, fieldwork stopped in observance of a religious holiday.) Data entry began in the third week of March and concluded in the first week of June 1997.

The anthropometrics section of the household survey was carried out by a team of enumerators who had worked on the Demographic Health Survey for Egypt (Egypt DHS 1995). This team had been trained for a two-week period prior to working on the Egypt DHS 1995 and had a one-week refresher course in May. Fieldwork for the anthropometrics questionnaire was carried out during the last two weeks of May 1997.

APPENDIX 2

CONSTRUCTION OF TOTAL HOUSEHOLD EXPENDITURE

The measure of total consumption used in this paper is quite extensive and draws from responses to several sections of the household survey. In brief, consumption is measured as the sum of total food expenses, total nonfood nondurable good expenses, estimated use value of durable goods, and an imputed rental value of housing. The following sections document total consumption in greater detail.

FOOD AND NONFOOD EXPENDITURES

Total food consumption is estimated from Section 5 of the female questionnaire, "Food Expenses and Home Production." The survey respondent is asked a series of questions on how much the household has consumed of 123 food products over the past seven days. For each of the food items, the female respondent is asked to state how much of the item consumed came from purchases, then whether the household both grew and consumed any of the food items, and then, finally, whether the household had received any of the food items from other sources, such as gifts. The sum of the responses to these three questions for each of the 123 food items is the primary component of food consumption. In addition to this, food consumption includes the estimated value of all meals eaten away from the home by all household members over the past seven days.

Nonfood (nondurable) consumption is estimated from Section 6 (Part A) of both the male and female questionnaires, as well as Section 5 (male) on tobacco expenditures.

It is the sum of expenditures on 45 nonfood items, including expenditures on fuel, clothing, schooling, health, cleaning items, and several miscellaneous items. For these items, the respondent states how much was spent during the last month or year on the item, depending on the typical frequency of purchase.

USE-VALUE OF DURABLE GOODS

An important component of total consumption, which is occasionally excluded from more limited definitions of consumption, is the use-value (or rental value) of durable goods. The data for this component of expenditure come from Section 6, Part B of the male questionnaire, in which a series of questions is asked for each of 22 durable goods.

The first step in calculating a use-value is to estimate the current value of the item. Most respondents provided estimated current values for their durable goods as well as the value when obtained, but some people were only able to provide the value of the item when they purchased it. Using the responses from those individuals who answered both the current and initial value, as well as the age of the item, it is possible to estimate an average rate of depreciation for each durable good. Average depreciation for each durable good was estimated by taking the difference between the current and initial value and then dividing this difference by the age of the durable good. This estimate of (item-specific) depreciation rates is used with the information on the age of the item to predict a current value of a durable good for those individuals who could not provide these estimates.

The responses to Section 15, Part B, on credit and savings are used to estimate a nominal rate of interest, which is the final piece of information needed to estimate a use-value of durable goods. The interest rate used for this purpose is the modal response to the rate of interest for all loans obtained from commercial banks. For urban areas, the rate of interest used is 15 percent and for rural areas, the rate is 14 percent.

The use-value for household *j* of durable good *i* is then estimated by the following formula:

$$\text{Use-value}_{ij} = \text{Current Value}_{ij} * (r + \delta_i) / (1 - \delta_i),$$

where r = nominal rate of interest and δ_i = the average rate of depreciation for good *i*.

IMPUTED RENTAL VALUE OF HOUSING

The data on dwellings and rental are contained in Section 2 of the EIHS. Section 2b has a filter question to determine whether a household owns the dwelling or not, thus separating owners from tenants. The tenants are then asked about actual monthly rental payments, and the owners are asked: "if someone wanted to rent this dwelling today, how much rent per month would they have to pay?" Thus, we have a measure of actual rent for tenants and a measure of imputed (self-reported) rent for owners. However, the problem is that (i) actual rent is missing for a number of tenant households, and (ii) self-imputed rent is missing for a number of owner households.

We used the following procedure to calculate monthly rental values; these are an input into the calculation of total household consumption.

1. For tenants, we use the reported actual rent paid by them, whenever available.
2. For owners, we use the self-imputed rent reported by them, whenever available.
3. Fortunately, steps 1 and 2 themselves take care of 2,264 out of a total sample of 2,500 households. For the remaining households, we proceeded to estimate imputed rents derived from a hedonic model of dwelling rentals described below.

Since we wanted to predict rentals for (a small fraction) of *both* rented and owner-occupied dwellings, we decided to use data for both actual and self-imputed rents in our rent determination model. The following model was estimated.

$$\ln R_i = \alpha + \beta'(Urban)_i + \gamma'(Gov)_i + \delta(Tenant)_i + \eta' X_i + \theta'(Tenant * X)_i + \epsilon_i$$

where

R_i = monthly rent (actual or self-imputed),

$Urban_i$ = a dummy variable for urban areas,

Gov_i = a vector of dummy variables for individual governorates,

$Tenant_i$ = a dummy variable with a value of 1 if the rent observation is reported by a tenant, and 0 if self-imputed by the owner,

X_i = a vector of dwelling characteristics, including the number of rooms, and categorical variables identifying the type of walls, floor, roof, toilet, and source of water,

and α, β', γ', δ, η', and θ' are estimable parameters, and ϵ_i is an independently and identically distributed error term.

We also tried interacting dummy variables for governorates with the urban dummy variable. However, that failed to reduce the standard error of the estimates. Table 24 reports the preferred estimates of model parameters.

The model was used to predict rent for cases where actual or self-imputed rent was missing. Altogether, predictions were made for 213 households (99 owner households and 114 tenant households). We thus have actual or imputed rentals for 2,477 households. For the remaining 33 households, virtually no information was available on the type of dwelling (including information on whether they were owner-occupied or not); we therefore desisted from trying to predict an imputed rent for them.

Table 24 The hedonic dwelling rent model

Dependent Variable: Log of Rent	Coefficient	Standard Error	T-Statistic	P-Value
Urban	0.087	(0.0446)	1.95	0.051
Room_mis	0.164	(0.1469)	1.12	0.263
Nmrooms	0.121	(0.0102)	11.84	0.000
Gv1	0.636	(0.0850)	7.49	0.000
Gv3	0.596	(0.1818)	3.27	0.001
Gv4	0.408	(0.1230)	3.32	0.001
Gv5	0.720	(0.0955)	7.54	0.000
Gv6	0.718	(0.1027)	6.99	0.000
Gv7	0.793	(0.0851)	9.31	0.000
Gv8	0.494	(0.1201)	4.11	0.000
Gv9	0.368	(0.0988)	3.72	0.000
Gv10	0.747	(0.1118)	6.68	0.000
Gv11	0.177	(0.1101)	1.61	0.107
Gv12	0.598	(0.1281)	4.67	0.000
Gv13	0.746	(0.0814)	9.17	0.000
Gv14	1.161	(0.1308)	8.87	0.000
Gv15	0.480	(0.1101)	4.35	0.000
Gv16	0.662	(0.1004)	6.59	0.000
Gv17	0.470	(0.1005)	4.67	0.000
Gv18	0.332	(0.1068)	3.11	0.002
Gv19	1.060	(0.1115)	9.50	0.000
Gv20	1.078	(0.1595)	6.76	0.000
Wl1	–0.192	(0.0731)	–2.62	0.009
Wl3	0.114	(0.2419)	0.47	0.635
Wl4	0.027	(0.2268)	0.12	0.904
Fl2	–0.680	(0.4575)	–1.48	0.137
Fl3	–0.030	(0.4647)	–0.06	0.948
Fl4	0.238	(0.1917)	1.24	0.213
Fl5	0.383	(0.3374)	1.13	0.255
Fl6	–0.069	(0.7913)	–0.08	0.930
Rf2	–0.325	(0.6104)	–0.53	0.594
Rf3	0.230	(0.3002)	0.76	0.443
Rf4	0.602	(0.3186)	1.89	0.059
Rf5	–0.171	(0.6005)	–0.28	0.775
Rf6	0.913	(0.3889)	2.34	0.019
Rf7	0.733	(0.7328)	1.00	0.317
Wt1	–1.274	(0.3925)	–3.24	0.001
Wt2	–0.987	(0.4231)	–2.33	0.020
Wt3	–1.030	(0.4853)	–2.12	0.034
Wt4	–1.116	(0.3639)	–3.06	0.002
Tl1	–0.872	(0.3500)	–2.49	0.013
Tl2	–0.321	(0.3634)	–0.88	0.376
Tl3	–1.104	(0.3726)	–2.96	0.003
Tl4	–0.452	(0.4840)	–0.93	0.350
Tl5	–0.242	(0.2255)	–1.07	0.282
Wlt1	0.506	(0.2300)	2.20	0.028
Wlt2	0.375	(0.2407)	1.55	0.119
Wlt3	–0.222	(0.2953)	–0.75	0.452
Flt2	1.065	(0.5059)	2.10	0.035
Flt3	0.163	(0.4858)	0.33	0.736

(continued)

Table 24 (continued)

Dependent Variable: Log of Rent	Coefficient	Standard Error	T-Statistic	P-Value
Flt4	0.011	(0.1977)	0.06	0.952
Flt5	0.177	(0.3716)	0.47	0.634
Rft2	0.237	(0.6512)	0.36	0.715
Rft3	–0.117	(0.3066)	–0.38	0.701
Rft4	–0.243	(0.3263)	–0.74	0.456
Rft5	0.149	(0.6195)	0.24	0.810
Rft6	–0.782	(0.4012)	–1.95	0.051
Wtt1	0.678	(0.2289)	2.96	0.003
Wtt2	0.254	(0.2776)	0.91	0.360
Wtt3	0.228	(0.3617)	0.63	0.528
Tlt1	1.000	(0.3067)	3.26	0.001
Tlt2	0.213	(0.3206)	0.66	0.506
Tlt3	1.151	(0.3386)	3.39	0.001
Tlt4	0.057	(0.4552)	0.12	0.899
Tenant	–0.335	(0.4373)	–0.76	0.443
Intercept	3.221	(0.5465)	5.89	0.000

Notes: The sample size is 2,257 households. The adjusted R-squared is 0.52. *Urban* is a dummy variable for urban areas; *Gvi* are a set of dummy variables for individual governorates; *Wli, Fli, Rfi, Wti*, and *Tli* are a set of categorical variables that identify the type of walls, floor, roof, source of water, and toilet respectively; *Tenant* is a dummy variable with a value of 1 if the rent observation is reported by a tenant; *Wlti, Flti, Rfti, Wtti*, and *Tlti* are the same categorical variables as mentioned above interacted with the *Tenant* dummy variable; *Nmrooms* is the number of rooms in the dwelling; *Room_mis* is a dummy variable taking the value 1 if information on the number of rooms is missing. Further details of the estimated model are available from the authors.

APPENDIX 3

FOOD BUNDLES OF THE POOR

Tables 25–29 list in detail the grams, calories, and cost of the five region-specific food bundles, which reflect average consumption levels of the relatively poor households. These average bundles of food are used to estimate the food poverty lines. To calculate the grams of each food item in the minimum food bundle, multiply the average grams by the ratio of estimated caloric need over calorie content of the average food bundle consumed by poor households. (The latter two figures are provided at the end of the tables.)

Table 25 Average food bundle of poorer households Metropolitan

Food Item	Average Grams	Calories	Piasters
Wheat	0.78	2.56	0.11
Sorghum	0.09	0.31	0.13
Maize	1.86	6.46	0.22
Wheat Flour (Market)	4.60	16.76	0.64
Wheat Flour (Subsidized)	0.19	0.68	0.03
Rice	59.28	215.19	8.28
Macaroni	26.90	101.94	4.59
Ferick	0.68	2.34	0.20
Baladi Bread (Dark)	357.05	871.20	13.77
Baladi Bread (White)	5.25	14.24	0.42
Shami Bread	0.00	0.00	0.00
Fino Bread	45.55	133.45	3.94
Other Bread	0.89	2.14	0.10
Other Cereal	0.51	2.36	0.45
Ful	18.93	64.73	4.92
Tamiya	23.42	82.66	4.32
Lentils	6.96	24.42	2.13
Humous	0.07	0.25	0.03
Helba	0.90	0.00	0.15
Kidney Beans	2.18	7.62	0.66
Cowpeas	2.19	7.55	0.71
Other Pulses	0.16	0.54	0.05
Eggs	13.82	48.52	6.74
Milk	63.91	49.85	11.46
Cream	0.04	0.16	0.07
Yogurt	4.15	6.34	1.25
White Cheese	9.81	31.49	7.25
Rumi Cheese	0.44	1.72	0.69
Old Cheese	1.34	4.15	0.45
Other Cheese	4.91	13.16	1.40
Ghee	0.70	6.13	0.88
Vegetable Ghee	9.43	72.17	4.78
Butter	1.47	10.16	1.36
Oil Tamwin	15.30	135.22	1.54
Oil Market	6.48	57.31	2.00
Tahina	0.57	3.62	0.44
Potatoes	60.90	45.68	3.73
Onions	23.56	9.90	1.68
Garlic	3.10	3.44	0.32
Tomatoes	54.78	9.86	6.59
Tomato Sauce	0.26	0.15	0.14
Green Leafy	6.39	1.21	0.50
Cabbage	8.40	1.34	1.04
Cauliflower	3.01	0.45	0.71
Artichoke	1.89	0.32	0.28
Egg Plant	6.80	2.24	0.78
Squash	6.44	1.22	0.78
Okra	0.15	0.06	0.11
Mulkiyya	0.92	0.23	0.35
Green Cowpeas	0.10	0.34	0.02
Green Peas	11.81	5.08	1.80
Pepper	1.73	0.36	0.41

(continued)

Table 25 (continued)

Food Item	Average Grams	Calories	Piasters
Cucumber	9.21	1.84	1.23
Green Beans	0.54	0.19	0.07
Carrots	11.20	3.92	0.50
Taro	4.85	3.40	0.50
Other Vegetables	0.94	0.65	0.18
Bananas	9.68	5.81	1.80
Oranges	49.07	23.55	4.16
Lemon	5.96	1.07	0.87
Tangerine	18.87	9.06	1.41
Apples	0.52	0.26	0.29
Cantaloupe	0.26	0.10	0.05
Strawberry	1.15	0.39	0.21
Pineapple	0.28	0.11	0.03
Dry fruits	0.00	0.00	0.00
Fish Fresh	12.12	14.30	5.44
Fish Frozen	4.04	4.77	1.25
Fish Canned	0.33	1.01	0.15
Fish Smoked	0.52	0.65	0.33
Chicken Fresh	19.56	36.97	10.27
Chicken Frozen	1.26	2.38	0.66
Beef Fresh	8.01	18.10	11.80
Beef Frozen	1.15	2.59	1.16
Beef Canned	0.16	0.37	0.20
Meat Processed	0.46	1.19	0.19
Meat Other	0.55	0.66	0.58
Salt	6.51	0.00	0.37
Pepper	0.99	3.43	0.70
Vinegar	2.20	0.00	0.12
Pickled	1.73	2.29	0.45
Sugar	30.36	117.20	3.49
Molasses	5.42	17.18	0.82
Honey	0.19	0.54	0.27
Halawa Tahinia	1.36	8.79	0.71
Jam	0.46	1.12	0.19
Ice Cream	0.28	0.37	0.06
Tea	3.23	1.29	4.46
Coffee	0.15	0.08	0.27
Carbonated Drinks	4.34	2.04	0.68
Fruit Juices	0.00	0.00	0.00
Alcoholic Drinks	0.00	0.00	0.00
Other Drinks	0.08	0.06	0.06
Other Food Expenses	0.00	0.00	0.00
TOTALS		*2401.1*	*162.9*
REQUIREMENT		*2430.4*	

Table 26 Average food bundle of poorer households Lower urban

Food Item	Average Grams	Calories	Piasters
Wheat	9.21	30.40	0.86
Sorghum	0.00	0.00	0.00
Maize	8.55	29.76	0.86
Wheat Flour (Market)	15.02	54.66	1.29
Wheat Flour (Subsidized)	13.80	50.25	0.91
Other flour	0.76	2.48	0.12
Rice	120.40	437.04	15.58
Macaroni	25.87	98.06	4.29
Baladi Bread (Market)	358.93	875.80	14.03
Baladi Bread (Subsidized)	0.20	0.55	0.03
Fino Bread	13.37	39.19	1.09
Other Bread	0.04	0.09	0.01
Other Cereal	0.59	2.72	0.33
Ful	20.97	71.71	4.26
Tamiya	24.56	86.68	4.47
Lentils	6.24	21.90	1.74
Humous	0.10	0.37	0.02
Helba	2.09	0.00	0.42
Kidney Beans	2.25	7.88	0.69
Cowpeas	2.48	8.57	0.76
Other Pulses	0.27	0.93	0.04
Eggs	12.84	45.08	5.72
Milk	32.48	25.33	4.83
Condensed Milk	0.00	0.00	0.00
Baby Milk	0.04	0.22	0.06
Cream	0.78	2.95	0.53
Sour Milk	1.29	1.54	0.14
Other Milk	0.00	0.00	0.00
Yogurt	1.65	2.53	0.43
White Cheese	10.29	33.03	4.46
Rumi Cheese	0.11	0.42	0.18
Old Cheese	1.44	4.45	0.40
Other Cheese	4.04	10.83	1.06
Ghee	1.72	14.97	1.48
Vegetable Ghee	13.33	101.97	5.68
Butter	1.06	7.33	1.05
Oil Tamwin	7.12	62.98	0.86
Oil Free	12.95	114.50	4.16
Tahina	0.19	1.23	0.09
Potatoes	80.62	60.47	4.88
Onions	17.10	7.18	1.70
Garlic	3.15	3.49	0.47
Tomatoes	58.48	10.53	6.94
Tomato Sauce	0.57	0.32	0.20
Green Leafy	3.92	0.75	0.33
Cabbage	9.95	1.59	1.14
Cauliflower	1.97	0.30	0.41
Egg Plant	2.25	0.74	0.25
Squash	7.79	1.48	0.74
Okra	0.06	0.02	0.05
Mulkiyya	0.65	0.16	0.21

(continued)

Table 26 (continued)

Food Item	Average Grams	Calories	Piasters
Green Cowpeas	0.00	0.00	0.00
Green Peas	9.86	4.24	1.26
Pepper	1.22	0.26	0.27
Cucumber	5.14	1.03	0.74
Green Beans	1.07	0.37	0.14
Carrots	13.90	4.87	0.58
Taro	3.39	2.37	0.30
Other Vegetables	0.51	0.35	0.04
Bananas	7.32	4.39	1.31
Oranges	55.27	26.53	4.42
Lemon	3.88	0.70	0.73
Grape Fruit	0.07	0.03	0.01
Tangerine	11.83	5.68	0.89
Apricot	0.00	0.00	0.00
Strawberry	2.01	0.68	0.35
Dates	0.21	0.61	0.03
Pineapple	0.19	0.07	0.05
Dry Fruits	0.07	0.20	0.08
Fish Fresh	15.92	18.79	6.75
Fish Frozen	7.45	8.79	2.13
Fish Canned	0.15	0.46	0.05
Fish Smoked	0.68	0.86	0.48
Chicken fresh	19.62	37.08	9.71
Chicken frozen	0.49	0.93	0.29
Duck and Geese	1.14	3.78	0.88
Pigeon	0.44	0.78	0.22
Beef Fresh	13.48	30.45	19.37
Beef Frozen	0.30	0.67	0.35
Lamb	0.80	2.54	0.93
Goat	0.29	0.46	0.36
Camel	3.06	8.97	3.85
Meat Processed	0.22	0.56	0.12
Meat Other	0.01	0.02	0.01
Salt	6.85	0.00	0.33
Pepper	1.35	4.67	1.24
Vinegar	0.28	0.00	0.03
Pickled	2.11	2.79	0.37
Sugar	36.80	142.03	5.84
Molasses	3.41	10.81	0.53
Honey	0.24	0.69	0.30
Halawa Tahinia	2.23	14.33	0.93
Jam	0.41	0.99	0.26
Syrup	0.00	0.00	0.00
Ice Cream	0.45	0.59	0.09
Tea	3.37	1.35	4.01
Coffee	0.14	0.08	0.23
Carbonated Drinks	0.60	0.28	0.07
Fruit Juices	0.00	0.00	0.00
Alcoholic Drinks	0.00	0.00	0.00
Other Drinks	0.07	0.05	0.03
Other Food Expenses	0.07	0.00	0.09
TOTALS		*2665.1*	*170.4*
REQUIREMENT		*2360.2*	

Table 27 Average food bundle of poorer households Upper urban

Food Item	Average Grams	Calories	Piasters
Wheat	5.91	19.49	0.52
Sorghum	0.00	0.00	0.00
Maize	10.34	35.98	10.01
Other Cereals	0.00	0.00	0.00
Wheat Flour (Market)	17.17	62.51	1.47
Wheat Flour (Subsidized)	111.27	405.04	6.42
Other Flour	1.12	3.66	0.16
Rice	37.34	135.55	5.51
Macaroni	16.51	62.59	2.75
Ferick	0.27	0.93	0.06
Baladi Bread (Market)	267.33	652.28	10.30
Baladi Bread (Subsidized)	0.27	0.74	0.02
Shami Bread	0.00	0.00	0.00
Fino Bread	24.95	73.10	2.23
Other Bread	0.11	0.25	0.02
Other Cereals	0.80	3.73	0.52
Ful	22.71	77.67	4.98
Tamiya	17.90	63.19	3.41
Lentils	10.20	35.82	2.89
Humous	0.50	1.78	0.16
Helba	0.72	0.00	0.19
Kidney Beans	3.70	12.95	0.92
Cowpeas	0.89	3.06	0.25
Other Pulses	0.19	0.65	0.04
Eggs	17.74	62.27	4.26
Milk	38.21	29.80	6.32
Baby Milk	0.09	0.46	0.14
Cream	0.12	0.44	0.11
Sour Milk	0.59	0.70	0.08
Yogurt	4.74	7.25	0.48
White Cheese	4.02	12.89	2.38
Rumi Cheese	0.18	0.71	0.19
Old Cheese	1.90	5.90	0.66
Other Cheese	8.36	22.41	1.89
Ghee	2.90	25.31	3.36
Vegetable Ghee	11.54	88.31	5.20
Butter	0.67	4.61	0.59
Oil Tamwin	9.15	80.89	0.94
Oil Free	8.69	76.85	2.96
Tahina	0.38	2.42	0.17
Potatoes	51.09	38.32	3.63
Onions	23.80	10.00	1.60
Garlic	21.49	23.85	2.12
Tomatoes	48.06	8.65	5.41
Tomato Sauce	0.14	0.08	0.07
Green Leafy	2.01	0.38	0.13
Cabbage	4.52	0.72	0.58
Cauliflower	0.54	0.08	0.16
Artichoke	0.00	0.00	0.00
Egg Plant	3.03	1.00	0.37
Squash	4.07	0.77	0.42
Mulkiyya	3.36	0.84	0.67

(continued)

Table 27 (continued)

Food Item	Average Grams	Calories	Piasters
Green Cowpeas	0.27	0.91	0.04
Green Peas	4.37	1.88	0.62
Pepper	0.56	0.12	0.12
Cucumber	1.78	0.36	0.27
Green Beans	0.43	0.15	0.09
Carrots	5.72	2.00	0.25
Taro	1.77	1.24	0.17
Other Vegetables	0.60	0.41	0.10
Bananas	7.60	4.56	1.30
Oranges	44.84	21.53	3.73
Lemon	3.46	0.62	0.37
Grape Fruit	0.00	0.00	0.00
Tangerine	5.31	2.55	0.47
Dates	6.62	19.27	1.31
Nuts	0.33	1.87	0.35
Fish Fresh	7.80	9.20	3.32
Fish Frozen	2.14	2.53	0.78
Fish Canned	0.23	0.72	0.20
Fish Smoked	0.64	0.80	0.43
Chicken Fresh	15.79	29.85	8.96
Chicken Frozen	0.50	0.95	0.24
Duck and Geese	1.96	6.48	1.29
Pigeon	0.32	0.57	0.16
Beef Fresh	16.87	38.13	23.41
Beef Frozen	1.58	3.56	0.32
Lamb	0.66	2.10	0.86
Goat	0.26	0.41	0.27
Camel	0.26	0.77	0.34
Meat Processed	0.08	0.20	0.06
Meat Other	1.17	1.40	0.53
Salt	25.82	0.00	1.25
Pepper	1.94	6.75	1.43
Vinegar	0.68	0.00	0.11
Pickled	2.59	3.42	0.59
Sugar	52.60	203.02	8.77
Molasses	4.14	13.11	0.63
Honey	0.24	0.69	0.23
Halawa Tahinia	1.24	7.96	0.56
Jam	0.89	2.13	0.27
Ice Cream	1.64	2.15	0.33
Other Sweets	0.12	0.52	0.03
Tea	6.79	2.72	5.25
Coffee	0.08	0.04	0.10
Carbonated Drinks	3.28	1.54	0.48
Fruit Juices	0.00	0.00	0.00
Alcoholic Drinks	0.00	0.00	0.00
Other Drinks	1.47	1.01	0.35
Other Food Expenses	0.05	0.00	0.02
TOTALS		*2557.1*	*159.5*
REQUIREMENT		*2380.3*	

Table 28 Average food bundle of poorer households Lower rural

Food Item	Average Grams	Calories	Piasters
Wheat	65.45	215.98	4.87
Sorghum	1.67	5.55	0.13
Maize	52.77	183.64	3.77
Other Cereal	0.09	0.32	0.01
Wheat Flour (Market)	27.37	99.61	2.60
Wheat Flour (Subsidized)	71.33	259.64	4.95
Other flour	2.74	8.96	0.33
Rice	145.15	526.90	16.95
Macaroni	17.49	66.28	2.82
Ferick	0.18	0.63	0.03
Baladi Bread (Market)	158.56	386.88	6.16
Baladi Bread (Subsidized)	5.59	15.15	0.27
Shami Bread	2.12	5.37	0.12
Fino Bread	9.24	27.07	0.70
Other Bread	0.21	0.51	0.02
Other Cereal	1.54	7.16	0.43
Ful	16.74	57.26	3.13
Tamiya	17.99	63.49	3.18
Lentils	5.62	19.73	1.52
Humous	0.07	0.26	0.02
Helba	1.20	0.00	0.25
Kidney Beans	2.89	10.10	0.86
Cowpeas	2.07	7.15	0.57
Other Pulses	0.78	2.70	0.05
Eggs	12.33	43.27	5.40
Milk	44.03	34.34	5.40
Condensed Milk	0.19	0.59	0.02
Baby Milk	0.23	1.17	0.17
Cream	2.07	7.86	1.41
Sour Milk	6.09	7.25	0.91
Other Milk	0.10	0.07	0.01
Yogurt	0.21	0.33	0.06
White Cheese	11.67	37.45	3.76
Rumi Cheese	0.04	0.14	0.05
Old Cheese	2.13	6.60	0.63
Other Cheese	6.74	18.06	1.23
Ghee	3.22	28.15	2.80
Vegetable Ghee	13.55	103.69	5.18
Butter	2.41	16.73	2.16
Oil Tamwin	8.78	77.64	1.07
Oil Free	12.30	108.76	3.81
Tahina	0.10	0.63	0.04
Potatoes	83.40	62.55	4.69
Onions	20.15	8.46	1.95
Garlic	4.12	4.57	0.47
Tomatoes	61.35	11.04	6.20
Tomato Sauce	0.13	0.07	0.10
Green Leafy	5.26	1.00	0.39
Cabbage	10.79	1.73	1.08
Cauliflower	2.83	0.43	0.58
Artichoke	0.00	0.00	0.00

(continued)

Table 28 (continued)

Food Item	Average Grams	Calories	Piasters
Egg Plant	2.15	0.71	0.19
Squash	3.71	0.71	0.36
Okra	0.07	0.03	0.05
Mulkiyya	0.22	0.05	0.05
Green Cowpeas	0.02	0.08	0.00
Green Peas	7.69	3.30	0.95
Pepper	1.68	0.35	0.32
Cucumber	5.77	1.15	0.67
Green Beans	0.84	0.29	0.06
Carrots	15.42	5.40	0.56
Taro	1.22	0.85	0.11
Other Vegetables	2.88	1.98	0.16
Bananas	5.60	3.36	0.98
Oranges	51.23	24.59	3.71
Lemon	2.74	0.49	0.36
Grape Fruit	0.25	0.12	0.02
Tangerine	14.58	7.00	1.10
Apples	0.03	0.01	0.02
Apricot	0.00	0.00	0.00
Peach	0.06	0.03	0.01
Pears	0.09	0.05	0.04
Strawberry	0.39	0.13	0.06
Dates	0.10	0.29	0.01
Guava	0.73	0.47	0.09
Pineapple	0.07	0.03	0.01
Other Fruits	0.17	0.07	0.03
Dry Fruits	0.03	0.10	0.01
Nuts	0.07	0.39	0.02
Fish Fresh	11.33	13.37	3.73
Fish Frozen	13.34	15.75	3.82
Fish Canned	0.08	0.24	0.03
Fish Smoked	0.41	0.51	0.27
Chicken Fresh	21.15	39.98	11.17
Chicken Frozen	0.17	0.32	0.09
Duck and Geese	4.83	15.99	2.77
Pigeon	0.60	1.06	0.30
Rabbit	0.12	0.16	0.08
Beef Fresh	9.54	21.56	13.44
Beef Frozen	0.30	0.68	0.25
Lamb	2.46	7.79	3.36
Goat	1.01	1.59	1.56
Camel	0.79	2.32	0.99
Meat Processed	0.05	0.14	0.05
Meat Other	0.10	0.12	0.02
Salt	11.84	0.00	0.50
Pepper	1.64	5.70	1.02
Vinegar	0.11	0.00	0.01
Pickled	4.59	6.06	0.46
Sugar	42.71	164.87	7.10
Molasses	3.54	11.23	0.56
Honey	0.09	0.25	0.12
Halawa Tahinia	1.23	7.93	0.56

(continued)

Table 28 (continued)

Food Item	Average Grams	Calories	Piasters
Jam	0.13	0.31	0.06
Syrup	0.03	0.08	0.01
Pastry	0.08	0.33	0.01
Ice Cream	0.04	0.05	0.01
Other Sweets	0.04	0.20	0.01
Tea	3.67	1.47	4.19
Coffee	0.06	0.03	0.14
Carbonated Drinks	1.33	0.63	0.20
Fruit Juices	0.81	0.53	0.11
Alcoholic Drinks	0.00	0.00	0.00
Other Drinks	0.14	0.10	0.11
Other Food Expenses	0.02	0.00	0.01
TOTALS		*2926.3*	*170.4*
REQUIREMENT		*2498.8*	

Table 29 Average food bundle of poorer households Upper rural

Food Item	Average Grams	Calories	Piasters
Wheat	83.21	274.59	7.21
Sorghum	3.79	12.63	0.29
Maize	60.76	211.43	5.40
Other Cereals	0.00	0.00	0.00
Wheat Flour (Market)	65.76	239.38	5.01
Wheat Flour (Subsidized)	165.84	603.66	10.18
Other Flour	4.73	15.46	0.38
Rice	34.15	123.95	4.96
Macaroni	13.93	52.79	2.23
Ferick	0.65	2.26	0.19
Baladi Bread (Market)	159.73	389.74	6.37
Baladi Bread (Subsidized)	3.82	10.35	0.23
Shami Bread	0.07	0.17	0.00
Fino Bread	9.12	26.72	0.72
Other Bread	0.26	0.62	0.03
Other Cereal	1.44	6.70	0.72
Ful	21.04	71.95	4.82
Tamiya	17.49	61.75	3.27
Lentils	10.22	35.87	2.76
Humous	0.25	0.88	0.07
Helba	1.24	0.00	0.24
Kidney Beans	2.01	7.05	0.57
Cowpeas	0.48	1.66	0.14
Other Pulses	0.60	2.08	0.06
Eggs	15.09	52.97	4.89
Milk	24.28	18.94	3.67
Baby Milk	0.24	1.22	0.14
Cream	0.06	0.25	0.56
Sour Milk	2.27	2.70	0.20
Other Milk	0.15	0.10	0.02
Yogurt	0.92	1.41	0.20
White Cheese	3.54	1.35	1.41
Rumi Cheese	0.03	0.10	0.04
Old Cheese	7.77	24.09	1.69
Other Cheese	9.56	25.61	1.92
Ghee	5.25	45.79	5.84
Vegetable Ghee	10.78	82.47	5.00
Butter	4.31	29.88	3.71
Oil Tamwin	14.15	125.11	1.57
Oil Free	7.36	65.06	2.34
Tahina	0.14	0.91	0.09
Potatoes	56.13	42.10	3.79
Onions	24.36	10.23	1.65
Garlic	10.66	11.83	1.38
Tomatoes	53.35	9.60	5.46
Tomato Sauce	0.58	0.33	0.08
Green Leafy	4.52	0.86	0.35
Cabbage	5.50	0.88	0.58
Cauliflower	0.51	0.08	0.10
Artichoke	0.03	0.00	0.00
Egg Plant	1.26	0.42	0.12
Squash	3.46	0.66	0.34

(continued)

Table 29 (continued)

Food Item	Average Grams	Calories	Piasters
Okra	0.22	0.09	0.14
Mulkiyya	3.23	0.81	0.67
Green Cowpeas	0.00	0.00	0.00
Green Peas	1.66	0.71	0.23
Pepper	0.68	0.14	0.10
Cucumber	2.17	0.43	0.32
Green Beans	0.59	0.21	0.10
Carrots	7.51	2.63	0.29
Taro	2.48	1.73	0.20
Other Vegetables	0.70	0.48	0.08
Bananas	4.81	2.89	0.80
Oranges	32.85	15.77	2.76
Lemon	1.93	0.35	0.34
Grape Fruit	0.06	0.03	0.01
Tangerine	5.26	2.52	0.46
Apples	0.05	0.02	0.03
Apricot	0.00	0.00	0.00
Plum	0.09	0.05	0.01
Strawberry	0.04	0.02	0.01
Dates	2.20	6.40	0.26
Guava	0.02	0.01	0.00
Nuts	0.41	2.31	0.16
Fish Fresh	2.76	3.26	1.07
Fish Frozen	2.08	2.46	0.66
Fish Canned	0.05	0.15	0.04
Fish Smoked	0.17	0.22	0.09
Chicken Frozen	14.74	27.85	7.87
Chicken Frozen	0.82	1.55	0.48
Duck and Geese	1.60	5.30	1.22
Pigeon	1.50	2.67	0.82
Rabbit	0.29	0.40	0.15
Turkey	0.08	0.16	0.12
Beef Fresh	18.26	41.28	25.29
Beef Frozen	0.33	0.73	0.31
Beef Canned	0.00	0.00	0.00
Lamb	0.79	2.51	1.15
Goat	0.57	0.89	0.73
Camel	0.54	1.58	0.60
Meat Processed	0.14	0.35	0.10
Meat Other	0.35	0.42	0.19
Salt	10.21	0.00	0.52
Pepper	1.22	4.23	0.75
Vinegar	0.16	0.00	0.02
Pickled	1.85	2.45	0.40
Sugar	63.48	245.03	10.60
Molasses	4.11	13.01	0.59
Honey	0.21	0.60	0.11
Halawa Tahinia	1.03	6.63	0.53
Jam	0.18	0.41	0.10
Syrup	0.00	0.00	0.00

(continued)

Table 29 (continued)

Food Item	Average Grams	Calories	Piasters
Pastry	0.01	0.05	0.01
Ice Cream	0.69	0.90	0.15
Other Sweets	0.89	3.89	0.24
Tea	4.40	1.76	5.32
Coffee	0.05	0.03	0.03
Carbonated Drinks	2.17	1.02	0.32
Fruit Juices	0.07	0.05	0.02
Alcoholic Drinks	0.00	0.00	0.00
Other Drinks	0.46	0.32	0.24
Other Food Expenses	0.40	0.00	0.16
TOTALS		*3126.4*	*170.5*
REQUIREMENT		*2431.4*	

REFERENCES

Ali, S., H. El-Laithy, A. Hamza, et al. 1994. Food policy reform in Egypt: Its impact on the poor. In *Maintaining food security in Egypt during and after agricultural and food policy reform.* Cairo: Ministry of Agriculture and Land Reclamation.

Atkinson, A. B. 1993. *The institution of an official poverty line and economic policy*. Welfare State Program Discussion Program No. 98. STICERD. London: London School of Economics.

Cardiff, P. 1997. *The 1995/1996 household income, expenditure and consumption survey: Final analysis report.* Washington, D.C.: U.S. Agency for International Development/Egypt and the U.S. Bureau of the Census.

Deaton, A. 1995. The analysis of household surveys: Microeconometric analysis for development policy. Princeton University, Princeton, N.J., U.S.A. Photocopy.

Egypt (Institute of National Planning). 1996. *Egypt human development report 1996*. Cairo.

El-Laithy, H., and O. M. Osman. 1996. *Profile and trend of poverty and economic growth in Egypt*. Research Paper Series, Egypt Human Development Report. Cairo: Institute of National Planning.

El-Zanaty, F., et al. 1996. *Egypt Demographic and Health Survey 1995*. Calverton, Md., U.S.A. and Cairo: Macro International Inc. and National Population Council.

Foster, J., and A. F. Shorrocks. 1991. Subgroup consistent poverty indices. *Econometrica* 59 (3): 687–709.

Foster, J., J. Greer, and E. Thorbecke. 1984. A class of decomposable poverty measures. *Econometrica* 52 (3): 761–765.

Hardle, W. 1990. *Applied nonparametric regression*. Cambridge: Cambridge University Press.

IMF (International Monetary Fund). 1997. *International financial statistics.* Vol. L, No. 7. Washington, D.C.

Kakwani, N. 1980. On a class of poverty measures. *Econometrica* 48 (2): 437–446.

Kakwani, N. 1990. Testing for significance of poverty differences with application to Côte d'Ivoire. LSMS Working Paper No. 62. Washington, D.C.: World Bank.

Kochar, A. 1997. The savings module in the living standards measurement survey. Stanford University, Stanford, Calif., U.S.A. Photocopy.

Korayem, K. 1994. The impact of structural adjustment and stabilization policies on the poor in Egypt, and how do they adapt. United Nations Children's Fund, New York. Photocopy.

Lanjouw, P., and M. Ravallion. 1995. Poverty and household size. *Economic Journal* 105 (November): 1415–1434.

Lipton, M., and M. Ravallion. 1995. Poverty and policy. In *Handbook of development economics*, Vol. 3, ed. J. Behrman and T. N. Srinivasan. Amsterdam: North Holland.

Ravallion, M. 1994. *Poverty comparisons*. Chur, Switzerland: Harwood Academic Publishers.

Sen, A. 1976. Poverty: An ordinal approach to measurement. *Econometrica* 44 (22): 219–231.

Shryock, H. S., J. S. Siegel, and Associates. 1976. *The methods and materials of demography*. Orlando, Fla., U.S.A.: Academic Press.

Summers, R., and A. Heston. 1991. The Penn World Table (Mark 5): An expanded set of international comparisons, 1950–1988. *Quarterly Journal Of Economics* 106 (May).

WHO (World Health Organization). 1985. *Energy and protein requirements*. Technical Report Series No. 724. Geneva.

World Bank. 1997. *World development indicators.* Washington, D.C.